Space-Saving Type

SSD
Compact Cylinder

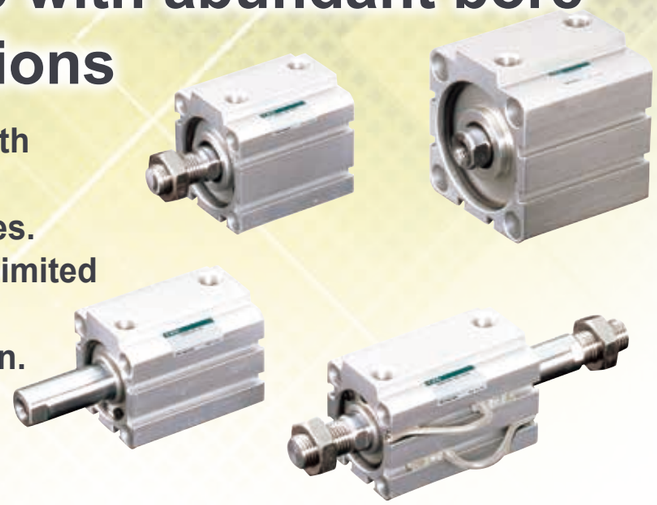
ø12, ø16, ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100, ø125, ø140, ø160

CONTENTS

SSD Series

Compact type with abundant bore sizes and options

Space-saving cylinder with a compact overall length compared to general types. Can be installed even in limited spaces, contributing to equipment miniaturization.



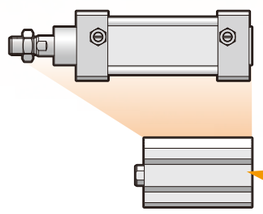
Compact overall length

Size comparison **SCA2**: SCA2-00-40B-50
SSD: SSD-L-40-50

SCA2
200.5 mm

SSD2
96.5 mm

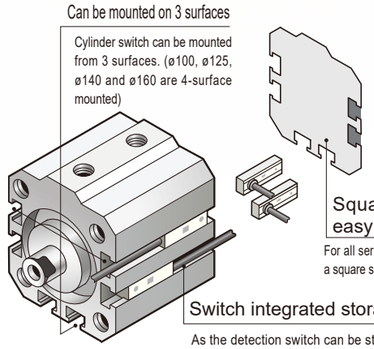
50% Down



Switch mountable on 3 surfaces

Can be mounted on 3 surfaces

Cylinder switch can be mounted from 3 surfaces. (ø100, ø125, ø140 and ø160 are 4-surface mounted)



Square form for easy design

For all series, cross-section has a square shape. Easy design.

Switch integrated storage

As the detection switch can be stored and installed in the groove of the body, there is no projection and neat space saving is realized. (excluding T2Y□ and T3Y□)

Shorter overall length with dedicated body

Supports stroke increments of 1 mm without using spacers. (Basic type only, ø125 to ø160 standard, ø12 to ø100 optional)

Same dimensions even with rubber cushion

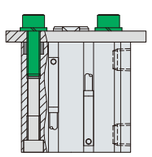
Even if rubber cushion is selected, the overall length dimension is the same.

Through hole + taps on both ends equipped as standard

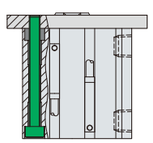
Mounting direction does not need to be selected when choosing the model No.. Contributes to reduction in design man-hours and spare parts.

Rod Side Mounting

Screw-in mounting

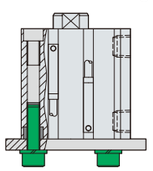


Through-bolt mounting

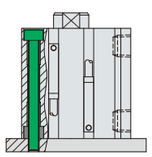


Head Side Mounting

Screw-in mounting

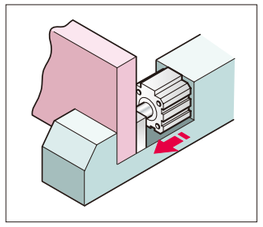


Through-bolt mounting

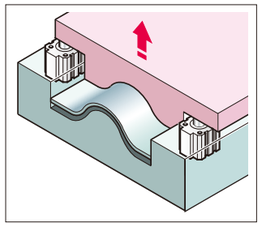


Application Examples

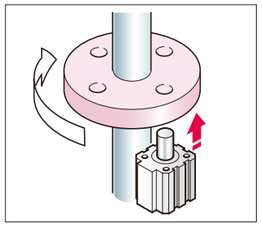
● Clamp



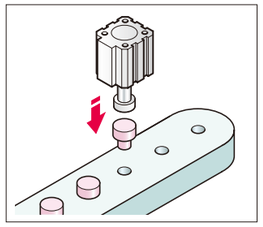
● Mold push-up



● Positioning



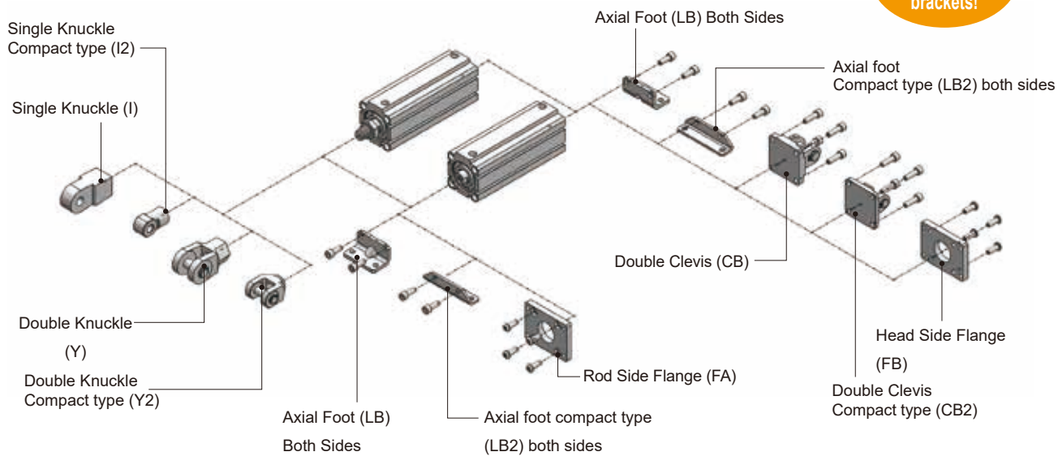
● Press-fitting



Abundant Mounting Brackets

Achieves high design flexibility with a wide variety of mounting brackets.

Compatible with various mounting brackets!



SSD Series Product System

Series		Bore size (mm)
Single rod	SSD	ø12 to ø160
Single rod high load	SSD-K	ø12 to ø100
Single Acting, Push Type	SSD-X	ø12 to ø50
Single acting, Pull Type	SSD-Y	ø12 to ø50
Heat resistance	SSD-T	ø12 to ø100
With heat resistant cylinder switch	SSD-T1L	ø16 to ø63
High load with rubber-air cushioned	SSD-K-□C	ø20 to ø100
Position locking	SSD-Q	ø16 to ø100
Fine speed	SSD-F	ø12 to ø100
High load/fine speed	SSD-KF	ø12 to ø100
Low speed	SSD-O	ø12 to ø100
High load/low friction	SSD-KU	ø20 to ø100
Double rod	SSD-D	ø12 to ø160
Back to back	SSD-B	ø12 to ø100

Series		Bore size (mm)
Two-stage	SSD-W	ø12 to ø100
rotation-stop	SSD-M	ø12 to ø63
Coolant proof	SSD-G2/G3	ø16 to ø100
High load/coolant proof	SSD-KG2/G3	ø16 to ø100
Anti-spatter adherence	SSD-G1/G4	ø25 to ø100
High load, anti-spatter adherence	SSD-KG1/G4	ø25 to ø100
Double rod, anti-spatter adherence	SSD-DG1/G4	ø25 to ø100
Environment-resistant scraper	SSD-G5	ø20 to ø100
High load/environment-resistant scraper	SSD-KG5	ø20 to ø100
With strong magnetic field proof switch	SSD-L4	ø40 to ø100
With strong magnetic field proof switch and coil scraper	SSD-G1L4	ø40 to ø100
High load strong magnetic field proof with switch	SSD-KL4	ø40 to ø100
High load with strong magnetic field proof switch and coil scraper	SSD-KG1L4	ø40 to ø100

System Table

Compact Cylinder SSD Series

*For high load type with strong magnetic field resistant switch, refer to P. 354.

●: Standard, ◎: Option, ○: Custom Products, △: Available depending on conditions (Contact CKD) : Not manufacturable

Variation	Model No. Circuit Diagram Symbol	Bore Size (mm)	Standard Stroke (mm) 5	10	15	20	25	30	40	50	60	70	80	90	100	Min. Stroke (mm)	Max. Stroke (mm)	Intermediate Stroke (per mm)	Option: Rod end male thread N	Option: Dedicated body for intermediate stroke S	Mounting bracket: Axial foot LB	Axial foot (Compact type) LB2	Double Clevis CB	Double Clevis (Compact type) CB2	Rod Side Flange FA	Head Side Flange FB	Switch	Page
Double Acting, Single Rod Type with Switch Off-delay/T1□ switch	SSD SSD-L SSD-L1	ø12, ø16	●	●	●	●	●	●								1	30	1	◎	◎	◎	◎	◎	◎	◎	◎	◎	362
		ø20, ø25, ø32, ø40, ø50	●	●	●	●	●	●	●	●							50		◎	◎	◎	◎	◎	◎	◎	◎		
		ø63, ø80, ø100	●	●		●		●	●	●							50		◎	◎	◎	◎	◎	◎	◎	◎		
		ø125, ø140, ø160		●		●		●	●	●	●	●	●	●	●		300		◎	●	◎	△	◎	△	△	△		
Single Acting, Push Type with Switch Off-delay/T1□ switch	SSD-X SSD-XL SSD-XL1	ø12, ø16, ø20	●	●												5	10	–	◎		◎	◎	◎	◎	◎	◎	◎	404
		ø25, ø32	●	●													10		◎		◎	◎	◎	◎	◎	◎		
		ø40, ø50		●		●											20		◎		◎	◎	◎	◎	◎	◎		
Single Acting, Retracting Type with Switch Off-delay/T1□ switch	SSD-Y SSD-YL SSD-YL1	ø12, ø16, ø20	●	●												5	10	–	◎		◎	◎	◎	◎	◎	◎	◎	404
		ø25, ø32	●	●													10		◎		◎	◎	◎	◎	◎	◎		
		ø40, ø50		●		●											20		◎		◎	◎	◎	◎	◎	◎		
Double Acting/ Heat Resistant Type	SSD-T	ø12, ø16, ø20	●	●	●	●	●	●								1	30	1	◎		◎	◎	◎	◎	◎	◎	◎	426
		ø25, ø32, ø40, ø50	●	●	●	●	●	●	●	●							50		◎		◎	◎	◎	◎	◎	◎		
		ø63, ø80, ø100	●	●		●		●	●	●							50		◎		◎	◎	◎	◎	◎	◎		
Double Acting with Heat Resistant Cylinder Switch	SSD-T1L	ø16		●	●	●	●	●								10	30	1	◎		◎	◎	◎	◎	◎	◎	◎	432
		ø20			●	●	●	●								15			◎		◎	◎	◎	◎	◎	◎		
		ø25			●	●	●	●	●	●							50		◎		◎	◎	◎	◎	◎	◎		
		ø32, ø40, ø50		●	●	●	●	●	●	●						10			◎		◎	◎	◎	◎	◎	◎		
		ø63		●		●		●	●	●									◎		◎	◎	◎	◎	◎	◎		
Double Acting, Fall Prevention Type with Switch	SSD-Q SSD-QL	ø16, ø20	●	●	●	●	●	●	●	●						5	100	1	◎		◎	◎	◎	◎	◎	◎	◎	456
		ø25, ø32, ø40, ø50		●	●	●	●	●	●	●	●	●	●	●	●		200		◎		◎	◎	◎	◎	◎	◎		
		ø63, ø80, ø100		●		●		●	●	●	●	●	●	●	●		300		◎		◎	◎	◎	◎	◎	◎		
Double Acting, Creep Speed Type with Switch Off-delay/T1□ switch	SSD-F SSD-LF SSD-L1F	ø12, ø16, ø20	●	●	●	●	●	●								1	30	1	◎		◎	◎	◎	◎	◎	◎	◎	474
		ø25, ø32, ø40, ø50	●	●	●	●	●	●	●	●							50		◎		◎	◎	◎	◎	◎	◎		
		ø63, ø80, ø100	●	●		●		●	●	●							50		◎		◎	◎	◎	◎	◎	◎		
Double Acting, Low Speed Type with Switch Off-delay/T1□ switch	SSD-O SSD-OL SSD-OL1	ø12, ø16, ø20	●	●	●	●	●	●								1	30	1	◎		◎	◎	◎	◎	◎	◎	◎	480
		ø25, ø32, ø40, ø50	●	●	●	●	●	●	●	●							50		◎		◎	◎	◎	◎	◎	◎		
		ø63, ø80, ø100	●	●		●		●	●	●							50		◎		◎	◎	◎	◎	◎	◎		
Double Acting, Double Rod Type with Switch	SSD-D SSD-DL	ø12, ø16, ø20	●	●	●	●	●	●								1	30	1	◎		◎	◎			◎		◎	490
		ø25, ø32, ø40, ø50	●	●	●	●	●	●	●	●							50		◎		◎	◎			◎			
		ø63, ø80, ø100	●	●		●		●	●	●							50		◎		◎	◎			◎			
		ø125, ø140, ø160		●		●		●	●	●	●	●	●	●	●	10	300		◎		◎	△			△			
Double Acting, Back-to-Back Type with Switch Off-delay/T1□ switch	SSD-B SSD-BL SSD-BL1	ø12, ø16, ø20	●	●	●	●	●	●								1	30	1	◎								◎	506
		ø25, ø32, ø40, ø50	●	●	●	●	●	●	●	●							50		◎									
		ø63, ø80, ø100	●	●		●		●	●	●							50		◎									
Double Acting, Tandem Type with Switch Off-delay/T1□ switch	SSD-W SSD-WL SSD-WL1	ø12, ø16, ø20	●	●	●	●	●	●								1	30	1	◎								◎	516
		ø25, ø32, ø40, ø50	●	●	●	●	●	●	●	●							50		◎									
		ø63, ø80, ø100	●	●		●		●	●	●							50		◎									
Double Acting, Non-rotating Type with Switch Off-delay/T1□ switch	SSD-M SSD-ML SSD-ML1	ø12, ø16, ø20, ø25	●	●	●	●	●	●								1	30	1	◎		◎	◎	◎	◎	◎	◎	◎	526
		ø32, ø40, ø50	●	●	●	●	●	●	●	●							50		◎		◎	◎	◎	◎	◎	◎		
		ø63	●	●		●		●	●	●							50		◎		◎	◎	◎	◎	◎	◎		
Double Acting, Cutting Oil Resistant Type with Switch	SSD-G2·G3 SSD-G2L·G3L	ø16, ø20	●	●	●	●	●	●								1	30	1	◎		△*1	△*1	◎	◎	△*1	◎	◎	540
		ø25, ø32, ø40, ø50	●	●	●	●	●	●	●	●							50		◎		△*1	△*1	◎	◎	△*1	◎		
		ø63, ø80, ø100	●	●		●		●	●	●							50		◎		◎	◎	◎	◎	◎	◎		
Double Acting, Spatter Adhesion Prevention Type with Switch	SSD-G1/G4 SSD-G1L/G4L	ø25, ø32 ø40, ø50	●	●	●	●	●	●	●	●						1	50	1	◎		◎	◎	◎	◎	◎	◎	◎	560
		ø63, ø80, ø100	●	●		●		●	●	●							50		◎		◎	◎	◎	◎	◎	◎		
Double Acting, Double Rod Spatter Adhesion Prevention Type with Switch	SSD-DG1/DG4 SSD-DG1L/DG4L	ø25, ø32 ø40, ø50	●	●	●	●	●	●	●	●						1	50	1	◎		◎	◎			◎		◎	590
		ø63, ø80, ø100	●	●		●		●	●	●							50		◎		◎	◎			◎			
Double Acting, Environmentally Resistant Scraper Type with Switch	SSD-G5 SSD-G5L	ø20, ø25, ø32 ø40, ø50	○	○	○	○	○	○	○	○						1	50	1	○		○	○	○	○	○	○	○	604
		ø63, ø80, ø100	○	○		○		○	○	○							50		○		○	○	○	○	○	○		

*1: For ø16 to ø25, due to structural reasons, foot brackets (LB, LB2) and flange brackets (FA) cannot be retrofitted to the rod side. Assembly at the time of product shipment is a custom order.

[High Load Type]

●: Standard, ◎: Option, ○: Custom Products, △: Available depending on conditions (Contact CKD) : Not manufacturable

Variation	Model No. Circuit Diagram Symbol	Bore Size (mm)	Standard Stroke (mm) 5	10	15	20	25	30	40	50	60	Standard Stroke (mm) 70	80	90	100	Min. Stroke (mm)	Max. Stroke (mm)	Intermediate Stroke (per mm)	Option: Rod end male thread N	Option: Dedicated body for intermediate stroke S	Mounting bracket: Axial foot LB	Axial foot (Compact type) LB2	Double Clevis CB	Double knuckle clevis (Compact type) CB2	Rod Side Flange FA	Head Side Flange FB	Switch	Page
Double Acting, High Load Type with Switch	SSD-K SSD-KL	ø12, ø16	●	●	●	●	●	●	●	●						1	100	1	◎	◎	◎	◎	◎	◎	◎	◎	◎	388
		ø20	●	●	●	●	●	●	●	●							200		◎	◎	◎	◎	◎	◎	◎	◎		
		ø25, ø32, ø40, ø50		●	●	●	●	●	●	●	●	●	●	●	●		300		◎	◎	◎	◎	◎	◎	◎	◎		
		ø63, ø80, ø100		●		●		●	●	●	●	●	●	●	●		300		◎	◎	◎	◎	◎	◎	◎	◎		
(Double Acting, High Load Type with Rubber Air Cushion)	SSD-K-□C	ø20	●	●	●	●	●	●	●	●	●	●	●	●	●	5	200	1	◎		◎	◎	◎	◎	◎	◎	◎	446
		ø25, ø32, ø40, ø50		●	●	●	●	●	●	●	●	●	●	●	●		300		◎		◎	◎	◎	◎	◎	◎		
		ø63, ø80, ø100		●		●		●	●	●	●	●	●	●	●	10	300		◎		◎	◎	◎	◎	◎	◎		
Double Acting, High Load Type, Creep Speed Type with Switch	SSD-KF SSD-KLF	ø12, ø16, ø20	●	●	●	●	●	●	●	●						1	100	1	◎		◎	◎	◎	◎	◎	◎	◎	474
		ø25, ø32, ø40, ø50		●	●	●	●	●	●	●	●	●	●	●	●		150		◎		◎	◎	◎	◎	◎	◎		
		ø63, ø80, ø100		●		●		●	●	●	●	●	●	●	●		200		◎		◎	◎	◎	◎	◎	◎		
Double Acting, High Load Type, Low Friction Type with Switch	SSD-KU SSD-KUL	ø20	●	●	●	●	●	●	●	●						5	200	1	◎		◎	◎	◎	◎	◎	◎	◎	486
		ø25, ø32, ø40, ø50		●	●	●	●	●	●	●	●	●	●	●	●		300		◎		◎	◎	◎	◎	◎	◎		
		ø63, ø80, ø100		●		●		●	●	●	●	●	●	●	●		300		◎		◎	◎	◎	◎	◎	◎		
Double Acting, High Load Type, Cutting Oil Resistant Type with Switch	SSD-KG2/KG3 SSD-KG2L/KG3L	ø16, ø20	●	●	●	●	●	●	●	●						1	100	1	◎		△*1	△*1	◎	◎	△*1	◎	◎	550
		ø25, ø32, ø40, ø50		●	●	●	●	●	●	●	●	●	●	●	●		150		◎		△*1	△*1	◎	◎	△*1	◎		
		ø63, ø80, ø100		●		●		●	●	●	●	●	●	●	●		200		◎		◎	◎	◎	◎	◎	◎		
Double Acting, High Load Type, Spatter Adhesion Prevention Type with Switch	SSD-KG1/KG4 SSD-KG1L/KG4L	ø25, ø32 ø40, ø50		●	●	●	●	●	●	●	●	●	●	●	●	1	300	1	◎		◎	◎	◎	◎	◎	◎	◎	574
		ø63, ø80, ø100		●		●		●	●	●	●	●	●	●	●		300		◎		◎	◎	◎	◎	◎	◎		
Double Acting, High Load Type, Environmentally Resistant Scraper Type with Switch	SSD-KG5 SSD-KG5L	ø20	○	○	○	○	○	○	○	○						1	200	1	○		○	○	○	○	○	○	○	618
		ø25, ø32, ø40, ø50		○	○	○	○	○	○	○	○	○	○	○	○		300		○		○	○	○	○	○	○		
		ø63, ø80, ø100		○		○		○	○	○	○	○	○	○	○		300		○			○	○	○	○	○		

*Length measurement function (Cylinder with Linear Norm Sensor, Super Compact Type LN-A□ Series) is also available. For details, refer to "Pneumatic Cylinder ④" (No. RJ-005AA).

*1: For ø16 to ø25, due to structural reasons, foot brackets (LB, LB2) and flange brackets (FA) cannot be retrofitted to the rod side. Assembly at the time of product shipment is a custom order.

[With Strong Magnetic Field Resistant Switch]

Variation	Model No. Circuit Diagram Symbol	Bore Size (mm)	Standard Stroke (mm) 5	10	15	20	25	30	40	50	60	Standard Stroke (mm) 70	80	90	100	Min. Stroke (mm)	Max. Stroke (mm)	Intermediate Stroke (per mm)	Option: Rod end male thread N	Option: Dedicated body for intermediate stroke S	Mounting bracket: Axial foot LB	Axial foot (Compact type) LB2	Double Clevis CB	Double knuckle clevis (Compact type) CB2	Rod Side Flange FA	Head Side Flange FB	Switch	Page
Double Acting, Single Rod Type With Strong Magnetic Field Resistant Switch	SSD-L4	ø40, ø50				●		●	●	●						20	50	1	◎		◎	◎	◎	◎	◎	◎	◎	634
		ø63, ø80, ø100				●		●	●	●									◎		◎	◎	◎	◎	◎	◎		
Double Acting, High Load Type With Strong Magnetic Field Resistant Switch	SSD-KL4	ø40, ø50				●		●	●	●	●	●	●	●	●	20	150	1	◎		◎	◎	◎	◎	◎	◎	◎	644
		ø63, ø80, ø100				●		●	●	●	●	●	●	●	●		200		◎		◎	◎	◎	◎	◎	◎		
Double Acting, Single Rod Type With Strong Magnetic Field Resistant Switch With Coil Scraper	SSD-G1L4	ø40, ø50				●		●	●	●						20	50	1	◎		◎	◎	◎	◎	◎	◎	◎	654
		ø63, ø80, ø100				●		●	●	●									◎		◎	◎	◎	◎	◎	◎		
Double Acting, High Load Type With Strong Magnetic Field Resistant Switch With Coil Scraper	SSD-KG1L4	ø40, ø50				●		●	●	●	●	●	●	●	●	20	150	1	◎		◎	◎	◎	◎	◎	◎	◎	664
		ø63, ø80, ø100				●		●	●	●	●	●	●	●	●		200		◎		◎	◎	◎	◎	◎	◎		

Combination Availability Table for Variations and Option Items

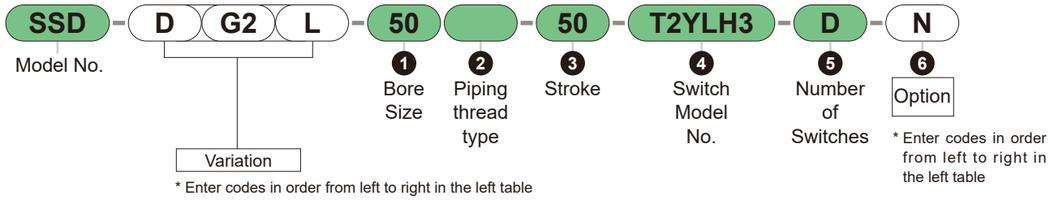
SSD (ø100 or less)

◎ Symbol: Option
○ Symbol: Custom Products
△ Symbol: Manufacturable depending on conditions (Please consult)
× Symbol: Not manufacturable

Category		Category	Variation																								Piping thread			Option	
			Double Acting Single Rod Type	Single Acting, Push Type	Single Acting, Retracting Type	Double Acting Double Rod Type	Back-to-Back Type	Two-Stage Type	With Fall Prevention	Non-Rotating Type	Heat resistant type (120°C)	Low Speed Type	With Heavy-duty Scraper	With Metal Scraper	With Cutting Oil Resistant Scraper (NBR)	With Cutting Oil Resistant Scraper (FKM)	Sputter adhesion prevention type	With Environmentally Resistant Scraper	With Cylinder Switch	With Cylinder Switch (For Strong Magnetic Field)	With Cylinder Switch (For Heat Resistance)	Low speed type	NPT (ø32 to ø100)	G (ø32 to ø100)		Piston Rod Material (Stainless Steel)	Piston Rod End Male Thread
		Code	None	X	Y	D	B	W	Q	M	T	O	G	G1	G2	G3	G4	G5	L	L4	T1L	F	NN	GN		M	N
Variation	Double Acting Single Rod Type	Blank																								◎	◎
	Single Acting, Push Type	X				×	△	○	×	×	△	○	×	△	△	△	△	△	◎	○	○	×	○	○		◎	◎
	Single Acting, Retracting Type	Y				×	○	×	×	△	○	×	△	△	△	△	△	△	◎	○	○	×	○	○		◎	◎
	Double Acting Double Rod Type	D					×	×	○	○	○	○	○	○	○	○	○	○	◎	○	○	○	○	○		◎	◎
	Back-to-Back Type	B						×	○	○	○	○	○	○	○	○	○	○	◎	○	○	○	○	○		◎	◎
	Two-Stage Type	W							×	○	○	○	△	△	△	△	△	△	◎	○	○	○	○	○		◎	◎
	With Fall Prevention	Q								△	×	△	△	△	△	△	△	△	◎	○	×	△	○	○		○	◎
	Non-Rotating Type	M									×	○	×	×	×	×	×	×	◎	○	×	○	○	○		*5	◎
	Heat resistant type (120°C)	T										×	×	○	×	×	×	×	×	×	*2	×	○	○		◎	◎
	Low Speed Type	O											×	×	×	×	×	×	◎	○	×	×	○	○		◎	◎
	With Heavy-duty Scraper	G												×	×	×	×	×	○	○	×	×	○	○		○	○
	With Metal Scraper	G1													×	×	*3	×	◎	○	○	×	○	○		○	○
	With Cutting Oil Resistant Scraper (NBR)	G2														×	×	×	◎	×	×	×	○	○		*1	◎
	With Cutting Oil Resistant Scraper (FKM)	G3															×	×	◎	×	×	×	○	○		*1	◎
	Sputter adhesion prevention type	G4																×	○	○	×	×	○	○		○	○
	With Environmentally Resistant Scraper	G5																	○	○	×	×	○	○		○	○
	With Cylinder Switch	L																		×	×	◎	○	○		◎	◎
	With Cylinder Switch (For Strong Magnetic Field)	L4																			×	○	○	○		○	◎
	With Cylinder Switch (For Heat Resistance)	T1L																				×	○	○		○	◎
	Low speed type	F																					○	○		○	◎
Piping thread	NPT (ø32 to ø100)	NN																						×		×	○
	G (ø32 to ø100)	GN																								×	○
Option	Piston rod material (stainless steel) (including C-ring)	M																									◎
	Piston Rod End Male Thread	N																									
Mounting bracket	Cylinder Switch	Separately Shown	◎	◎	◎	◎	◎	◎	◎	×	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○		◎	◎
	Axial Foot Type	LB	◎	◎	◎	◎	△	△	◎	◎	◎	○	◎	*4	*4	◎	◎	◎	◎	◎	◎	○	○		◎	◎
	Axial foot type (Compact)	LB2	◎	◎	◎	◎	△	△	◎	◎	◎	○	◎	*4	*4	◎	◎	◎	◎	◎	◎	○	○		◎	◎
	Rod Side Flange Type	FA	◎	◎	◎	◎	○	○	◎	◎	◎	○	◎	*4	*4	◎	◎	◎	◎	◎	◎	○	○		◎	◎
	Head Side Flange Type	FB	◎	◎	◎	×	×	×	◎	◎	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○		◎	◎
	Double Clevis Type	CB	◎	◎	◎	×	×	△	◎	◎	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○		◎	◎
	Double knuckle clevis type (Compact)	CB2	◎	◎	◎	×	×	△	◎	◎	◎	○	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○		◎	◎
	Mounting Bolt	Separately Shown	◎	◎	◎	◎	×	×	◎	◎	◎	○	◎	△	△	◎	◎	◎	◎	◎	◎	○	○		△	◎

For outline dimensions when combining variations and options, please consult separately.
*1: For "G2", "G3", the material of the piston rod and C-ring is stainless steel. The "M" code is not necessary.
*2: "T1L" is a heat-resistant specification.
*3: "G4" type has a structure including a metal scraper.
*4: For ø16 to ø25, due to structural reasons, foot brackets (LB, LB2) and flange brackets (FA) cannot be retrofitted to the rod side. Assembly at the time of product shipment is a custom order.
*5: ø12 to ø25 are options, ø32 to ø63 are custom products.

[Model Number Notation Example]



Model No. Compact Cylinder
Variation Double rod/coolant proof scraper with switch
❶Bore size: ø50 mm
❷Port Thread Type: Rc Thread
❸Stroke: 50 mm
❹Switch Model No.: Coolant proof switch, 3 m lead wire
❺Number of Switches: 2 pcs
❻Option: Rod end male thread

*1: Back-to-back type has two cylinders. When indicating each variation, use the following method.
If only S1 has a variation, enter the variation code before the S1 stroke.
(Example) SSD-B-32- = M10-30: Only S1 is non-rotating type.
If only S2 has a variation, enter the variation code before the S2 stroke.
(Example) SSD-B-32-10- = M30: Only S2 is non-rotating type.
If S1 and S2 have the same variation, enter the variation code before the bore size.
(Example) SSD- = MB-32-10-30: Both S1 and S2 are non-rotating type.

Combination Availability Table for Variations and Option Items

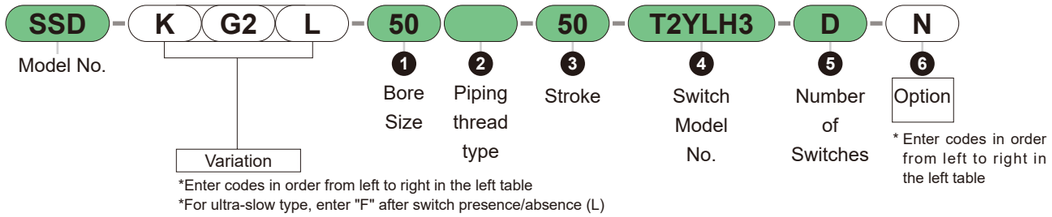
High Load Type SSD-K (ø100 or less)

◎ Symbol: Option
○ Symbol: Custom Products
△ Symbol: Manufacturable depending on conditions (Please consult)
× Symbol: Not manufacturable

Category		Code	Double Acting, High Load Type K	Double Acting Double Rod Type D	Back-to-Back Type B	Two-Stage Type W	Non-Rotating Type M	Heat resistant type (120°C) T	Low Speed Type 0	Low Friction Type U	With Heavy-duty Scraper G	With Metal Scraper G1	With Cutting Oil Resistant Scraper (NBR) G2	With Cutting Oil Resistant Scraper (FKM) G3	Sputter adhesion prevention type G4	With Cylinder Switch L	With Cylinder Switch (For Strong Magnetic Field) L4	With Cylinder Switch (For Heat Resistance) T1L	Low speed type F	NPT (ø32 to ø100) NN	G (ø32 to ø100) GN		With Rubber Air Cushion C			Piston Rod Material (Stainless Steel) M	Piston Rod End Male Thread N
Variation	Double Acting, High Load Type	K	\	○	○	○	○	○	○	◎	○	◎	◎	◎	◎	◎	◎	○	○	○	○		◎			◎	◎
	Double Acting Double Rod Type	D		\	×	×	○	○	○	×	○	○	○	○	○	○	○	○	○	○	○		○			○	○
	Back-to-Back Type	B			\	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		○			○	○
	Two-Stage Type	W				\	○	○	○	×	△	△	△	△	△	○	○	○	○	○	○		×			○	○
	Non-Rotating Type	M					\	×	○	×	×	×	×	×	×	○	○	×	○	○	○		○			*8	○
	Heat resistant type (120°C)	T						\	×	×	×	○	×	×	×	×	×	*2	×	○	○		×			○	○
	Low Speed Type	O							\	×	×	×	×	×	×	○	○	×	×	○	○		○			○	○
	Low Friction Type	U								\		×	×	×	×	◎	◎	×	×	○	○		×			○	◎
	With Heavy-duty Scraper	G									\	×	×	×	×	○	○	×	×	○	○		×			○	○
	With Metal Scraper	G1										\	×	×	*6	◎	○	○	○	○	○		○			○	○
	With Cutting Oil Resistant Scraper (NBR)	G2											\	×	×	◎	×	×	×	○	○		○			*1	◎
	With Cutting Oil Resistant Scraper (FKM)	G3												\	×	◎	×	×	×	○	○		×			*1	◎
	Sputter adhesion prevention type	G4													\	×	×	×	×	○	○		○			○	○
	With Cylinder Switch	L														\	×	×	◎	○	○		◎			◎	◎
	With Cylinder Switch (For Strong Magnetic Field)	L4															\	×	○	○	○		○			○	○
	With Cylinder Switch (For Heat Resistance)	T1L																\	×	○	○		×			○	○
	Low speed type	F																	\	○	○		○			○	○
Piping thread	NPT (ø32 to ø100)	NN																		\	×		○			○	○
	G (ø32 to ø100)	GN																			\		○			○	○
Cushion	With Rubber Air Cushion	C																					\			○	◎
Option	Piston Rod Material (Stainless Steel)	M																								\	◎
	Piston Rod End Male Thread	N																									\
Mounting bracket	Cylinder Switch	Separately Shown	◎	○	○	○	○	×	○	◎	○	◎	◎	◎	◎	◎	◎	○	◎	○	○		◎			◎	◎
	Axial Foot Type	LB	◎	○	△	△	○	○	○	◎	○	◎	*7	*7	◎	◎	◎	○	◎	○	○		◎			◎	◎
	Axial foot type (Compact)	LB2	◎	○	△	△	○	○	○	◎	○	◎	*7	*7	◎	◎	◎	○	◎	○	○		◎			◎	◎
	Rod Side Flange Type	FA	◎	○	○	○	○	○	○	◎	○	◎	*7	*7	◎	◎	◎	○	◎	○	○		◎			◎	◎
	Head Side Flange Type	FB	◎	×	×	×	○	○	○	◎	○	◎	◎	◎	◎	◎	◎	○	◎	○	○		◎			◎	◎
	Double Clevis Type	CB	◎	×	×	△	○	○	○	◎	○	◎	◎	◎	◎	◎	◎	○	◎	○	○		◎			◎	◎
	Double knuckle clevis type (Compact)	CB2	◎	×	×	△	○	○	○	◎	○	◎	◎	◎	◎	◎	◎	○	◎	○	○		◎			◎	◎
	Mounting Bolt	Separately Shown	◎	○	×	×	○	○	○	◎	○	◎	△	◎	◎	◎	◎	○	◎	○	○		◎			△	◎

For outline dimensions when combining variations and options, please consult separately.
*1: For "G2", "G3", the material of the piston rod and C-ring is stainless steel. The "M" code is not necessary.
*2: "T1L" is a heat-resistant specification.
*3: Heat-resistant type does not have rubber cushion.
*4: Double rod type can also be handled with standard double rod type instead of high load type even when exceeding standard stroke.
*5: For tandem type, only the S1 side cylinder is high load type.
*6: "G4" type has a structure including a metal scraper.
*7: For ø16 to ø25, due to structural reasons, foot brackets (LB, LB2) and flange brackets (FA) cannot be retrofitted to the rod side. Assembly at the time of product shipment is a custom order.
*8: ø12 to ø25 are options, ø32 to ø63 are custom products.

[Model Number Notation Example]



Model No. Compact Cylinder
Variation High load/coolant proof scraper with switch
❶Bore size: ø50 mm
❷Port Thread Type: Rc Thread
❸Stroke: 50 mm
❹Switch Model No.: Coolant proof switch, 3 m lead wire
❺Number of Switches: 2 pcs
❻Option: Rod end male thread

*1: Back-to-back type has two cylinders. When indicating each variation, use the following method.
If only S1 has a variation, enter the variation code before the S1 stroke.
(Example) SSD-B-32- = K100-30: Only S1 is high load type.
If only S2 has a variation, enter the variation code before the S2 stroke.
(Example) SSD-B-32-30- = K100: Only S2 is high load type.
If S1 and S2 have the same variation, enter the variation code before the bore size.
(Example) SSD- = KB-32-30-100: Both S1 and S2 are high load type.

Combination Availability Table for Variations and Option Items

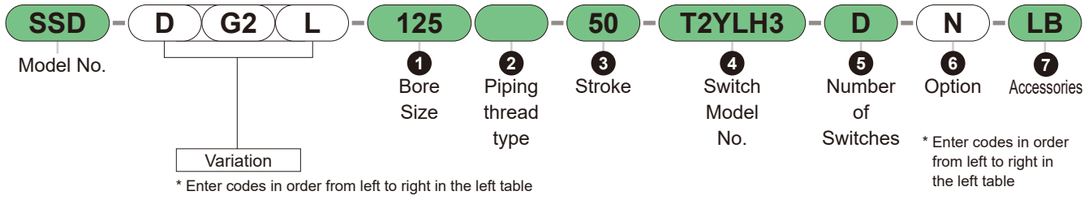
SSD (ø125 or more)

◎ Symbol: Option
○ Symbol: Custom Products
△ Symbol: Manufacturable depending on conditions (Please consult)
× Symbol: Not manufacturable

Category		Category	Variation													Piping thread			Option		
			Double Acting Single Rod Type	Double Acting Double Rod Type	Back-to-Back Type	Two-Stage Type	Heat resistant type (120°C)	Low Speed Type	With Heavy-duty Scraper	With Metal Scraper	With Cutting Oil Resistant Scraper (NBR)	With Cutting Oil Resistant Scraper (FKM)	With Cylinder Switch	Low speed type		NPT	G		Piston Rod Material (Stainless Steel)	Piston rod/C-ring material (stainless steel)	Piston Rod End Male Thread
		Code	None	D	B	W	T	O	G	G1	G2	G3	L	F		NN	GN		M	M1	N
Variation	Double Acting Single Rod Type	Blank														○	○		○	○	◎
	Double Acting Double Rod Type	D			×	×	○	○	○	○	○	○	◎	○		○	○		○	○	◎
	Back-to-Back Type	B				×	○	○	○	○	○	○	○	○		○	○		○	○	○
	Two-Stage Type	W					○	○	△	△	△	△	○	○		○	○		○	○	○
	Heat Resistant Type (120°C)	T						×	×	○	×	×	×	×		○	○		○	○	○
	Low Speed Type	O							×	×	×	×	○	×		○	○		○	○	○
	With Heavy-duty Scraper	G								×	×	×	○	×		○	○		○	○	○
	With Metal Scraper	G1									×	×	○	×		○	○		○	○	○
	With Cutting Oil Resistant Scraper (NBR)	G2										×	○	×		○	○		*1	○	○
	With Cutting Oil Resistant Scraper (FKM)	G3											○	×		○	○		*1	○	○
	With Cylinder Switch	L												○		○	○		○	○	◎
	Low speed type	F														○	○		○	○	○
Piping thread	NPT	NN															×		○	○	○
	G	GN																	○	○	○
Option	Piston Rod Material (Stainless Steel)	M																	×	○	○
	Piston rod/C-ring material (stainless steel)	M1																			○
	Piston Rod End Male Thread	N																			
Mounting bracket	Cylinder Switch	Separately Shown	◎	◎	○	○	×	○	○	○	○	○	◎	○	○	○		○	○	◎
	Axial Foot Type	LB	◎	○	△	△	○	○	○	○	△	△	◎	○	○	○		○	○	◎
	Double Clevis Type	CB	◎	×	×	△	○	○	○	○	△	△	◎	○	○	○		○	○	◎
	Mounting Bolt	Separately Shown	◎	○	×	×	○	○	○	○	△	△	◎	○	○	○		△	△	◎

For outline dimensions when combining variations and options, please consult separately.
*1: For "G2", "G3", the piston rod material is stainless steel. The "M" code is not necessary.

[Model Number Notation Example]



Model No. Compact Cylinder
● Variation Double rod/coolant proof scraper with switch
❶Bore size: ø125 mm
❷Port Thread Type: Rc Thread
❸Stroke: 50 mm
❹Switch Model No. Proximity coolant proof switch, 3 m lead wire
❺Number of Switches: 2 pcs
❻Option: Rod end male thread
❼Accessories: Axial foot

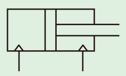
*1: Back-to-back type has two cylinders. When indicating each variation, use the following method.
If only S1 has a variation, enter the variation code before the S1 stroke.
(Example) SSD-B-125-010-30: Only S1 is low speed type.
If only S2 has a variation, enter the variation code before the S2 stroke.
(Example) SSD-B-125-10-030: Only S2 is low speed type.
If S1 and S2 have the same variation, enter the variation code before the bore size.
(Example) SSD-B0-125-10-30: Both S1 and S2 are low speed type.

Compact Cylinder Double Acting, Single Rod Type

SSD Series

● Bore size: ø12, ø16, ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100, ø125, ø140, ø160

Circuit Diagram Symbol



RoHS

Model No. Notation Method

	1	2	3	4	5	6	7	8	9	10
Without Switch (Without magnet for switch)	SSD	12			5			N	LB	I
With Switch (Built-in magnet for switch)	SSD-L	12			5	T0H	R	N	LB	I
Off-delay with T1□ switch (ø12, ø16 only)	SSD-L1	12			10	T2JH	R	N	LB	I
	Model No.	Bore Size	Piping thread type	Cushion	Stroke	Switch Model No.	Number of Switches	Option	Mounting bracket	Accessories

❶Model No.

Code	Content
SSD	Double Acting/Single Rod Type
SSD-L	Double-acting, Single rod type with switch
SSD-L1	Double Acting, Single Rod Type, Off-Delay Type with T1□ Switch (ø12, ø16)

❷Bore Size (mm)

Code	Content	Code	Content
12	ø12	63	ø63
16	ø16	80	ø80
20	ø20	100	ø100
25	ø25	125	ø125
32	ø32	140	ø140
40	ø40	160	ø160
50	ø50		

❸Port Thread Type

Code	Content
Blank	M5 thread (ø12 to ø25) Rc thread (ø32 to ø160)
N	NPT thread (Custom product) (ø32 to ø160)
G	G thread (Custom product) (ø32 to ø160)

❹Cushion

Code	Content
Blank	Without cushion (ø12 to ø100) (With rubber cushion (ø125 to ø160))
D	With rubber cushion (ø12 to ø100)

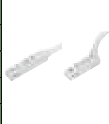
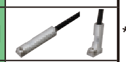
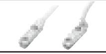
❺Stroke (mm)

Bore Size	Stroke	Intermediate Stroke
ø12, ø16	1 to 30	Every 1 mm
ø20 to ø50	1 to 50	
ø63 to ø100	1 to 50	
ø125 to ø160	1 to 300	

Note: For details on stroke, please refer to P. 364.

❻Switch Model No.

For switch details, please refer to P. 869.
Switches are included to the product and shipped.

Contact	Indicator Lamp Special Function	Wiring (Output)	Load Voltage (V) AC	Load Voltage (V) DC	Load Current (mA) AC	Load Current (mA) DC	Lead Wire *1 Straight	Lead Wire *1 L-shape		
Solid State	1-Color	2-wire	85 to 265	—	5 to 100	—	T1H□	T1V□		
Solid State	1-Color	2-wire	—	10 to 30	—	5 to 20 *2	T2H□	T2V□		
Solid State	1-Color	3-wire (NPN)	—	30 or less	—	100 or less	T3H□	T3V□		
Solid State	1-Color	3-wire (PNP)	—	30 or less	—	100 or less	T3PH□	T3PV□		
Solid State	2-Color	2-wire	—	24 ± 10%	—	5 to 20	T2WH□	T2WV□		
Solid State	2-Color	3-wire (NPN)	—	30 or less	—	50 or less	T3WH□	T3WV□		
Solid State	2-Color Improved Water Resistance	2-wire	—	24 ± 10%	—	5 to 20	T2WLH□	T2WLV□		*3
Solid State	2-Color for AC Magnetic Field	2-wire	—	24 ± 10%	—	5 to 20	T2YD□	–		*4
Solid State	2-Color for AC Magnetic Field	2-wire	—	24 ± 10%	—	5 to 20	T2YDT□	–		
Solid State	1-Color Off-Delay Type	2-wire	—	10 to 30	—	5 to 20 *2	T2JH□	T2JV□		
Solid State	1-Color Flexible Lead Wire Type	2-wire	—	10 to 30	—	5 to 20 *2	T2HR3□	T2VR3□		
Reed	1-Color	2-wire	110	12/24	7 to 20	5 to 50	T0H□	T0V□		
Reed	No Indicator Lamp	2-wire	110	5/12/24	20 or less	50 or less	T5H□	T5V□		
Reed	1-Color	2-wire	110/220	12/24	7 to 20 / 7 to 10	5 to 50	T8H□	T8V□		*5

*1: For "□" in the switch model No., enter the code selected from the "*Lead wire length, connector specification" table.
*2: The maximum load current value above, 20 mA, is at 25°C. If the switch operating ambient temperature is higher than 25°C, it will be lower than 20 mA. (At 60°C, it will be 5 to 10 mA.)
*3: This does not guarantee the water resistance of the cylinder. When using in a water-resistant environment, use of an improved water resistance cylinder is recommended.
*4: AC magnetic field resistant switches cannot be mounted on ø12, ø16.
5: T8 switches cannot be mounted on ø12 to ø32.
*6: Switches other than the above switch model No.s are also available. (Custom products) For details, refer to P. 869.

*** Lead wire length, connector specification**

Code	Content
Blank	1 m (Standard)
3	3 m (Option)
5	5 m (Option)
W *7	M8 Connector, 1PIN (+) 4PIN (-) Lead Wire 0.3 m

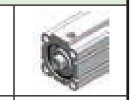
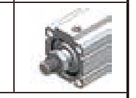
*7: Only T2WLH, T2WLV can be selected.

Example) Lead wire length
1 m T0H
3 m T0H3
5 m T0H5

❼Number of Switches

Code	Content
R	With 1 pc on rod side
H	With 1 pc on head side
D	With 2 pcs

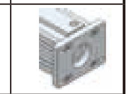
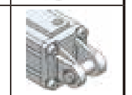
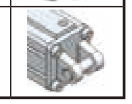
❽Option

	Code	Content	
	Blank	Rod end female thread	
	N	Rod end male thread	
*1, *4	S	Dedicated body for intermediate stroke (ø12 to ø100)	
*2, *3	M	Piston Rod Material (Stainless Steel)	

*1: For ø125 to ø160, option "S" is standard.
*2: Piston rod of ø12 to ø25 is stainless steel as standard. C-type retaining ring changes from steel to stainless steel. The nut material for rod end male thread type will be stainless steel.
*3: ø125 to ø160 are custom products.
*4: For intermediate stroke, refer to P. 365.

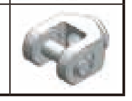
❾Mounting type

Mounting brackets are shipped included to the product.

	Code	Content	
	LB	Axial Foot Type	
*1	LB2	Axial foot type (Compact type) (ø12 to ø100)	
*1	FA	Rod side flange type (ø12 to ø100)	
	FB	Head side flange type (ø12 to ø100)	
	CB	Double Clevis Type (Pin and retaining ring included)	
	CB2	Double knuckle clevis type (Compact type) (ø12 to ø100) (Pin and retaining ring included)	

*1: When LB2 or FA is selected, the piston rod protrusion dimension WF differs from the standard. Refer to outline dimension drawings on P. 369, 370, 373, 374. Also, the model No. specifying the protrusion length will be printed at the end of the model No. on the nameplate included to the main body. For cylinder model No.s when ordering cylinders and LB2/FA brackets separately, please contact us.

❿Accessories

Code	Content	
I	Single Knuckle	
I2	Rod eye (compact)	
Y	Double Knuckle (pin and retaining ring included)	
Y2	Rod clevis (compact) (pin and snap ring included)	

*1: Selectable when rod end male thread "N" is selected.
*2: "I", "I2", "Y", "Y2" cannot be selected at the same time.

*For combination of variations and options, refer to P. 356 to 361.

About Custom Product Specifications

For details, refer to P. 690 to 694.

Code	Content
-XP5	Knuckle Pin/Clevis Pin Split Pin
-XP7	Knuckle fixed by pin driving
-XP8	Knuckle pin/clevis pin split pin specification, knuckle fixed by pin driving
-T2	Fluorine Packing Type
-A2	With 2 Rod Nuts
-R1,R2	With spigot joint
Rod End Shape Modification	Refer to Ending 11.

Model No. Example)

SSD -……… - XP5

Rechargeable Battery Compatible Specification (Catalog No. CC-1226AA)

●Structure usable in rechargeable battery manufacturing processes

SSD -……… - P4*

*Please contact us for details.

Switch Single Unit Model No. Notation Method

SW - T0H

❻ Switch Model No.

Specifications

Item		SSD SSD-L (With Switch)												
Bore size mm		ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100	ø125	ø140	ø160
Actuation method		Double Acting Type												
Operating Fluid		Compressed Air												
Max. Operating Pressure MPa		1.0												
Min. Operating Pressure MPa		0.1							0.05					
Proof pressure MPa		1.6												
Ambient Temperature °C		-10 to 60 (No freezing)												
Port Size		M5				Rc 1/8		Rc 1/4		Rc 3/8				
Stroke tolerance mm	With Rubber Cushion	$^{+2.0}_{0}$												
	Without Cushion	$^{+1.0}_{0}$										–		
Operating Piston Speed mm/s		50 to 500							50 to 300					
Cushion		Rubber cushion available/unavailable selectable										With rubber cushion (Standard)		
Lubrication		Not required (When lubricating, use turbine oil Class 1 ISO VG32)												
Allowable Absorbed Energy J	With Rubber Cushion	0.03	0.05	0.10	0.16	0.16	0.44	0.75	0.78	2.51	3.92	6.52	6.52	7.78
	Without Cushion	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12	0.27	0.56	–		

Stroke Table

Stroke (mm)		Applicable Bore												
		ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100	ø125	ø140	ø160
Standard Stroke	5	●	●	●	●	●	●	●	●	●	●			
	10	●	●	●	●	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●						
	20	●	●	●	●	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●						
	30	●	●	●	●	●	●	●	●	●	●	●	●	●
	40			●	●	●	●	●	●	●	●	●	●	●
	50			●	●	●	●	●	●	●	●	●	●	●
	60											●	●	●
	70											●	●	●
	80											●	●	●
	90											●	●	●
	100											●	●	●
Minimum Stroke (mm) *1, 3		1												
Maximum Stroke (mm)		30		50								300		
Intermediate Stroke *2		Every 1 mm												

When exceeding standard stroke, it becomes high load type (K) (ø12 to ø100). For specifications, refer to P. 388, and for outline dimensions, refer to P. 392 to P. 400.

***1: For the number of switches attachable and minimum stroke, refer to the table below.**

*2: The handling method for intermediate strokes differs for ø12 to ø100 and ø125 to ø160 as follows. For details, refer to the next section.

[ø12 to ø100]

The overall length dimension for intermediate stroke is the same as the standard stroke above it.

[ø125 to ø160]

The overall length dimension for intermediate stroke will be handled with a length dedicated to intermediate stroke.

***3: For minimum stroke for mounting brackets LB, LB2, refer to P. 369, P. 373.**

Number of Switches Mounted and Min. Stroke (mm)

Switch Model No.	T□		T2WL	
Number of Switches / Bore Size (mm)	1	2	1	2
ø12	5	5	20	20
ø16	5	5	20	20
ø20	5	5	20	20
ø25	5	5	20	20
ø32	5	5	20	20
ø40	5	5	15	15
ø50	5	5	15	15
ø63	5	5	10	15
ø80	5	5	10	15
ø100	5	5	10	15
ø125	5	5	10	15
ø140	5	5	10	15
ø160	5	5	10	15

Note: Less than 10 mm with the 2-color LED, off-delay, AC magnetic field proof, T1□ or T8□ switch is not available.

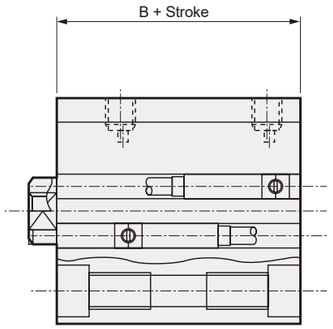
About Intermediate Stroke

● SSD Series

Item	Standard Product		Optional Product	
	Spacer type on standard stroke body		Dedicated Body Type (-S)	
Model number indication	Refer to model No. indication method.		Indicates the "Option" symbol -S in the model No. indication method.	
Manufacturing Content	A spacer is provided on the standard stroke body, manufactured in 1 mm stroke increments.		A dedicated body is manufactured for the specified stroke.	
Stroke Range	Bore Size	Stroke Range	Bore Size	Stroke Range
	12, 16	1 to 29	12, 16	6 (11) to 29 *1
	20 to 50	1 to 49	20 to 50	6 to 49
	63 to 100	1 to 49	63 to 100	6 to 49
	125 to 160	1 to 299 *2	125 to 160	1 to 299 *2
Model Number Notation Example	Model No. SSD-32-38A +2 mm spacer is added to the standard cylinder SSD-32-40 to make it 38 mm. B + Stroke = 23 + 40 = 63		Model No. SSD-32-38-S A dedicated body for 38 strokes is manufactured. B + Stroke = 23 + 38 = 61	

*1: ( ) indicates when equipped with a switch.

*2: For ø125 to ø160, the dedicated body type is standard.



Cylinder Weight Table (Weight with switch is when 2 cylinder switches are included)

● ø12 to ø100 (Unit: g)

Stroke (mm)	5		10		15		20		25		30		40		50	
Bore Size (mm)	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch
ø12	36	86	44	86	53	95	61	103	70	112	72	114	-	-	-	-
ø16	48	104	59	104	69	114	80	125	91	136	102	147	-	-	-	-
ø20	63	138	75	150	88	163	101	176	113	188	126	201	151	226	176	251
ø25	87	178	102	193	118	209	134	225	150	241	165	256	197	288	228	319
ø32	122	236	144	258	166	280	188	302	209	323	231	345	275	389	318	432
ø40	183	326	210	353	236	379	263	406	290	433	316	459	369	512	422	565
ø50	299	493	341	535	383	577	425	619	467	661	510	704	594	788	678	872
ø63	452	731	507	786	-	-	617	896	-	-	727	1006	838	1117	948	1227
ø80	841	1254	928	1341	-	-	1101	1514	-	-	1274	1687	1448	1861	1621	2034
ø100	1319	1886	1433	2,000	-	-	1660	2227	-	-	1888	2455	2115	2682	2343	2910

● ø125 to ø160 (Unit: kg)

Stroke (mm) / Bore Size (mm)	10		20		30		40		50		60		70		80		90		100	
	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch
ø125	4.35	4.45	4.62	4.72	4.88	4.98	5.15	5.25	5.41	5.51	5.68	5.78	5.94	6.04	6.21	6.31	6.47	6.57	6.74	6.84
ø140	6.33	6.44	6.63	6.74	6.94	7.05	7.24	7.35	7.55	7.66	7.85	7.96	8.16	8.27	8.46	8.57	8.77	8.88	9.07	9.18
ø160	8.64	8.76	9.02	9.14	9.4	9.52	9.78	9.9	10.16	10.28	10.54	10.66	10.92	11.04	11.3	11.42	11.68	11.8	12.06	12.18

Theoretical Thrust Table

(Unit: N)

Bore Size (mm)	Operating Direction	Operating Pressure MPa											
		0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø12	Push	-	11.3	17.0	22.6	33.9	45.2	56.5	67.9	79.2	90.5	1.02×10^2	1.13×10^2
	Pull	-	8.48	12.7	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
ø16	Push	-	20.1	30.2	40.2	60.3	80.4	1.01×10^2	1.21×10^2	1.41×10^2	1.61×10^2	1.81×10^2	2.01×10^2
	Pull	-	15.1	22.6	30.2	45.2	60.3	75.4	90.5	1.06×10^2	1.21×10^2	1.36×10^3	1.51×10^2
ø20	Push	-	31.4	47.1	62.8	94.2	1.26×10^2	1.57×10^2	1.88×10^2	2.20×10^2	2.51×10^2	2.83×10^2	3.14×10^2
	Pull	-	23.6	35.3	47.1	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2	1.88×10^2	2.12×10^2	2.36×10^2
ø25	Push	-	49.1k	73.6	98.2	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2	3.93×10^2	4.42×10^2	4.91×10^2
	Pull	-	37.8	56.7	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
ø32	Push	-	80.4	1.21×10^2	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2	6.43×10^2	7.24×10^2	8.04×10^2
	Pull	-	60.3	90.5	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
ø40	Push	-	1.26×10^2	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	-	1.06×10^2	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push	-	1.96×10^2	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	-	1.65×10^2	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Push	1.56×10^2	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	1.40×10^2	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
ø80	Push	2.51×10^2	5.03×10^2	7.54×10^2	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3	4.02×10^3	4.52×10^3	5.03×10^3
	Pull	2.27×10^2	4.54×10^2	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
ø100	Push	3.93×10^2	7.85×10^2	1.18×10^3	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3	6.28×10^3	7.07×10^3	7.85×10^3
	Pull	3.57×10^2	7.15×10^2	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3
ø125	Push	6.13×10^2	1.23×10^3	1.84×10^3	2.45×10^3	3.68×10^3	4.91×10^3	6.14×10^3	7.36×10^3	8.59×10^3	9.82×10^3	1.10×10^4	1.23×10^4
	Pull	5.65×10^2	1.13×10^3	1.70×10^3	2.26×10^3	3.39×10^3	4.52×10^3	5.65×10^3	6.79×10^3	7.92×10^3	9.05×10^3	1.02×10^4	1.13×10^4
ø140	Push	7.69×10^2	1.54×10^3	2.31×10^3	3.08×10^3	4.62×10^3	6.16×10^3	7.70×10^3	9.24×10^3	1.08×10^4	1.23×10^4	1.39×10^4	1.54×10^4
	Pull	7.21×10^2	1.44×10^3	2.16×10^3	2.89×10^3	4.33×10^3	5.77×10^3	7.22×10^3	8.66×10^3	1.01×10^4	1.15×10^4	1.30×10^4	1.44×10^4
ø160	Push	10.1×10^3	2.01×10^3	3.02×10^3	4.02×10^3	6.03×10^3	8.04×10^3	1.01×10^4	1.21×10^4	1.41×10^4	1.61×10^4	1.81×10^4	2.01×10^4
	Pull	9.42×10^2	1.88×10^3	2.83×10^3	3.77×10^3	5.65×10^3	7.54×10^3	9.42×10^3	1.13×10^4	1.32×10^4	1.51×10^4	1.70×10^4	1.88×10^4

Mounting Bracket Model No. Notation Method

Bore Size (mm) / Mounting bracket	ø12	ø16	ø20	ø25	ø32	ø40	ø50
Foot (LB)	SSD-LB-12	SSD-LB-16	SSD-LB-20	SSD-LB-25	SSD-LB-32	SSD-LB-40	SSD-LB-50
Foot (LB2)	SSD-LB2-12	SSD-LB2-16	SSD-LB2-20	SSD-LB2-25	SSD-LB2-32	SSD-LB2-40	SSD-LB2-50
Flange (FA/FB)	SSD-FA-12	SSD-FA-16	SSD-FA-20	SSD-FA-25	SSD-FA-32	SSD-FA-40	SSD-FA-50
Double Clevis (CB)	SSD-CB-12	SSD-CB-16	SSD-CB-20	SSD-CB-25	SSD-CB-32	SSD-CB-40	SSD-CB-50
Double knuckle clevis (CB2)	SSD-CB2-12	SSD-CB2-16	SSD-CB2-20	SSD-CB2-25	SSD-CB2-32	SSD-CB2-40	SSD-CB2-50
Bore Size (mm) / Mounting bracket	**ø63**	**ø80**	**ø100**	**ø125**	**ø140**	**ø160**	
Foot (LB)	SSD-LB-63	SSD-LB-80	SSD-LB-100	SSD-LB-125	SSD-LB-140	SSD-LB-160	
Foot (LB2)	SSD-LB2-63	SSD-LB2-80	SSD-LB2-100	–	–	–	
Flange (FA/FB)	SSD-FA-63	SSD-FA-80	SSD-FA-100	–	–	–	
Double Clevis (CB)	SSD-CB-63	SSD-CB-80	SSD-CB-100	SSD-CB-125	SSD-CB-140	SSD-CB-160	
Double knuckle clevis (CB2)	SSD-CB2-63	SSD-CB2-80	SSD-CB2-100	–	–	–	

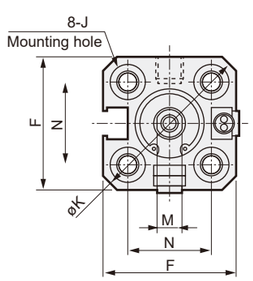
*1: Foot type mounting brackets are 2 pcs/set.
*2: When mounting with through-bolts, refer to the mounting bolt model No. indication method (P. 682).

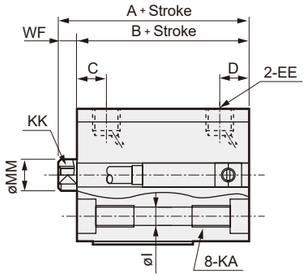
MEMO

Outline Dimension Drawing (Bore size: ø12 to ø25)

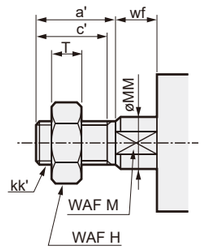
● SSD-(L)-12 to 25

ø12, ø16

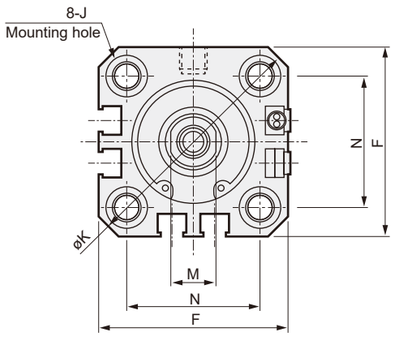


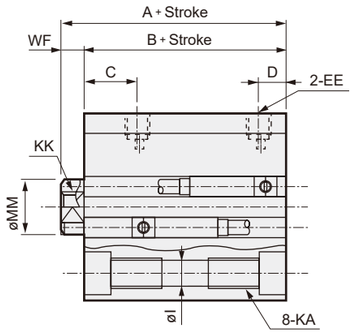


● Rod end male thread part



ø20, ø25





Code / Bore Size (mm)	Dimension with switch A *1	Dimension with switch B *1	Dimension without switch A *1	Dimension without switch B *1	Common dimension C	D	EE	F	I	J	K	KA	KK	M	MM	N	WF
ø12	25.5	22	20.5	17	5.5	5.5	M5	25	3.5	6.5 Counterbore depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
ø16	25.5	22	20.5	17	5.5	5.5	M5	29	3.5	6.5 Counterbore depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
ø20	34	29.5	24	19.5	8	5.5	M5	36	5.5	9 Counterbore depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
ø25	37.5	32.5	27.5	22.5	11	6	M5	40	5.5	9 Counterbore depth 5.5	51	M6 depth 11	M6 Depth 12	10	12	28	5

*1: When calculating A + Stroke and B + Stroke dimensions for intermediate strokes, do not enter the intermediate stroke value for the stroke; instead, enter the value of the standard stroke above it.
(Example) For an intermediate stroke of 7 mm, enter the standard stroke of 10 mm for calculation.
***2: For dimensions with each switch, refer to P. 674 to 681.**
***3: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**

● For 5 mm stroke with switch, the dimensions are as follows.

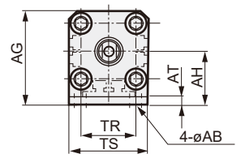
Bore	A + Stroke	B + Stroke
ø12	35.5	32
ø16	35.5	32

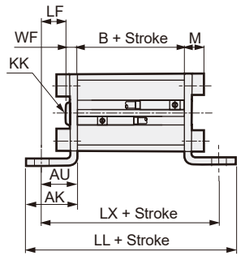
● Rod end male thread part dimension table

Code / Bore Size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5

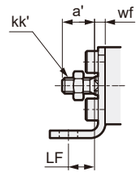
Outline Dimension Drawing (Bore size: ø12 to ø25)

● Axial Foot Type (LB)





● For rod end male thread



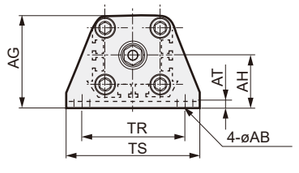
Code / Bore Size (mm)	Common dimension AB	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch *1 B	LL	LX	Without Switch B	LL	LX	For male thread a'	kk'	wf	LF
ø12	6	29.5	17	18	2.3	12	16	25	6.3	M3 depth 6	3.5	8.5	22	58	46	17	53	41	10.5	M5	3.5	8.5
ø16	6	33.5	19	18	2.3	12	16	29	6.3	M4 depth 8	3.5	8.5	22	58	46	17	53	41	12	M6	3.5	8.5
ø20	7	42	24	24	3.2	16	24	36	9.2	M5 depth 7	4.5	11.5	29.5	77.5	61.5	19.5	67.5	51.5	14	M8	4.5	11.5
ø25	7	46	26	24	3.2	16	28	40	9.2	M6 Depth 12	5	11	32.5	80.5	64.5	22.5	70.5	54.5	17.5	M10×1.25	5	11

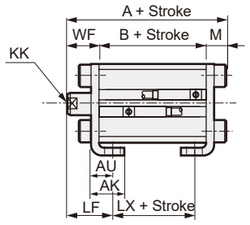
*1: For 5 strokes with switch, the dimensions are as follows.

Bore Size	For female thread B	LL	LX
ø12	27	63	51
ø16	27	63	51

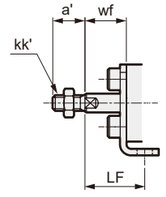
*2: LB cannot be selected when B + stroke is at or less than the stroke below.
ø20: 27 or less

● Axial Foot Type (Compact Type) (LB2)





● For rod end male thread



Code / Bore Size (mm)	Common dimension AB	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch *1 A	B	LX	Without Switch A	B	LX	For male thread a'	kk'	wf	LF
ø12	5	29.5	17	12.5	2	8	34	44	6	M3 depth 6	13.5	19.5	41.5	22	10	36.5	17	5	10.5	M5	13.5	19.5
ø16	5	33.5	19	13	2	8	38	48	6	M4 depth 8	13.5	19.5	41.5	22	10	36.5	17	5	12	M6	13.5	19.5
ø20	7	42	24	15	3.2	9.2	48	62	9.2	M5 depth 7	14.5	20.5	53.2	29.5	17.5	43.2	19.5	7.5	14	M8	14.5	20.5
ø25	7	46	26	16.5	3.2	10.7	52	66	9.2	M6 Depth 12	15	22.5	56.7	32.5	17.5	46.7	22.5	7.5	17.5	M10×1.25	15	22.5

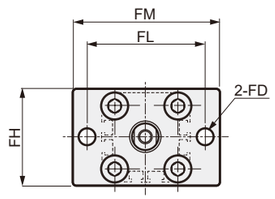
*1: For 5 strokes with switch, the dimensions are as follows.

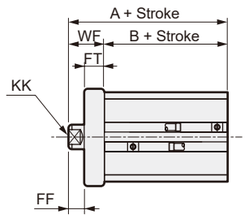
Bore Size	For female thread A	B	LX
ø12	46.5	27	15
ø16	46.5	27	15

*2: If B + Stroke is less than or equal to the values below, LB2 cannot be selected.
ø20: 27 or less

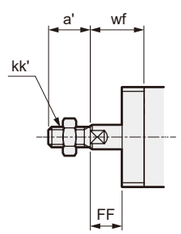
Outline Dimension Drawing (Bore size: ø12 to ø25)

● Rod Side Flange Type (FA)





● For rod end male thread

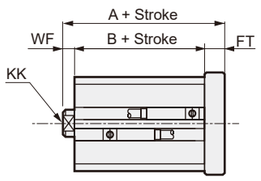


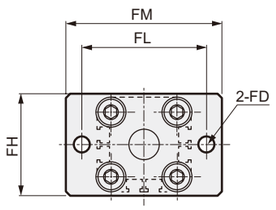
Code / Bore Size (mm)	Common dimension FD	FH	FL	FM	FT	For female thread FF	KK	WF	With Switch *1 A	With Switch *1 B	Without Switch A	Without Switch B	For male thread FF	a'	kk'	wf
ø12	4.5	25	45	55	5.5	8	M3 depth 6	13.5	35.5	22	30.5	17	8	10.5	M5	13.5
ø16	4.5	30	45	55	5.5	8	M4 depth 8	13.5	35.5	22	30.5	17	8	12	M6	13.5
ø20	6.6	39	48	60	8	6.5	M5 depth 7	14.5	44	29.5	34	19.5	6.5	14	M8	14.5
ø25	6.6	42	52	64	8	7	M6 Depth 12	15	47.5	32.5	37.5	22.5	7	17.5	M10×1.25	15

*1: For 5 strokes with switch, the dimensions are as follows.

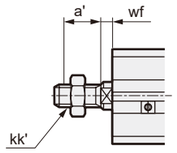
Bore Size	For female thread A	B
ø12	40.5	27
ø16	40.5	27

● Head Side Flange Type (FB)





● For rod end male thread



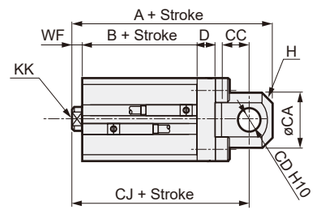
Code / Bore Size (mm)	Common dimension FD	FH	FL	FM	FT	For female thread KK	WF	With Switch *1 A	With Switch *1 B	Without Switch A	Without Switch B	For male thread a'	kk'	wf
ø12	4.5	25	45	55	5.5	M3 depth 6	3.5	31	22	26	17	10.5	M5	3.5
ø16	4.5	30	45	55	5.5	M4 depth 8	3.5	31	22	26	17	12	M6	3.5
ø20	6.6	39	48	60	8	M5 depth 7	4.5	42	29.5	32	19.5	14	M8	4.5
ø25	6.6	42	52	64	8	M6 Depth 12	5	45.5	32.5	35.5	22.5	17.5	M10×1.25	5

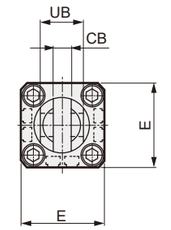
*1: For 5 strokes with switch, the dimensions are as follows.

Bore Size	For female thread A	B
ø12	36	27
ø16	36	27

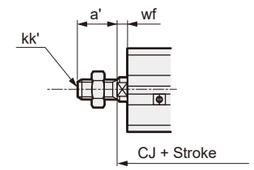
Outline Dimension Drawing (Bore size: ø12 to ø25)

● Double Knuckle Clevis Type (CB)





● For rod end male thread

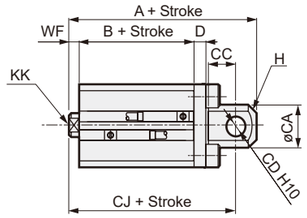


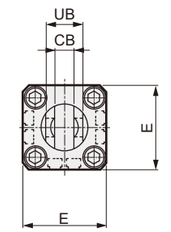
Code / Bore Size (mm)	Common dimension CA	CB	CC	CD	D	E	H	UB	For female thread KK	WF	With Switch *1 A	With Switch *1 B	With Switch *1 CJ	Without Switch A	Without Switch B	Without Switch CJ	For male thread a'	kk'	wf	With Switch *1 CJ	Without Switch CJ
ø12	13.5	6.5 +0.4 +0.1	7	5	5	25	C1.5	12 -0.1 -0.4	M3 depth 6	3.5	45.5	22	39.5	40.5	17	34.5	10.5	M5	3.5	39.5	34.5
ø16	15	6.5 +0.4 +0.1	8	5	5	29	C2	12 -0.1 -0.4	M4 depth 8	3.5	46.5	22	40.5	41.5	17	35.5	12	M6	3.5	40.5	35.5
ø20	24	8 +0.4 +0.1	12	10	8	36	C4	19 -0.1 -0.4	M5 depth 7	4.5	67	29.5	57	57	19.5	47	14	M8	4.5	57	47
ø25	27.5	10 +0.4 +0.1	16	12	8	40	C5	21 -0.1 -0.4	M6 Depth 12	5	76.5	32.5	64.5	66.5	22.5	54.5	17.5	M10×1.25	5	64.5	54.5

*1: For 5 strokes with switch, the dimensions are as follows.

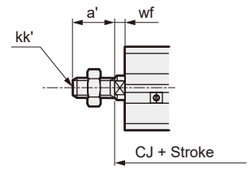
Bore Size	For female thread A	B	CJ	For male thread CJ
ø12	50.5	27	44.5	44.5
ø16	51.5	27	45.5	45.5

● Double clevis type (compact type) (CB2)





● For rod end male thread



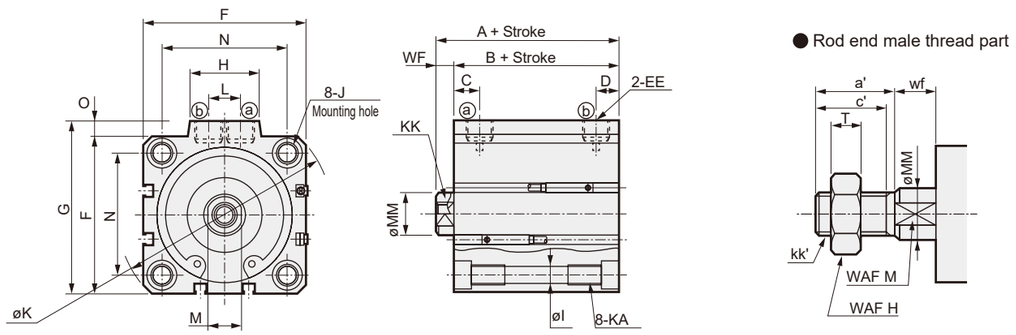
Code / Bore Size (mm)	Common dimension CA	CB	CC	CD	D	E	H	UB	For female thread KK	WF	With Switch *1 A	With Switch *1 B	With Switch *1 CJ	Without Switch A	Without Switch B	Without Switch CJ	For male thread a'	kk'	wf	With Switch *1 CJ	Without Switch CJ
ø12	12	5 +0.4 +0.1	7	5	4	25	C1.5	10 -0.1 -0.3	M3 depth 6	3.5	45.5	22	39.5	40.5	17	34.5	10.5	M5	3.5	39.5	34.5
ø16	15	6.5 +0.4 +0.1	8	5	5	29	C2	12 -0.1 -0.4	M4 depth 8	3.5	46.5	22	40.5	41.5	17	35.5	12	M6	3.5	40.5	35.5
ø20	20	8 +0.4 +0.1	12	8	5	36	C4	16 -0.1 -0.3	M5 depth 7	4.5	61	29.5	52	51	19.5	42	14	M8	4.5	52	42
ø25	24	10 +0.4 +0.1	14	10	5	40	C5	20 -0.1 -0.3	M6 Depth 12	5	67.5	32.5	57.5	57.5	22.5	47.5	17.5	M10×1.25	5	57.5	47.5

*1: For 5 strokes with switch, the dimensions are as follows.

Bore Size	For female thread A	B	CJ	For male thread CJ
ø12	50.5	27	44.5	44.5
ø16	51.5	27	45.5	45.5

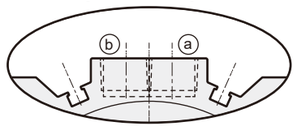
Outline Dimension Drawing (Bore size: ø32 to ø100)

● SSD-(L)-32 to 100



● Rod end male thread part

[Bore size ø100]



*Only ø100 has a switch groove on the port surface

Code / Bore Size (mm)	Dimension with switch A *1	Dimension with switch B *1	Dimension without switch A *1	Dimension without switch B *1	C	D	EE	F	G	H	I	J	K	KA	KK	L	M	MM	N	O	WF
ø32	40	33	30	23	8	8	Rc 1/8	45	49.5	24	5.5	9 Counterbore Depth 5.5	60	M6 depth 11	M8 depth 13	10	14	16	34	4.5	7
ø40	46.5	39.5	36.5	29.5	12	8.5	Rc 1/8	52	57	24	5.5	9 Counterbore Depth 5.5	69	M6 depth 11	M8 depth 13	10	14	16	40	5	7
ø50	48.5	40.5	38.5	30.5	10.5	10.5	Rc 1/4	64	71	33	6.9	11 Counterbore Depth 6.5	86	M8 depth 13	M10 depth 15	15	17	20	50	7	8
ø63	54	46	44	36	13	11	Rc 1/4	77	84	33	8.7	14 Counterbore Depth 9	103	M10 depth 25	M10 depth 15	15	17	20	60	7	8
ø80	63.5	53.5	53.5	43.5	16	13	Rc 3/8	98	104	38	10.5	17.5 Counterbore Depth 11	132	M12 depth 28	M16 depth 21	15	22	25	77	6	10
ø100	75	63	65	53	23	15	Rc 3/8	117	123.5	38	10.5	17.5 Counterbore Depth 11	156	M12 depth 28	M20 depth 27	15	27	30	94	6.5	12

*1: When calculating A + Stroke and B + Stroke dimensions for intermediate strokes, do not enter the intermediate stroke value for the stroke; instead, enter the value of the standard stroke above it. (Example) For an intermediate stroke of 7 mm, enter the standard stroke of 10 mm for calculation.

***2: For dimensions with each switch, refer to P. 674 to 681.**

***3: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**

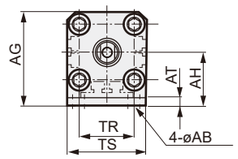
● Rod end male thread part

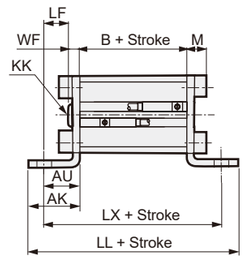
Code / Bore Size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14×1.5	14	16	8	5
ø40	23.5	20.5	22	M14×1.5	14	16	8	5
ø50	28.5	26	27	M18×1.5	17	20	11	5
ø63	28.5	26	27	M18×1.5	17	20	11	5
ø80	35.5	32.5	32	M22×1.5	22	25	13	8
ø100	35.5	32.5	41	M26×1.5	27	30	16	8

Outline Dimension Drawing (Bore size: ø32 to ø100)

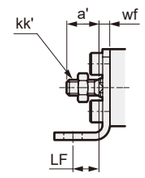
● Axial Foot Type (LB)

· ø32

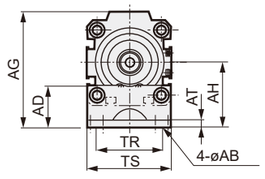


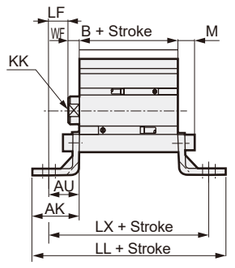


● For rod end male thread

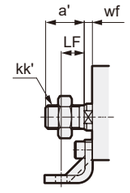


· ø40 to ø100





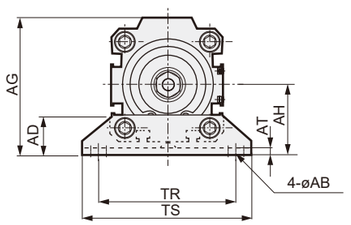
● For rod end male thread

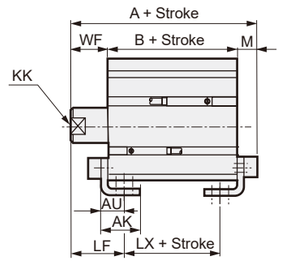


Code / Bore Size (mm)	Common dimension AB	AD	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch B	With Switch LL	With Switch LX	Without Switch B	Without Switch LL	Without Switch LX	For male thread a'	kk'	wf	LF
ø32	7	–	53.5	31	24	3.2	16	34	45	9.2	M8 depth 13	7	9	33	81	65	23	71	55	23.5	M14×1.5	5	11
ø40	7	26	71	40	29	4.5	19	40	52	10	M8 depth 13	7	12	39.5	97.5	77.5	29.5	87.5	67.5	23.5	M14×1.5	5	14
ø50	9	23	79	40	34	4.5	22	46	64	13	M10 depth 15	8	14	40.5	108.5	84.5	30.5	98.5	74.5	28.5	M18×1.5	5	17
ø63	11	33	96.5	51	40	4.5	25	60	77	15	M10 depth 15	8	17	46	126	96	36	116	86	28.5	M18×1.5	5	20
ø80	13	42	116.5	61.5	50	6	35	77	98	18	M16 depth 21	10	25	53.5	153.5	123.5	43.5	143.5	113.5	35.5	M22×1.5	8	27
ø100	13	48	134	69	50	6	35	94	117	18	M20 depth 27	12	23	63	163	133	53	153	123	35.5	M26×1.5	8	27

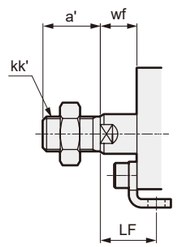
Note: LB cannot be selected when B + stroke is at or less than the stroke value below. ø63: 42 or less, ø80/ø100: 69 or less

● Axial Foot Type (Compact Type) (LB2)





● For rod end male thread

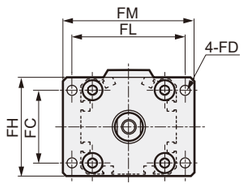


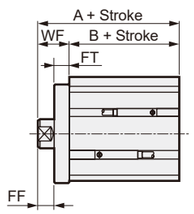
Code / Bore Size (mm)	Common dimension AB	AD	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch A	With Switch B	With Switch LX	Without Switch A	Without Switch B	Without Switch LX	For male thread a'	kk'	wf	LF
ø32	7	18.5	57	30	17	3.2	11.2	57	71	9.2	M8 depth 13	17	25	59.2	33	17	49.2	23	7	23.5	M14×1.5	15	23
ø40	7	18	64	33	18.2	3.2	11.2	64	78	9.2	M8 depth 13	17	25	65.7	39.5	23.5	55.7	29.5	13.5	23.5	M14×1.5	15	23
ø50	9	22	78	39	22.7	3.2	14.7	79	95	11.2	M10 depth 15	18	29.5	69.7	40.5	17.5	59.7	30.5	7.5	28.5	M18×1.5	15	26.5
ø63	11	26	91.5	46	25.2	3.2	16.2	95	113	13.2	M10 depth 15	18	31	77.2	46	20	67.2	36	10	28.5	M18×1.5	15	28
ø80	13	39.5	114	59	30.5	4.5	19.5	118	140	16.5	M16 depth 21	20	35	90	53.5	23.5	80	43.5	13.5	35.5	M22×1.5	18	33
ø100	13	50	136	71	35.5	6	23	137	162	18	M20 depth 27	22	39	103	63	29	93	53	19	35.5	M26×1.5	18	35

Note: LB2 cannot be selected when B + stroke is at or less than the value below.
ø63: 45 or less, ø80: 72 or less, ø100: 69 or less

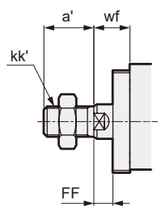
Outline Dimension Drawing (Bore size: ø32 to ø100)

● Rod Side Flange Type (FA)



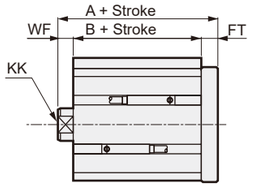


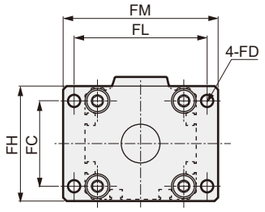
● For rod end male thread



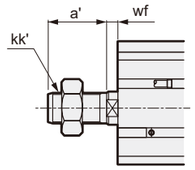
Code / Bore Size (mm)	Common dimension						For female thread							For male thread			
	FC	FD	FH	FL	FM	FT	FF	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	FF	a'	kk'	wf
ø32	34	5.5	48	56	65	8	9	M8 depth 13	17	50	33	40	23	7	23.5	M14×1.5	15
ø40	40	5.5	54	62	72	8	9	M8 depth 13	17	56.5	39.5	46.5	29.5	7	23.5	M14×1.5	15
ø50	50	6.6	67	76	89	9	9	M10 depth 15	18	58.5	40.5	48.5	30.5	6	28.5	M18×1.5	15
ø63	60	9	80	92	108	9	9	M10 depth 15	18	64	46	54	36	6	28.5	M18×1.5	15
ø80	77	11	99	116	134	11	9	M16 depth 21	20	73.5	53.5	63.5	43.5	7	35.5	M22×1.5	18
ø100	94	11	117	136	154	11	11	M20 depth 27	22	85	63	75	53	7	35.5	M26×1.5	18

● Head Side Flange Type (FB)





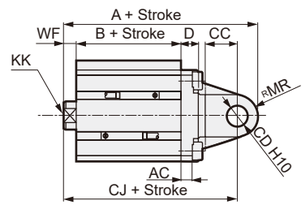
● For rod end male thread

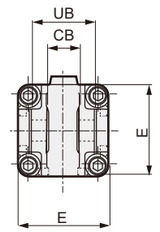


Code / Bore Size (mm)	Common dimension						For female thread						For male thread			
	FC	FD	FH	FL	FM	FT	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	a'	kk'	wf	
ø32	34	5.5	48	56	65	8	M8 depth 13	7	48	33	38	23	23.5	M14×1.5	5	
ø40	40	5.5	54	62	72	8	M8 depth 13	7	54.5	39.5	44.5	29.5	23.5	M14×1.5	5	
ø50	50	6.6	67	76	89	9	M10 depth 15	8	57.5	40.5	47.5	30.5	28.5	M18×1.5	5	
ø63	60	9	80	92	108	9	M10 depth 15	8	63	46	53	36	28.5	M18×1.5	5	
ø80	77	11	99	116	134	11	M16 depth 21	10	74.5	53.5	64.5	43.5	35.5	M22×1.5	8	
ø100	94	11	117	136	154	11	M20 depth 27	12	86	63	76	53	35.5	M26×1.5	8	

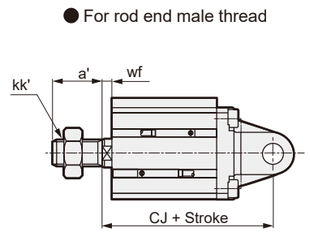
Outline Dimension Drawing (Bore size: ø32 to ø100)

● Double Knuckle Clevis Type (CB)





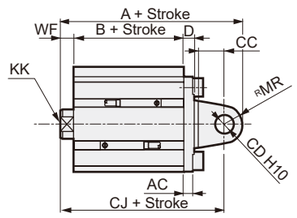
● For rod end male thread

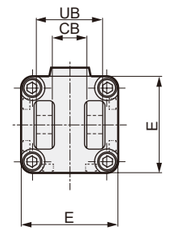


Code / Bore Size (mm)	Common dimension								For female thread							For male thread				
	AC	CB	CC	CD	D	E	MR	UB	KK	WF	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	a'	kk'	wf	With Switch *1 CJ	Without Switch CJ
ø32	9.5	10 +0.4 +0.1	16	12	10	45	12	21 -0.1 -0.4	M8 depth 13	7	82	33	70	72	23	60	23.5	M14×1.5	5	68	58
ø40	6.5	18 +0.4 +0.1	18	12	10	52	12	36 -0.1 -0.4	M8 depth 13	7	90.5	39.5	78.5	80.5	29.5	68.5	23.5	M14×1.5	5	76.5	66.5
ø50	6.5	18 +0.4 +0.1	18	12	10	64	12	36 -0.1 -0.4	M10 depth 15	8	92.5	40.5	80.5	82.5	30.5	70.5	28.5	M18×1.5	5	77.5	67.5
ø63	7.5	20 +0.4 +0.1	24	14	10	77	16	40 -0.1 -0.4	M10 depth 15	8	107	46	91	97	36	81	28.5	M18×1.5	5	88	78
ø80	10.5	28 +0.4 +0.1	30	20	14	98	20	56 -0.1 -0.3	M16 depth 21	10	135.5	53.5	115.5	125.5	43.5	105.5	35.5	M22×1.5	8	113.5	103.5
ø100	10.5	28 +0.4 +0.1	30	20	16	118	20	56 -0.1 -0.3	M20 depth 27	12	147	63	127	137	53	117	35.5	M26×1.5	8	123	113

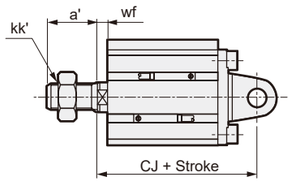
*1: Pin and retaining ring are included.

● Double clevis type (compact type) (CB2)





● For rod end male thread

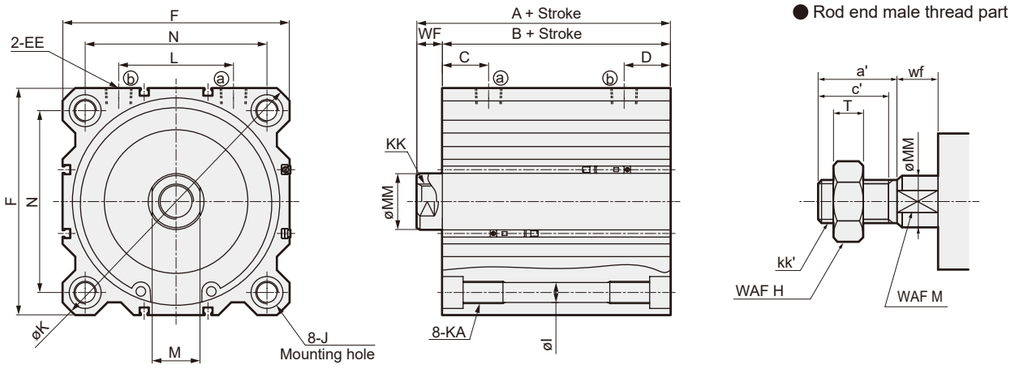


Code / Bore Size (mm)	Common dimension								For female thread							For male thread				
	AC	CB	CC	CD	D	E	MR	UB	KK	WF	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	a'	kk'	wf	With Switch *1 CJ	Without Switch CJ
ø32	4.5	18 +0.4 +0.1	14	10	5	45	10	36 -0.1 -0.3	M8 depth 13	7	70	33	60	60	23	50	23.5	M14×1.5	5	58	48
ø40	5	18 +0.4 +0.1	14	10	6	52	10	36 -0.1 -0.4	M8 depth 13	7	78.5	39.5	68.5	68.5	29.5	58.5	23.5	M14×1.5	5	66.5	56.5
ø50	6	22 +0.4 +0.1	20	14	7	64	14	44 -0.1 -0.3	M10 depth 15	8	90.5	40.5	76.5	80.5	30.5	66.5	28.5	M18×1.5	5	73.5	63.5
ø63	7	22 +0.4 +0.1	20	14	8	77	14	44 -0.1 -0.3	M10 depth 15	8	98	46	84	88	36	74	28.5	M18×1.5	5	81	71
ø80	9	28 +0.4 +0.1	27	18	10	98	18	56 -0.1 -0.3	M16 depth 21	10	119.5	53.5	101.5	109.5	43.5	91.5	35.5	M22×1.5	8	99.5	89.5
ø100	12	32 +0.4 +0.1	31	22	13	117	22	64 -0.1 -0.3	M20 depth 27	12	142	63	120	132	53	110	35.5	M26×1.5	8	116	106

*1: Pin and retaining ring are included.

Outline Dimension Drawing (Bore size: ø125 to ø160)

● SSD-(L)-125 to 160



● Rod end male thread part

Code / Bore Size (mm)	Common dimension											
	A	B	C	D	EE	F	I	J	K	KA	KK
ø125	88	72	23.5	23.5	Rc3/8	142	12.5	20 Counterbore Depth 13	190	M14 depth 25	M22 depth 30
ø140	98	82	27	27	Rc3/8	158	12.5	20 Counterbore Depth 13	210	M14 depth 25	M22 depth 30
ø160	108	91	30	30	Rc3/8	178	14.7	23 Counterbore depth 15.2	238	M16 depth 28	M24 depth 33

Switch dimension / Bore Size (mm)	L	M	MM	N	WF
ø125	72	30	35	114	16
ø140	80	30	35	128	16
ø160	90	36	40	144	17

***1: For dimensions with each switch, refer to P. 674 to 681.**
***2: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**

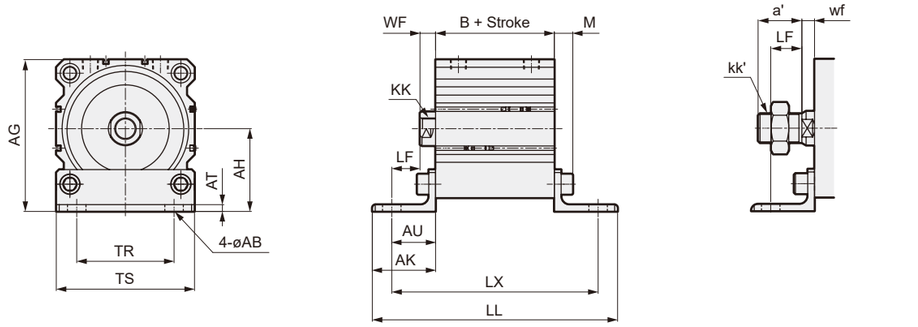
● Rod end male thread part dimension table

Code / Bore Size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø125	45	42	46	M30×1.5	30	35	18	13
ø140	45	42	46	M30×1.5	30	35	18	13
ø160	50	47	55	M36×1.5	36	40	21	14

Outline Dimension Drawing (Bore size: ø125 to ø160)

● Axial Foot Type (LB)

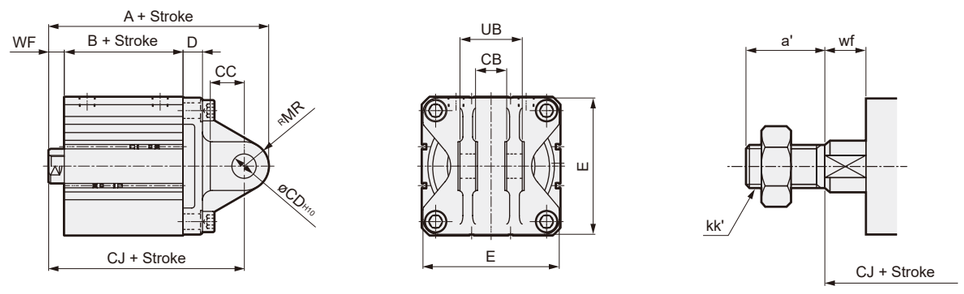
● For rod end male thread



Code / Bore Size (mm)	Common dimension										For female thread						For male thread			
	AB	AD	AG	AH	AK	AT	AU	TR	TS	M	KK	WF	LF	B	LL	LX	a'	kk'	wf	LF
ø125	19	43	156	85	65	7	45	100	142	21	M22 depth 30	16	29	72	202	162	45	M30×1.5	13	32
ø140	19	51	179	100	70	8	50	112	158	22	M22 depth 30	16	34	82	222	182	45	M30×1.5	13	37
ø160	19	52	195	106	73	10	53	118	178	26	M24 depth 33	17	36	91	237	197	50	M36×1.5	14	39

● Double Knuckle Clevis Type (CB)

● For rod end male thread



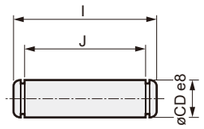
Code / Bore Size (mm)	Common dimension								For female thread					For male thread			
	AC	CB	CC	CD	D	E	MR	UB	KK	WF	A	B	CJ	a'	kk'	wf	CJ
ø125	18	$32^{+0.1}_{+0.1}$	35	25	20	140	25	64	M22 depth 30	16	176	72	151	45	M30×1.5	13	148
ø140	20	$36^{+0.1}_{+0.1}$	40	28	22	154	28	72	M22 depth 30	16	201	82	173	45	M30×1.5	13	170
ø160	22	$40^{+0.1}_{+0.1}$	40	32	24	174	32	80	M24 depth 33	17	215	91	183	50	M36×1.5	14	180

Outline Dimension Drawing

● Double Knuckle Clevis (CB) Attached Pin

· ø12 to ø100

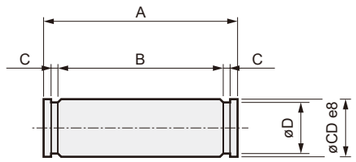
Material: Steel
Zinc Chromate



Model No.	Applicable Bore Size	I	J	CD	Retaining Ring to Use	Weight (g)
SSD-P-12	ø12	18	13	5	E-type 4	2.8
SSD-P-16	ø16	18	13	5	E-type 4	2.8
SSD-P-20	ø20	25	20	10	E-type 9	17
SSD-P-25	ø25	27	22	12	E-type 9	25
SSD-P-32	ø32	27	22	12	E-type 9	25
SSD-P-40	ø40	43.5	36.2	12	Shaft C-type 12	39
SSD-P-50	ø50	43.5	36.2	12	Shaft C-type 12	39
SSD-P-63	ø63	47.5	40.2	14	Shaft C-type 14	58
SSD-P-80	ø80	64	56.2	20	Shaft C-type 20	156
SSD-P-100	ø100	64	56.2	20	Shaft C-type 20	156

· ø125 to ø160

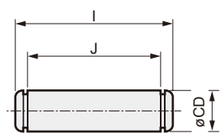
Material: Steel
Zinc Chromate



Model No.	Applicable Bore Size	A	B	C	CD	D	Retaining Ring to Use	Weight (g)
SSD-P-125	ø125	75	66.3	1.35	25	23.9	Shaft C-type 25	250
SSD-P-140	ø140	84	74.7	1.65	28	26.6	Shaft C-type 28	400
SSD-P-160	ø160	92	82.7	1.65	32	30.3	Shaft C-type 32	500

● Double Knuckle Clevis (CB2) Attached Pin (P2)

Material: Steel
Zinc Chromate



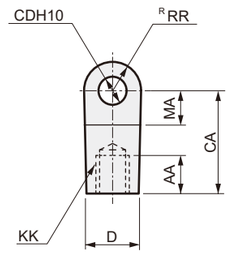
Model No.	Applicable Bore Size	I	J	CD	Retaining Ring to Use	Weight (g)
SSD-P2-12	ø12	15.2	10.2	$5^{0.01}_{0.028}$	E-type 4	2.4
SSD-P2-16	ø16	18	13	$5^{0.01}_{0.028}$	E-type 4	2.8
SSD-P2-20	ø20	21	16.2	$8^{0.025}_{0.047}$	Shaft C-type 8	8.2
SSD-P2-25	ø25	25.6	20.2	$10^{0.025}_{0.047}$	Shaft C-type 10	16
SSD-P2-32	ø32, ø40	41.6	36.2	$10^{0.025}_{0.047}$	Shaft C-type 10	25
SSD-P2-50	ø50, ø63	50.6	44.2	$14^{0.032}_{0.059}$	Shaft C-type 14	60
SSD-P2-80	ø80	64	56.2	$18^{0.032}_{0.059}$	Shaft C-type 18	124
SSD-P2-100	ø100	72	64.2	$22^{0.04}_{0.083}$	Shaft C-type 22	213

Outline Dimension Drawing

● Single Knuckle (I)

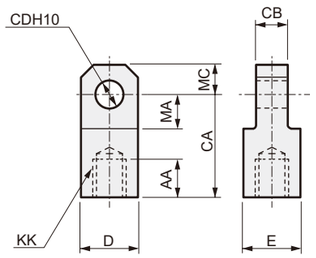
· ø12, ø16, ø40, ø50, ø63, ø80, ø100

Material: ø12 to ø25 Steel
ø32 to ø160 Cast iron
ø12 to ø32 Zinc Chromate
ø40 to ø100 Painted



· ø20, ø25, ø32, ø125, ø140, ø160

Material: ø12 to ø25 Steel
ø32 to ø160 Cast iron
ø12 to ø32 Zinc Chromate
ø40 to ø100 Painted



Model No.	Applicable Bore size (mm)	AA	CA	CB	CD	D	E	KK	MA	MC	RR	Weight (g)
P2-I-16	12	8	25	$6.4^{0}_{-0.1}$	$5^{-0.048\ 0}$	12	12	M5	14	–	10	21
SSD-I-16	16	8	25	$6.5^{-0.1}_{-0.2}$	$5^{-0.048\ 0}$	12	12	M6	14	–	10	21
SSD-I-20	20	13.5	30	$8^{-0.1}_{-0.2}$	$10^{-0.058\ 0}$	19	19	M8	13	10	–	65
M1-I-30	25	14	36	$10^{-0.1}_{-0.2}$	$12^{-0.070}_{0}$	25	19	M10×1.25	16	12	–	106
SSD-I-32	32	15	36	$10^{-0.1}_{-0.2}$	$12^{-0.070}_{0}$	25	19	M14×1.5	16	12	–	106
SSD-I-40	40	20	50	$18^{-0.1}_{-0.4}$	$12^{-0.070}_{0}$	27	27	M14×1.5	21	–	16	260
SSD-I-50	50	21	50	$18^{-0.1}_{-0.4}$	$12^{-0.070}_{0}$	27	27	M18×1.5	21	–	16	240
SSD-I-63	63	21	50	$20^{-0.1}_{-0.4}$	$14^{-0.070}_{0}$	27	27	M18×1.5	21	–	16	250
SSD-I-80	80	30	70	$28^{-0.1}_{-0.4}$	$20^{-0.084}_{0}$	46	41	M22×1.5	30	–	25	880
SSD-I-100	100	30	70	$28^{-0.1}_{-0.4}$	$20^{-0.084}_{0}$	46	41	M26×1.5	30	–	25	840
SSD-I-125	125·140	50	85	$32^{-0.1}_{-0.4}$	$25^{-0.084}_{0}$	55	55	M30×1.5	32	27.5	–	1250
SSD-I-160	160	60	105	$40^{-0.1}_{-0.4}$	$32^{-0.100}_{0}$	70	70	M36×1.5	40	35	–	2550

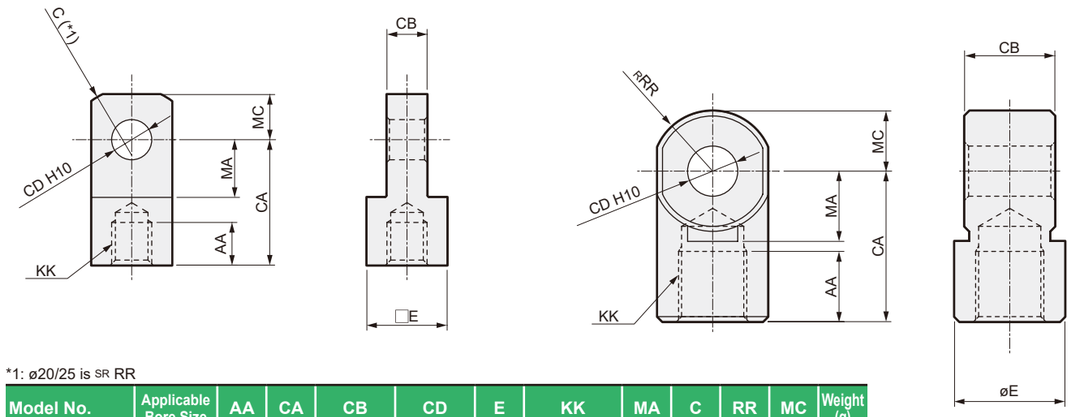
● Single Knuckle (Compact Type) (I2)

· ø12 to ø25

Material: Steel
Zinc Chromate

· ø32 to ø100

Material: Cast Iron
ø32 Zinc chromate
ø40 to ø100 Painted



*1: ø20/25 is SR RR

Model No.	Applicable Bore Size	AA	CA	CB	CD	E	KK	MA	C	RR	MC	Weight (g)
SSD-I2-12	ø12	6	16	$5^{-0.2}_{-0.4}$	$5^{+0.048\ 0}$	□10	M5×0.8	7	2	–	5.5	9
SSD-I2-16	ø16	8	25	$6.5^{-0.2}_{-0.4}$	$5^{+0.048\ 0}$	□12	M6×1	14	2	–	7	21
SSD-I2-20	ø20	8.5	25	$8^{-0.2}_{-0.4}$	$8^{+0.058\ 0}$	□16	M8×1.25	11.5	–	13.4	9	38
SSD-I2-25	ø25	10.5	30	$10^{-0.2}_{-0.4}$	$10^{+0.058\ 0}$	□20	M10×1.25	14	–	17.1	11	71
SSD-I2-32	ø32, ø40	14	30	$18^{-0.3}_{-0.5}$	$10^{+0.058\ 0}$	ø22	M14×1.5	14	–	12	12	74
SSD-I2-50	ø50, ø63	18	40	$22^{-0.3}_{-0.5}$	$14^{+0.070}_{0}$	ø28	M18×1.5	20	–	16	16	155
SSD-I2-80	ø80	21	50	$28^{-0.3}_{-0.5}$	$18^{+0.070}_{0}$	ø38	M22×1.5	27	–	21	21	380
SSD-I2-100	ø100	21	55	$32^{-0.3}_{-0.5}$	$22^{+0.084}_{0}$	ø44	M26×1.5	31	–	24	24	550

Outline Dimension Drawing

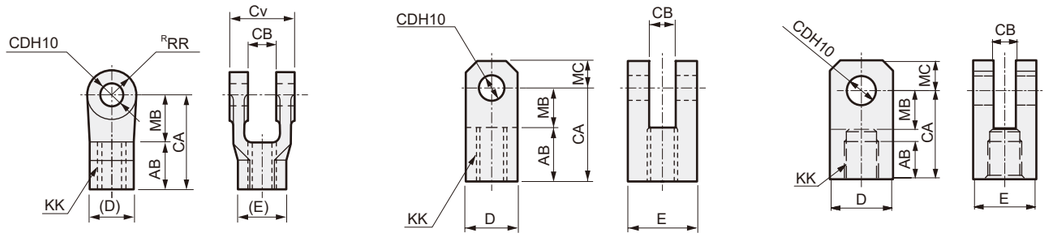
● Double Knuckle (Y)

· ø12, ø16, ø40, ø50, ø63, ø80, ø100, ø125, ø140, ø160

· ø20, ø25 Material: ø12 to ø32 Steel
ø40 to ø100 Cast iron
ø12 to ø25 Zinc Chromate
ø32 to ø100 Painted

*1: Pins and retaining rings are included.
*2: AB is thread depth

· ø32

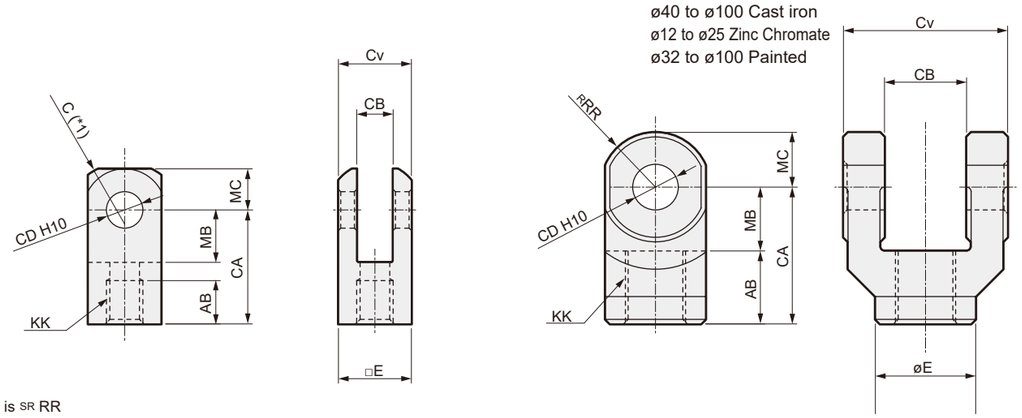


Model No.	Applicable Bore size (mm)	AB	CA	CB	CD	Cv	D	E	KK	MB	MC	RR	Weight (g)
P2-Y-16	12	11	21	6.5 $^{+0.2}_{+0.1}$	5 $^{-0.048}_{0}$	12	12	12	M5	10	–	10	20
SSD-Y-16	16	11	21	6.5 $^{+0.2}_{+0.1}$	5 $^{-0.048}_{0}$	12	12	12	M6	10	–	10	20
SSD-Y-20	20	17	30	8 $^{+0.3}_{+0.1}$	10 $^{-0.058}_{0}$	19	19	19	M8	13	10	–	100
M1-Y-30	25	20	36	10 $^{+0.3}_{+0.1}$	12 $^{-0.070}_{0}$	25	25	25	M10×1.25	16	12	–	197
SSD-Y-32	32	15	36	10 $^{+0.3}_{+0.1}$	12 $^{-0.070}_{0}$	25	25	25	M14×1.5	16	12	–	197
SSD-Y-40	40	24	50	18 $^{+0.4}_{+0.1}$	12 $^{-0.070}_{0}$	36	(27)	31.2	M14×1.5	26	–	16	250
SSD-Y-50	50	24	50	18 $^{+0.4}_{+0.1}$	12 $^{-0.070}_{0}$	36	(27)	31.2	M18×1.5	26	–	16	240
SSD-Y-63	63	24	50	20 $^{+0.4}_{+0.1}$	14 $^{-0.070}_{0}$	40	(27)	31.2	M18×1.5	26	–	16	260
SSD-Y-80	80	35	70	28 $^{+0.4}_{+0.1}$	20 $^{-0.084}_{0}$	56	(41)	47.3	M22×1.5	35	–	25	900
SSD-Y-100	100	35	70	28 $^{+0.4}_{+0.1}$	20 $^{-0.084}_{0}$	56	(41)	47.3	M26×1.5	35	–	25	850
SSD-Y-125	125·140	50	85	32 $^{+0.4}_{+0.1}$	25 $^{-0.084}_{0}$	64	(46)	53.1	M30×1.5	35	–	27.5	1300
SSD-Y-160	160	60	105	40 $^{+0.4}_{+0.1}$	32 $^{-0.100}_{0}$	80	(55)	63.5	M36×1.5	45	–	35	2550

● Rod clevis (compact) (Y2)

· ø12 to ø25

· ø32 to ø100 Material: ø12 to ø32 Steel
ø40 to ø100 Cast iron
ø12 to ø25 Zinc Chromate
ø32 to ø100 Painted



*1: ø20/25 is SR RR
*2: Pins and retaining rings are included.

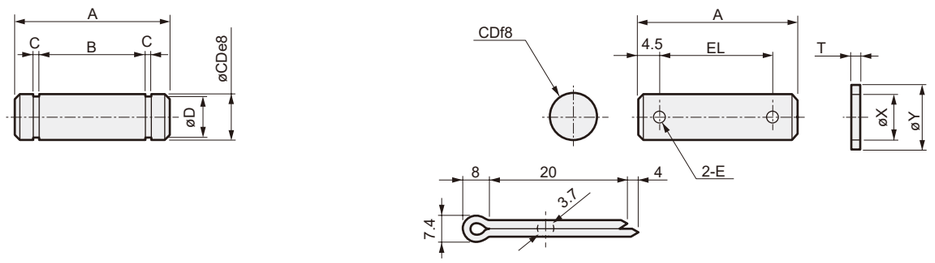
Model No.	Applicable Bore Size	AB	CA	CB	CD	Cv	E	KK	MB	C	RR	MC	Weight (g)
SSD-Y2-12	ø12	6	16	5 $^{+0.4}_{+0.2}$	5 $^{-0.048}_{0}$	10	□10	M5×0.8	7	2	–	5.5	12
SSD-Y2-16	ø16	11	21	6.5 $^{+0.4}_{+0.2}$	5 $^{-0.048}_{0}$	12	□12	M6×1	10	2	–	7	20
SSD-Y2-20	ø20	13.5	25	8 $^{+0.4}_{+0.2}$	8 $^{-0.058}_{0}$	16	□16	M8×1.25	11.5	–	13.4	9	45
SSD-Y2-25	ø25	16	30	10 $^{+0.4}_{+0.2}$	10 $^{-0.058}_{0}$	20	□20	M10×1.25	14	–	17.1	11	84
SSD-Y2-32	ø32, ø40	16	30	18 $^{+0.5}_{+0.3}$	10 $^{-0.058}_{0}$	36	ø22	M14×1.5	14	–	12	12	120
SSD-Y2-50	ø50, ø63	20	40	22 $^{+0.5}_{+0.3}$	14 $^{-0.070}_{0}$	44	ø28	M18×1.5	20	–	16	16	257
SSD-Y2-80	ø80	23	50	28 $^{+0.5}_{+0.3}$	18 $^{-0.070}_{0}$	56	ø38	M22×1.5	27	–	21	21	589
SSD-Y2-100	ø100	24	55	32 $^{+0.5}_{+0.3}$	22 $^{-0.084}_{0}$	64	ø44	M26×1.5	31	–	24	24	933

Outline Dimension Drawing

● Pin for Double Knuckle (Y) (P)

· ø12, ø16, ø40 to ø160

· ø20 to ø32 Material: Steel
Zinc Chromate

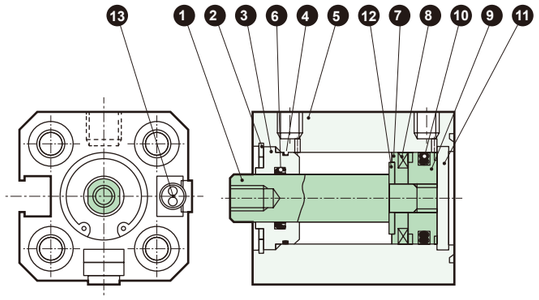


Model No.	Applicable Bore size (mm)	A	B	C	D	CD	E	EL	T	X	Y	Retaining ring/ cotter pin to use	Weight (g)
P2-P-16	12, 16	18	13	0.7	4	5 $^{-0.010}_{-0.028}$	–	–	–	–	–	E-type retaining ring 4	3.0
M1-P-20	20	37	–	–	–	10 $^{-0.013}_{-0.035}$	4	28	1.6	10.5	18	Split Pin	29
M1-P-30	25, 32	46	–	–	–	12 $^{-0.018-}_{0.043}$	4	37	2.3	12.5	22	Split Pin	50
S1-P-40	40·50	43.5	36.2	1.15	11.5	12 $^{-0.032}_{-0.059}$	–	–	–	–	–	Shaft C-type 12	40
S1-P-63	63	47.5	40.2	1.15	13.4	14 $^{-0.032}_{-0.059}$	–	–	–	–	–	Shaft C-type 14	60
S1-P-80	80·100	64	56.2	1.35	19	20 $^{-0.040}_{-0.073}$	–	–	–	–	–	Shaft C-type 20	160
SCS2-125-P	125·140	75	66.3	1.35	23.9	25 $^{-0.040}_{-0.073}$	–	–	–	–	–	Shaft C-type 25	250
SCS2-160-P	160	92	82.7	1.65	30.3	32 $^{-0.050}_{-0.089}$	–	–	–	–	–	Shaft C-type 32	500

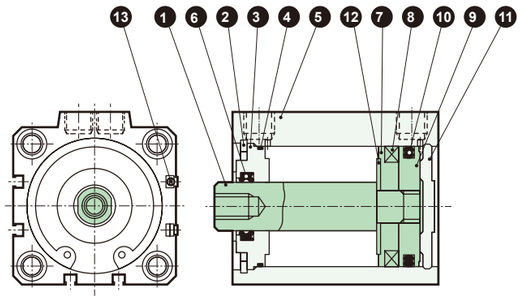
● Pin for Double Knuckle (Y2)
Common with pin for double clevis (CB2) (P2).
For outline dimensions, refer to P. 378.

Internal Structure Diagram/Material (Bore size: ø12 to 50) (Without Cushion)

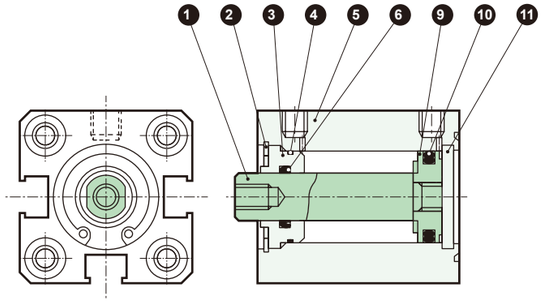
● SSD-L-12 to 25 (Double Acting Type with Switch)



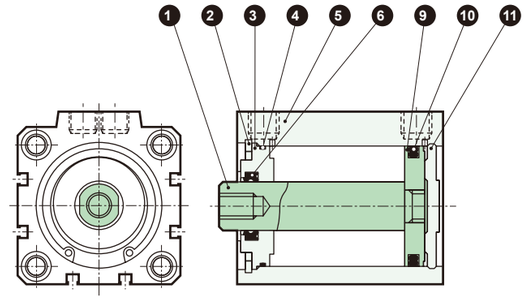
● SSD-L-32 to 50 (Double Acting Type with Switch)



● SSD-12 to 25 (Double Acting Type)



● SSD-32 to 50 (Double Acting Type)



Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Piston Rod	ø12 to ø25: Stainless steel ø32 to ø50: Steel	ø16 to ø50: Industrial chrome plating	8	Magnet	Plastic	
2	C-type retaining ring	Steel	Zinc phosphate	9	Piston	Aluminum Alloy	Chromate
3	Rod Metal	Aluminum Alloy	Alumite	10	Piston Packing	Nitrile Rubber	
4	Rod metal gasket	Nitrile Rubber		11	Cover	ø12 to ø25: Stainless steel ø32 to ø50: Aluminum alloy	ø32 to ø50: Alumite
5	Cylinder Body	Aluminum Alloy	Hard Anodized				
6	Rod Packing	Nitrile Rubber		12	Spacer washer	Stainless Steel	ø20 to ø50
7	Spacer	ø12: Aluminum alloy ø16 to ø50: Special resin	ø12: Chromate	With Switch			
				13	Switch		

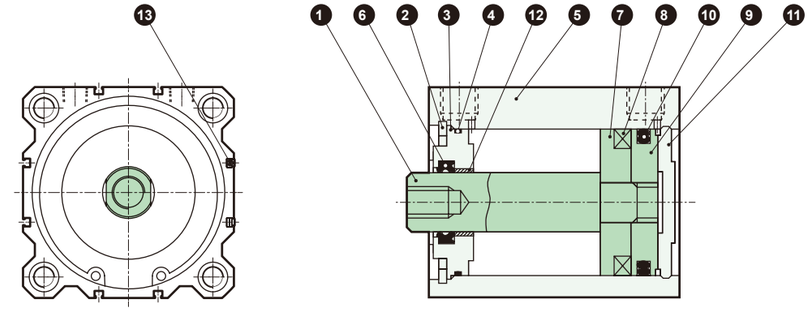
Mounting Bracket Material

Mounting bracket	Material	Remarks
LB LB2	Steel	Zinc Chromate
FA FB	Steel	Zinc Chromate
CB CB2	Cast Iron	Painting

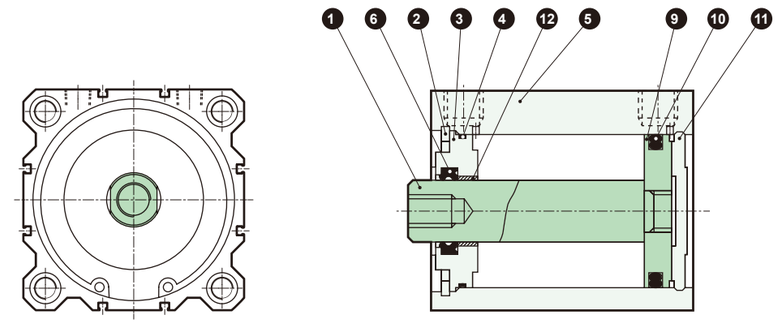
For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Internal Structure Diagram/Material (Bore size: ø63 to ø100) (Without Cushion)

● SSD-L-63 to 100 (Double Acting Type with Switch)



● SSD-63 to 100 (Double Acting Type)

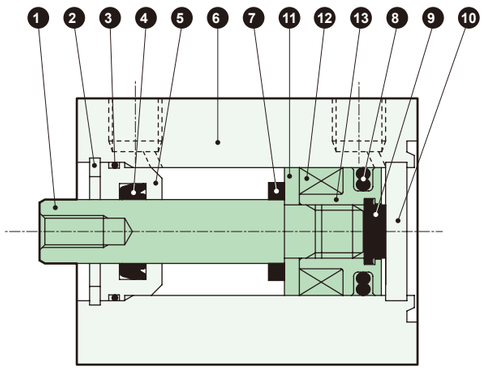


Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Piston Rod	Steel	Industrial Hard Chrome Plating	8	Magnet	Plastic	
2	C-type retaining ring	Steel	Zinc phosphate	9	Piston	Aluminum Alloy	Chromate
3	Rod Metal	Aluminum Alloy	Chromate	10	Piston Packing	Nitrile Rubber	
4	Rod metal gasket	Nitrile Rubber		11	Cover	Aluminum Alloy	Alumite
5	Cylinder Body	Aluminum Alloy	Hard Anodized	12	Bushing	Bearing Alloy	
6	Rod Packing	Nitrile Rubber		With Switch			
7	Spacer	Aluminum Alloy	Chromate	13	Switch		

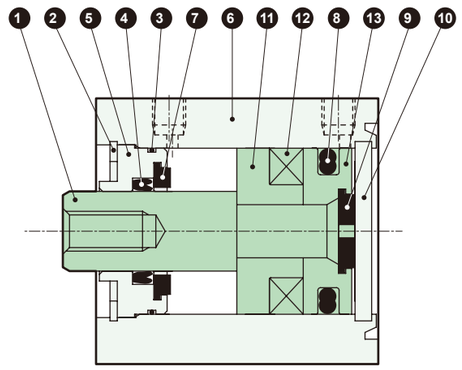
For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Internal Structure Diagram/Material (Bore size: ø12 to ø32) (With Rubber Cushion)

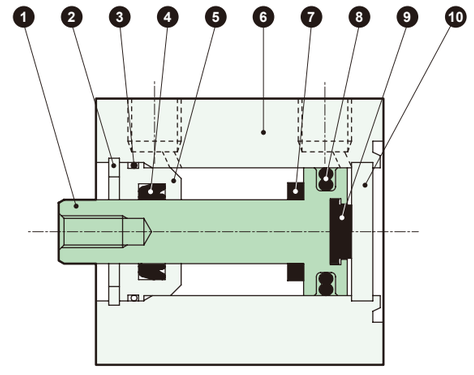
● SSD-L-12D (Double Acting Type with Switch)



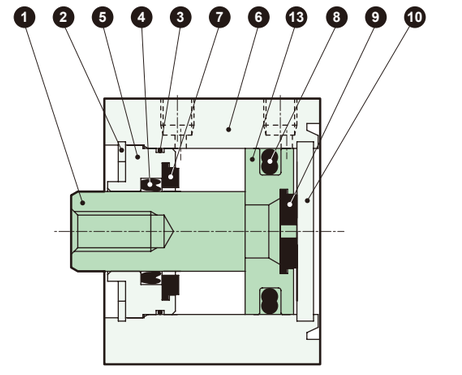
● SSD-L-16D to 32D (Double Acting Type with Switch)



● SSD-12D (Double Acting Type)



● SSD-16D to 32D (Double Acting Type)



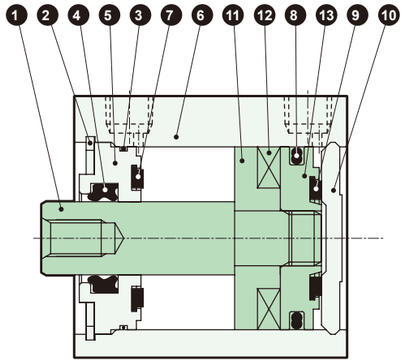
Part No.	Part Name	Material	Remarks
1	Piston Rod	ø12 to ø25: Stainless steel ø32: Steel	ø16 to ø32: Industrial chrome plating
2	C-type retaining ring	Steel	Zinc phosphate
3	Rod metal gasket	Nitrile Rubber	
4	Rod Packing	Nitrile Rubber	
5	Rod Metal	Aluminum Alloy	Alumite
6	Cylinder Body	Aluminum Alloy	Hard Anodized
7	Cushion rubber (R)	Urethane Rubber	

Part No.	Part Name	Material	Remarks
8	Piston Packing	Nitrile Rubber	
9	Cushion rubber (H)	Urethane Rubber	
10	Cover	ø12 to ø25: Stainless steel ø32: Aluminum alloy	ø32: Alumite
11	Spacer	Aluminum Alloy	Chromate
12	Magnet	Plastic	
13	Piston	Aluminum Alloy	Chromate

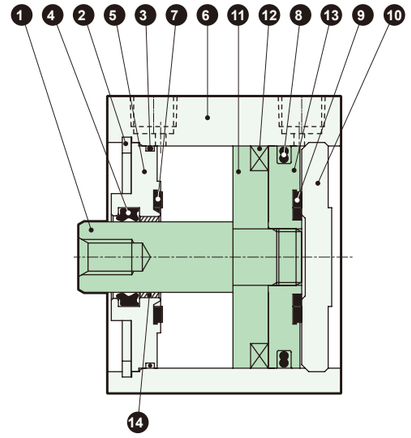
For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Internal Structure Diagram/Material (Bore size: ø40 to ø100) (With Rubber Cushion)

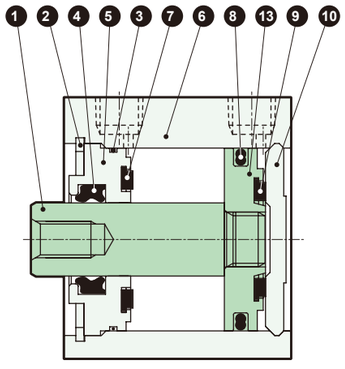
● SSD-L-40D, 50D (Double Acting Type with Switch)



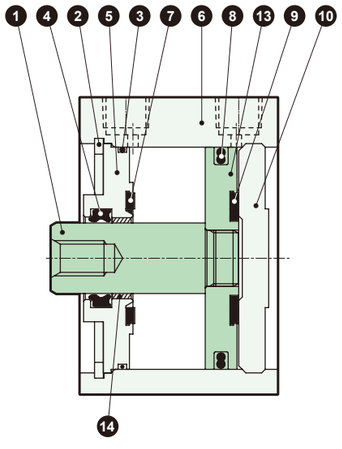
● SSD-L-63D to 100D (Double Acting Type with Switch)



● SSD-40, 50D (Double Acting Type)



● SSD-63D to 100D (Double Acting Type)



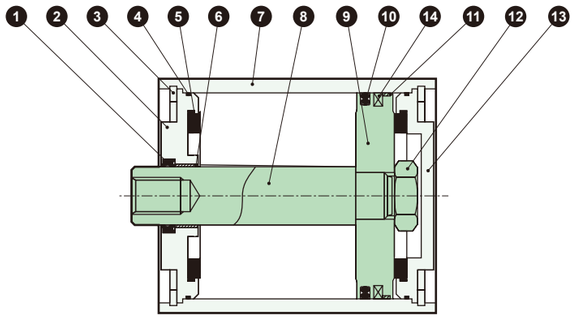
Part No.	Part Name	Material	Remarks
1	Piston Rod	Steel	Industrial Hard Chrome Plating
2	C-type retaining ring	Steel	Zinc phosphate
3	Rod metal gasket	Nitrile Rubber	
4	Rod Packing	Nitrile Rubber	
5	Rod Metal	Aluminum Alloy	ø40 to ø50: Alumite ø63 to ø100: Chromate
6	Cylinder Body	Aluminum Alloy	Hard Anodized
7	Cushion rubber (R)	Urethane Rubber	

Part No.	Part Name	Material	Remarks
8	Piston Packing	Nitrile Rubber	
9	Cushion rubber (H)	Urethane Rubber	
10	Cover	Aluminum Alloy	Alumite
11	Spacer	Aluminum Alloy	Chromate
12	Magnet	Plastic	
13	Piston	Aluminum Alloy	Chromate
14	Bushing	Bearing Alloy	

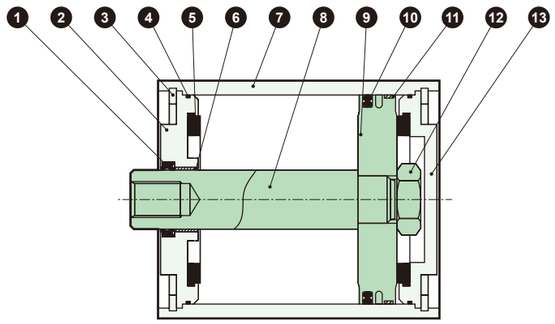
For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Internal Structure Diagram/Material (Bore size: ø125 to ø160) (With Rubber Cushion)

● SSD-L-ø125 to ø160 (Double Acting with Switch)



● SSD ø125 to ø160 (Double Acting)



Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Rod Packing	Nitrile Rubber		8	Piston Rod	Steel	Industrial Hard Chrome Plating
2	Rod Metal	Aluminum Alloy	Chromate	9	Piston	Aluminum Alloy	
3	C-type retaining ring	Steel	Zinc phosphate	10	Piston Packing	Nitrile Rubber	
4	Metal gasket	Nitrile Rubber		11	Wear Ring	Polyacetal	
5	Cushion Rubber	Urethane Rubber		12	Hexagon Nut	Steel	Zinc Chromate
6	Bushing	Bearing Alloy		13	Bottom plate	Aluminum Alloy	Chromate
7	Cylinder Body	Aluminum Alloy	Hard Anodized	14	Magnet	Rubber	

For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

MEMO

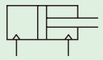
Space-Saving Type
SSD2
SSG
SSD
CAT
MDC2
SMG
MSD
FC□
Cylinder Switch
Ending

Compact Cylinder Double Acting, Single Rod, High Load Type

SSD-K Series

● Bore size: ø12, ø16, ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100

Circuit Diagram Symbol



RoHS

Model No. Notation Method

Without Switch
(Without magnet for switch)

SSD-K – 12 – ( ) – 5 ——— N – LB – I

Model No. ❶ ❷ ❸ ❻ ❼ ❽

With Switch
(Built-in magnet for switch)

SSD-KL – 12 – ( ) – 5 – T0H – R – N – LB – I

Model No. ❶ Bore Size ❷ Piping thread type ❸ Stroke ❹ Switch Model No. ❺ Number of Switches ❻ Option ❼ Mounting bracket ❽ Accessories

❶Bore Size (mm)

Code	Content
12	ø12
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

❷Port Thread Type

Code	Content
Blank	M5 thread (ø12 to ø25)
	Rc thread (ø32 to ø100)
NN	NPT thread (Custom product) (ø32 to ø100)
GN	G thread (Custom product) (ø32 to ø100)

❸Stroke (mm)

Bore Size	Stroke	Intermediate Stroke
ø12 to ø16	1 to 100	Every 1 mm
ø20	1 to 200	
ø25 to ø100	1 to 300	

Note: For details on stroke, please refer to P. 390.

❹Switch Model No.

For switch details, please refer to P. 869.
Switches are included to the product and shipped.

Contact	Indicator Lamp Special Function	Wiring (Output)	Load Voltage (V) AC	Load Voltage (V) DC	Load Current (mA) AC	Load Current (mA) DC	Lead Wire *1 Straight	Lead Wire *1 L-shape	
Solid State	1-Color	2-wire	85 to 265	—	5 to 100	—	T1H□	T1V□	
			—	10 to 30	—	5 to 20 *2	T2H□	T2V□	
		3-wire (NPN)	—	30 or less	—	100 or less	T3H□	T3V□	
		3-wire (PNP)	—		—		T3PH□	T3PV□	
	2-Color	2-wire	—	24 ± 10%	—	5 to 20	T2WH□	T2WV□	
		3-wire (NPN)	—	30 or less	—	50 or less	T3WH□	T3WV□	
	2-Color Improved Water Resistance	2-wire	—	24 ± 10%	—	5 to 20	T2WLH□	T2WLV□	*3
	2-Color for AC Magnetic Field		—		—		T2YD□	–	*4
			—		—		T2YDT□	–	
	1-Color Off-Delay Type		—	10 to 30	—	5 to 20 *2	T2JH□	T2JV□	
	1-Color Flexible Lead Wire Type		—		—		T2HR3□	T2VR3□	
Reed	1-Color	2-wire	110	12/24	7 to 20	5 to 50	T0H□	T0V□	
	No Indicator Lamp		110	5/12/24	20 or less	50 or less	T5H□	T5V□	
	1-Color		110/220	12/24	7 to 20 / 7 to 10	5 to 50	T8H□	T8V□	*5

*1: For "□" in the switch model No., enter the code selected from the "*Lead wire length, connector specification" table.
*2: The maximum load current value above, 20 mA, is at 25°C. If the switch operating ambient temperature is higher than 25°C, it will be lower than 20 mA. (At 60°C, it will be 5 to 10 mA.)
*3: This does not guarantee the water resistance of the cylinder. When using in a water-resistant environment, use of an improved water resistance cylinder is recommended.
*4: AC magnetic field resistant switches cannot be mounted on ø12, ø16.
*5: T8□ switches cannot be mounted on ø12, ø16.
*6: Switches other than the above switch model No.s are also available. (Custom products) For details, refer to P. 869.

*Lead wire length, connector specification

Code	Content
Blank	1 m (Standard)
3	3 m (Option)
5	5 m (Option)
W	M8 Connector, 1PIN (+) 4PIN (-) Lead Wire 0.3 m

*7

*7: Only T2WLH, T2WLV can be selected.

Example) Lead wire length
1 m T0H
3 m T0H3
5 m T0H5

❺Number of Switches

Code	Content
R	With 1 pc on rod side
H	With 1 pc on head side
D	With 2 pcs

❻Option

Code	Content	
Blank	Rod end female thread	
N	Rod end male thread	
*2 S	Dedicated body for intermediate stroke	
*1 M	Piston Rod Material (Stainless Steel)	

*1: The piston rod material for ø12 to ø25 is stainless steel as standard. C-type retaining ring changes from steel to stainless steel. The nut material for rod end male thread type will be stainless steel.
*2: For intermediate stroke, refer to P. 390.

❼Mounting type

Mounting brackets are shipped included to the product.

Code	Content	
LB	Axial Foot Type	
*1 LB2	Axial foot type (Compact type)	
*1 FA	Rod Side Flange Type	
FB	Head Side Flange Type	
CB	Double Clevis Type (pin and retaining ring included)	
CB2	Double knuckle clevis type (Compact type) (Pin and retaining ring included)	

*1: When LB2 or FA is selected, the piston rod protrusion dimension WF differs from the standard. Refer to outline dimension drawings on P. 393, 394, 398, 399. Also, the model No. specifying the protrusion length will be printed at the end of the model No. on the nameplate included to the main body. For cylinder model No.s when ordering cylinders and LB2/FA brackets separately, please contact us.

❽Accessories

Code	Content	
I	Single Knuckle	
I2	Rod eye (compact)	
Y	Double Knuckle (pin and retaining ring included)	
Y2	Rod clevis (compact) (pin and snap ring included)	

*1: Selectable when rod end male thread "N" is selected.
*2: "I", "I2", "Y", "Y2" cannot be selected at the same time.

*For combination of variations and options, refer to P. 356 to 361.

About Custom Product Specifications

For details, refer to P. 690 to 694.

Code	Content
-XP5	Knuckle Pin/Clevis Pin Split Pin
-XP7	Knuckle fixed by pin driving
-XP8	Knuckle pin/clevis pin split pin specification, knuckle fixed by pin driving
-T2	Fluorine Packing Type
-A2	With 2 Rod Nuts
-R1,R2	With spigot joint
Rod End Shape Modification	Refer to Ending 11.

Model No. Example)
SSD-K – ..... – XP5

Rechargeable Battery Compatible Specification

(Catalog No. CC-1226AA)

●Structure usable in rechargeable battery manufacturing processes

SSD-K – ..... – P4□

*Please contact us for details.

Oil-free Compatible Specification

(Catalog No. RJ-001)

● Grease scatter prevention structure

SSD-K – ..... – P12

Switch Single Unit Model No. Notation Method

SW – T0H

❹ Switch Model No.

Specifications

Item	SSD-K SSD-KL (With Switch)									
Bore size mm	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation method	Double Acting Type									
Operating Fluid	Compressed Air									
Max. Operating Pressure MPa	1.0									
Min. Operating Pressure MPa	0.1							0.05		
Proof pressure MPa	1.6									
Ambient Temperature °C	-10 to 60 (No freezing)									
Port Size	M5				Rc 1/8		Rc 1/4		Rc 3/8	
Stroke tolerance mm	+2.0 0									
Operating Piston Speed mm/s	50 to 500							50 to 300		
Cushion	Rubber Cushion									
Lubrication	Not Required (When lubricating, use Turbine Oil ISO VG32)									
Allowable absorbed energy J	0.04	0.09	0.16	0.16	0.40	0.63	0.98	1.56	2.51	3.92

Stroke

Stroke (mm)		Applicable Bore									
		ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Standard Stroke	5	●	●	●							
	10	●	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●			
	20	●	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●			
	30	●	●	●	●	●	●	●	●	●	●
	40	●	●	●	●	●	●	●	●	●	●
	50	●	●	●	●	●	●	●	●	●	●
	60				●	●	●	●	●	●	●
	70				●	●	●	●	●	●	●
	80				●	●	●	●	●	●	●
	90				●	●	●	●	●	●	●
	100				●	●	●	●	●	●	●
Minimum Stroke (mm) *1		1									
Maximum Stroke (mm)		100		200	300						
Intermediate Stroke *2		Every 1 mm									

***1: Cannot be manufactured for less than 5 mm with 1-color indicator switch, or less than 10 mm with 2-color indicator type, off-delay type, AC magnetic field type, T1□, T8□ switch. For the number of switches attachable and minimum stroke, refer to the table on the right.**

*2: The overall length dimension for intermediate stroke is the same as the standard stroke above it.

***3: For minimum stroke for mounting brackets LB, LB2, refer to P. 393, 397, 398.**

Number of Switches Mounted and Min. Stroke (mm)

Switch Model No.	T*		T2WL	
Number of Switches	1	2	1	2
Bore Size (mm)				
ø12	5	5	20	20
ø16	5	5	20	20
ø20	5	5	15	15
ø25	5	5	15	15
ø32	5	5	15	15
ø40	5	5	10	15
ø50	5	5	10	15
ø63	5	5	10	15
ø80	5	5	10	15
ø100	5	5	10	15

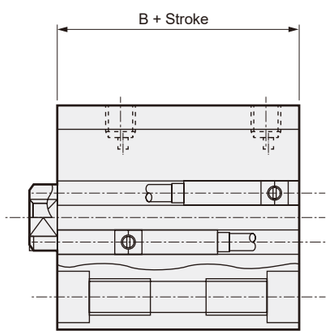
Note: Less than 10 mm with the 2-color LED, off-delay, AC magnetic field proof, T1□ or T8□ switch is not available.

About Intermediate Stroke

● SSD-K Series

Item	Standard Product		Optional Product	
	Spacer type on standard stroke body		Dedicated Body Type (-S)	
Model number indication	Refer to model No. indication method.		Indicates the "Option" code -S in the model No. indication method.	
Manufacturing Content	A spacer is provided on the standard stroke body, manufactured in 1 mm stroke increments.		A dedicated body is manufactured for the specified stroke.	
Stroke Range	Bore Size	Stroke Range	Bore Size	Stroke Range
	12 to 20	1 to 49	12, 16	6 (11) to 100 (*1)
			20	6 to 200
	25 to 100	1 to 99	25 to 100	11 to 300
Model Number Notation Example	Model No. SSD-K-32-81 A +9 mm spacer is added to the standard cylinder SSD-K-32-90 to make it 90 mm. B + Stroke = 33 + 90 = 123		Model No. SSD-K-32-81-S A dedicated body for 81 strokes is manufactured. B + Stroke = 33 + 81 = 114	

*1: ( ) indicates when equipped with a switch.



Cylinder Weight Table (Weight with switch is when 2 cylinder switches are included)

(Unit: g)

Stroke (mm)	5		10		15		20		25		30		40		50		60		70		80		90		100	
Bore size (mm)	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW
ø12	44	86	53	95	61	103	70	112	78	121	87	129	104	146	121	163	138	180	155	197	172	214	189	231	206	248
ø16	59	104	69	114	80	125	91	136	102	147	113	158	135	169	157	191	179	213	201	235	223	257	245	279	267	301
ø20	75	150	88	163	101	176	113	188	126	201	138	213	163	238	188	263	213	288	238	313	263	338	288	363	313	388
ø25	-	-	118	209	134	225	150	241	165	256	182	273	214	305	246	337	278	369	310	401	342	433	374	465	406	497
ø32	-	-	188	302	209	323	231	345	253	367	275	389	318	432	361	475	404	518	447	561	490	604	533	647	576	690
ø40	-	-	263	406	290	433	316	459	342	485	369	512	422	565	475	618	528	671	581	724	634	777	687	830	740	883
ø50	-	-	425	619	467	661	510	704	553	747	594	788	678	872	762	956	846	1040	930	1124	1014	1208	1098	1292	1182	1376
ø63	-	-	617	896	-	-	727	1006	-	-	838	1117	948	1227	1058	1337	1168	1447	1278	1557	1388	1667	1498	1777	1608	1887
ø80	-	-	1101	1514	-	-	1274	1687	-	-	1448	1861	1621	2034	1794	2207	1967	2380	2140	2553	2313	2726	2486	2899	2659	3072
ø100	-	-	1660	2227	-	-	1888	2455	-	-	2115	2682	2343	2910	2571	3138	2799	3366	3027	3594	3255	3822	3483	4050	3711	4278

Stroke (mm)	110		120		130		140		150		160		170		180		190		200	
Bore size (mm)	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW
ø20	338	413	363	438	388	463	413	488	438	513	463	538	488	563	513	588	538	613	563	638
ø25	438	529	470	561	502	593	534	625	566	657	598	689	630	721	662	753	694	785	726	817
ø32	619	733	662	776	705	819	748	862	791	905	833	947	876	990	919	1033	962	1076	1005	1119
ø40	793	936	846	989	899	1042	952	1095	1005	1148	1058	1201	1111	1254	1164	1307	1217	1360	1270	1413
ø50	1266	1460	1350	1544	1434	1628	1518	1712	1602	1796	1700	1894	1785	1979	1870	2064	1955	2149	2040	2234
ø63	1718	1997	1828	2107	1938	2217	2048	2327	2158	2437	2268	2547	2378	2657	2488	2767	2598	2877	2708	2987
ø80	2832	3245	3005	3418	3178	3591	3351	3764	3524	3937	3697	4110	3870	4283	4043	4456	4216	4629	4389	4802
ø100	3939	4506	4167	4734	4395	4962	4623	5190	4851	5418	5079	5646	5307	5874	5535	6102	5763	6830	5991	6558

Stroke (mm)	210		220		230		240		250		260		270		280		290		300	
Bore size (mm)	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW
ø25	769	849	801	881	833	913	865	945	897	977	929	1009	961	1041	993	1073	1025	1105	1057	1137
ø32	1048	1162	1091	1205	1134	1248	1177	1291	1220	1334	1263	1377	1306	1420	1349	1463	1392	1506	1435	1549
ø40	1323	1466	1376	1519	1429	1572	1482	1625	1535	1678	1588	1731	1641	1784	1694	1837	1747	1890	1800	1943
ø50	2125	2319	2210	2404	2295	2489	2380	2574	2465	2659	2550	2744	2635	2829	2720	2914	2805	2999	2890	3084
ø63	2817	3096	2927	3206	3037	3316	3147	3426	3257	3536	3367	3646	3477	3756	3587	3866	3697	3976	3807	4086
ø80	4561	4974	4734	5147	4907	5320	5080	5493	5253	5666	5426	5839	5599	6012	5772	6185	5945	6358	6118	6531
ø100	6220	6787	6448	7015	6676	7243	6904	7471	7132	7699	7360	7927	7588	8155	7816	8383	8044	8611	8272	8839

Theoretical Thrust Table

(Unit: N)

Bore Size (mm)	Operating Direction	Operating Pressure MPa											
		0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø12	Push	-	11.3	17.0	22.6	33.9	45.2	56.5	67.9	79.2	90.5	1.02×10^2	1.13×10^2
	Pull	-	8.48	12.7	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
ø16	Push	-	20.1	30.2	40.2	60.3	80.4	1.01×10^2	1.21×10^2	1.41×10^2	1.61×10^2	1.81×10^2	2.01×10^2
	Pull	-	15.1	22.6	30.2	45.2	60.3	75.4	90.5	1.06×10^2	1.21×10^2	1.36×10^2	1.51×10^2
ø20	Push	-	31.4	47.1	62.8	94.2	1.26×10^2	1.57×10^2	1.88×10^2	2.20×10^2	2.51×10^2	2.83×10^2	3.14×10^2
	Pull	-	23.6	35.3	47.1	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2	1.88×10^2	2.12×10^2	2.36×10^2
ø25	Push	-	49.1k	73.6	98.2	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2	3.93×10^2	4.42×10^2	4.91×10^2
	Pull	-	37.8	56.7	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
ø32	Push	-	80.4	1.21×10^2	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2	6.43×10^2	7.24×10^2	8.04×10^2
	Pull	-	60.3	90.5	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
ø40	Push	-	1.26×10^2	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	-	1.06×10^2	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push	-	1.96×10^2	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	-	1.65×10^2	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Push	1.56×10^2	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	1.40×10^2	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
ø80	Push	2.51×10^2	5.03×10^2	7.54×10^2	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3	4.02×10^3	4.52×10^3	5.03×10^3
	Pull	2.27×10^2	4.54×10^2	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
ø100	Push	3.93×10^2	7.85×10^2	1.18×10^3	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3	6.28×10^3	7.07×10^3	7.85×10^3
	Pull	3.57×10^2	7.15×10^2	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3

Mounting Bracket Model No. Notation Method

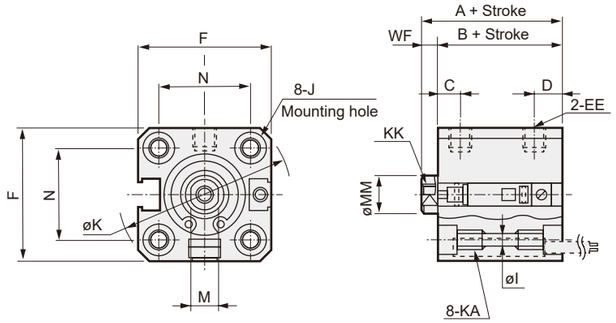
Bore Size (mm) / Mounting bracket	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Foot (LB)	SSD-LB-12	SSD-LB-16	SSD-LB-20	SSD-LB-25	SSD-LB-32	SSD-LB-40	SSD-LB-50	SSD-LB-63	SSD-LB-80	SSD-LB-100
Foot (LB2)	SSD-LB2-12	SSD-LB2-16	SSD-LB2-20	SSD-LB2-25	SSD-LB2-32	SSD-LB2-40	SSD-LB2-50	SSD-LB2-63	SSD-LB2-80	SSD-LB2-100
Flange (FA/FB)	SSD-FA-12	SSD-FA-16	SSD-FA-20	SSD-FA-25	SSD-FA-32	SSD-FA-40	SSD-FA-50	SSD-FA-63	SSD-FA-80	SSD-FA-100
Double Clevis (CB)	SSD-CB-12	SSD-CB-16	SSD-CB-20	SSD-CB-25	SSD-CB-32	SSD-CB-40	SSD-CB-50	SSD-CB-63	SSD-CB-80	SSD-CB-100
Double knuckle clevis (CB2)	SSD-CB2-12	SSD-CB2-16	SSD-CB2-20	SSD-CB2-25	SSD-CB2-32	SSD-CB2-40	SSD-CB2-50	SSD-CB2-63	SSD-CB2-80	SSD-CB2-100

Note: Foot type mounting brackets are 2 pcs/set.

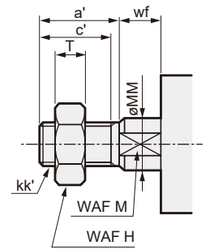
Outline Dimension Drawing (Bore size: ø12 to ø25)

● SSD-K(L)-12 to 25

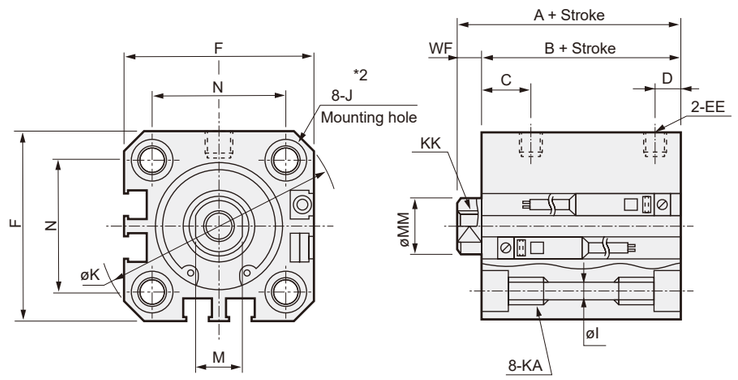
ø12, ø16



● Rod end male thread part



ø20, ø25



Code / Bore Size (mm)	Dimension with switch A *1	Dimension with switch B *1	Dimension without switch A *1	Dimension without switch B *1	C	D *2	EE	F	I	J *2	K	KA *2	KK	M	MM	N	WF
ø12	30.5	27	25.5	22	5.5	5.5	M5	25	3.5	6.5 Counterbore depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
ø16	30.5	27	25.5	22	5.5	5.5	M5	29	3.5	6.5 Counterbore depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
ø20	39	34.5	29	24.5	8	5.5	M5	36	5.5	9 Counterbore depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
ø25	42.5	37.5	32.5	27.5	11	6	M5	40	5.5	9 Counterbore depth 5.5	51	M6 depth 11	M6 Depth 12	10	12	28	5

*1: When calculating A + Stroke and B + Stroke dimensions for intermediate strokes, do not enter the intermediate stroke value for the stroke; instead, enter the value of the standard stroke above it. (Example) For an intermediate stroke of 7 mm, enter the standard stroke of 10 mm for calculation.

*2: For ø20 exceeding 100 strokes, ø25 exceeding 150 strokes, A and B dimensions are the values in Table 1, and there is no counterbore J.

*3: For ø12, ø16 with switch and 5 mm stroke, (A + Stroke) and (B + Stroke) dimensions are as shown in Table 2.

***4: For dimensions with each switch, refer to P. 674 to 681.**

***5: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**

Table 1 *2

Bore	Dimension with switch A	B	D	J	KA	Dimension without switch A	B	J	KA
ø20	50.5	46	8	-	M6 depth 16	40.5	36	-	M6 depth 16
ø25	56	51	11	-	M6 depth 16	46	41	-	M6 depth 16

Table 2 *3

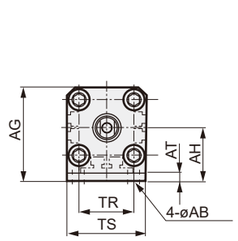
Bore	A + Stroke	B + Stroke
ø12	40.5	37
ø16	40.5	37

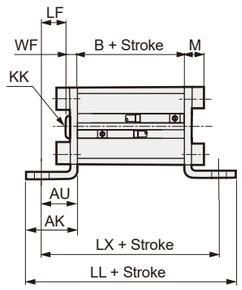
● Rod end male thread part dimension table

Code / Bore Size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5

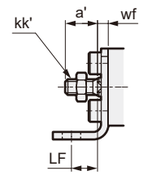
Outline Dimension Drawing (Bore size: ø12 to ø25)

● Axial Foot Type (LB)





● For rod end male thread



Code / Bore Size (mm)	Common dimension AB	AG	AH	AK	AT	AU	TR	TS	M	For female thread *1 KK	WF	LF	With Switch *2 B	LL	LX	Without Switch B	LL	LX	For male thread a'	kk'	wf	LF
ø12	6	29.5	17	18	2.3	12	16	25	6.3	M3 depth 6	3.5	8.5	27	63	51	22	58	46	10.5	M5	3.5	8.5
ø16	6	33.5	19	18	2.3	12	16	29	6.3	M4 depth 8	3.5	8.5	27	63	51	22	58	46	12	M6	3.5	8.5
ø20	7	42	24	24	3.2	16	24	36	9.2	M5 depth 7	4.5	11.5	34.5	82.5	66.5	24.5	72.5	56.5	14	M8	4.5	11.5
ø25	7	46	26	24	3.2	16	28	40	9.2	M6 Depth 12	5	11	37.5	85.5	69.5	27.5	75.5	59.5	17.5	M10×1.25	5	11

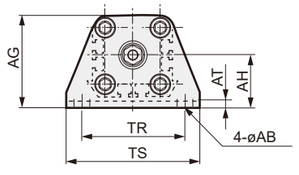
*1: For ø20 exceeding 100 strokes, ø25 exceeding 150 strokes, the dimensions are as follows.

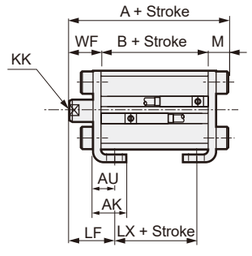
Code / Bore Size (mm)	For female thread With Switch B	LL	LX	Without Switch B	LL	LX
ø20	46	94	78	36	84	68
ø25	51	99	83	41	89	73

*2: For 5 strokes with switch, the dimensions are as follows.

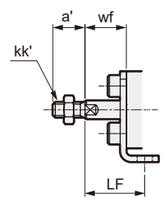
Bore Size	For female thread B	LL	LX
ø12	32	68	56
ø16	32	68	56

● Axial Foot Type (Compact Type) (LB2)





● For rod end male thread



Code / Bore Size (mm)	Common dimension AB	AG	AH	AK	AT	AU	TR	TS	M	For female thread *1 KK	WF	LF	With Switch *2 A	B	LX	Without Switch A	B	LX	For male thread a'	kk'	wf	LF
ø12	5	29.5	17	12.5	2	8	34	44	6	M3 depth 6	13.5	19.5	46.5	27	15	41.5	22	10	10.5	M5	13.5	19.5
ø16	5	33.5	19	13	2	8	38	48	6	M4 depth 8	13.5	19.5	46.5	27	15	41.5	22	10	12	M6	13.5	19.5
ø20	7	42	24	15	3.2	9.2	48	62	9.2	M5 depth 7	14.5	20.5	58.2	34.5	22.5	48.2	24.5	12.5	14	M8	14.5	20.5
ø25	7	46	26	16.5	3.2	10.7	52	66	9.2	M6 Depth 12	15	22.5	61.7	37.5	22.5	51.7	27.5	12.5	17.5	M10×1.25	15	22.5

*1: For ø20 exceeding 100 strokes, ø25 exceeding 150 strokes, the dimensions are as follows.

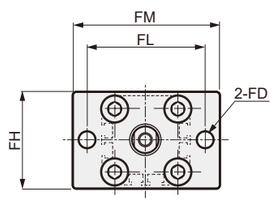
Code / Bore Size (mm)	For female thread With Switch A	B	LX	Without Switch A	B	LX
ø20	69.7	46	34	59.7	36	24
ø25	75.2	51	36	65.2	41	26

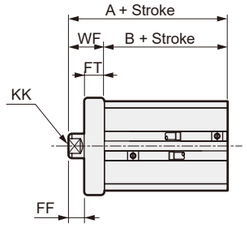
*2: For 5 strokes with switch, the dimensions are as follows.

Bore Size	For female thread A	B	LX
ø12	51.5	32	20
ø16	51.5	32	20

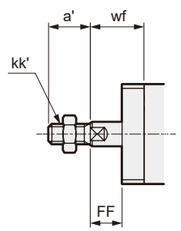
Outline Dimension Drawing (Bore size: ø12 to ø25)

● Rod Side Flange Type (FA)





● For rod end male thread



Code / Bore Size (mm)	Common dimension					For female thread *1							For male thread			
	FD	FH	FL	FM	FT	FF	KK	WF	With Switch *2 A	With Switch *2 B	Without Switch A	Without Switch B	FF	a'	kk'	wf
ø12	4.5	25	45	55	5.5	8	M3 depth 6	13.5	40.5	27	35.5	22	8	10.5	M5	13.5
ø16	4.5	30	45	55	5.5	8	M4 depth 8	13.5	40.5	27	35.5	22	8	12	M6	13.5
ø20	6.6	39	48	60	8	6.5	M5 depth 7	14.5	49	34.5	39	24.5	6.5	14	M8	14.5
ø25	6.6	42	52	64	8	7	M6 Depth 12	15	52.5	37.5	42.5	27.5	7	17.5	M10×1.25	15

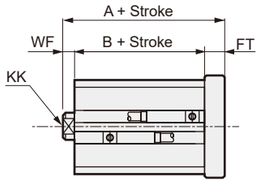
*1: For ø20 exceeding 100 strokes, ø25 exceeding 150 strokes, the dimensions are as follows.

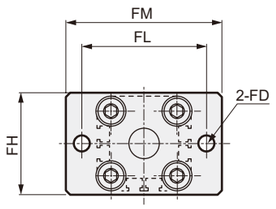
Code / Bore Size (mm)	For female thread			
	With Switch A	With Switch B	Without Switch A	Without Switch B
ø20	60.5	46	50.5	36
ø25	66	51	56	41

*2: For 5 strokes with switch, the dimensions are as follows.

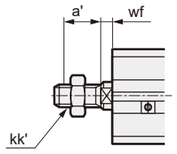
Bore Size	For female thread A	For female thread B
ø12	45.5	32
ø16	45.5	32

● Head Side Flange Type (FB)





● For rod end male thread



Code / Bore Size (mm)	Common dimension					For female thread *1							For male thread			
	FD	FH	FL	FM	FT	KK	WF	With Switch *2 A	With Switch *2 B	Without Switch A	Without Switch B	a'	kk'	wf		
ø12	4.5	25	45	55	5.5	M3 depth 6	3.5	36	27	31	22	10.5	M5	3.5		
ø16	4.5	30	45	55	5.5	M4 depth 8	3.5	36	27	31	22	12	M6	3.5		
ø20	6.6	39	48	60	8	M5 depth 7	4.5	47	34.5	37	24.5	14	M8	4.5		
ø25	6.6	42	52	64	8	M6 Depth 12	5	50.5	37.5	40.5	27.5	17.5	M10×1.25	5		

*1: For ø20 exceeding 100 strokes, ø25 exceeding 150 strokes, the dimensions are as follows.

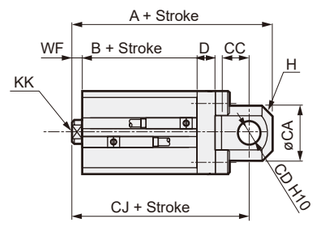
Code / Bore Size (mm)	For female thread			
	With Switch A	With Switch B	Without Switch A	Without Switch B
ø20	58.5	46	48.5	36
ø25	64	51	54	41

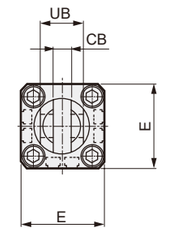
*2: For 5 strokes with switch, the dimensions are as follows.

Bore Size	For female thread A	For female thread B
ø12	41	32
ø16	41	32

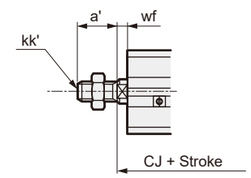
Outline Dimension Drawing (Bore size: ø12 to ø25)

● Double Knuckle Clevis Type (CB)





● For rod end male thread



Code / Bore Size (mm)	Common dimension								For female thread *1								For male thread *1				
	CA	CB	CC	CD	D	E	H	UB	KK	WF	With Switch *2 A	With Switch *2 B	With Switch *2 CJ	Without Switch A	Without Switch B	Without Switch CJ	a'	kk'	wf	With Switch *2 CJ	Without Switch CJ
ø12	13.5	$6.5^{+0.4}_{+0.1}$	7	5	5	25	C1.5	$12^{-0.1}_{-0.4}$	M3 depth 6	3.5	50.5	27	44.5	45.5	22	39.5	10.5	M5	3.5	44.5	39.5
ø16	15	$6.5^{+0.4}_{+0.1}$	8	5	5	29	C2	$12^{-0.1}_{-0.4}$	M4 depth 8	3.5	51.5	27	45.5	46.5	22	40.5	12	M6	3.5	45.5	40.5
ø20	24	$8^{+0.4}_{+0.1}$	12	10	8	36	C4	$19^{-0.1}_{-0.4}$	M5 depth 7	4.5	72	34.5	62	62	24.5	52	14	M8	4.5	62	52
ø25	27.5	$10^{+0.4}_{+0.1}$	16	12	8	40	C5	$21^{-0.1}_{-0.4}$	M6 Depth 12	5	81.5	37.5	69.5	71.5	27.5	59.5	17.5	M10×1.25	5	69.5	59.5

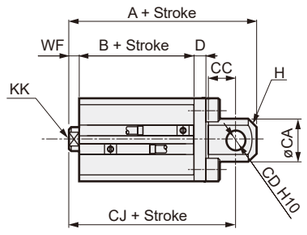
*1: For ø20 exceeding 100 strokes, ø25 exceeding 150 strokes, the dimensions are as follows.

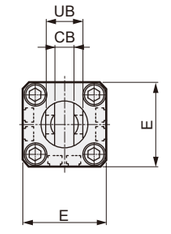
Code / Bore Size (mm)	For female thread						For male thread	
	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	With Switch CJ	Without Switch CJ
ø20	83.5	46	73.5	80	36	63.5	73.5	63.5
ø25	95	51	83	90	41	73	83	73

*2: For 5 strokes with switch, the dimensions are as follows.

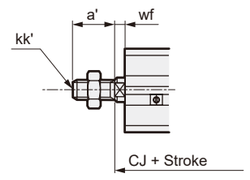
Bore Size	For female thread A	For female thread B	For female thread CJ	For male thread CJ
ø12	55.5	32	49.5	49.5
ø16	56.5	32	50.5	50.5

● Double clevis type (compact type) (CB2)





● For rod end male thread



Code / Bore Size (mm)	Common dimension								For female thread *1								For male thread *1				
	CA	CB	CC	CD	D	E	H	UB	KK	WF	With Switch *2 A	With Switch *2 B	With Switch *2 CJ	Without Switch A	Without Switch B	Without Switch CJ	a'	kk'	wf	With Switch *2 CJ	Without Switch CJ
ø12	12	$5^{+0.4}_{+0.1}$	7	5	4	25	C1.5	$10^{-0.1}_{-0.3}$	M3 depth 6	3.5	50.5	27	44.5	45.5	22	39.5	10.5	M5	3.5	44.5	39.5
ø16	15	$6.5^{+0.4}_{+0.1}$	8	5	5	29	C2	$12^{-0.1}_{-0.4}$	M4 depth 8	3.5	51.5	27	45.5	46.5	22	40.5	12	M6	3.5	45.5	40.5
ø20	20	$8^{+0.4}_{+0.1}$	12	8	5	36	C4	$16^{-0.1}_{-0.3}$	M5 depth 7	4.5	66	34.5	57	56	24.5	47	14	M8	4.5	57	47
ø25	24	$10^{+0.4}_{+0.1}$	14	10	5	40	C5	$20^{-0.1}_{-0.3}$	M6 Depth 12	5	72.5	37.5	62.5	62.5	27.5	52.5	17.5	M10×1.25	5	62.5	52.5

*1: For ø20 exceeding 100 strokes, ø25 exceeding 150 strokes, the dimensions are as follows.

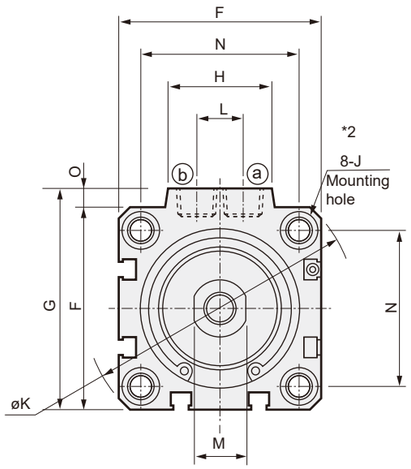
Code / Bore Size (mm)	For female thread						For male thread	
	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	With Switch CJ	Without Switch CJ
ø20	77.5	46	68.5	71	36	58.5	68.5	58.5
ø25	86	51	76	78	41	66	76	66

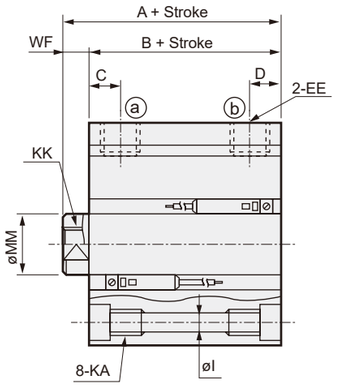
*2: For 5 strokes with switch, the dimensions are as follows.

Bore Size	For female thread A	For female thread B	For female thread CJ	For male thread CJ
ø12	55.5	32	49.5	49.5
ø16	56.5	32	50.5	50.5

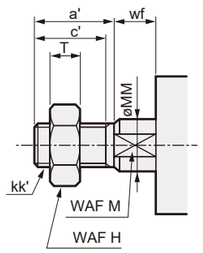
Outline Dimension Drawing (Bore size: ø32 to ø100)

● SSD-K(L)-32 to 100

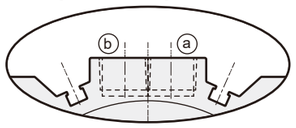




● Rod end male thread part



[Bore size ø100]



*Only ø100 has a switch groove on the port surface

Code / Bore Size (mm)	Dimension with switch A *1	Dimension with switch B *1	Dimension without switch A *1	Dimension without switch B *1	Common dimension C	D *2	EE	F	G	H	I	J	K	KA	KK	L	M	MM	N	O	WF
ø32	50	43	40	33	8	8	Rc 1/8	45	49.5	24	5.5	9 Counterbore depth 5.5	60	M6 depth 11	M8 depth 13	10	14	16	34	4.5	7
ø40	56.5	49.5	46.5	39.5	12	8.5	Rc 1/8	52	57	24	5.5	9 Counterbore depth 5.5	69	M6 depth 11	M8 depth 13	10	14	16	40	5	7
ø50	58.5	50.5	48.5	40.5	10.5	10.5	Rc 1/4	64	71	33	6.9	11 Counterbore Depth 6.5	86	M8 depth 13	M10 depth 15	15	17	20	50	7	8
ø63	64	56	54	46	13	11	Rc 1/4	77	84	33	8.7	14 Counterbore depth 9	103	M10 depth 25	M10 depth 15	15	17	20	60	7	8
ø80	73.5	63.5	63.5	53.5	16	13	Rc 3/8	98	104	38	10.5	17.5 Counterbore depth 11	132	M12 depth 28	M16 depth 21	15	22	25	77	6	10
ø100	85	73	75	63	23	15	Rc 3/8	117	123.5	38	10.5	17.5 Counterbore depth 11	156	M12 depth 28	M20 depth 27	15	27	30	94	6.5	12

*1: When calculating A + Stroke and B + Stroke dimensions for intermediate strokes, do not enter the intermediate stroke value for the stroke; instead, enter the value of the standard stroke above it. (Example) For an intermediate stroke of 7 mm, enter the standard stroke of 10 mm for calculation.
*2: For ø32 to ø50 exceeding 150 strokes, ø63 to ø100 exceeding 200 strokes, A, B, D dimensions are the values in Table 1, and there is no counterbore J.
***3: For dimensions with each switch, refer to P. 674 to 681.**
***4: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**

Table 1 Table2

Bore	Dimension with switch A	B	D	KA	Dimension without switch A	B	D
ø32	57.5	50.5	8	M6 depth 17	47.5	40.5	8
ø40	66	59	12	M6 depth 17	56	49	12
ø50	72	64	10.5	M8 depth 20	62	54	10.5
ø63	74	66	13	M10 depth 34	64	56	13
ø80	83.5	73.5	16	M12 depth 39	73.5	63.5	16
ø100	95	83	23	M12 depth 39	85	73	23

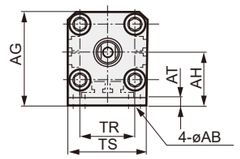
● Rod end male thread part dimension table

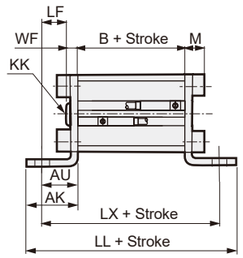
Code / Bore Size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14×1.5	14	16	8	5
ø40	23.5	20.5	22	M14×1.5	14	16	8	5
ø50	28.5	26	27	M18×1.5	17	20	11	5
ø63	28.5	26	27	M18×1.5	17	20	11	5
ø80	35.5	32.5	32	M22×1.5	22	25	13	8
ø100	35.5	32.5	41	M26×1.5	27	30	16	8

Outline Dimension Drawing (Bore size: ø32 to ø100)

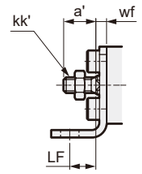
● Axial Foot Type (LB)

· ø32

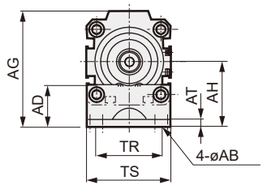


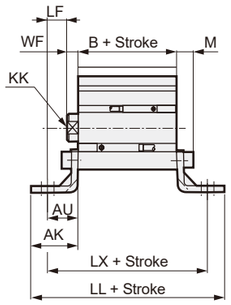


● For rod end male thread

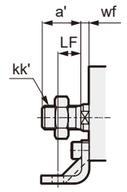


· ø40 to ø100





● For rod end male thread



Code / Bore Size (mm)	Common dimension AB	AD	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch *1 B	With Switch *1 LL	With Switch *1 LX	Without Switch B	Without Switch LL	Without Switch LX	For male thread a'	kk'	wf	LF
ø32	7	–	53.5	31	24	3.2	16	34	45	9.2	M8 depth 13	7	9	43	91	75	33	81	65	23.5	M14×1.5	5	11
ø40	7	26	71	40	29	4.5	19	40	52	10	M8 depth 13	7	12	49.5	107.5	87.5	39.5	97.5	77.5	23.5	M14×1.5	5	14
ø50	9	23	79	40	34	4.5	22	46	64	13	M10 depth 15	8	14	50.5	118.5	94.5	40.5	108.5	84.5	28.5	M18×1.5	5	17
ø63	11	33	96.5	51	40	4.5	25	60	77	15	M10 depth 15	8	17	56	136	106	46	126	96	28.5	M18×1.5	5	20
ø80	13	42	116.5	61.5	50	6	35	77	98	18	M16 depth 21	10	25	63.5	163.5	133.5	53.5	153.5	123.5	35.5	M22×1.5	8	27
ø100	13	48	134	69	50	6	35	94	117	18	M20 depth 27	12	23	73	173	143	63	163	133	35.5	M26×1.5	8	27

*1: For ø32 to ø50 exceeding 150 strokes, ø63 to ø100 exceeding 200 strokes, the dimensions are as follows.

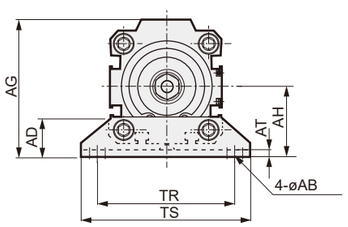
Code / Bore Size (mm)	For female thread With Switch B	With Switch LL	With Switch LX	Without Switch B	Without Switch LL	Without Switch LX
ø32	50.5	98.5	82.5	40.5	88.5	72.5
ø40	59	117	97	49	107	87
ø50	64	132	108	54	122	98
ø63	66	146	116	56	136	106
ø80	73.5	173.5	143.5	63.5	163.5	133.5
ø100	83	183	153	73	173	143

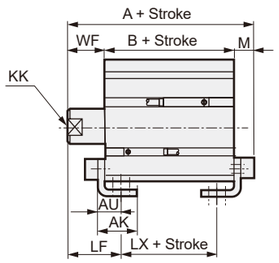
*2: LB cannot be selected when B + stroke is at or less than the stroke below.
ø63: 42 or less ø80, ø100: 69 or less

Outline Dimension Drawing (Bore size: ø32 to ø100)

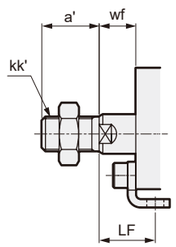
● Axial Foot Type (Compact Type) (LB2)

· ø32 to ø100





● For rod end male thread



Code / Bore Size (mm)	Common dimension										For female thread									For male thread			
	AB	AD	AG	AH	AK	AT	AU	TR	TS	M	KK	WF	LF	With Switch *1 A	With Switch *1 B	With Switch *1 LX	Without Switch A	Without Switch B	Without Switch LX	a'	kk'	wf	LF
ø32	7	18.5	57	30	17	3.2	11.2	57	71	9.2	M8 depth 13	17	25	69.2	43	27	59.2	33	17	23.5	M14×1.5	15	23
ø40	7	18	64	33	18.2	3.2	11.2	64	78	9.2	M8 depth 13	17	25	75.7	49.5	33.5	65.7	39.5	23.5	23.5	M14×1.5	15	23
ø50	9	22	78	39	22.7	3.2	14.7	79	95	11.2	M10 depth 15	18	29.5	79.7	50.5	27.5	69.7	40.5	17.5	28.5	M18×1.5	15	26.5
ø63	11	26	91.5	46	25.2	3.2	16.2	95	113	13.2	M10 depth 15	18	31	87.2	56	30	77.2	46	20	28.5	M18×1.5	15	28
ø80	13	39.5	114	59	30.5	4.5	19.5	118	140	16.5	M16 depth 21	20	35	100	63.5	33.5	90	53.5	23.5	35.5	M22×1.5	18	33
ø100	13	50	136	71	35.5	6	23	137	162	18	M20 depth 27	22	39	113	73	39	103	63	29	35.5	M26×1.5	18	35

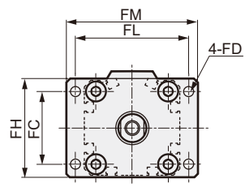
*1: For ø32 to ø50 exceeding 150 strokes, ø63 to ø100 exceeding 200 strokes, the dimensions are as follows.

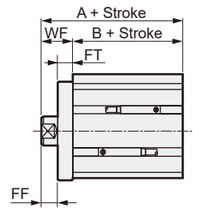
*2: LB2 cannot be selected when B + stroke is at or less than the value below. ø63: 45 or less ø80: 72 or less ø100: 69 or less

Code / Bore Size (mm)	For female thread					
	With Switch			Without Switch		
	A	B	LX	A	B	LX
ø32	76.7	50.5	34.5	66.7	40.5	24.5
ø40	85.2	59	43	75.2	49	33
ø50	93.2	64	41	83.2	54	31
ø63	97.2	66	40	87.2	56	30
ø80	110	73.5	43.5	100	63.5	33.5
ø100	123	83	49	113	73	39

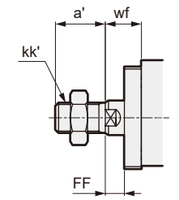
Outline Dimension Drawing (Bore size: ø32 to ø100)

● Rod Side Flange Type (FA)





● For rod end male thread

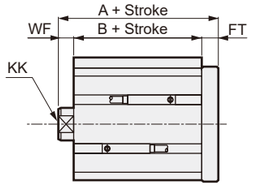


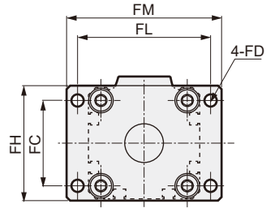
Code / Bore Size (mm)	Common dimension						For female thread							For male thread			
	FC	FD	FH	FL	FM	FT	FF	KK	WF	With Switch *1 A	With Switch *1 B	Without Switch A	Without Switch B	FF	a'	kk'	wf
ø32	34	5.5	48	56	65	8	9	M8 depth 13	17	60	43	50	33	7	23.5	M14×1.5	15
ø40	40	5.5	54	62	72	8	9	M8 depth 13	17	66.5	49.5	56.5	39.5	7	23.5	M14×1.5	15
ø50	50	6.6	67	76	89	9	9	M10 depth 15	18	68.5	50.5	58.5	40.5	6	28.5	M18×1.5	15
ø63	60	9	80	92	108	9	9	M10 depth 15	18	74	56	64	46	6	28.5	M18×1.5	15
ø80	77	11	99	116	134	11	9	M16 depth 21	20	83.5	63.5	73.5	53.5	7	35.5	M22×1.5	18
ø100	94	11	117	136	154	11	11	M20 depth 27	22	95	73	85	63	7	35.5	M26×1.5	18

*1: For ø32 to ø50 exceeding 150 strokes, ø63 to ø100 exceeding 200 strokes, the dimensions are as follows.

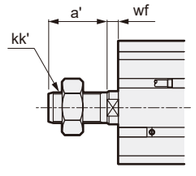
Code / Bore Size (mm)	For female thread			
	With Switch		Without Switch	
	A	B	A	B
ø32	67.5	50.5	57.5	40.5
ø40	76	59	66	49
ø50	82	64	72	54
ø63	84	66	74	56
ø80	93.5	73.5	83.5	63.5
ø100	105	83	95	73

● Head Side Flange Type (FB)





● For rod end male thread



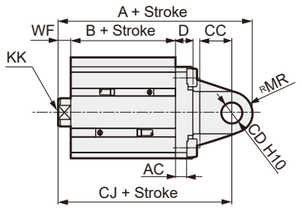
Code / Bore Size (mm)	Common dimension						For female thread						For male thread			
	FC	FD	FH	FL	FM	FT	KK	WF	With Switch *1 A	With Switch *1 B	Without Switch A	Without Switch B	a'	kk'	wf
ø32	34	5.5	48	56	65	8	M8 depth 13	7	58	43	48	33	23.5	M14×1.5	5
ø40	40	5.5	54	62	72	8	M8 depth 13	7	64.5	49.5	54.5	39.5	23.5	M14×1.5	5
ø50	50	6.6	67	76	89	9	M10 depth 15	8	67.5	50.5	57.5	40.5	28.5	M18×1.5	5
ø63	60	9	80	92	108	9	M10 depth 15	8	73	56	63	46	28.5	M18×1.5	5
ø80	77	11	99	116	134	11	M16 depth 21	10	84.5	63.5	74.5	53.5	35.5	M22×1.5	8
ø100	94	11	117	136	154	11	M20 depth 27	12	96	73	86	63	35.5	M26×1.5	8

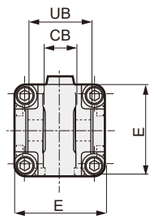
*1: For ø32 to ø50 exceeding 150 strokes, ø63 to ø100 exceeding 200 strokes, the dimensions are as follows.

Code / Bore Size (mm)	For female thread			
	With Switch		Without Switch	
	A	B	A	B
ø32	65.5	50.5	55.5	40.5
ø40	74	59	64	49
ø50	81	64	71	54
ø63	83	66	73	56
ø80	94.5	73.5	84.5	63.5
ø100	106	83	96	73

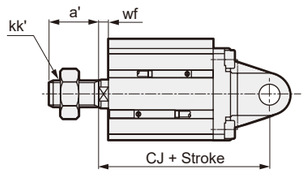
Outline Dimension Drawing (Bore size: ø32 to ø100)

● Double Knuckle Clevis Type (CB)





● For rod end male thread

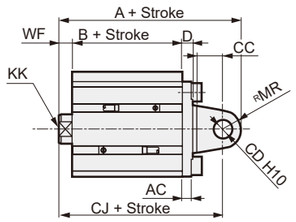


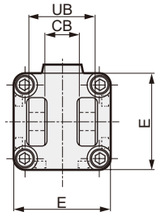
Code / Bore Size (mm)	Common dimension								For female thread								For male thread				
	AC	CB	CC	CD	D	E	MR	UB	KK	WF	With Switch *1			Without Switch			a'	kk'	wf	With Switch *1	Without Switch
											A	B	CJ	A	B	CJ				CJ	CJ
ø32	9.5	$10^{+0.4}_{+0.1}$	16	12	10	45	12	$21^{-0.1}_{-0.4}$	M8 depth 13	7	92	43	80	82	33	70	23.5	M14×1.5	5	78	68
ø40	6.5	$18^{+0.4}_{+0.1}$	18	12	10	52	12	$36^{-0.1}_{-0.4}$	M8 depth 13	7	100.5	49.5	88.5	90.5	39.5	78.5	23.5	M14×1.5	5	86.5	76.5
ø50	6.5	$18^{+0.4}_{+0.1}$	18	12	10	64	12	$36^{-0.1}_{-0.4}$	M10 depth 15	8	102.5	50.5	90.5	92.5	40.5	80.5	28.5	M18×1.5	5	87.5	77.5
ø63	7.5	$20^{+0.4}_{+0.1}$	24	14	10	77	16	$40^{-0.1}_{-0.4}$	M10 depth 15	8	117	56	101	107	46	91	28.5	M18×1.5	5	98	88
ø80	10.5	$28^{+0.4}_{+0.1}$	30	20	14	98	20	$56^{-0.1}_{-0.4}$	M16 depth 21	10	145.5	63.5	125.5	135.5	53.5	115.5	35.5	M22×1.5	8	123.5	113.5
ø100	10.5	$28^{+0.4}_{+0.1}$	30	20	16	117	20	$56^{-0.1}_{-0.4}$	M20 depth 27	12	157	73	137	147	63	127	35.5	M26×1.5	8	133	123

*1: For ø32 to ø50 exceeding 150 strokes, ø63 to ø100 exceeding 200 strokes, the dimensions are as follows.

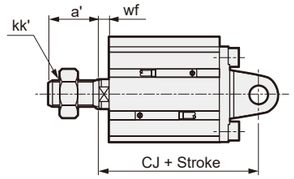
Code / Bore Size (mm)	For female thread						For male thread	
	With Switch			Without Switch			With Switch	Without Switch
	A	B	CJ	A	B	CJ	CJ	CJ
ø32	99.5	50.5	87.5	89.5	40.5	77.5	85.5	75.5
ø40	110	59	98	100	49	88	96	86
ø50	116	64	104	106	54	94	101	91
ø63	127	66	111	117	56	101	108	98
ø80	155.5	73.5	135.5	145.5	63.5	125.5	133.5	123.5
ø100	167	83	147	157	73	137	143	133

● Double clevis type (compact type) (CB2)





● For rod end male thread



Code / Bore Size (mm)	Common dimension								For female thread								For male thread				
	AC	CB	CC	CD	D	E	MR	UB	KK	WF	With Switch *1			Without Switch			a'	kk'	wf	With Switch *1	Without Switch
											A	B	CJ	A	B	CJ				CJ	CJ
ø32	4.5	$18^{+0.4}_{+0.1}$	14	10	5	45	10	$36^{-0.1}_{-0.3}$	M8 depth 13	7	80	43	70	70	33	60	23.5	M14×1.5	5	68	58
ø40	5	$18^{+0.4}_{+0.1}$	14	10	6	52	10	$36^{-0.1}_{-0.3}$	M8 depth 13	7	88.5	49.5	78.5	78.5	39.5	68.5	23.5	M14×1.5	5	76.5	66.5
ø50	6	$22^{+0.4}_{+0.1}$	20	14	7	64	14	$44^{-0.1}_{-0.3}$	M10 depth 15	8	100.5	50.5	86.5	90.5	40.5	76.5	28.5	M18×1.5	5	83.5	73.5
ø63	7	$22^{+0.4}_{+0.1}$	20	14	8	77	14	$44^{-0.1}_{-0.3}$	M10 depth 15	8	108	56	94	98	46	84	28.5	M18×1.5	5	91	81
ø80	9	$28^{+0.4}_{+0.1}$	27	18	10	98	18	$56^{-0.1}_{-0.3}$	M16 depth 21	10	129.5	63.5	111.5	119.5	53.5	101.5	35.5	M22×1.5	8	109.5	99.5
ø100	12	$32^{+0.4}_{+0.1}$	31	22	13	117	22	$64^{-0.1}_{-0.3}$	M20 depth 27	12	152	73	130	142	63	120	35.5	M26×1.5	8	126	116

*1: For ø32 to ø50 exceeding 150 strokes, ø63 to ø100 exceeding 200 strokes, the dimensions are as follows.

Code / Bore Size (mm)	For female thread						For male thread	
	With Switch			Without Switch			With Switch	Without Switch
	A	B	CJ	A	B	CJ	CJ	CJ
ø32	87.5	50.5	77.5	77.5	40.5	67.5	75.5	65.5
ø40	98	59	88	88	49	78	86	76
ø50	114	64	100	104	54	90	97	87
ø63	118	66	104	108	56	94	101	91
ø80	139.5	73.5	121.5	129.5	63.5	111.5	119.5	109.5
ø100	162	83	140	152	73	130	136	126

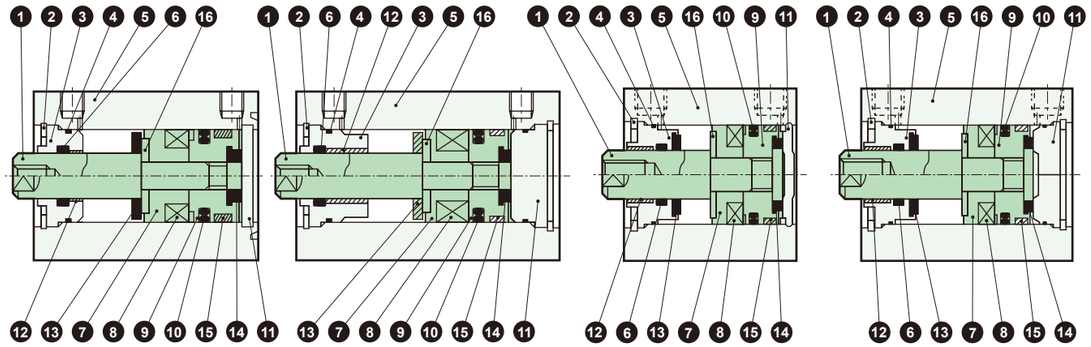
MEMO

Space-Saving Type
SSD2
SSG
SSD
CAT
MDC2
SMG
MSD
FC□
Cylinder Switch
Ending

Internal Structure Diagram/Material

● SSD-KL-12 to 25 (Double Acting, High Load Type with Switch)

⟨ø20: 100 strokes or less / ø25: 150 strokes or less⟩ ⟨ø20: Exceeding 100 stroke up to 200 stroke / ø25: Exceeding 150 stroke up to 300 stroke⟩

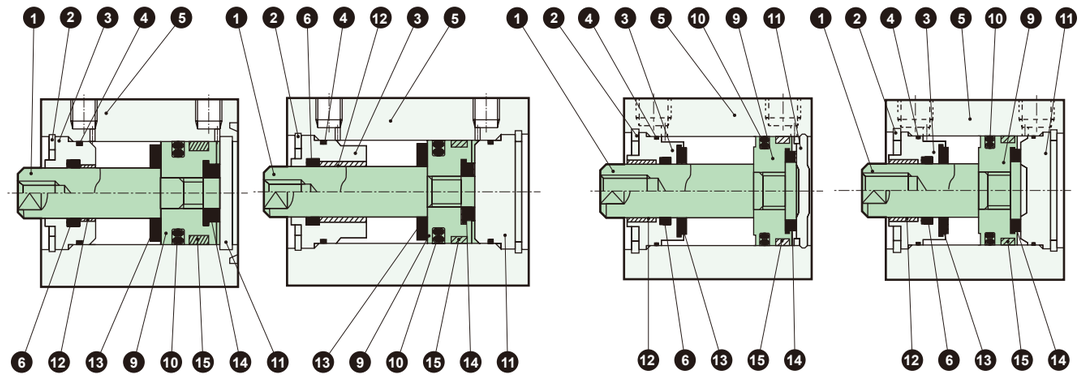


● SSD-KL-32 (Double Acting, High Load Type with Switch)

⟨150 strokes or less⟩ ⟨Exceeding 150 stroke up to 300 stroke⟩

● SSD-K-12 to 25 (Double Acting, High Load Type)

⟨ø20: 100 strokes or less / ø25: 150 strokes or less⟩ ⟨ø20: Exceeding 100 stroke up to 200 stroke / ø25: Exceeding 150 stroke up to 300 stroke⟩



● SSD-K-32 (Double Acting, High Load Type)

⟨150 strokes or less⟩ ⟨Exceeding 150 stroke up to 300 stroke⟩

Part No.	Part Name	Material	Remarks
1	Piston Rod	ø12 to ø25: Stainless steel ø32: Steel	ø16 to ø32 Industrial Hard Chrome Plating
2	C-type retaining ring	Steel	Zinc phosphate
3	Rod Metal	Aluminum Alloy	ø12 to 25: Alumite ø32: Chromate
4	Rod metal gasket	Nitrile Rubber	
5	Cylinder Body	Aluminum Alloy	Hard Anodized
6	Rod Packing	Nitrile Rubber	
7	Spacer	ø12: Aluminum alloy ø16 to ø32: Special resin	ø12: Chromate
8	Magnet	Plastic	

Part No.	Part Name	Material	Remarks
9	Piston	Aluminum Alloy	Chromate
10	Piston Packing	Nitrile Rubber	
11	Cover	ø12 to ø25: Stainless steel ø32: Aluminum alloy	(*1) ø32: Alumite
12	Bushing	Bearing Alloy	ø20 to ø32 only
13	Cushion rubber (R)	Urethane Rubber	
14	Cushion rubber (H)	Urethane Rubber	
15	Wear Ring	Polyacetal	
16	Spacer washer	Stainless Steel	ø20 to ø32 only

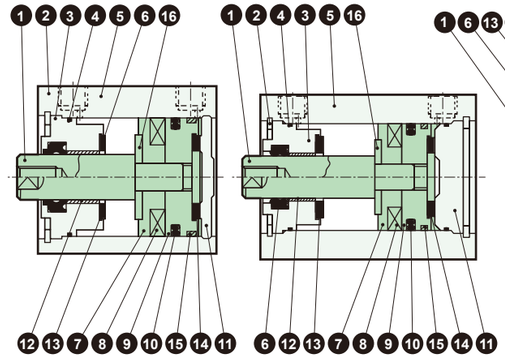
*1: For cover of long stroke type (ø20 with 100 mm stroke and over, ø25, ø32 with 150 mm stroke and over), material: Aluminum alloy, remarks: This will be alumite treatment.

For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Internal Structure Diagram/Material

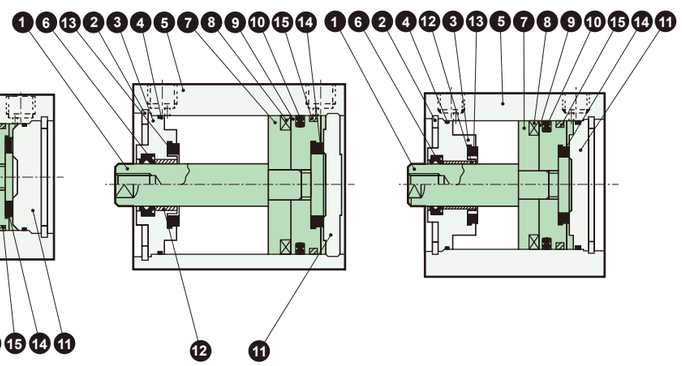
● SSD-KL-40, 50 (Double Acting, High Load Type with Switch)

⟨150 strokes or less⟩ ⟨Exceeding 150 stroke up to 300 stroke⟩



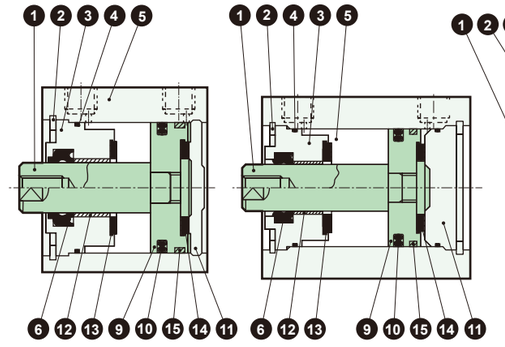
● SSD-KL-63 to 100 (Double Acting, High Load Type with Switch)

⟨200 strokes or less⟩ ⟨Exceeding 200 stroke up to 300 stroke⟩



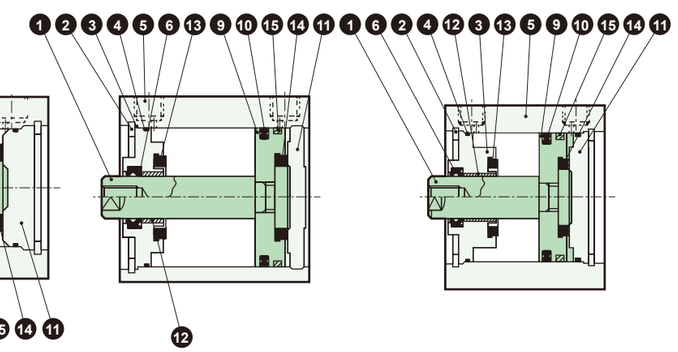
● SSD-K-40, 50 (Double Acting, High Load Type)

⟨150 strokes or less⟩ ⟨Exceeding 150 stroke up to 300 stroke⟩



● SSD-K-63 to 100 (Double Acting, High Load Type)

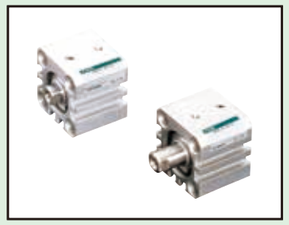
⟨200 strokes or less⟩ ⟨Exceeding 200 stroke up to 300 stroke⟩



Part No.	Part Name	Material	Remarks
1	Piston Rod	Steel	Industrial Hard Chrome Plating
2	C-type retaining ring	Steel	Zinc phosphate
3	Rod Metal	Aluminum Alloy	ø40, ø50: Chromate ø63 to ø100: Alumite
4	Rod metal gasket	Nitrile Rubber	
5	Cylinder Body	Aluminum Alloy	Hard Anodized
6	Rod Packing	Nitrile Rubber	
7	Spacer	ø40, ø50: Special resin ø63 to ø100: Aluminum alloy	ø63 to ø100: Chromate
8	Magnet	Plastic	

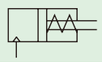
Part No.	Part Name	Material	Remarks
9	Piston	Aluminum Alloy	Chromate
10	Piston Packing	Nitrile Rubber	
11	Cover	Aluminum Alloy	Alumite
12	Bushing	Bearing Alloy	
13	Cushion rubber (R)	Urethane Rubber	
14	Cushion rubber (H)	Urethane Rubber	
15	Wear Ring	Polyacetal	
16	Spacer washer	Stainless Steel	ø40 to ø50 only

For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.



Compact Cylinder
Single Acting, Push Type
SSD-X Series
Single Acting, Retracting Type
SSD-Y Series

● Bore size: ø12, ø16, ø20, ø25, ø32, ø40, ø50

Circuit Diagram Symbol SSD-X  SSD-Y 

RoHS

Model No. Notation Method

Without Switch (Without magnet for switch): SSD-X - 12 - [ ] - 5 ——— N - LB - I

With Switch (Built-in magnet for switch): SSD-XL - 12 - [ ] - 5 - T0H - R - N - LB - I

Off-delay type/ With T1□ switch (ø12, ø16 only): SSD-XL1 - 12 - [ ] - 10 - T2JH - R - N - LB - I

❶ Model No.	❷ Bore Size	❸ Piping thread type	❹ Stroke	❺ Switch Model No.	❻ Number of Switches	❼ Option	❽ Mounting bracket	❾ Accessories

❶ Model No.

Code	Content
SSD-X	Single Acting, Push Type
SSD-XL	Single Acting/Push Type with Switch
SSD-XL1	Single acting / Push type, with switch, Off-delay type with T1□ switch (ø12, ø16)
SSD-Y	Single Acting, Retracting Type
SSD-YL	Single Acting/Retracting Type with Switch
SSD-YL1	Single acting/pull with switch, off-delay with T1□ switch (ø12, ø16)

❷ Bore Size (mm)

Code	Content
12	ø12
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50

❸ Port Thread Type

Code	Content
Blank	M5 thread (ø12 to ø25)
	Rc thread (ø32 to ø50)
NN	NPT thread (custom order) (ø32 to ø50)
GN	G thread (custom order) (ø32 to ø50)

❹ Stroke (mm)

Bore Size	Stroke
ø12 to ø32	5, 10
ø40, ø50	10, 20

Note: For details, see P. 406.

❺ Switch Model No.

For switch details, please refer to P. 869.
Switches are included to the product and shipped.

Contact	Indicator Lamp Special Function	Wiring (Output)	Load Voltage (V) AC	Load Voltage (V) DC	Load Current (mA) AC	Load Current (mA) DC	Lead Wire *1 Straight	Lead Wire *1 L-shape	
Solid State	1-Color	2-wire	85 to 265	—	5 to 100	—	T1H□	T1V□	
			—	10 to 30	—	5 to 20 *2	T2H□	T2V□	
		3-wire (NPN)	—	30 or less	—	100 or less	T3H□	T3V□	
		3-wire (PNP)	—		—		T3PH□	T3PV□	
	2-Color	2-wire	—	24 ± 10%	—	5 to 20	T2WH□	T2WV□	
		3-wire (NPN)	—	30 or less	—	50 or less	T3WH□	T3WV□	
	2-Color Improved Water Resistance	2-wire	—	24 ± 10%	—	5 to 20	T2WLH□	T2WLV□	*3
	2-Color for AC Magnetic Field		—		—		T2YD□	–	*4
			—		—		T2YDT□	–	
	1-Color Off-Delay Type		—	10 to 30	—	5 to 20 *2	T2JH□	T2JV□	
	1-Color Flexible Lead Wire Type		—		—		T2HR3□	T2VR3□	
Reed	1-Color	2-wire	110	12/24	7 to 20	5 to 50	T0H□	T0V□	
	No Indicator Lamp		110	5/12/24	20 or less	50 or less	T5H□	T5V□	
	1-Color		110/220	12/24	7 to 20 / 7 to 10	5 to 50	T8H□	T8V□	*5

*1: For "□" in the switch model No., enter the code selected from the "*Lead wire length, connector specification" table.
*2: The maximum load current value above, 20 mA, is at 25°C. If the switch operating ambient temperature is higher than 25°C, it will be lower than 20 mA. (At 60°C, it will be 5 to 10 mA.)
*3: This does not guarantee the water resistance of the cylinder. When using in a water-resistant environment, use of an improved water resistance cylinder is recommended.
*4: Switches for AC magnetic fields cannot be mounted on ø12 and ø16.
*5: T8□ switches cannot be mounted on ø12 to ø32.
*6: Products less than 10 mm with 2-color indication type, off-delay type, for AC magnetic field, or with T1□ or T8□ switches cannot be manufactured.
*7: Switches other than the model No.s listed above are also available. (Custom products) For details, refer to P. 869.

*Lead wire length, connector specification

Code	Content
Blank	1 m (Standard)
3	3 m (Option)
5	5 m (Option)
W	M8 Connector, 1PIN (+), 4PIN (−) Lead Wire 0.3 m

*8

*8: Only T2WLH, T2WLV can be selected.

Example) Lead wire length
1 m T0H
3 m T0H3
5 m T0H5

❻ Number of Switches

Code	Content
R	With 1 pc on rod side
H	With 1 pc on head side
D	With 2 pcs

❼ Option

Code	Content	
Blank	Rod end female thread	
N	Rod end male thread	
*1 M	Piston Rod Material (Stainless Steel)	

*1: The piston rod material for ø12 to ø25 is stainless steel as standard. C-type retaining ring changes from steel to stainless steel. The nut material for rod end male thread type will be stainless steel.

❽ Mounting type

Mounting brackets are shipped included to the product.

Code	Content	
LB	Axial Foot Type	
*1 LB2	Axial foot type (Compact type)	
*1 FA	Rod Side Flange Type	
FB	Head Side Flange Type	
CB	Double Clevis Type (pin and retaining ring included)	
CB2	Double knuckle clevis type (Compact type) (Pin and retaining ring included)	

*1: When LB2 or FA is selected, the piston rod protrusion dimension WF differs from the standard. See P. 409, 410, 413, 414, 417, 418, 421, and 422 for outline dimension drawings. Also, the model No. specifying the protrusion length will be printed at the end of the model No. on the nameplate included to the main body. For cylinder model No.s when ordering cylinders and LB2/FA brackets separately, please contact us.

❾ Accessories

Code	Content	
I	Single Knuckle	
I2	Rod eye (compact)	
Y	Double Knuckle (pin and retaining ring included)	
Y2	Rod clevis (compact) (pin and snap ring included)	

*1: Selectable when rod end male thread "N" is selected.
*2: "I", "I2", "Y", "Y2" cannot be selected at the same time.

*For combination of variations and options, refer to P. 356 to 361.

About Custom Product Specifications

For details, refer to P. 690 to 694.

Code	Content
-XP5	Knuckle Pin/Clevis Pin Split Pin
-XP7	Knuckle fixed by pin driving
-XP8	Knuckle pin/clevis pin split pin specification, knuckle fixed by pin driving
-T2	Fluorine Packing Type
-A2	With 2 Rod Nuts
-R1,R2	With spigot joint
Rod End Shape Modification	Refer to Ending 11.

Model No. Example)
SSD-$^{X}_{Y}$-.....-XP5

Rechargeable Battery Compatible Specification

(Catalog No. CC-1226AA)

●Structure usable in rechargeable battery manufacturing processes

SSD-$^{X}_{Y}$-.....-P4*

*Please contact us for details.

Switch Single Unit Model No. Notation Method

SW - T0H

❺ Switch Model No.

Specifications

Item	SSD-X SSD-Y SSD-XL (with switch) SSD-YL (with switch)						
Bore size mm	ø12	ø16	ø20	ø25	ø32	ø40	ø50
Actuation method	SSD-X, XL: Single acting/push, SSD-Y, YL: Single Acting, Retracting Type						
Operating Fluid	Compressed Air						
Max. Operating Pressure MPa	1.0						
Min. Operating Pressure MPa	0.2		0.17		0.12		
Proof pressure MPa	1.6						
Ambient Temperature °C	-10 to 60 (No freezing)						
Port Size	M5				Rc 1/8		Rc 1/4
Stroke tolerance mm	+1.0 0						
Operating Piston Speed mm/s	50 to 500						
Cushion	None						
Lubrication	Not Required (When lubricating, use Turbine Oil ISO VG32)						
Allowable absorbed energy J	0.004	0.01	0.016	0.021	0.025	0.092	0.1

Note: Do not leave single acting cylinders pressurized. If left pressurized, the piston rod may not return by spring load when the pressure is released. If it is necessary to use the product while pressurized, use a double-acting type.

Stroke

Stroke (mm)		Applicable Bore						
		ø12	ø16	ø20	ø25	ø32	ø40	ø50
Standard Stroke	5	●	●	●	●	●		
	10	●	●	●	●	●	●	●
	20						●	●

*1: For models with a switch, refer to the table below.

***2: For the minimum stroke when using mounting brackets LB and LB2, see P. 409, 413, 417, and 421.**

Number of Switches Mounted and Min. Stroke (mm)

Switch Model No.	T*		T2WL	
Number of Switches / Bore Size (mm)	1	2	1	2
ø12	5	5	-	-
ø16	5	5	-	-
ø20	5	5	-	-
ø25	5	5	-	-
ø32	5	5	-	-
ø40	10	10	20	20
ø50	10	10	20	20

Note: Less than 10 mm with the 2-color LED, off-delay, AC magnetic field proof, T1□ or T8□ switch is not available.

Cylinder Weight Table

(Weight with switch is when 2 cylinder switches are included)

(Unit: g)

Stroke (mm) / Bore Size (mm)	5		10		20	
	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch
ø12	40	80	49	89	-	-
ø16	52	92	64	104	-	-
ø20	74	114	89	129	-	-
ø25	107	147	127	167	-	-
ø32	155	195	183	223	-	-
ø40	-	-	285	325	358	398
ø50	-	-	459	499	572	612

SSD-X/SSD-Y Spring load

(Unit: N)

Bore Size (mm)	Stroke (mm)	SSD-X		SSD-Y	
		At 0 Stroke	At Full Stroke Operation	At 0 Stroke	At Full Stroke Operation
ø12	5	8.7	13.7	2.9	11
	10	2.9	13.7	2.9	11.3
ø16	5	10.2	15.1	3.5	13.2
	10	5.4	15.1	3.5	13.2
ø20	5	16.8	24	11.8	30.4
	10	9.7	24	12.7	30.3
ø25	5	17.1	23.5	10.8	26.5
	10	10.8	23.5	10.8	26.5
ø32	5	24.1	28.5	17	27
	10	19.6	28.5	17.9	27.4
ø40	10	28.9	38.2	19.3	33
	20	19.6	38.2	19.9	40.2
ø50	10	33.3	47.9	24.5	84.3
	20	18.8	47.9	23.1	82.3

Theoretical Thrust Table

(Unit: N)

Bore Size (mm)	Operating Direction	Operating Pressure MPa									
		0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø12	Push	-	22.6	33.9	45.2	56.5	67.9	79.2	90.5	1.02×10^{2}	1.13×10^{2}
	Pull	-	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
ø16	Push	-	40.2	60.3	80.4	1.01×10^{2}	1.21×10^{2}	1.41×10^{2}	1.61×10^{2}	1.81×10^{2}	2.01×10^{2}
	Pull	-	30.2	45.2	60.3	75.4	90.5	1.06×10^{2}	1.21×10^{2}	1.36×10^{2}	1.51×10^{2}
ø20	Push	-	62.8	94.2	1.26×10^{2}	1.57×10^{2}	1.88×10^{2}	2.20×10^{2}	2.51×10^{2}	2.83×10^{2}	3.14×10^{2}
	Pull	-	47.1	70.7	94.2	1.18×10^{2}	1.41×10^{2}	1.65×10^{2}	1.88×10^{2}	2.12×10^{2}	2.36×10^{2}
ø25	Push	-	98.2	1.47×10^{2}	1.96×10^{2}	2.45×10^{2}	2.95×10^{2}	3.44×10^{2}	3.93×10^{2}	4.42×10^{2}	4.91×10^{2}
	Pull	-	75.6	1.13×10^{2}	1.51×10^{2}	1.89×10^{2}	2.27×10^{2}	2.64×10^{2}	3.02×10^{2}	3.40×10^{2}	3.78×10^{2}
ø32	Push	1.21×10^{2}	1.61×10^{2}	2.41×10^{2}	3.22×10^{2}	4.02×10^{2}	4.83×10^{2}	5.63×10^{2}	6.43×10^{2}	7.24×10^{2}	8.04×10^{2}
	Pull	90.5	1.21×10^{2}	1.81×10^{2}	2.41×10^{2}	3.02×10^{2}	3.62×10^{2}	4.22×10^{2}	4.83×10^{2}	5.43×10^{2}	6.03×10^{2}
ø40	Push	1.88×10^{2}	2.51×10^{2}	3.77×10^{2}	5.03×10^{2}	6.28×10^{2}	7.54×10^{2}	8.80×10^{2}	1.01×10^{3}	1.13×10^{3}	1.26×10^{3}
	Pull	1.58×10^{2}	2.11×10^{2}	3.17×10^{2}	4.22×10^{2}	5.28×10^{2}	6.33×10^{2}	7.39×10^{2}	8.44×10^{2}	9.50×10^{2}	1.06×10^{3}
ø50	Push	2.95×10^{2}	3.93×10^{2}	5.89×10^{2}	7.85×10^{2}	9.82×10^{2}	1.18×10^{3}	1.37×10^{3}	1.57×10^{3}	1.77×10^{3}	1.96×10^{3}
	Pull	2.47×10^{2}	3.30×10^{2}	4.95×10^{2}	6.60×10^{2}	8.25×10^{2}	9.90×10^{2}	1.15×10^{3}	1.32×10^{3}	1.48×10^{3}	1.65×10^{3}

Mounting Bracket Model No. Notation Method

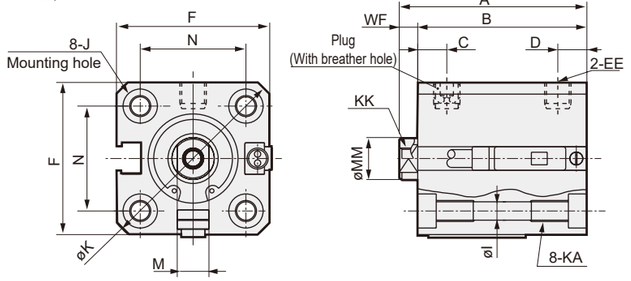
Bore Size (mm) / Mounting bracket	ø12	ø16	ø20	ø25	ø32	ø40	ø50
Foot (LB)	SSD-LB-12	SSD-LB-16	SSD-LB-20	SSD-LB-25	SSD-LB-32	SSD-LB-40	SSD-LB-50
Foot (LB2)	SSD-LB2-12	SSD-LB2-16	SSD-LB2-20	SSD-LB2-25	SSD-LB2-32	SSD-LB2-40	SSD-LB2-50
Flange (FA/FB)	SSD-FA-12	SSD-FA-16	SSD-FA-20	SSD-FA-25	SSD-FA-32	SSD-FA-40	SSD-FA-50
Double Clevis (CB)	SSD-CB-12	SSD-CB-16	SSD-CB-20	SSD-CB-25	SSD-CB-32	SSD-CB-40	SSD-CB-50
Double knuckle clevis (CB2)	SSD-CB2-12	SSD-CB2-16	SSD-CB2-20	SSD-CB2-25	SSD-CB2-32	SSD-CB2-40	SSD-CB2-50

Note: Foot type mounting brackets are 2 pcs/set.

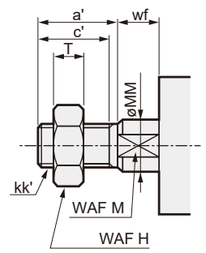
Outline Dimension Drawing (Bore size: ø12 to ø25)

●SSD-X (L)-12 to 25

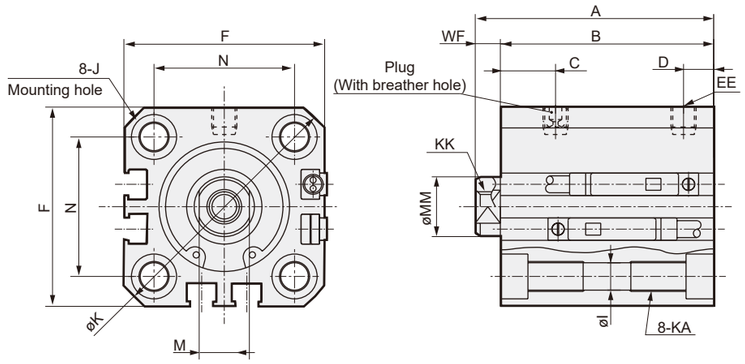
ø12, ø16



● Rod end male thread part



ø20, ø25



Code / Bore Size (mm)			Dimension with switch A	Dimension with switch B	Dimension without switch A	Dimension without switch B	C	D	EE	F	I	J	K	KA	KK	M	MM	N	WF
ø12	Stroke	5	35.5	32	25.5	22	5.5	5.5	M5	25	3.5	6.5 Counterbore depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
		10			30.5	27													
ø16	Stroke	5	35.5	32	25.5	22	5.5	5.5	M5	29	3.5	6.5 Counterbore depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
		10			30.5	27													
ø20	Stroke	5	39	34.5	29	24.5	8	5.5	M5	36	5.5	9 Counterbore depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
		10	44	39.5	34	29.5													
ø25	Stroke	5	42.5	37.5	32.5	27.5	11	6	M5	40	5.5	9 Counterbore depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5
		10	47.5	42.5	37.5	32.5													

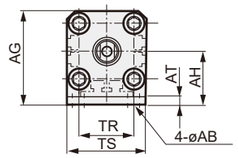
***1: For dimensions with each switch, refer to P. 674 to 681.**
***2: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**

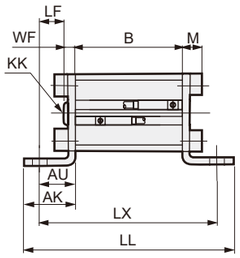
● Rod end male thread part dimension table

Code / Bore Size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5

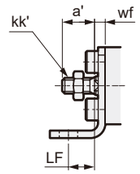
Outline Dimension Drawing (Bore size: ø12 to ø25)

● Axial Foot Type (LB)





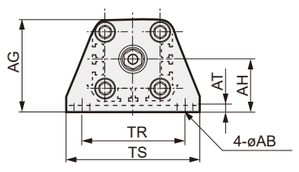
● For rod end male thread

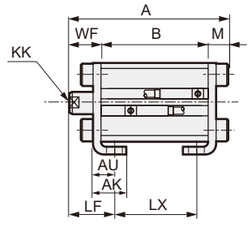


Code / Bore Size (mm)			Common dimension AB	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch B	With Switch LL	With Switch LX	Without Switch B	Without Switch LL	Without Switch LX	For male thread a'	kk'	wf	LF
ø12	Stroke	5	6	29.5	17	18	2.3	12	16	25	6.3	M3 depth 6	3.5	8.5	32	68	56	22	58	46	10.5	M5	3.5	8.5
		10													32	68	56	27	63	51				
ø16	Stroke	5	6	33.5	19	18	2.3	12	16	29	6.3	M4 depth 8	3.5	8.5	32	68	56	22	58	46	12	M6	3.5	8.5
		10													32	68	56	27	63	51				
ø20	Stroke	5	7	42	24	24	3.2	16	24	36	9.2	M5 depth 7	4.5	11.5	34.5	82.5	66.5	–	–	–	14	M8	4.5	11.5
		10													39.5	87.5	71.5	29.5	77.5	61.5				
ø25	Stroke	5	7	46	26	24	3.2	16	28	40	9.2	M6 Depth 12	5	11	37.5	85.5	69.5	27.5	75.5	59.5	17.5	M10×1.25	5	11
		10													42.5	90.5	74.5	32.5	80.5	64.5				

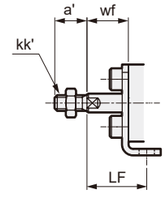
*1: For ø20 without switch, 5 strokes, LB cannot be selected.

● Axial Foot Type (Compact Type) (LB2)





● For rod end male thread

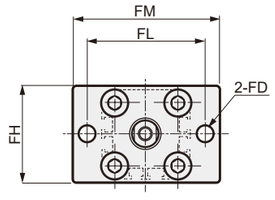


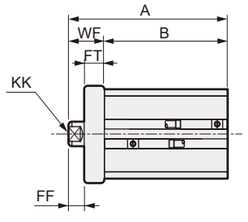
Code / Bore Size (mm)			Common dimension AB	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch A	With Switch B	With Switch LX	Without Switch A	Without Switch B	Without Switch LX	For male thread a'	kk'	wf	LF
ø12	Stroke	5	5	29.5	17	12.5	2	8	34	44	6	M3 depth 6	13.5	19.5	51.5	32	20	41.5	22	10	10.5	M5	13.5	19.5
		10													51.5	32	20	46.5	27	15				
ø16	Stroke	5	5	33.5	19	13	2	8	38	48	6	M4 depth 8	13.5	19.5	51.5	32	20	41.5	22	10	12	M6	13.5	19.5
		10													51.5	32	20	46.5	27	15				
ø20	Stroke	5	7	42	24	15	3.2	9.2	48	62	9.2	M5 depth 7	14.5	20.5	58.2	34.5	22.5	–	–	–	14	M8	14.5	20.5
		10													63.2	39.5	27.5	53.2	29.5	17.5				
ø25	Stroke	5	7	46	26	16.5	3.2	10.7	52	66	9.2	M6 Depth 12	15	22.5	61.7	37.5	22.5	51.7	27.5	12.5	17.5	M10×1.25	15	22.5
		10													66.7	42.5	27.5	56.7	32.5	17.5				

*1: For ø20 without switch, 5 strokes, LB2 cannot be selected.

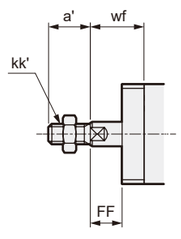
Outline Dimension Drawing (Bore size: ø12 to ø25)

● Rod Side Flange Type (FA)



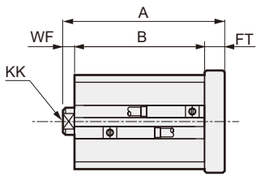


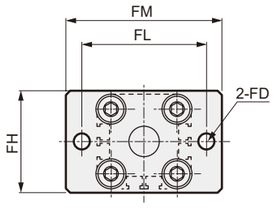
● For rod end male thread



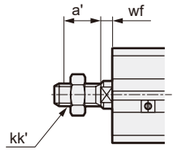
Code / Bore Size (mm)			Common dimension FD	FH	FL	FM	FT	For female thread FF	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	For male thread FF	a'	kk'	wf
ø12	Stroke	5	4.5	25	45	55	5.5	8	M3 depth 6	13.5	45.5	32	35.5	22	8	10.5	M5	13.5
		10									45.5	32	40.5	27				
ø16	Stroke	5	4.5	30	45	55	5.5	8	M4 depth 8	13.5	45.5	32	35.5	22	8	12	M6	13.5
		10									45.5	32	40.5	27				
ø20	Stroke	5	6.6	39	48	60	8	6.5	M5 depth 7	14.5	49	34.5	39	24.5	6.5	14	M8	14.5
		10									54	39.5	44	29.5				
ø25	Stroke	5	6.6	42	52	64	8	7	M6 Depth 12	15	52.5	37.5	42.5	27.5	7	17.5	M10×1.25	15
		10									57.5	42.5	47.5	32.5				

● Head Side Flange Type (FB)





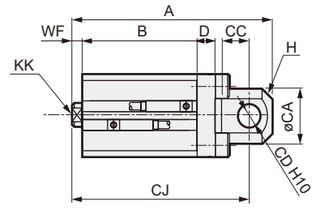
● For rod end male thread

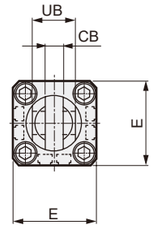


Code / Bore Size (mm)			Common dimension FD	FH	FL	FM	FT	For female thread KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	For male thread a'	kk'	wf
ø12	Stroke	5	4.5	25	45	55	5.5	M3 depth 6	3.5	41	32	31	22	10.5	M5	3.5
		10								41	32	36	27			
ø16	Stroke	5	4.5	30	45	55	5.5	M4 depth 8	3.5	41	32	31	22	12	M6	3.5
		10								41	32	36	27			
ø20	Stroke	5	6.6	39	48	60	8	M5 depth 7	4.5	47	34.5	37	24.5	14	M8	4.5
		10								52	39.5	42	29.5			
ø25	Stroke	5	6.6	42	52	64	8	M6 Depth 12	5	50.5	37.5	40.5	27.5	17.5	M10×1.25	5
		10								55.5	42.5	45.5	32.5			

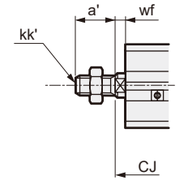
Outline Dimension Drawing (Bore size: ø12 to ø25)

● Double Knuckle Clevis Type (CB)



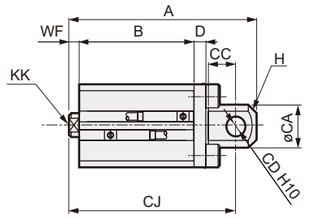


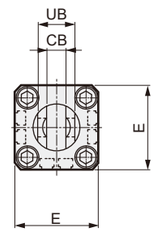
● For rod end male thread



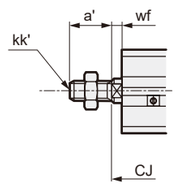
Code / Bore Size (mm)			Common dimension CA	CB	CC	CD	D	E	H	UB	For female thread KK	WF	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	For male thread a'	kk'	wf	With Switch CJ	Without Switch CJ
ø12	Stroke	5	13.5	6.5 +0.4 +0.1	7	5	5	25	C1.5	12 -0.1 -0.4	M3 depth 6	3.5	55.5	32	49.5	45.5	22	39.5	10.5	M5	3.5	49.5	39.5
		10											55.5	32	49.5	50.5	27	44.5				49.5	44.5
ø16	Stroke	5	15	6.5 +0.4 +0.1	8	5	5	29	C2	12 -0.1 -0.4	M4 depth 8	3.5	56.5	32	50.5	46.5	22	40.5	12	M6	3.5	50.5	40.5
		10											56.5	32	50.5	51.5	27	45.5				50.5	45.5
ø20	Stroke	5	24	8 +0.4 +0.1	12	10	8	36	C4	19 -0.1 -0.4	M5 depth 7	4.5	72	34.5	62	62	24.5	52	14	M8	4.5	62	52
		10											77	39.5	67	67	29.5	57				67	57
ø25	Stroke	5	27.5	10 +0.4 +0.1	16	12	8	40	C5	21 -0.1 -0.4	M6 Depth 12	5	81.5	37.5	69.5	71.5	27.5	59.5	17.5	M10×1.25	5	69.5	59.5
		10											86.5	42.5	74.5	76.5	32.5	64.5				74.5	64.5

● Double clevis type (compact type) (CB2)





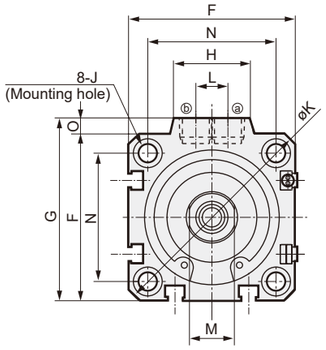
● For rod end male thread

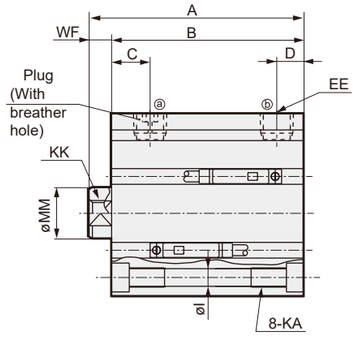


Code / Bore Size (mm)			Common dimension CA	CB	CC	CD	D	E	H	UB	For female thread KK	WF	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	For male thread a'	kk'	wf	With Switch CJ	Without Switch CJ
ø12	Stroke	5	12	5 +0.4 +0.1	7	5	4	25	C1.5	10 -0.1 -0.3	M3 depth 6	3.5	55.5	32	49.5	45.5	22	39.5	10.5	M5	3.5	49.5	39.5
		10											55.5	32	49.5	50.5	27	44.5				49.5	44.5
ø16	Stroke	5	15	6.5 +0.4 +0.1	8	5	5	29	C2	12 -0.1 -0.4	M4 depth 8	3.5	56.5	32	50.5	46.5	22	40.5	12	M6	3.5	50.5	40.5
		10											56.5	32	50.5	51.5	27	45.5				50.5	45.5
ø20	Stroke	5	20	8 +0.4 +0.1	12	8	5	36	C4	16 -0.1 -0.3	M5 depth 7	4.5	66	34.5	57	56	24.5	47	14	M8	4.5	57	47
		10											71	39.5	62	61	29.5	52				62	52
ø25	Stroke	5	24	10 +0.4 +0.1	14	10	5	40	C5	20 -0.1 -0.3	M6 Depth 12	5	72.5	37.5	62.5	62.5	27.5	52.5	17.5	M10×1.25	5	62.5	52.5
		10											77.5	42.5	67.5	67.5	32.5	57.5				67.5	57.5

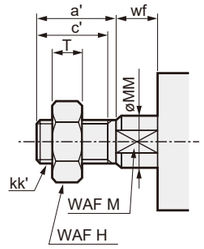
Outline dimension drawing (bore size: ø32 to ø50)

●SSD-X (L)-32 to 50





● Rod end male thread part



Code / Bore Size (mm)			Dimension with switch A	Dimension with switch B	Dimension without switch A	Dimension without switch B	C	D	EE	F	G	H	I	J	K	KA	KK	L	M	MM	N	O	WF
ø32	Stroke	5	45	38	35	28	8	8	Rc1/8	45	49.5	24	5.5	9 Counterbore Depth 5.5	60	M6 Depth 11	M8 Depth 13	10	14	16	34	4.5	7
		10	50	43	40	33																	
ø40	Stroke	10	56.5	49.5	46.5	39.5	12	8.5	Rc1/8	52	57	24	5.5	9 Counterbore Depth 5.5	69	M6 Depth 11	M8 Depth 13	10	14	16	40	5	7
		20	66.5	59.5	56.5	49.5																	
ø50	Stroke	10	58.5	50.5	48.5	40.5	10.5	10.5	Rc1/4	64	71	33	6.9	11 Counter-bore Depth 6.5	86	M8 Depth 13	M10 Depth 15	15	17	20	50	7	8
		20	68.5	60.5	58.5	50.5																	

***1: For dimensions with each switch, refer to P. 674 to 681.**

***2: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**

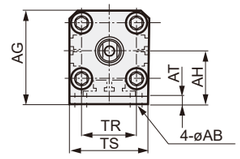
● Rod end male thread part dimension table

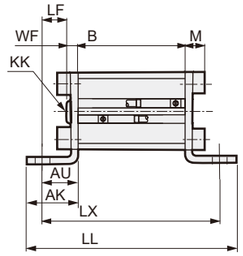
Code / Bore Size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14×1.5	14	16	8	5
ø40	23.5	20.5	22	M14×1.5	14	16	8	5
ø50	28.5	26	27	M18×1.5	17	20	11	5

Outline dimension drawing (bore size: ø32 to ø50)

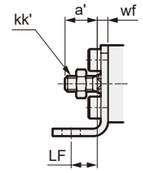
● Axial Foot Type (LB)

・ø32

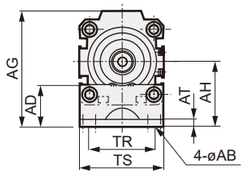


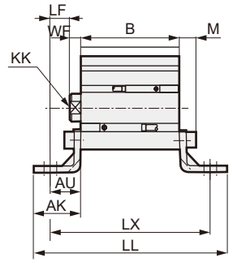


● For rod end male thread

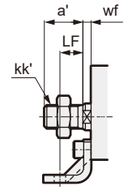


・ø40 to ø50



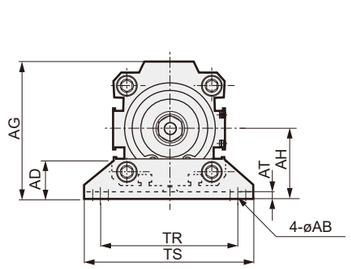


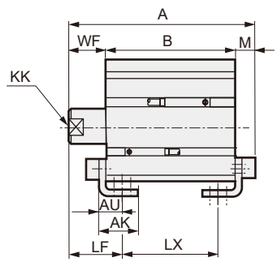
● For rod end male thread



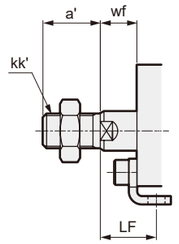
Code / Bore Size (mm)			Common dimension AB	AD	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch B	With Switch LL	With Switch LX	Without Switch B	Without Switch LL	Without Switch LX	For male thread a'	kk'	wf	LF
ø32	Stroke	5	7	–	53.5	31	24	3.2	16	34	45	9.2	M8 depth 13	7	9	38	86	70	28	76	60	23.5	M14×1.5	5	11
		10														43	91	75	33	81	65				
ø40	Stroke	10	7	26	71	40	29	4.5	19	40	52	10	M8 depth 13	7	12	49.5	107.5	87.5	39.5	97.5	77.5	23.5	M14×1.5	5	14
		20														59.5	117.5	97.5	49.5	107.5	87.5				
ø50	Stroke	10	9	23	79	40	34	4.5	22	46	64	13	M10 depth 15	8	14	50.5	118.5	94.5	40.5	108.5	84.5	28.5	M18×1.5	5	17
		20														60.5	128.5	104.5	50.5	118.5	94.5				

● Axial Foot Type (Compact Type) (LB2)





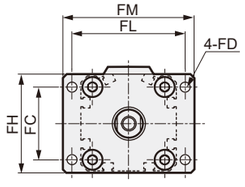
● For rod end male thread

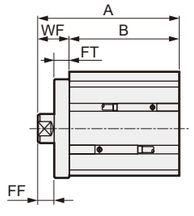


Code / Bore Size (mm)			Common dimension AB	AD	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch A	With Switch B	With Switch LX	Without Switch A	Without Switch B	Without Switch LX	For male thread a'	kk'	wf	LF
ø32	Stroke	5	7	18.5	57	30	17	3.2	11.2	57	71	9.2	M8 depth 13	17	25	64.2	38	22	54.2	28	12	23.5	M14×1.5	15	23
		10														69.2	43	27	59.2	33	17				
ø40	Stroke	10	7	18	64	33	18.2	3.2	11.2	64	78	9.2	M8 depth 13	17	25	75.7	49.5	33.5	65.7	39.5	23.5	23.5	M14×1.5	15	23
		20														85.7	59.5	43.5	75.7	49.5	33.5				
ø50	Stroke	10	9	22	78	39	22.7	3.2	14.7	79	95	11.2	M10 depth 15	18	29.5	79.7	50.5	27.5	69.7	40.5	17.5	28.5	M18×1.5	15	26.5
		20														89.7	60.5	37.5	79.7	50.5	27.5				

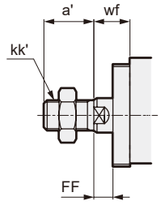
Outline dimension drawing (bore size: ø32 to ø50)

● Rod Side Flange Type (FA)



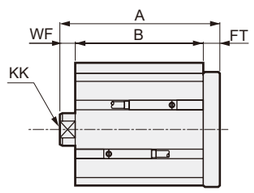


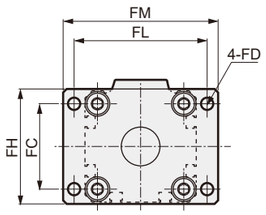
● For rod end male thread



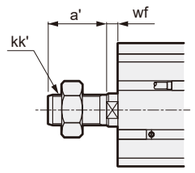
Code / Bore Size (mm)			Common dimension FC	FD	FH	FL	FM	FT	For female thread FF	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	For male thread FF	a'	kk'	wf
ø32	Stroke	5	34	5.5	48	56	65	8	9	M8 depth 13	17	55	38	45	28	7	23.5	M14×1.5	15
		10										60	43	50	33				
ø40	Stroke	10	40	5.5	54	62	72	8	9	M8 depth 13	17	66.5	49.5	56.5	39.5	7	23.5	M14×1.5	15
		20										76.5	59.5	66.5	49.5				
ø50	Stroke	10	50	6.6	67	76	89	9	9	M10 depth 15	18	68.5	50.5	58.5	40.5	6	28.5	M18×1.5	15
		20										78.5	60.5	68.5	50.5				

● Head Side Flange Type (FB)





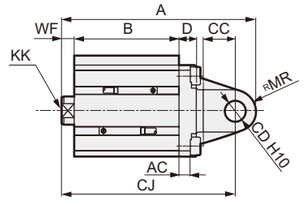
● For rod end male thread

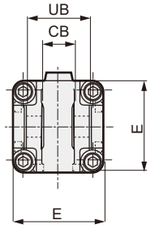


Code / Bore Size (mm)			Common dimension FC	FD	FH	FL	FM	FT	For female thread KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	For male thread a'	kk'	wf
ø32	Stroke	5	34	5.5	48	56	65	8	M8 depth 13	7	53	38	43	28	23.5	M14×1.5	5
		10									58	43	48	33			
ø40	Stroke	10	40	5.5	54	62	72	8	M8 depth 13	7	64.5	49.5	54.5	39.5	23.5	M14×1.5	5
		20									74.5	59.5	64.5	49.5			
ø50	Stroke	10	50	6.6	67	76	89	9	M10 depth 15	8	67.5	50.5	57.5	40.5	28.5	M18×1.5	5
		20									77.5	60.5	67.5	50.5			

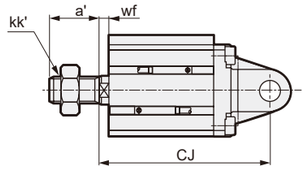
Outline dimension drawing (bore size: ø32 to ø50)

● Double Knuckle Clevis Type (CB)



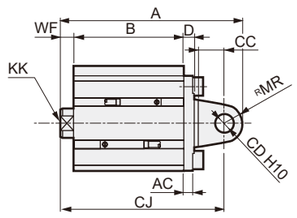


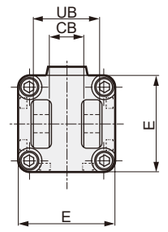
● For rod end male thread



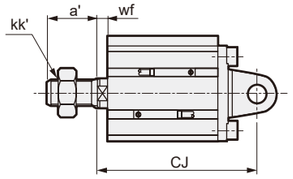
Code / Bore Size (mm)			Common dimension AC	CB	CC	CD	D	E	MR	UB	For female thread KK	WF	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	For male thread a'	kk'	wf	With Switch CJ	Without Switch CJ
ø32	Stroke	5	9.5	$10^{+0.4}_{+0.1}$	16	12	10	45	12	$21^{-0.1}_{-0.4}$	M8 depth 13	7	87	38	75	77	28	65	23.5	M14×1.5	5	73	63
		10											92	43	80	82	33	70				78	68
ø40	Stroke	10	6.5	$18^{+0.4}_{+0.1}$	18	12	10	52	12	$36^{-0.1}_{-0.4}$	M8 depth 13	7	100.5	49.5	88.5	90.5	39.5	78.5	23.5	M14×1.5	5	86.5	76.5
		20											110.5	59.5	98.5	100.5	49.5	88.5				96.5	86.5
ø50	Stroke	10	6.5	$18^{+0.4}_{+0.1}$	18	12	10	64	12	$36^{-0.1}_{-0.4}$	M10 depth 15	8	102.5	50.5	90.5	92.5	40.5	80.5	28.5	M18×1.5	5	87.5	77.5
		20											112.5	60.5	100.5	102.5	50.5	90.5				97.5	87.5

● Double clevis type (compact type) (CB2)





● For rod end male thread

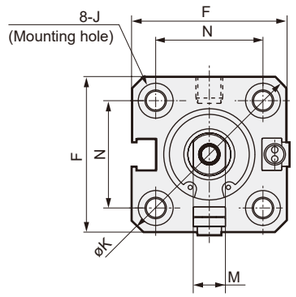


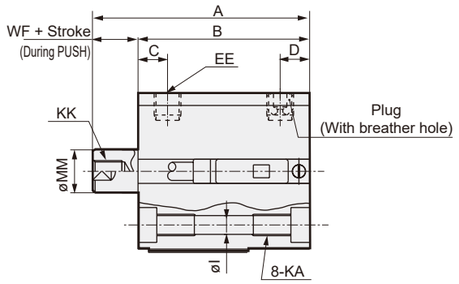
Code / Bore Size (mm)			Common dimension AC	CB	CC	CD	D	E	MR	UB	For female thread KK	WF	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	For male thread a'	kk'	wf	With Switch CJ	Without Switch CJ
ø32	Stroke	5	4.5	$18^{+0.4}_{+0.1}$	14	10	5	45	10	$36^{-0.1}_{-0.3}$	M8 depth 13	7	75	38	65	65	28	55	23.5	M14×1.5	5	63	53
		10											80	43	70	70	33	60				68	58
ø40	Stroke	10	5	$18^{+0.4}_{+0.1}$	14	10	6	52	10	$36^{-0.1}_{-0.3}$	M8 depth 13	7	88.5	49.5	78.5	78.5	39.5	68.5	23.5	M14×1.5	5	76.5	66.5
		20											98.5	59.5	88.5	88.5	49.5	78.5				86.5	76.5
ø50	Stroke	10	6	$22^{+0.4}_{+0.1}$	20	14	7	64	14	$44^{-0.1}_{-0.3}$	M10 depth 15	8	100.5	50.5	86.5	90.5	40.5	76.5	28.5	M18×1.5	5	83.5	73.5
		20											110.5	60.5	96.5	100.5	50.5	86.5				93.5	83.5

Outline Dimension Drawing (Bore size: ø12 to ø25)

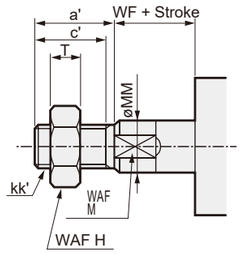
● SSD-Y (L)-12 to 25

ø12, ø16

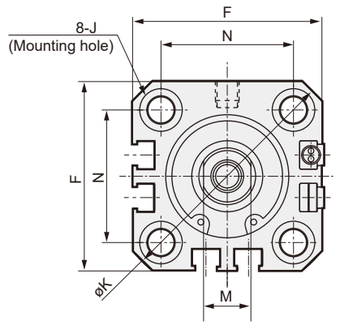


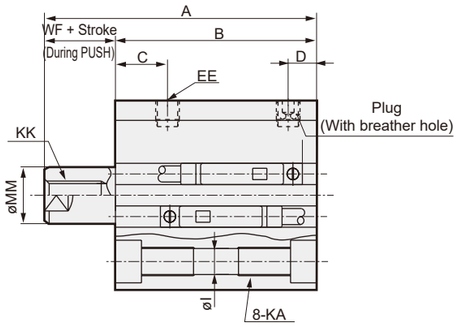


● Rod end male thread part



ø20, ø25





Code / Bore Size (mm)			Dimension with switch A	Dimension with switch B	Dimension without switch A	Dimension without switch B	C	D	EE	F	I	J	K	KA	KK	M	MM	N	WF
ø12	Stroke	5	40.5	32	30.5	22	5.5	5.5	M5	25	3.5	6.5 Counterbore depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
		10	45.5		40.5	27													
ø16	Stroke	5	40.5	32	30.5	22	5.5	5.5	M5	29	3.5	6.5 Counterbore depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
		10	45.5		40.5	27													
ø20	Stroke	5	44	34.5	34	24.5	8	5.5	M5	36	5.5	9 Counterbore depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
		10	54	39.5	44	29.5													
ø25	Stroke	5	47.5	37.5	37.5	27.5	11	6	M5	40	5.5	9 Counterbore depth 5.5	51	M6 depth 11	M6 depth 12	10	12	28	5
		10	57.5	42.5	47.5	32.5													

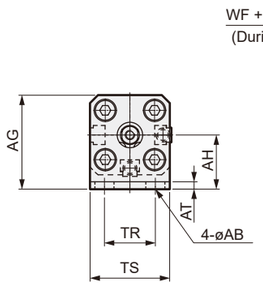
***1: For dimensions with each switch, refer to P. 674 to 681.**
***2: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**

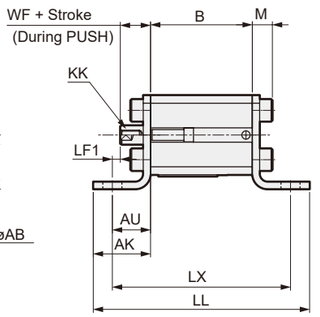
Rod End Male Thread Dimension Table

Code / Bore Size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5

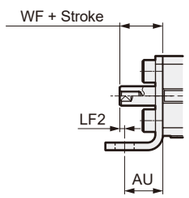
Outline Dimension Drawing (Bore size: ø12 to ø25)

● Axial Foot Type (LB)

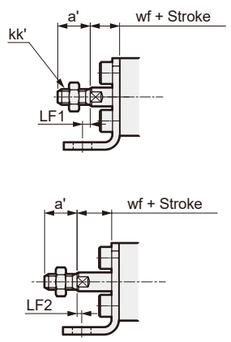




ø12, ø16: At 10 strokes



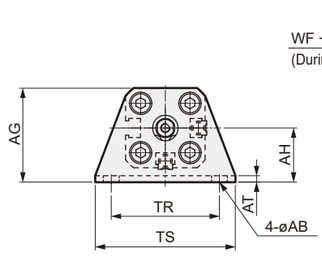
● For rod end male thread

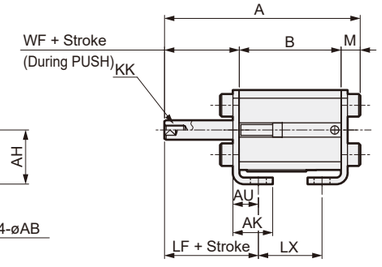


Code / Bore Size (mm)			Common dimension AB	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF1	LF2	With Switch B	With Switch LL	With Switch LX	Without Switch B	Without Switch LL	Without Switch LX	For male thread a'	kk'	wf	LF1	LF2
ø12	Stroke	5	6	29.5	17	18	2.3	12	16	25	6.3	M3 depth 6	3.5	3.5	-	32	68	56	22	58	46	10.5	M5	3.5	3.5	-
		10												-	1.5	32	68	56	27	63	51				-	1.5
ø16	Stroke	5	6	33.5	19	18	2.3	12	16	29	6.3	M4 depth 8	3.5	3.5	-	32	68	56	22	58	46	12	M6	3.5	3.5	-
		10												-	1.5	32	68	56	27	63	51				-	1.5
ø20	Stroke	5	7	42	24	24	3.2	16	24	36	9.2	M5 depth 7	4.5	6.5	-	34.5	82.5	66.5	-	-	-	14	M8	4.5	6.5	-
		10												1.5	-	39.5	87.5	71.5	29.5	77.5	61.5				1.5	-
ø25	Stroke	5	7	46	26	24	3.2	16	28	40	9.2	M6 Depth 12	5	6	-	37.5	85.5	69.5	27.5	75.5	59.5	17.5	M10×1.25	5	6	-
		10												1	-	42.5	90.5	74.5	32.5	80.5	64.5				1	-

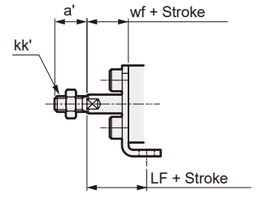
*1: For ø20 without switch, 5 strokes, LB cannot be selected.

● Axial Foot Type (Compact Type) (LB2)





● For rod end male thread

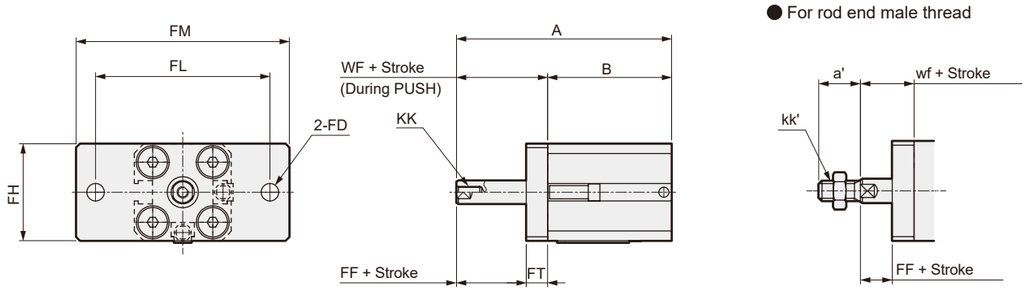


Code / Bore Size (mm)			Common dimension AB	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch A	With Switch B	With Switch LX	Without Switch A	Without Switch B	Without Switch LX	For male thread a'	kk'	wf	LF
ø12	Stroke	5	5	29.5	17	12.5	2	8	34	44	6	M3 depth 6	13.5	19.5	56.5	32	20	46.5	22	10	10.5	M5	13.5	19.5
		10													56.5	32	20	56.5	27	15				
ø16	Stroke	5	5	33.5	19	13	2	8	38	48	6	M4 depth 8	13.5	19.5	56.5	32	20	46.5	22	10	12	M6	13.5	19.5
		10													56.5	32	20	56.5	27	15				
ø20	Stroke	5	7	42	24	15	3.2	9.2	48	62	9.2	M5 depth 7	14.5	20.5	63.2	34.5	22.5	-	-	-	14	M8	14.5	20.5
		10													68.2	39.5	27.5	63.2	29.5	17.5				
ø25	Stroke	5	7	46	26	16.5	3.2	10.7	52	66	9.2	M6 Depth 12	15	22.5	66.7	37.5	22.5	56.7	27.5	12.5	17.5	M10×1.25	15	22.5
		10													71.7	42.5	27.5	66.7	32.5	17.5				

*1: For ø20 without switch, 5 strokes, LB2 cannot be selected.

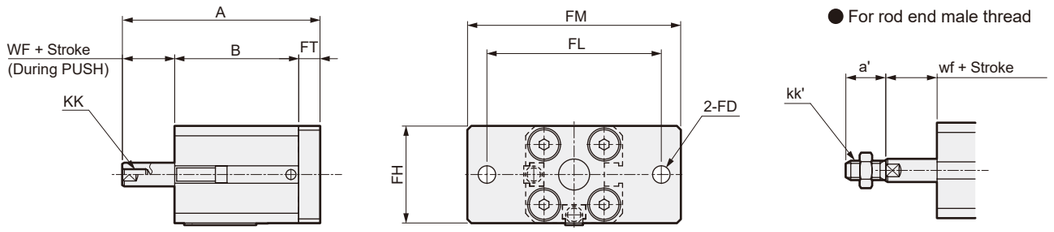
Outline Dimension Drawing (Bore size: ø12 to ø25)

● Rod Side Flange Type (FA)



Code / Bore Size (mm)			Common dimension FD	FH	FL	FM	FT	For female thread FF	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	For male thread FF	a'	kk'	wf
ø12	Stroke	5	4.5	25	45	55	5.5	8	M3 depth 6	13.5	50.5	32	40.5	22	8	10.5	M5	13.5
		10									55.5	32	50.5	27				
ø16	Stroke	5	4.5	30	45	55	5.5	8	M4 depth 8	13.5	50.5	32	40.5	22	8	12	M6	13.5
		10									55.5	32	50.5	27				
ø20	Stroke	5	6.6	39	48	60	8	6.5	M5 depth 7	14.5	54	34.5	44	24.5	6.5	14	M8	14.5
		10									64	39.5	54	29.5				
ø25	Stroke	5	6.6	42	52	64	8	7	M6 Depth 12	15	57.5	37.5	47.5	27.5	7	17.5	M10×1.25	15
		10									67.5	42.5	57.5	32.5				

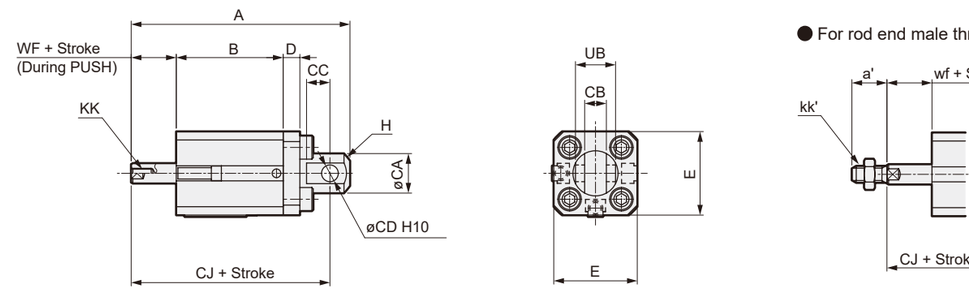
● Head Side Flange Type (FB)



Code / Bore Size (mm)			Common dimension FD	FH	FL	FM	FT	For female thread KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	For male thread a'	kk'	wf
ø12	Stroke	5	4.5	25	45	55	5.5	M3 depth 6	3.5	46	32	36	22	10.5	M5	3.5
		10								51	32	46	27			
ø16	Stroke	5	4.5	30	45	55	5.5	M4 depth 8	3.5	46	32	36	22	12	M6	3.5
		10								51	32	46	27			
ø20	Stroke	5	6.6	39	48	60	8	M5 depth 7	4.5	52	34.5	42	24.5	14	M8	4.5
		10								62	39.5	52	29.5			
ø25	Stroke	5	6.6	42	52	64	8	M6 Depth 12	5	55.5	37.5	45.5	27.5	17.5	M10×1.25	5
		10								65.5	42.5	55.5	32.5			

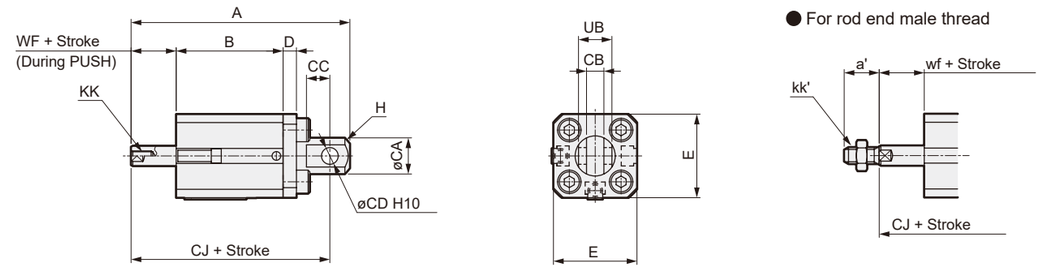
Outline Dimension Drawing (Bore size: ø12 to ø25)

● Double Knuckle Clevis Type (CB)



Code / Bore Size (mm)			Common dimension CA	CB	CC	CD	D	E	H	UB	For female thread KK	WF	With Switch CJ	Without Switch CJ	For male thread a'	kk'	wf	With Switch CJ	Without Switch CJ
ø12	Stroke	5	13.5	$6.5^{+0.4}_{+0.1}$	7	5	5	25	C1.5	$12^{-0.1}_{-0.4}$	M3 depth 6	3.5	54.5	44.5	10.5	M5	3.5	54.5	44.5
		10											59.5	49.5				59.5	49.5
ø16	Stroke	5	15	$6.5^{+0.4}_{+0.1}$	8	5	5	29	C2	$12^{-0.1}_{-0.4}$	M4 depth 8	3.5	55.5	45.5	12	M6	3.5	55.5	45.5
		10											60.5	50.5				60.5	50.5
ø20	Stroke	5	24	$8^{+0.4}_{+0.1}$	12	10	8	36	C4	$19^{-0.1}_{-0.4}$	M5 depth 7	4.5	67	57	14	M8	4.5	67	57
		10											72	62				72	62
ø25	Stroke	5	27.5	$10^{+0.4}_{+0.1}$	16	12	8	40	C5	$21^{-0.1}_{-0.4}$	M6 Depth 12	5	74.5	64.5	17.5	M10×1.25	5	74.5	64.5
		10											79.5	69.5				79.5	69.5

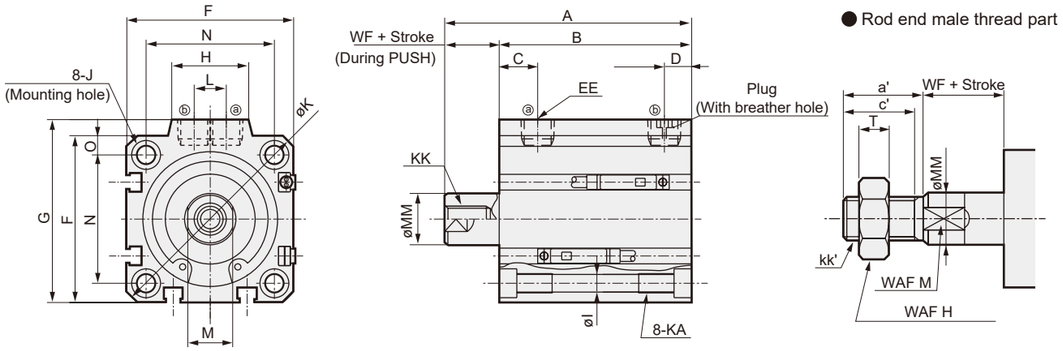
● Double clevis type (compact type) (CB2)



Code / Bore Size (mm)			Common dimension CA	CB	CC	CD	D	E	H	UB	For female thread KK	WF	With Switch CJ	Without Switch CJ	For male thread a'	kk'	wf	With Switch CJ	Without Switch CJ
ø12	Stroke	5	12	$5^{+0.4}_{+0.1}$	7	5	4	25	C1.5	$10^{-0.1}_{-0.3}$	M3 depth 6	3.5	54.5	44.5	10.5	M5	3.5	54.5	44.5
		10											59.5	49.5				59.5	49.5
ø16	Stroke	5	15	$6.5^{+0.4}_{+0.1}$	8	5	5	29	C2	$12^{-0.1}_{-0.4}$	M4 depth 8	3.5	55.5	45.5	12	M6	3.5	55.5	45.5
		10											60.5	50.5				60.5	50.5
ø20	Stroke	5	20	$8^{+0.4}_{+0.1}$	12	8	5	36	C4	$16^{-0.1}_{-0.3}$	M5 depth 7	4.5	62	52	14	M8	4.5	62	52
		10											67	57				67	57
ø25	Stroke	5	24	$10^{+0.4}_{+0.1}$	14	10	5	40	C5	$20^{-0.1}_{-0.3}$	M6 Depth 12	5	67.5	57.5	17.5	M10×1.25	5	67.5	57.5
		10											72.5	62.5				72.5	62.5

Outline dimension drawing (bore size: ø32 to ø50)

● SSD-Y (L)-32 to 50



Code / Bore Size (mm)			Dimension with switch A	Dimension with switch B	Dimension without switch A	Dimension without switch B	C	D	EE	F	G	H	I	J	K	KA	KK	L	M	MM	N	O	WF
ø32	Stroke	5	50	38	40	28	8	8	Rc 1/8	45	49.5	24	5.5	9 Counterbore Depth 5.5	60	M6 Depth 11	M8 Depth 13	10	14	16	34	4.5	7
		10	60	43	50	33																	
ø40	Stroke	10	66.5	49.5	56.5	39.5	12	8.5	Rc 1/8	52	57	24	5.5	9 Counterbore Depth 5.5	69	M6 Depth 11	M8 Depth 13	10	14	16	40	5	7
		20	86.5	59.5	76.5	49.5																	
ø50	Stroke	10	68.5	50.5	58.5	40.5	10.5	10.5	Rc 1/4	64	71	33	6.9	11 Counterbore Depth 6.5	86	M8 Depth 13	M10 Depth 15	15	17	20	50	7	8
		20	88.5	60.5	78.5	50.5																	

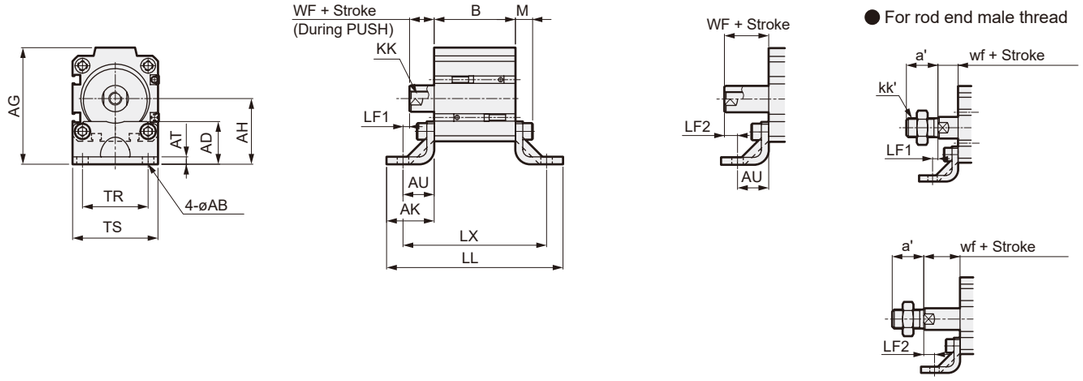
***1: For dimensions with each switch, refer to P. 674 to 681.**
***2: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**

● Rod end male thread part dimension table

Code / Bore Size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14×1.5	14	16	8	5
ø40	23.5	20.5	22	M14×1.5	14	16	8	5
ø50	28.5	26	27	M18×1.5	17	20	11	5

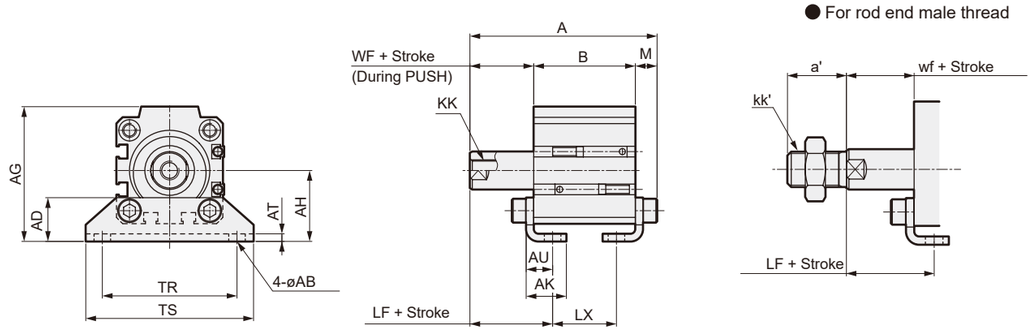
Outline dimension drawing (bore size: ø32 to ø50)

● Axial Foot Type (LB)



Code / Bore Size (mm)			AB	AD	AG	AH	AK	AT	AU	TR	TS	M	KK	WF	LF1	LF2	For female thread With Switch A	With Switch B	With Switch LX	Without Switch A	Without Switch B	Without Switch LX	For male thread a'	kk'	wf	LF1	LF2
ø32	Stroke	5	7	–	53.5	31	24	3.2	16	34	45	9.2	M8 depth 13	7	4	-	38	86	70	28	76	60	23.5	M14×1.5	5	6	-
		10													-	1	43	91	75	33	81	65				1	-
ø40	Stroke	10	7	26	71	40	29	4.5	19	40	52	10	M8 depth 13	7	2	-	49.5	107.5	87.5	39.5	97.5	77.5	23.5	M14×1.5	5	4	-
		20													-	8	59.5	117.5	97.5	49.5	107.5	87.5				-	6
ø50	Stroke	10	9	23	79	40	34	4.5	22	46	64	13	M10 depth 15	8	4	-	50.5	118.5	94.5	40.5	108.5	84.5	28.5	M18×1.5	5	7	-
		20													-	6	60.5	128.5	104.5	50.5	118.5	94.5				-	3

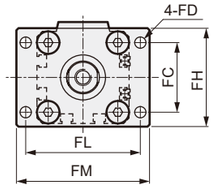
● Axial Foot Type (Compact Type) (LB2)

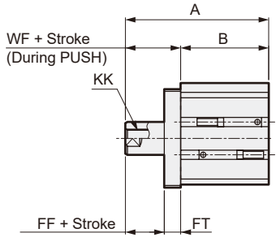


Code / Bore Size (mm)			AB	AD	AG	AH	AK	AT	AU	TR	TS	M	KK	WF	LF	For female thread With Switch A	With Switch B	With Switch LX	Without Switch A	Without Switch B	Without Switch LX	For male thread a'	kk'	wf	LF
ø32	Stroke	5	7	18.5	57	30	17	3.2	11.2	57	71	9.2	M8 depth 13	17	25	69.2	38	22	59.2	28	12	23.5	M14×1.5	15	23
		10														74.2	43	27	69.2	33	17				
ø40	Stroke	10	7	18	64	33	18.2	3.2	11.2	64	78	9.2	M8 depth 13	17	25	85.7	49.5	33.5	75.7	39.5	23.5	23.5	M14×1.5	15	23
		20														95.7	59.5	43.5	95.7	49.5	33.5				
ø50	Stroke	10	9	22	78	39	22.7	3.2	14.7	79	95	11.2	M10 depth 15	18	29.5	89.7	50.5	27.5	79.7	40.5	17.5	28.5	M18×1.5	15	26.5
		20														99.7	60.5	37.5	99.7	50.5	27.5				

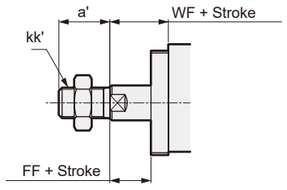
Outline dimension drawing (bore size: ø32 to ø50)

● Rod Side Flange Type (FA)



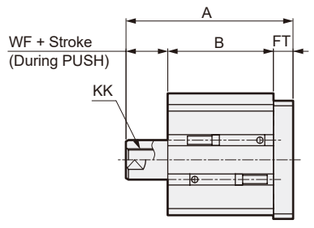


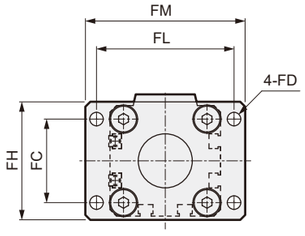
● For rod end male thread



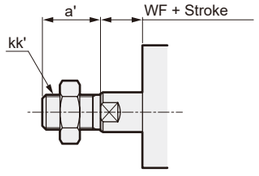
Code / Bore Size (mm)			Common dimension FC	FD	FH	FL	FM	FT	For female thread FF	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	For male thread FF	a'	kk'	wf
ø32	Stroke	5	34	5.5	48	56	65	8	9	M8 depth 13	17	60	38	50	28	7	23.5	M14×1.5	15
		10										70	43	60	33				
ø40	Stroke	10	40	5.5	54	62	72	8	9	M8 depth 13	17	76.5	49.5	66.5	39.5	7	23.5	M14×1.5	15
		20										96.5	59.5	86.5	49.5				
ø50	Stroke	10	50	6.6	67	76	89	9	9	M10 depth 15	18	78.5	50.5	68.5	40.5	6	28.5	M18×1.5	15
		20										98.5	60.5	88.5	50.5				

● Head Side Flange Type (FB)





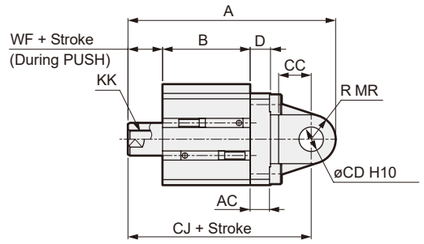
● For rod end male thread

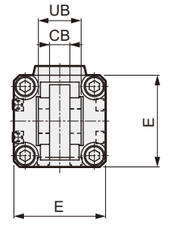


Code / Bore Size (mm)			Common dimension FC	FD	FH	FL	FM	FT	For female thread KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	For male thread a'	kk'	wf
ø32	Stroke	5	34	5.5	48	56	65	8	M8 depth 13	7	58	38	48	28	23.5	M14×1.5	5
		10									68	43	58	33			
ø40	Stroke	10	40	5.5	54	62	72	8	M8 depth 13	7	74.5	49.5	64.5	39.5	23.5	M14×1.5	5
		20									94.5	59.5	84.5	49.5			
ø50	Stroke	10	50	6.6	67	76	89	9	M10 depth 15	8	77.5	50.5	67.5	40.5	28.5	M18×1.5	5
		20									97.5	60.5	87.5	50.5			

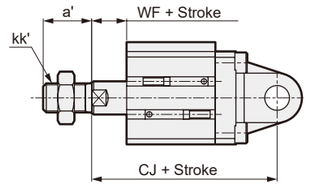
Outline dimension drawing (bore size: ø32 to ø50)

● Double Knuckle Clevis Type (CB)



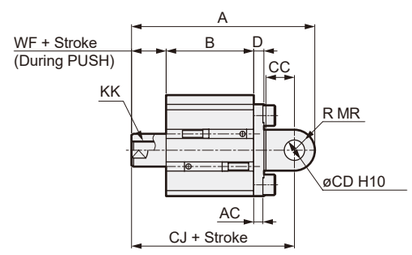


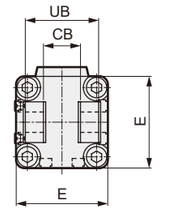
● For rod end male thread



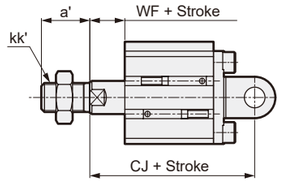
Code / Bore Size (mm)			Common dimension AC	CB	CC	CD	D	E	MR	UB	For female thread KK	WF	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	For male thread a'	kk'	wf	With Switch CJ	Without Switch CJ
ø32	Stroke	5	9.5	$10^{+0.4}_{+0.1}$	16	12	10	45	12	$21^{-0.1}_{-0.4}$	M8 depth 13	7	92	38	80	82	28	70	23.5	M14×1.5	5	78	68
		10											102	43	85	92	33	75				83	73
ø40	Stroke	10	6.5	$18^{+0.4}_{+0.1}$	18	12	10	52	12	$36^{-0.1}_{-0.4}$	M8 depth 13	7	110.5	49.5	98.5	100.5	39.5	88.5	23.5	M14×1.5	5	96.5	86.5
		20											130.5	59.5	108.5	120.5	49.5	98.5				106.5	96.5
ø50	Stroke	10	6.5	$18^{+0.4}_{+0.1}$	18	12	10	64	12	$36^{-0.1}_{-0.4}$	M10 depth 15	8	112.5	50.5	100.5	102.5	40.5	90.5	28.5	M18×1.5	5	97.5	87.5
		20											132.5	60.5	110.5	122.5	50.5	100.5				107.5	97.5

● Double clevis type (compact type) (CB2)





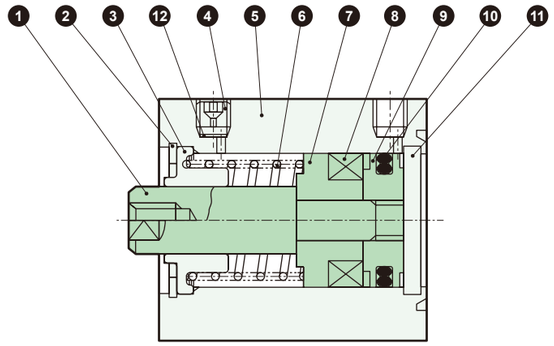
● For rod end male thread



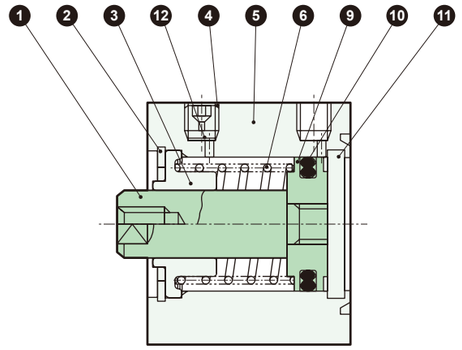
Code / Bore Size (mm)			Common dimension AC	CB	CC	CD	D	E	MR	UB	For female thread KK	WF	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	For male thread a'	kk'	wf	With Switch CJ	Without Switch CJ
ø32	Stroke	5	4.5	$18^{+0.4}_{+0.1}$	14	10	5	45	10	$36^{-0.1}_{-0.3}$	M8 depth 13	7	80	38	70	70	28	60	23.5	M14×1.5	5	68	58
		10											90	43	75	80	33	65				73	63
ø40	Stroke	10	5	$18^{+0.4}_{+0.1}$	14	10	6	52	10	$36^{-0.1}_{-0.3}$	M8 depth 13	7	98.5	49.5	88.5	88.5	39.5	78.5	23.5	M14×1.5	5	86.5	76.5
		20											118.5	59.5	98.5	108.5	49.5	88.5				96.5	86.5
ø50	Stroke	10	6	$22^{+0.4}_{+0.1}$	20	14	7	64	14	$44^{-0.1}_{-0.3}$	M10 depth 15	8	110.5	50.5	96.5	100.5	40.5	86.5	28.5	M18×1.5	5	93.5	83.5
		20											130.5	60.5	106.5	120.5	50.5	96.5				103.5	93.5

Internal Structure Diagram/Material

● SSD-XL (Single acting / Push type, with switch)



● SSD-X (Single acting / Push type)

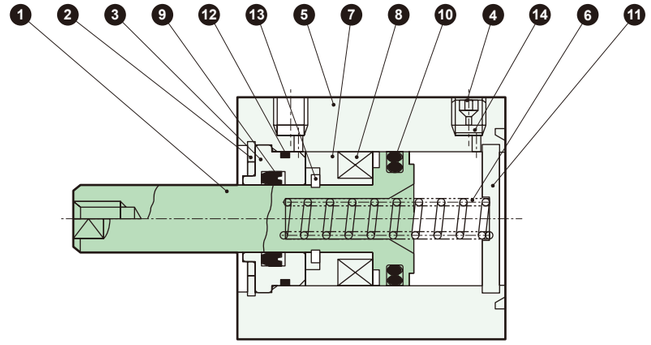


Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Piston Rod	ø12 to ø25: Stainless steel ø32 to ø50: Steel	ø16 to ø50: Industrial chrome plating	7	Spacer	Aluminum Alloy	Chromate
				8	Magnet	Plastic	
2	C-type retaining ring	Steel	Zinc phosphate	9	Piston	Aluminum Alloy	Chromate
3	Rod Metal	Aluminum Alloy	Alumite	10	Piston Packing	Nitrile Rubber	
4	Plug	Stainless Steel		11	Cover	ø12 to ø25: Stainless steel ø32 to ø50: Aluminum alloy	ø32 to ø50: Alumite
5	Cylinder Body	Aluminum Alloy	Hard Anodized				
6	Spring	Piano Wire	Electrodeposition Coating	12	Stainless Steel Wire Mesh	Stainless Steel	

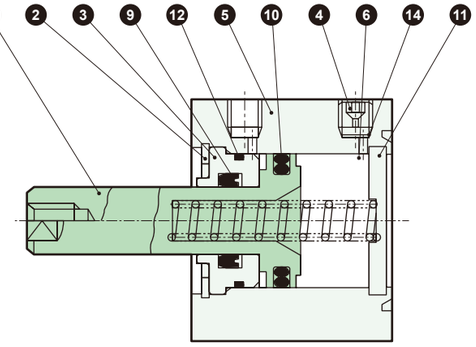
For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Internal Structure Diagram/Material

● SSD-YL (Single acting / Retracting type, with switch)

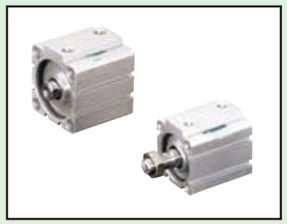


● SSD-Y (Single acting / Retracting type)



Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Piston	Stainless Steel		8	Magnet	Plastic	
				9	Rod Packing	Nitrile Rubber	
2	C-type retaining ring	Steel	Zinc phosphate	10	Piston Packing	Nitrile Rubber	
3	Rod Metal	Special aluminum alloy	Alumite	11	Cover	ø12 to ø25: Stainless steel ø32 to ø50: Aluminum alloy	ø32 to ø50: Alumite
4	Plug	Stainless Steel					
5	Cylinder Body	Aluminum Alloy	Hard Anodized	12	Metal gasket	Nitrile Rubber	
6	Spring	Piano Wire	Electrodeposition Coating	13	Round S-type retaining ring	Steel	Zinc phosphate
7	Spacer	Aluminum Alloy	Chromate	14	Stainless Steel Wire Mesh	Stainless Steel	

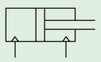
For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.



Compact Cylinder Double Acting, Heat Resistant Type

SSD-T Series

● Bore size: ø12, ø16, ø20, ø25, ø32, ø40, ø50, ø63, ø83, ø100

Circuit Diagram Symbol 

RoHS

Model No. Notation Method

SSD-T - 12 - [ ] - 5 - N - LB - I

Model No.	❶ Bore Size	❷ Piping thread type	❸ Stroke	❹ Option	❺ Mounting bracket	❻ Accessories
SSD-T	12	[ ]	5	N	LB	I

❶Bore Size (mm)

Code	Contents
12	ø12
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

❷Port Thread Type

Code	Contents
Blank	M5 thread (ø12 to ø25)
	Rc thread (ø32 to ø100)
NN	NPT thread (Custom product) (ø32 to ø100)
GN	G thread (Custom product) (ø32 to ø100)

❸Stroke (mm)

Bore Size	Stroke	Intermediate Stroke
ø12, ø16, ø20	1 to 30	Every 1 mm
ø25 to ø50	1 to 50	
ø63 to ø100	1 to 50	

Note: For details on stroke, please refer to P. 428.

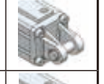
❹Option

	Code	Contents	
	Blank	Rod end female thread	
	N	Rod end male thread	
*1	M	Piston Rod Material (Stainless Steel)	

*1: The piston rod material for ø12 to ø25 is stainless steel as standard. C-type retaining ring changes from steel to stainless steel. The nut material for rod end male thread type will be stainless steel.

❺Mounting type

Mounting brackets are shipped included to the product.

	Code	Contents	
	LB	Axial Foot Type	
*1	LB2	Axial foot type (Compact type)	
*1	FA	Rod Side Flange Type	
	FB	Head Side Flange Type	
	CB	Double Clevis Type (pin and retaining ring included)	
	CB2	Clevis bracket (compact) (pin and snap ring included)	

*1: When LB2 or FA is selected, the piston rod protrusion dimension WF differs from the standard. Refer to outline dimension drawings on P. 369, 370, 373, 374. Also, the model No. specifying the protrusion length will be printed at the end of the model No. on the nameplate included to the main body. For cylinder model No.s when ordering cylinders and LB2/FA brackets separately, please contact us.

❻Accessories

Code	Contents	
I	Single Knuckle	
I2	Rod eye (compact)	
Y	Double Knuckle (pin and retaining ring included)	
Y2	Rod clevis (compact) (pin and snap ring included)	

*1: Selectable when rod end male thread "N" is selected.
*2: "I", "I2", "Y", "Y2" cannot be selected at the same time.

*For combination of variations and options, refer to P. 356 to 361.

About Custom Product Specifications

For details, refer to P. 690 to 694.

Code	Contents
-XP5	Knuckle Pin/Clevis Pin Split Pin
-XP7	Knuckle fixed by pin driving
-XP8	Knuckle pin/clevis pin split pin specification, knuckle fixed by pin driving
-A2	With 2 Rod Nuts
-R1,R2	With spigot joint
Rod End Shape Modification	Refer to Ending 11.

Model No. Example)

SSD-T-..... -XP5

Specifications

Item	SSD-T									
Bore size mm	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation method	Double Acting Type									
Operating Fluid	Compressed Air									
Max. Operating Pressure MPa	1.0									
Min. Operating Pressure MPa	0.1							0.05		
Proof pressure MPa	1.6									
Ambient Temperature °C	5 to 120									
Port Size	M5				Rc 1/8		Rc 1/4		Rc 3/8	
Stroke tolerance mm	+1.0 0									
Operating Piston Speed mm/s	50 to 500							50 to 300		
Cushion	None									
Lubrication *1	Not Available									
Allowable absorbed energy J	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12	0.27	0.56

*1: Grease up regularly with heat-resistant grease.

Stroke

Stroke (mm)		Applicable Bore									
		ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Standard Stroke	5	●	●	●	●	●	●	●	●	●	●
	10	●	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●			
	20	●	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●			
	30	●	●	●	●	●	●	●	●	●	●
	40				●	●	●	●	●	●	●
	50				●	●	●	●	●	●	●
Min. Stroke (mm)		1									
Max. Stroke (mm)		30			50						
Intermediate Stroke *1		Every 1 mm									

*1: The overall length dimension for intermediate stroke is the same as the standard stroke above it.

***2: For the minimum stroke when using mounting brackets LB and LB2, see P. 369 and 373.**

Cylinder Weight Table

(Unit: g)

Stroke (mm) / Bore Size (mm)	5	10	15	20	25	30	40	50
ø12	36	44	53	61	70	72	-	-
ø16	48	59	69	80	91	102	-	-
ø20	63	75	88	101	113	126	-	-
ø25	87	102	118	134	150	165	197	228
ø32	122	144	166	188	209	231	275	318
ø40	183	210	236	263	290	316	369	422
ø50	299	341	383	425	467	510	594	678
ø63	452	507	-	617	-	727	838	948
ø80	841	928	-	1101	-	1274	1448	1621
ø100	1319	1433	-	1660	-	1888	2115	2343

Theoretical Thrust Table

(Unit: N)

Bore Size (mm)	Operating Direction	Operating Pressure MPa											
		0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø12	Push	-	11.3	17.0	22.6	33.9	45.2	56.5	67.9	79.2	90.5	1.02×10²	1.13×10²
	Pull	-	8.48	12.7	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
ø16	Push	-	20.1	30.2	40.2	60.3	80.4	1.01×10²	1.21×10²	1.41×10²	1.61×10²	1.81×10²	2.01×10²
	Pull	-	15.1	22.6	30.2	45.2	60.3	75.4	90.5	1.06×10²	1.21×10²	1.36×10²	1.51×10²
ø20	Push	-	31.4	47.1	62.8	94.2	1.26×10²	1.57×10²	1.88×10²	2.20×10²	2.51×10²	2.83×10²	3.14×10²
	Pull	-	23.6	35.3	47.1	70.7	94.2	1.18×10²	1.41×10²	1.65×10²	1.88×10²	2.12×10²	2.36×10²
ø25	Push	-	49.1k	73.6	98.2	1.47×10²	1.96×10²	2.45×10²	2.95×10²	3.44×10²	3.93×10²	4.42×10²	4.91×10²
	Pull	-	37.8	56.7	75.6	1.13×10²	1.51×10²	1.89×10²	2.27×10²	2.64×10²	3.02×10²	3.40×10²	3.78×10²
ø32	Push	-	80.4	1.21×10²	1.61×10²	2.41×10²	3.22×10²	4.02×10²	4.83×10²	5.63×10²	6.43×10²	7.24×10²	8.04×10²
	Pull	-	60.3	90.5	1.21×10²	1.81×10²	2.41×10²	3.02×10²	3.62×10²	4.22×10²	4.83×10²	5.43×10²	6.03×10²
ø40	Push	-	1.26×10²	1.88×10²	2.51×10²	3.77×10²	5.03×10²	6.28×10²	7.54×10²	8.80×10²	1.01×10³	1.13×10³	1.26×10³
	Pull	-	1.06×10²	1.58×10²	2.11×10²	3.17×10²	4.22×10²	5.28×10²	6.33×10²	7.39×10²	8.44×10²	9.50×10²	1.06×10³
ø50	Push	-	1.96×10²	2.95×10²	3.93×10²	5.89×10²	7.85×10²	9.82×10²	1.18×10³	1.37×10³	1.57×10³	1.77×10³	1.96×10³
	Pull	-	1.65×10²	2.47×10²	3.30×10²	4.95×10²	6.60×10²	8.25×10²	9.90×10²	1.15×10³	1.32×10³	1.48×10³	1.65×10³
ø63	Push	1.56×10²	3.12×10²	4.68×10²	6.23×10²	9.35×10²	1.25×10³	1.56×10³	1.87×10³	2.18×10³	2.49×10³	2.81×10³	3.12×10³
	Pull	1.40×10²	2.80×10²	4.20×10²	5.61×10²	8.41×10²	1.12×10³	1.40×10³	1.68×10³	1.96×10³	2.24×10³	2.52×10³	2.80×10³
ø80	Push	2.51×10²	5.03×10²	7.54×10²	1.01×10³	1.51×10³	2.01×10³	2.51×10³	3.02×10³	3.52×10³	4.02×10³	4.52×10³	5.03×10³
	Pull	2.27×10²	4.54×10²	6.80×10²	9.07×10²	1.36×10³	1.81×10³	2.27×10³	2.72×10³	3.17×10³	3.63×10³	4.08×10³	4.54×10³
ø100	Push	3.93×10²	7.85×10²	1.18×10³	1.57×10³	2.36×10³	3.14×10³	3.93×10³	4.71×10³	5.50×10³	6.28×10³	7.07×10³	7.85×10³
	Pull	3.57×10²	7.15×10²	1.07×10³	1.43×10³	2.14×10³	2.86×10³	3.57×10³	4.29×10³	5.00×10³	5.72×10³	6.43×10³	7.15×10³

Mounting Bracket Model No. Notation Method

Bore Size (mm) / Mounting bracket	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Foot (LB)	SSD-LB-12	SSD-LB-16	SSD-LB-20	SSD-LB-25	SSD-LB-32	SSD-LB-40	SSD-LB-50	SSD-LB-63	SSD-LB-80	SSD-LB-100
Foot (LB2)	SSD-LB2-12	SSD-LB2-16	SSD-LB2-20	SSD-LB2-25	SSD-LB2-32	SSD-LB2-40	SSD-LB2-50	SSD-LB2-63	SSD-LB2-80	SSD-LB2-100
Flange (FA/FB)	SSD-FA-12	SSD-FA-16	SSD-FA-20	SSD-FA-25	SSD-FA-32	SSD-FA-40	SSD-FA-50	SSD-FA-63	SSD-FA-80	SSD-FA-100
Double Clevis (CB)	SSD-CB-12	SSD-CB-16	SSD-CB-20	SSD-CB-25	SSD-CB-32	SSD-CB-40	SSD-CB-50	SSD-CB-63	SSD-CB-80	SSD-CB-100
Double knuckle clevis (CB2)	SSD-CB2-12	SSD-CB2-16	SSD-CB2-20	SSD-CB2-25	SSD-CB2-32	SSD-CB2-40	SSD-CB2-50	SSD-CB2-63	SSD-CB2-80	SSD-CB2-100

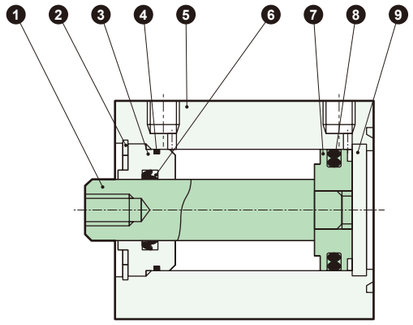
Note: Foot type mounting brackets are 2 pcs/set.

Outline Dimension Drawing

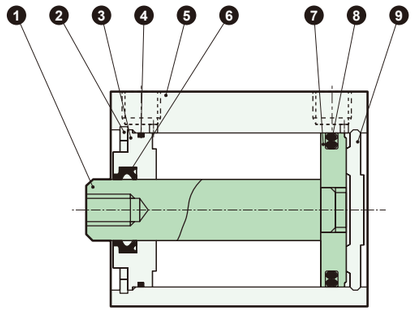
Same as double acting/single rod type. See P. 368 to 375.
However, it does not come with a switch.

Internal Structure Diagram/Material

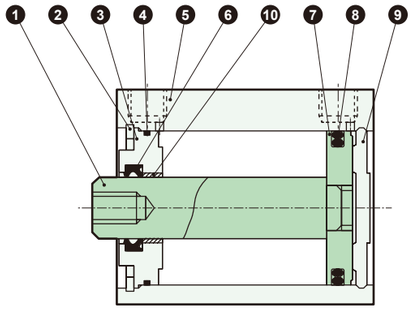
● SSD-T-12 to 25



● SSD-T-32 to 50



● SSD-T-63 to 100



Part No.	Part Name	Material	Remarks
1	Piston Rod	ø12 to ø25: Stainless steel ø32 to ø100: Steel	ø16 to ø100: Industrial hard chrome plating
2	C-type retaining ring	Steel	Zinc phosphate
3	Rod Metal	Aluminum Alloy	Alumite
4	Rod metal gasket	Fluoro Rubber	
5	Cylinder Body	Aluminum Alloy	Hard Anodized
6	Rod Packing	Fluoro Rubber	

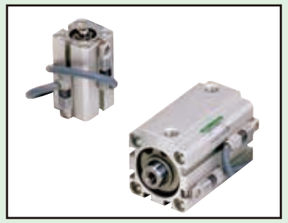
Part No.	Part Name	Material	Remarks
7	Piston	ø12 to ø25: Aluminum alloy ø32 to ø100: Stainless steel	ø12 to ø25: Chromate
8	Piston Packing	Fluoro Rubber	
9	Cover	ø12 to ø25: Stainless steel ø32 to ø100: Aluminum alloy	ø32 to ø100: Alumite
10	Bushing	Bearing Alloy	ø63 to ø100

Fluorine-based grease is used.

For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

MEMO

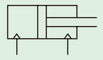
Space-Saving Type
SSD2
SSG
SSD
CAT
MDC2
SMG
MSD
FC□
Cylinder Switch
Ending



Compact Cylinder
Double Acting with Heat Resistant Cylinder Switch

SSD-T1L Series

● Bore size: ø16, ø20, ø25, ø32, ø40, ø50, ø63

Circuit Diagram Symbol 

RoHS

Model No. Notation Method

SSD-T1L - 16 - [ ] - 10 - ET0H - D - N - LB - I

SSD-T1L	16	[ ]	10	ET0H	D	N	LB	I
Double acting/ Heat resistant type with compact heat resistant switch	❶ Bore size	❷ Piping thread type	❸ Stroke	❹ Switch Model No.	❺ Number of Switches	❻ Option	❼ Mounting bracket	❽ Accessories

❶Bore Size (mm)

Code	Content
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63

❷Piping thread type

Code	Content
Blank	M5 thread (ø16 to ø25)
	Rc thread (ø32 to ø63)
NN	NPT thread (custom order) (ø32 to ø63)
GN	G thread (custom order) (ø32 to ø63)

❸Stroke (mm)

Bore size	Stroke	Intermediate Stroke
ø16	10 to 30	Every 1 mm
ø20	15 to 30	
ø25	15 to 50	
ø32 to ø63	10 to 50	

Note: For details on stroke, please refer to P. 434.

❹Switch Model No.

For switch details, please refer to P. 869.
Switches are included to the product and shipped.

	LED Indicator Special Function	Wiring (Output)	Load Voltage (V)		Load Current (mA)		Lead Wire		
			AC	DC	AC	DC	Straight	L-shape	
Contact / Reed	1-Color Heat Resistant	2-wire	110	12/24	7 to 20	5 to 50	ET0H	ET0V	

❺Number of Switches

Code	Content
R	With 1 pc on rod side
H	With 1 pc on head side
D	With 2 pcs

❻Option

Code	Content	
Blank	Rod end female thread	
N	Rod end male thread	
*1 M	Piston Rod Material (Stainless Steel)	

*1: The piston rod material for ø12 to ø25 is stainless steel as standard. C-type retaining ring changes from steel to stainless steel. The nut material for rod end male thread type will be stainless steel.

❼Mounting type

Mounting brackets are shipped included to the product.

	Code	Content	
	LB	Axial Foot Type	
*1	LB2	Axial foot type (Compact type)	
*1	FA	Rod Side Flange Type	
	FB	Head Side Flange Type	
	CB	Double Clevis Type (pin and retaining ring included)	
	CB2	Double Clevis Type (Compact type) (Pins and retaining rings included)	

*1: When LB2 or FA is selected, the piston rod protrusion dimension WF differs from the standard. See P. 437, 438, 441, and 442 for outline dimension drawings. Also, the model No. specifying the protrusion length will be printed at the end of the model No. on the nameplate included to the main body. For cylinder model No.s when ordering cylinders and LB2/FA brackets separately, please contact us.

❽Accessories

Code	Content	
I	Single Knuckle	
I2	Rod eye (compact)	
Y	Double Knuckle (pin and retaining ring included)	
Y2	Rod clevis (compact) (pin and snap ring included)	

*1: Selectable when rod end male thread "N" is selected.
*2: "I", "I2", "Y", "Y2" cannot be selected at the same time.

*For combination of variations and options, refer to P. 356 to 361.

About Custom Product Specifications

For details, refer to P. 690 to 694.

Code	Content
-XP5	Knuckle Pin/Clevis Pin Split Pin
-XP7	Knuckle fixed by pin driving
-XP8	Knuckle pin/clevis pin split pin specification, knuckle fixed by pin driving
-A2	With 2 Rod Nuts
-R1,R2	With spigot joint
Rod End Shape Modification	Refer to Ending 11.

Model No. Example)

SSD-T1L - ..... - XP5

Switch Single Unit Model No. Notation Method

SW - ET0H

❹ Switch Model No.

Specifications

Item	SSD-T1L						
Bore size mm	ø16	ø20	ø25	ø32	ø40	ø50	ø63
Actuation method	Double Acting Type						
Operating Fluid	Compressed Air						
Max. Operating Pressure MPa	1.0						
Min. Operating Pressure MPa	0.1						0.05
Proof pressure MPa	1.6						
Ambient Temperature °C	5 to 150 *1						
Port Size	M5			Rc1/8		Rc1/4	
Stroke tolerance mm	+1.0 0						
Operating Piston Speed mm/s	50 to 500						50 to 300
Cushion	None						
Lubrication *2	—						

*1: In an environment with an ambient temperature of 150°C, external leakage will gradually occur after about 500,000 cycles. Please be careful.
*2: Periodically apply heat-resistant grease.

Stroke

Stroke (mm)		Applicable Bore						
		ø16	ø20	ø25	ø32	ø40	ø50	ø63
Standard Stroke	10	●			●	●	●	●
	15	●	●	●	●	●	●	
	20	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	
	30	●	●	●	●	●	●	●
	40			●	●	●	●	●
	50			●	●	●	●	●
Minimum Stroke (mm) *1		10	15	15	10			
Maximum Stroke (mm)		30		50				
Intermediate stroke (mm) *2		Every 1 mm						

***1: For the number of switches attachable and minimum stroke, refer to the table below.**
*2: The overall length dimension for intermediate stroke is the same as the standard stroke above it.

Number of Switches Mounted and Min. Stroke (mm)

Switch Model No.	ET0□	
Number of Switches / Bore Size (mm)	1	2
ø16	10	20
ø20	15	25
ø25		20
ø32	10	
ø40		
ø50		
ø63		

Cylinder Weight Table (Weight with switch is when 2 cylinder switches are included)

(Unit: g)

Stroke (mm) / Bore Size (mm)	10	15	20	25	30	40	50
ø16	124	134	145	156	167	-	-
ø20	170	183	196	208	221	-	-
ø25	213	229	245	261	276	308	339
ø32	278	300	322	343	365	409	452
ø40	373	399	426	453	479	532	585
ø50	555	597	639	681	724	808	892
ø63	806	-	916	-	1026	1137	1247

Theoretical Thrust Table

(Unit: N)

Bore size (mm)	Operating Direction	Operating Pressure MPa											
		0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø16	Push	-	20.1	30.2	40.2	60.3	80.4	1.01×10^{2}	1.21×10^{2}	1.41×10^{2}	1.61×10^{2}	1.81×10^{2}	2.01×10^{2}
	Pull	-	15.1	22.6	30.2	45.2	60.3	75.4	90.5	1.06×10^{2}	1.21×10^{2}	1.36×10^{2}	1.51×10^{2}
ø20	Push	-	31.4	47.1	62.8	94.2	1.26×10^{2}	1.57×10^{2}	1.88×10^{2}	2.20×10^{2}	2.51×10^{2}	2.83×10^{2}	3.14×10^{2}
	Pull	-	23.6	35.3	47.1	70.7	94.2	1.18×10^{2}	1.41×10^{2}	1.65×10^{2}	1.88×10^{2}	2.12×10^{2}	2.36×10^{2}
ø25	Push	-	49.1	73.6	98.2	1.47×10^{2}	1.96×10^{2}	2.45×10^{2}	2.95×10^{2}	3.44×10^{2}	3.93×10^{2}	4.42×10^{2}	4.91×10^{2}
	Pull	-	37.8	56.7	75.6	1.13×10^{2}	1.51×10^{2}	1.89×10^{2}	2.27×10^{2}	2.64×10^{2}	3.02×10^{2}	3.40×10^{2}	3.78×10^{2}
ø32	Push	-	80.4	1.21×10^{2}	1.61×10^{2}	2.41×10^{2}	3.22×10^{2}	4.02×10^{2}	4.83×10^{2}	5.63×10^{2}	6.43×10^{2}	7.24×10^{2}	8.04×10^{2}
	Pull	-	60.3	90.5	1.21×10^{2}	1.81×10^{2}	2.41×10^{2}	3.02×10^{2}	3.62×10^{2}	4.22×10^{2}	4.83×10^{2}	5.43×10^{2}	6.03×10^{2}
ø40	Push	-	1.26×10^{2}	1.88×10^{2}	2.51×10^{2}	3.77×10^{2}	5.03×10^{2}	6.28×10^{2}	7.54×10^{2}	8.80×10^{2}	1.01×10^{3}	1.13×10^{3}	1.26×10^{3}
	Pull	-	1.06×10^{2}	1.58×10^{2}	2.11×10^{2}	3.17×10^{2}	4.22×10^{2}	5.28×10^{2}	6.33×10^{2}	7.39×10^{2}	8.44×10^{2}	9.50×10^{2}	1.06×10^{3}
ø50	Push	-	1.96×10^{2}	2.95×10^{2}	3.93×10^{2}	5.89×10^{2}	7.85×10^{2}	9.82×10^{2}	1.18×10^{3}	1.37×10^{3}	1.57×10^{3}	1.77×10^{3}	1.96×10^{3}
	Pull	-	1.65×10^{2}	2.47×10^{2}	3.30×10^{2}	4.95×10^{2}	6.60×10^{2}	8.25×10^{2}	9.90×10^{2}	1.15×10^{3}	1.32×10^{3}	1.48×10^{3}	1.65×10^{3}
ø63	Push	1.56×10^{2}	3.12×10^{2}	4.68×10^{2}	6.23×10^{2}	9.35×10^{2}	1.25×10^{3}	1.56×10^{3}	1.87×10^{3}	2.18×10^{3}	2.49×10^{3}	2.81×10^{3}	3.12×10^{3}
	Pull	1.40×10^{2}	2.80×10^{2}	4.20×10^{2}	5.61×10^{2}	8.41×10^{2}	1.12×10^{3}	1.40×10^{3}	1.68×10^{3}	1.96×10^{3}	2.24×10^{3}	2.52×10^{3}	2.80×10^{3}

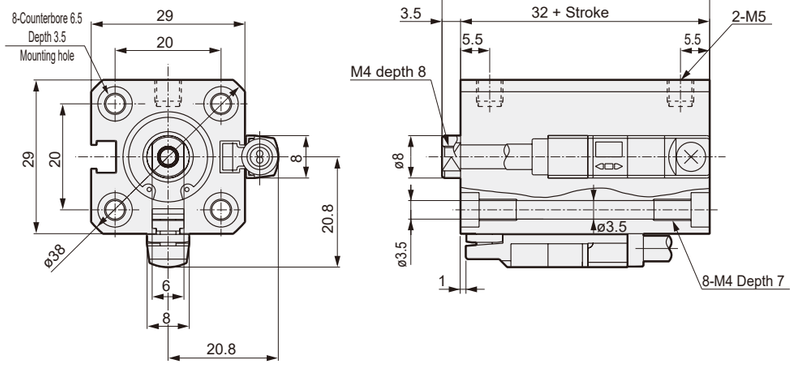
Mounting Bracket Model No. Notation Method

Bore Size (mm) / Mounting bracket	ø16	ø20	ø25	ø32	ø40	ø50	ø63
Foot (LB)	SSD-LB-16	SSD-LB-20	SSD-LB-25	SSD-LB-32	SSD-LB-40	SSD-LB-50	SSD-LB-63
Foot (LB2)	SSD-LB2-16	SSD-LB2-20	SSD-LB2-25	SSD-LB2-32	SSD-LB2-40	SSD-LB2-50	SSD-LB2-63
Flange (FA/FB)	SSD-FA-16	SSD-FA-20	SSD-FA-25	SSD-FA-32	SSD-FA-40	SSD-FA-50	SSD-FA-63
Double Clevis (CB)	SSD-CB-16	SSD-CB-20	SSD-CB-25	SSD-CB-32	SSD-CB-40	SSD-CB-50	SSD-CB-63
Double knuckle clevis (CB2)	SSD-CB2-16	SSD-CB2-20	SSD-CB2-25	SSD-CB2-32	SSD-CB2-40	SSD-CB2-50	SSD-CB2-63

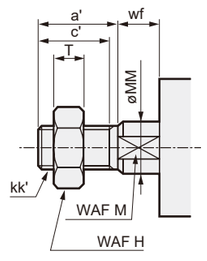
Note: Foot type mounting brackets are 2 pcs/set.

Outline Dimension Drawing (Bore size: ø16 to ø25)

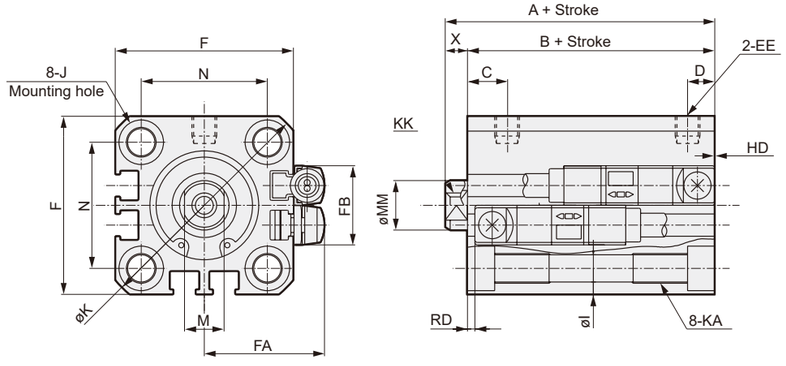
● SSD-T1L-16



● Rod end male thread part



● SSD-T1L-20/25



Code / Bore size	Basic dimensions																	Dimensions with switch, Contact type ET0H/ET0V	
	A *1	B *1	C	D	EE	F	FA	FB	I	J	K	KA	KK	M	MM	N	X	RD	HD
ø20	34	29.5	8	5.5	M5	36	24.3	16	5.5	Counterbore 9 Depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5	0	0
ø25	37.5	32.5	11	6	M5	40	26.3	17	5.5	Counterbore 9 Depth 5.5	51	M6 depth 11	M6 Depth 12	10	12	28	5	1.0	0.5

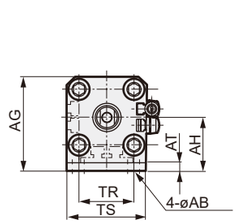
*1: When calculating A + stroke and B + stroke dimensions for intermediate strokes, do not use the intermediate stroke value for the stroke; instead, use the value of the standard stroke above it.
(Example) For an intermediate stroke of 7 mm, enter the standard stroke of 10 mm for calculation.
*2: Due to manufacturing constraints for heat-resistant magnets, the overall length of ø16 is longer than that of ø20. Please be careful.
***3: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**
***4: For dimensions with each switch, refer to P. 674 to 681.**

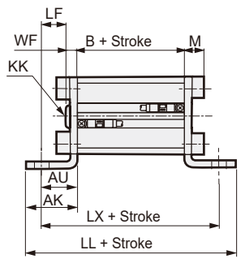
● Rod end male thread part dimension table

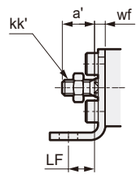
Code / Bore Size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10X1.25	10	12	6	5

Outline dimension drawing (bore size: ø16 to ø25)

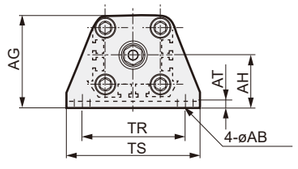
● Axial Foot Type (LB)

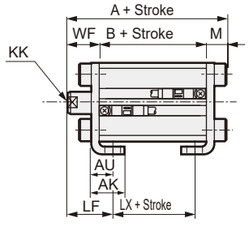




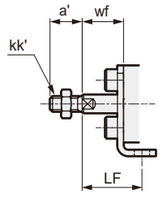


● Axial Foot Type (Compact Type) (LB2)





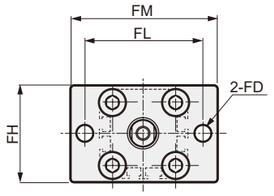
● For rod end male thread

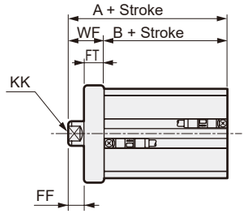


Code / Bore size (mm)	Common dimension									For female thread							For male thread			
	AB	AG	AH	AK	AT	AU	TR	TS	M	KK	WF	LF	A	B	LL	LX	a'	kk'	wf	LF
ø16	5	33.5	19	13	2	8	38	48	6	M4 depth 8	13.5	19.5	51.5	32	20		12	M6	13.5	19.5
ø20	7	42	24	15	3.2	9.2	48	62	9.2	M5 depth 7	14.5	20.5	53.2	29.5	17.5		14	M8	14.5	20.5
ø25	7	46	26	16.5	3.2	10.7	52	66	9.2	M6 Depth 12	15	22.5	56.7	32.5	17.5		17.5	M10×1.25	15	22.5

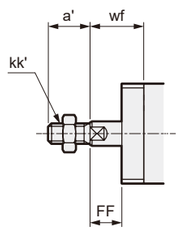
Outline dimension drawing (bore size: ø16 to ø25)

● Rod Side Flange Type (FA)



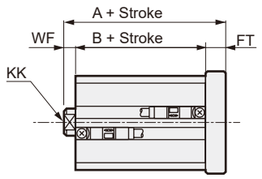


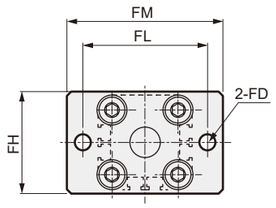
● For rod end male thread



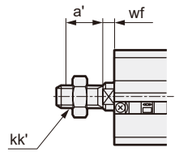
Code / Bore size (mm)	Common dimension					For female thread					For male thread			
	FD	FH	FL	FM	FT	FF	KK	WF	A	B	FF	a'	kk'	wf
ø16	4.5	30	45	55	5.5	8	M4 depth 8	13.5	45.5	32	8	12	M6	13.5
ø20	6.6	39	48	60	8	6.5	M5 depth 7	14.5	44	29.5	6.5	14	M8	14.5
ø25	6.6	42	52	64	8	7	M6 Depth 12	15	47.5	32.5	7	17.5	M10×1.25	15

● Head Side Flange Type (FB)





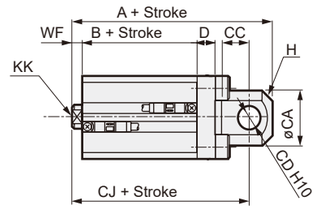
● For rod end male thread

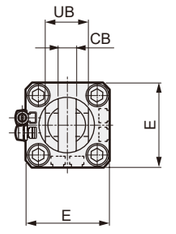


Code / Bore size (mm)	Common dimension					For female thread				For male thread		
	FD	FH	FL	FM	FT	KK	WF	A	B	a'	kk'	wf
ø16	4.5	30	45	55	5.5	M4 depth 8	3.5	41	32	12	M6	3.5
ø20	6.6	39	48	60	8	M5 depth 7	4.5	42	29.5	14	M8	4.5
ø25	6.6	42	52	64	8	M6 Depth 12	5	45.5	32.5	17.5	M10×1.25	5

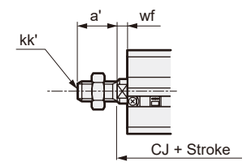
Outline dimension drawing (bore size: ø16 to ø25)

● Double Knuckle Clevis Type (CB)



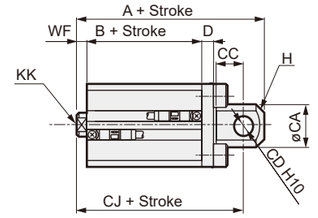


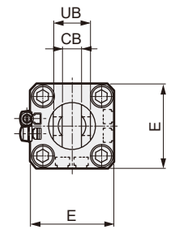
● For rod end male thread



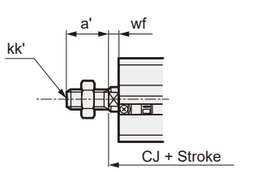
Code / Bore size (mm)	Common dimension								For female thread					For male thread			
	CA	CB	CC	CD	D	E	H	UB	KK	WF	A	B	CJ	a'	kk'	wf	CJ
ø16	15	$6.5^{+0.4}_{+0.1}$	8	5	5	29	C2	$12^{-0.1}_{-0.4}$	M4 depth 8	3.5	56.5	32	50.5	12	M6	3.5	50.5
ø20	24	$8^{+0.4}_{+0.1}$	12	10	8	36	C4	$19^{-0.1}_{-0.4}$	M5 depth 7	4.5	67	29.5	57	14	M8	4.5	57
ø25	27.5	$10^{+0.4}_{+0.1}$	16	12	8	40	C5	$21^{-0.1}_{-0.4}$	M6 Depth 12	5	76.5	32.5	64.5	17.5	M10×1.25	5	64.5

● Double clevis type (Compact type) (CB2)





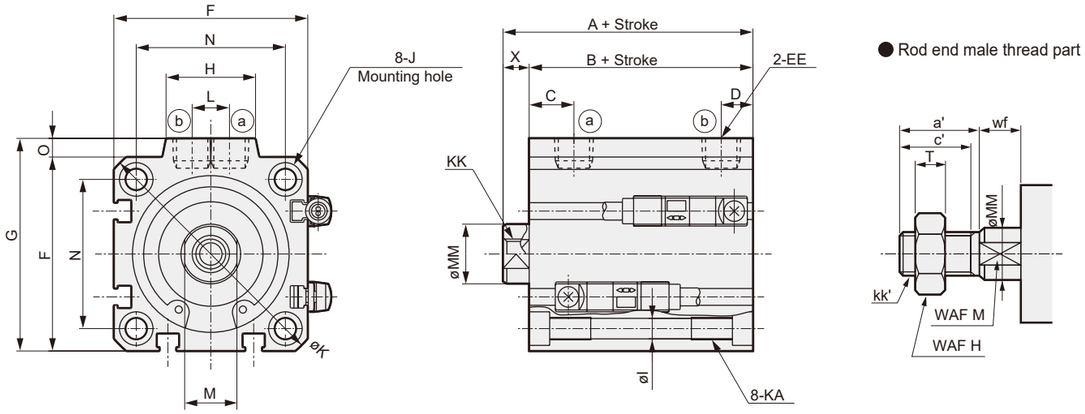
● For rod end male thread



Code / Bore size (mm)	Common dimension								For female thread					For male thread			
	CA	CB	CC	CD	D	E	H	UB	KK	WF	A	B	CJ	a'	kk'	wf	CJ
ø16	15	$6.5^{+0.4}_{+0.1}$	8	5	5	29	C2	$12^{-0.1}_{-0.4}$	M4 depth 8	3.5	56.5	32	50.5	12	M6	3.5	50.5
ø20	20	$8^{+0.4}_{+0.1}$	12	8	5	36	C4	$16^{-0.1}_{-0.3}$	M5 depth 7	4.5	61	29.5	52	14	M8	4.5	52
ø25	24	$10^{+0.4}_{+0.1}$	14	10	5	40	C5	$20^{-0.1}_{-0.3}$	M6 Depth 12	5	67.5	32.5	57.5	17.5	M10×1.25	5	57.5

Outline Dimension Drawing (Bore size: ø32 to ø63)

● SSD-T1L-32 to 63



● Rod end male thread part

Code / Bore size	Basic dimensions A *1	B *1	C	D	EE	F	G	H	I	J	K	KA	KK	L	M
ø32	40	33	8	8	Rc1/8	45	49.5	24	5.5	Counterbore 9 Depth 5.5	60	M6 depth 11	M8 depth 13	10	14
ø40	46.5	39.5	12	8.5	Rc1/8	52	57	24	5.5	Counterbore 9 Depth 5.5	69	M6 depth 11	M8 depth 13	10	14
ø50	48.5	40.5	10.5	10.5	Rc1/4	64	71	33	6.9	Counterbore 11 Depth 6.5	86	M8 depth 13	M10 depth 15	15	17
ø63	54	46	13	11	Rc1/4	77	84	33	8.7	Counterbore 14 Depth 9	103	M10 depth 25	M10 depth 15	15	17

Code / Bore size	Basic dimensions MM	N	O	X
ø32	16	34	4.5	7
ø40	16	40	5	7
ø50	20	50	7	8
ø63	20	60	7	8

*1: When calculating A + stroke and B + stroke dimensions for intermediate strokes, do not use the intermediate stroke value for the stroke; instead, use the value of the standard stroke above it.
(Example) For an intermediate stroke of 7 mm, enter the standard stroke of 10 mm for calculation.
***2: For dimensions with each switch, refer to P. 674 to 681.**
***3: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**

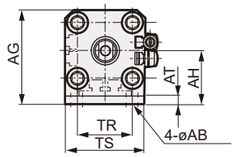
● Rod end male thread part dimension table

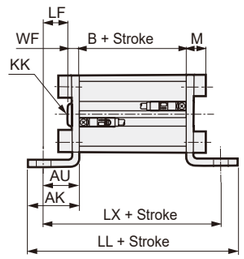
Code / Bore Size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14 X 1.5	14	16	8	5
ø40	23.5	20.5	22	M14 X 1.5	14	16	8	5
ø50	28.5	26	27	M18×1.5	17	20	11	5
ø63	28.5	26	27	M18×1.5	17	20	11	5

Outline Dimension Drawing (Bore size: ø32 to ø63)

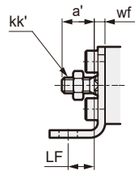
● Axial Foot Type (LB)

· ø32

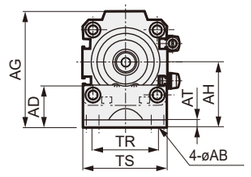


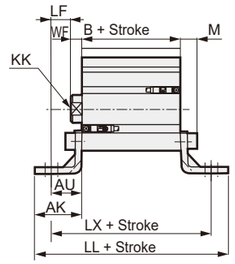


● For rod end male thread

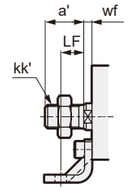


· ø40 to ø63



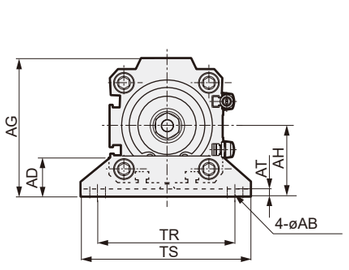


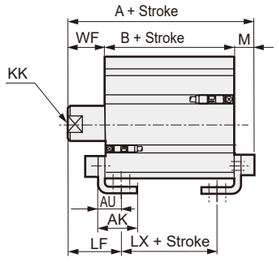
● For rod end male thread



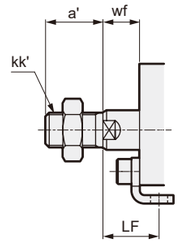
Code / Bore size (mm)	Common dimension AB	AD	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	B	LL	LX	For male thread a'	kk'	wf	LF
ø32	7	–	53.5	31	24	3.2	16	34	45	9.2	M8 depth 13	7	9	33	81	65	23.5	M14×1.5	5	11
ø40	7	26	71	40	29	4.5	19	40	52	10	M8 depth 13	7	12	39.5	97.5	77.5	23.5	M14×1.5	5	14
ø50	9	23	79	40	34	4.5	22	46	64	13	M10 depth 15	8	14	40.5	108.5	84.5	28.5	M18×1.5	5	17
ø63	11	33	96.5	51	40	4.5	25	60	77	15	M10 depth 15	8	17	46	126	96	28.5	M18×1.5	5	20

● Axial Foot Type (Compact Type) (LB2)





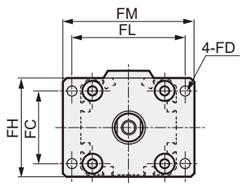
● For rod end male thread

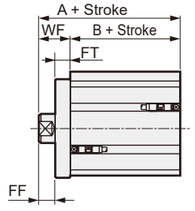


Code / Bore size (mm)	Common dimension AB	AD	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	A	B	LX	For male thread a'	kk'	wf	LF
ø32	7	18.5	57	30	17	3.2	11.2	57	71	9.2	M8 depth 13	17	25	59.2	33	17	23.5	M14×1.5	15	23
ø40	7	18	64	33	18.2	3.2	11.2	64	78	9.2	M8 depth 13	17	25	65.7	39.5	23.5	23.5	M14×1.5	15	23
ø50	9	22	78	39	22.7	3.2	14.7	79	95	11.2	M10 depth 15	18	29.5	69.7	40.5	17.5	28.5	M18×1.5	15	26.5
ø63	11	26	91.5	46	25.2	3.2	16.2	95	113	13.2	M10 depth 15	18	31	77.2	46	20	28.5	M18×1.5	15	28

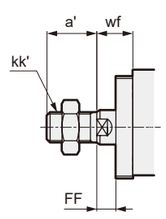
Outline dimension drawing (bore size: ø32 to ø63)

● Rod Side Flange Type (FA)



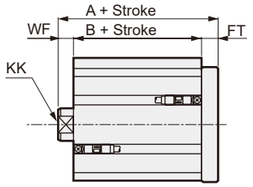


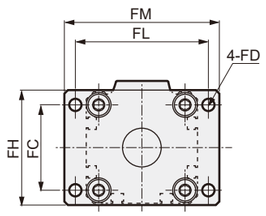
● For rod end male thread



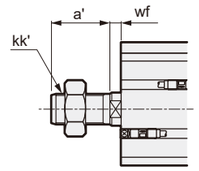
Code	Common dimension						For female thread					For male thread			
Bore size (mm)	FC	FD	FH	FL	FM	FT	FF	KK	WF	A	B	FF	a'	kk'	wf
ø32	34	5.5	48	56	65	8	9	M8 depth 13	17	50	33	7	23.5	M14×1.5	15
ø40	40	5.5	54	62	72	8	9	M8 depth 13	17	56.5	39.5	7	23.5	M14×1.5	15
ø50	50	6.6	67	76	89	9	9	M10 depth 15	18	58.5	40.5	6	28.5	M18×1.5	15
ø63	60	9	80	92	108	9	9	M10 depth 15	18	64	46	6	28.5	M18×1.5	15

● Head Side Flange Type (FB)





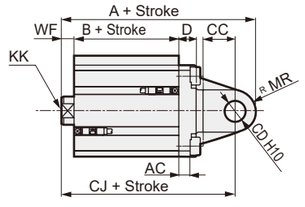
● For rod end male thread

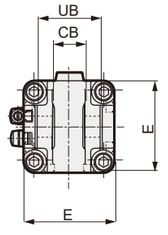


Code	Common dimension						For female thread				For male thread			
Bore size (mm)	FC	FD	FH	FL	FM	FT	KK	WF	A	B	a'	kk'	wf	
ø32	34	5.5	48	56	65	8	M8 depth 13	7	48	33	23.5	M14×1.5	5	
ø40	40	5.5	54	62	72	8	M8 depth 13	7	54.5	39.5	23.5	M14×1.5	5	
ø50	50	6.6	67	76	89	9	M10 depth 15	8	57.5	40.5	28.5	M18×1.5	5	
ø63	60	9	80	92	108	9	M10 depth 15	8	63	46	28.5	M18×1.5	5	

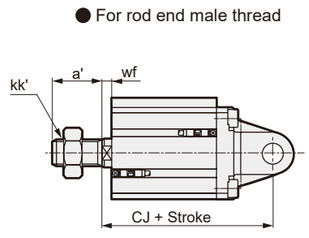
Outline dimension drawing (bore size: ø32 to ø63)

● Double Knuckle Clevis Type (CB)



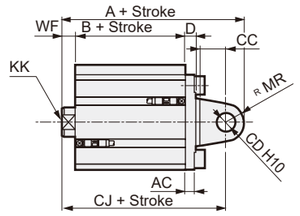


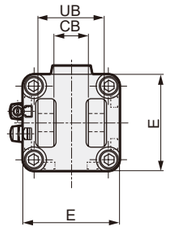
● For rod end male thread



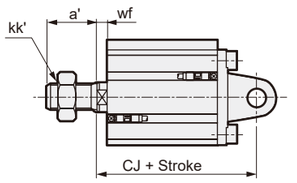
Code	Common dimension								For female thread					For male thread			
Bore size (mm)	AC	CB	CC	CD	D	E	MR	UB	KK	WF	A	B	CJ	a'	kk'	wf	CJ
ø32	9.5	$10^{+0.4}_{+0.1}$	16	12	10	45	12	$21^{-0.1}_{-0.4}$	M8 depth 13	7	82	33	70	23.5	M14×1.5	5	68
ø40	6.5	$18^{+0.4}_{+0.1}$	18	12	10	52	12	$36^{-0.1}_{-0.4}$	M8 depth 13	7	90.5	39.5	78.5	23.5	M14×1.5	5	76.5
ø50	6.5	$18^{+0.4}_{+0.1}$	18	12	10	64	12	$36^{-0.1}_{-0.4}$	M10 depth 15	8	92.5	40.5	80.5	28.5	M18×1.5	5	77.5
ø63	7.5	$20^{+0.4}_{+0.1}$	24	14	10	77	16	$40^{-0.1}_{-0.4}$	M10 depth 15	8	107	46	91	28.5	M18×1.5	5	88

● Double clevis type (Compact type)(CB2)





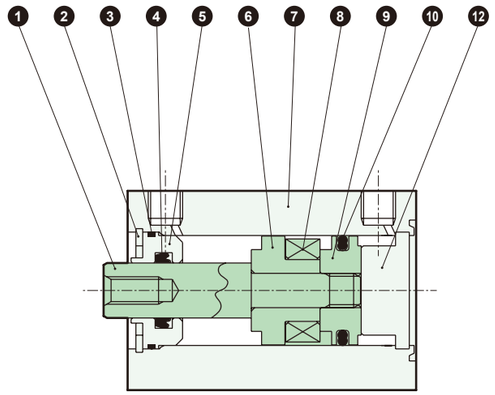
● For rod end male thread



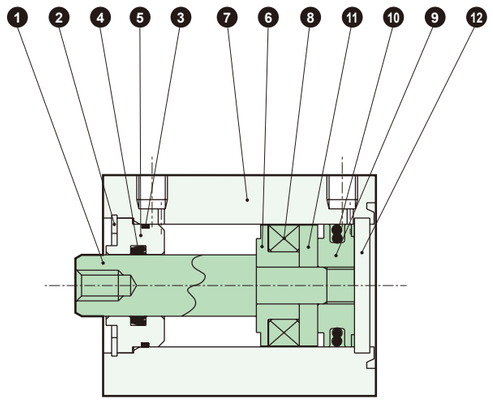
Code	Common dimension								For female thread					For male thread			
Bore size (mm)	AC	CB	CC	CD	D	E	MR	UB	KK	WF	A	B	CJ	a'	kk'	wf	CJ
ø32	4.5	$18^{+0.4}_{+0.1}$	14	10	5	45	10	$36^{-0.1}_{-0.3}$	M8 depth 13	7	70	33	60	23.5	M14×1.5	5	58
ø40	5	$18^{+0.4}_{+0.1}$	14	10	6	52	10	$36^{-0.1}_{-0.3}$	M8 depth 13	7	78.5	39.5	68.5	23.5	M14×1.5	5	66.5
ø50	6	$22^{+0.4}_{+0.1}$	20	14	7	64	14	$44^{-0.1}_{-0.3}$	M10 depth 15	8	90.5	40.5	76.5	28.5	M18×1.5	5	73.5
ø63	7	$22^{+0.4}_{+0.1}$	20	14	8	77	14	$44^{-0.1}_{-0.3}$	M10 depth 15	8	98	46	84	28.5	M18×1.5	5	81

Internal structure diagram/materials (bore size: ø16 to ø32)

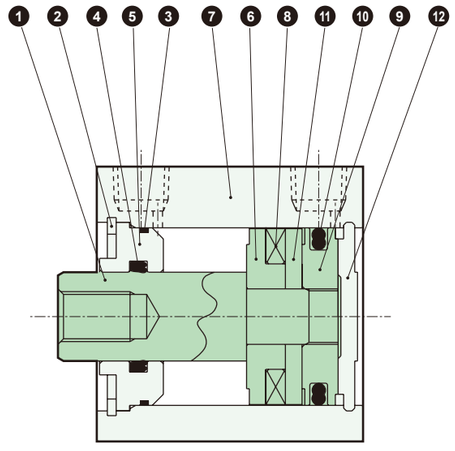
● SSD-T1L-16



● SSD-T1L-20/25



● SSD-T1L-32



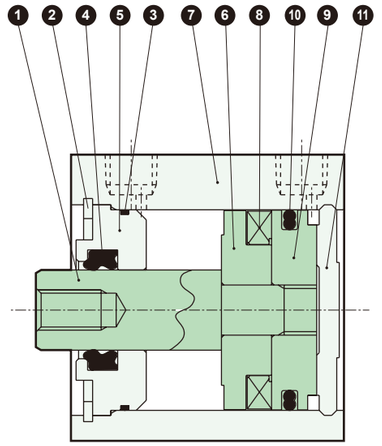
Part No.	Part Name	Material	Remarks
1	Piston Rod	ø16 to ø25: Stainless steel ø32: Steel	Industrial Hard Chrome Plating
2	C-type retaining ring	Steel	Zinc phosphate
3	Rod metal gasket	Fluoro Rubber	
4	Rod Packing	Fluoro Rubber	
5	Rod Metal	Aluminum Alloy	Alumite
6	Spacer (for magnet)	Aluminum alloy	Chromate
7	Cylinder Body	Aluminum alloy	Hard Anodized
8	Magnet	Special alloy	
9	Piston	ø16 to ø25: Aluminum alloy ø32: Stainless steel	ø16 to ø25: Chromate
10	Piston Packing	Fluoro Rubber	
11	Spacer	Aluminum alloy	Chromate
12	Cover	ø16 to ø25: Stainless steel ø32: Aluminum alloy	ø32: Alumite

Fluorine-based grease is used.

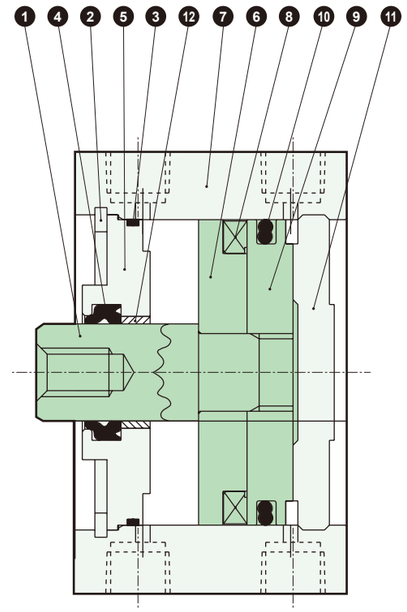
For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Internal structure diagram/materials (bore size: ø40 to ø63)

● SSD-T1L-40/50



● SSD-T1L-63



Part No.	Part Name	Material	Remarks
1	Piston Rod	Steel	Industrial Hard Chrome Plating
2	C-type retaining ring	Steel	Zinc phosphate
3	Rod metal gasket	Fluoro Rubber	
4	Rod Packing	Fluoro Rubber	
5	Rod Metal	Aluminum alloy	Chromate
6	Spacer (for magnet)	Aluminum alloy	Chromate
7	Cylinder Body	Aluminum alloy	Hard Anodized
8	Magnet	Plastic	
9	Piston	Stainless Steel	
10	Piston Packing	Fluoro Rubber	
11	Cover	Aluminum alloy	Alumite
12	Bushing	Bearing Alloy	

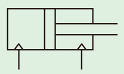
Fluorine-based grease is used.

For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Compact Cylinder High Load Type with Rubber Air Cushion

SSD-K-□C Series

● Bore size: ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100

Circuit Diagram Symbol 

RoHS

Space-Saving Type
SSD2
SSG
SSD
CAT
MDC2
SMG
MSD
FC□
Cylinder Switch
Ending

Model No. Notation Method

Without Switch (Without magnet for switch)

SSD-K - 40 [ ] C - 10 ——— N - LB - I

- Model No.
- ❶ 40
- ❷ [ ]
- With Rubber Air Cushion: C
- ❸ 10
- ❻ N
- ❼ LB
- ❽ I

With Switch (Built-in magnet for switch)

SSD-KL - 40 [ ] C - 10 - T0H - R - N - LB - I

- Model No.
- ❶ Bore size
- ❷ Piping thread type
- With Rubber Air Cushion: C
- ❸ Stroke
- ❹ Switch Model No.
- ❺ Number of Switches
- ❻ Option
- ❼ Mounting bracket
- ❽ Accessories

❶Bore Size (mm)

Code	Content
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

❷Piping thread type

Code	Content
Blank	M5 thread (ø20 to ø25)
	Rc thread (ø32 to ø100)
N	NPT thread (Custom product) (ø32 to ø100)
G	G thread (Custom product) (ø32 to ø100)

❸Stroke (mm)

Bore size	Stroke	Intermediate Stroke
ø20	5 to 200	Every 1 mm
ø25	10 to 300	
ø32 to ø50	10 to 300	
ø63 to ø100	10 to 300	

*1: For details regarding stroke, see P. 448.

❹Switch Model No.

For switch details, please refer to P. 869.
Switches are included to the product and shipped.

Contact	LED Indicator Special Function	Wiring (Output)	Load Voltage (V) AC	Load Voltage (V) DC	Load Current (mA) AC	Load Current (mA) DC	Lead Wire *1 Straight	Lead Wire *1 L-shape	
Solid State	1-Color	2-wire	85 to 265	—	5 to 100	—	T1H□	T1V□	
			—	10 to 30	—	5 to 20 *2	T2H□	T2V□	
		3-wire (NPN)	—	30 or less	—	100 or less	T3H□	T3V□	
		3-wire (PNP)	—		—		T3PH□	T3PV□	
	2-Color	2-wire	—	24 ± 10%	—	5 to 20	T2WH□	T2WV□	
		3-wire (NPN)	—	30 or less	—	50 or less	T3WH□	T3WV□	
	2-Color Improved Water Resistance	2-wire	—	24 ± 10%	—	5 to 20	T2WLH□	T2WLV□	*3
	2-Color for AC Magnetic Field		—		—		T2YD□	–	
			—		—		T2YDT□	–	
	1-Color Off-Delay Type		—	10 to 30	—	5 to 20 *2	T2JH□	T2JV□	
	1-Color Flexible Lead Wire Type		—		—		T2HR3□	T2VR3□	
Reed	1-Color	2-wire	110	12/24	7 to 20	5 to 50	T0H□	T0V□	
	No LED Indicator		110	5/12/24	20 or less	50 or less	T5H□	T5V□	
	1-Color		110/220	12/24	7 to 20 / 7 to 10	5 to 50	T8H□	T8V□	

*1: For "□" in the switch model No., enter the code selected from the "*Lead wire length, connector specification" table.
*2: The maximum load current value above, 20 mA, is at 25°C. If the switch operating ambient temperature is higher than 25°C, it will be lower than 20 mA. (At 60°C, it will be 5 to 10 mA.)
*3: This does not guarantee the water resistance of the cylinder. When using in a water-resistant environment, use of an improved water resistance cylinder is recommended.
*4: Switches other than the model No.s listed above are also available. (Custom products) For details, refer to P. 869.

***Lead wire length, connector specification**

	Code	Content
	Blank	1 m (Standard)
	3	3 m (Option)
	5	5 m (Option)
*5	W	M8 Connector, 1PIN (+) 4PIN (-) Lead Wire 0.3 m

*5: Only T2WLH and T2WLV can be selected.

Example) Lead wire length
1 m T0H
3 m T0H3
5 m T0H5

❺Number of Switches

Code	Content
R	With 1 pc on rod side
H	With 1 pc on head side
D	With 2 pcs

❻Option

	Code	Content
	Blank	Rod end female thread
	N	Rod end male thread
*1	M	Piston Rod Material (Stainless Steel)

*1: The piston rod material for ø20 to ø25 is stainless steel as standard. C-type retaining ring changes from steel to stainless steel. The nut material for rod end male thread type will be stainless steel.

❼Mounting type

Mounting brackets are shipped included to the product.

	Code	Content
	LB	Axial Foot Type
*1	LB2	Axial foot type (Compact type)
*1	FA	Rod Side Flange Type
	FB	Head Side Flange Type
	CB	Double Clevis Type (pin and retaining ring included)
	CB2	Clevis bracket (compact) (pin and snap ring included)

*1: When LB2 or FA is selected, the piston rod protrusion dimension WF differs from the standard. Refer to outline dimension drawings on P. 393, 394, 398, 399. Also, the model No. specifying the protrusion length will be printed at the end of the model No. on the nameplate included to the main body. For cylinder model No.s when ordering cylinders and LB2/FA brackets separately, please contact us.

❽Accessories

Code	Content
I	Single Knuckle
I2	Rod eye (compact)
Y	Double Knuckle (pin and retaining ring included)
Y2	Rod clevis (compact) (pin and snap ring included)

*1: Selectable when rod end male thread "N" is selected.
*2: "I", "I2", "Y", "Y2" cannot be selected at the same time.

*For combination of variations and options, refer to P. 356 to 361.

About Custom Product Specifications

For details, refer to P. 690 to 694.

Code	Content
-XP5	Knuckle Pin/Clevis Pin Split Pin
-XP7	Knuckle fixed by pin driving
-XP8	Knuckle pin/clevis pin split pin specification, knuckle fixed by pin driving
-A2	With 2 Rod Nuts
-R1, R2	With spigot joint
Rod End Shape Modification	Refer to Ending 11.

Model No. Example)
SSD-K-□C -......... - XP5

Switch Single Unit Model No. Notation Method

SW - T0H

❹ Switch Model No.

Specifications

Item	SSD-K-□C, SSD-KL-□C (with switch)							
Bore size mm	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation method	Double Acting Type							
Operating Fluid	Compressed Air							
Max. Operating Pressure MPa	1.0							
Min. Operating Pressure MPa	0.25		0.2					
Proof pressure MPa	1.6							
Ambient Temperature °C	-10 to 60 (No freezing)							
Port Size	Rc 1/8				Rc 1/4		Rc 3/8	
Stroke tolerance mm	+2.0 0							
Operating Piston Speed mm/s	50 to 500					50 to 300		
Cushion	Rubber Air Cushion							
Lubrication	Not Required (When lubricating, use Turbine Oil ISO VG32)							
Allowable absorbed energy J	0.16	0.16	0.40	0.63	0.98	1.56	2.51	3.92

Stroke

Stroke (mm)		Applicable Bore							
		ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Standard Stroke	5	●							
	10	●	●	●	●	●	●	●	●
	15	●	●	●	●	●			
	20	●	●	●	●	●	●	●	●
	25	●	●	●	●	●			
	30	●	●	●	●	●	●	●	●
	40	●	●	●	●	●	●	●	●
	50	●	●	●	●	●	●	●	●
	60			●	●	●	●	●	●
	70			●	●	●	●	●	●
	80			●	●	●	●	●	●
	90			●	●	●	●	●	●
	100			●	●	●	●	●	●
Minimum Stroke (mm) *1		5					10		
Maximum Stroke (mm)		200	300						
Intermediate Stroke *2		Every 1 mm							

***1: Cannot be manufactured for less than 10 mm with 2-color indicator type, off-delay type, AC magnetic field type, T1□, T8□ switch. For the number of switches attachable and minimum stroke, refer to the table on the right.**

*2: The overall length dimension for intermediate stroke is the same as the standard stroke above it.

***3: For minimum stroke for mounting brackets LB, LB2, refer to P. 393, 397, 398.**

Number of Switches Mounted and Min. Stroke (mm)

Switch Model No.	T*		T2WL	
Number of Switches / Bore Size (mm)	1	2	1	2
ø20	5	5	15	15
ø25	5	5	15	15
ø32	5	5	15	15
ø40	5	5	10	15
ø50	5	5	10	15
ø63	10	10	10	15
ø80	10	10	10	15
ø100	10	10	10	15

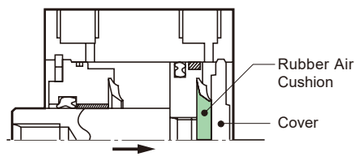
Note: Less than 10 mm is not available for 2-color LED, off-delay, strong magnetic field proof, or with T1□ or T8□ switch.

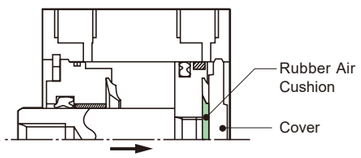
Rubber Air Cushion Mechanism

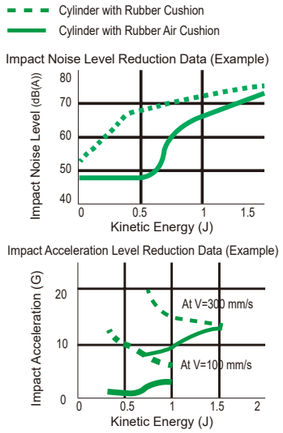
●Explanation during PULL

When the piston operates and the rubber air cushion comes into contact with the cover, a sealed air space is formed in the ■ part. The air in this sealed space is compressed as the piston operates and absorbs energy.

At the stroke end, energy absorption due to compressive strain of the rubber cushion is also added.







Cylinder Weight Table (Weight with switch is when 2 cylinder switches are included)

(Unit: g)

Stroke (mm)	5		10		15		20		25		30		40		50		60		70		80		90		100	
Bore size (mm)	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW
ø20	75	150	88	163	101	176	113	188	126	201	138	213	163	238	188	263	213	288	238	313	263	338	288	363	313	388
ø25	-	-	118	209	134	225	150	241	165	256	182	273	214	305	246	337	278	369	310	401	342	433	374	465	406	497
ø32	-	-	188	302	209	323	231	345	253	367	275	389	318	432	361	475	404	518	447	561	490	604	533	647	576	690
ø40	-	-	263	406	290	433	316	459	342	485	369	512	422	565	475	618	528	671	581	724	634	777	687	830	740	883
ø50	-	-	425	619	467	661	510	704	553	747	594	788	678	872	762	956	846	1040	930	1124	1014	1208	1098	1292	1182	1376
ø63	-	-	617	896	-	-	727	1006	-	-	838	1117	948	1227	1058	1337	1168	1447	1278	1557	1388	1667	1498	1777	1608	1887
ø80	-	-	1101	1514	-	-	1274	1687	-	-	1448	1861	1621	2034	1794	2207	1967	2380	2140	2553	2313	2726	2486	2899	2659	3072
ø100	-	-	1660	2227	-	-	1888	2455	-	-	2115	2682	2343	2910	2571	3138	2799	3366	3027	3594	3255	3822	3483	4050	3711	4278

Stroke (mm)	110		120		130		140		150		160		170		180		190		200	
Bore size (mm)	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW
ø20	338	413	363	438	388	463	413	488	438	513	463	538	488	563	513	588	538	613	563	638
ø25	438	529	470	561	502	593	534	625	566	657	598	689	630	721	662	753	694	785	726	817
ø32	619	733	662	776	705	819	748	862	791	905	833	947	876	990	919	1033	962	1076	1005	1119
ø40	793	936	846	989	899	1042	952	1095	1005	1148	1058	1201	1111	1254	1164	1307	1217	1360	1270	1413
ø50	1266	1460	1350	1544	1434	1628	1518	1712	1602	1796	1700	1894	1785	1979	1870	2064	1955	2149	2040	2234
ø63	1718	1997	1828	2107	1938	2217	2048	2327	2158	2437	2268	2547	2378	2657	2488	2767	2598	2877	2708	2987
ø80	2832	3245	3005	3418	3178	3591	3351	3764	3524	3937	3697	4110	3870	4283	4043	4456	4216	4629	4389	4802
ø100	3939	4506	4167	4734	4395	4962	4623	5190	4851	5418	5079	5646	5307	5874	5535	6102	5763	6830	5991	6558

Stroke (mm)	210		220		230		240		250		260		270		280		290		300	
Bore size (mm)	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW
ø25	769	849	801	881	833	913	865	945	897	977	929	1009	961	1041	993	1073	1025	1105	1057	1137
ø32	1048	1162	1091	1205	1134	1248	1177	1291	1220	1334	1263	1377	1306	1420	1349	1463	1392	1506	1435	1549
ø40	1323	1466	1376	1519	1429	1572	1482	1625	1535	1678	1588	1731	1641	1784	1694	1837	1747	1890	1800	1943
ø50	2125	2319	2210	2404	2295	2489	2380	2574	2465	2659	2550	2744	2635	2829	2720	2914	2805	2999	2890	3084
ø63	2817	3096	2927	3206	3037	3316	3147	3426	3257	3536	3367	3646	3477	3756	3587	3866	3697	3976	3807	4086
ø80	4561	4974	4734	5147	4907	5320	5080	5493	5253	5666	5426	5839	5599	6012	5772	6185	5945	6358	6118	6531
ø100	6220	6787	6448	7015	6676	7243	6904	7471	7132	7699	7360	7927	7588	8155	7816	8383	8044	8611	8272	8839

Theoretical Thrust Table

(Unit: N)

Bore size (mm)	Operating Direction	Operating Pressure MPa								
		0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø20	Push	-	94.2	1.26×10^2	1.57×10^2	1.88×10^2	2.20×10^2	2.51×10^2	2.83×10^2	3.14×10^2
	Pull	-	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2	1.88×10^2	2.12×10^2	2.36×10^2
ø25	Push	-	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2	3.93×10^2	4.42×10^2	4.91×10^2
	Pull	-	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
ø32	Push	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2	6.43×10^2	7.24×10^2	8.04×10^2
	Pull	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
ø40	Push	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Push	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
ø80	Push	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3	4.02×10^3	4.52×10^3	5.03×10^3
	Pull	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
ø100	Push	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3	6.28×10^3	7.07×10^3	7.85×10^3
	Pull	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3

Mounting Bracket Model No. Notation Method

Bore Size (mm) / Mounting bracket	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Foot (LB)	SSD-LB-20	SSD-LB-25	SSD-LB-32	SSD-LB-40	SSD-LB-50	SSD-LB-63	SSD-LB-80	SSD-LB-100
Foot (LB2)	SSD-LB2-20	SSD-LB2-25	SSD-LB2-32	SSD-LB2-40	SSD-LB2-50	SSD-LB2-63	SSD-LB2-80	SSD-LB2-100
Flange (FA/FB)	SSD-FA-20	SSD-FA-25	SSD-FA-32	SSD-FA-40	SSD-FA-50	SSD-FA-63	SSD-FA-80	SSD-FA-100
Double Clevis (CB)	SSD-CB-20	SSD-CB-25	SSD-CB-32	SSD-CB-40	SSD-CB-50	SSD-CB-63	SSD-CB-80	SSD-CB-100
Double knuckle clevis (CB2)	SSD-CB2-20	SSD-CB2-25	SSD-CB2-32	SSD-CB2-40	SSD-CB2-50	SSD-CB2-63	SSD-CB2-80	SSD-CB2-100

Note: Foot type mounting brackets are 2 pcs/set.

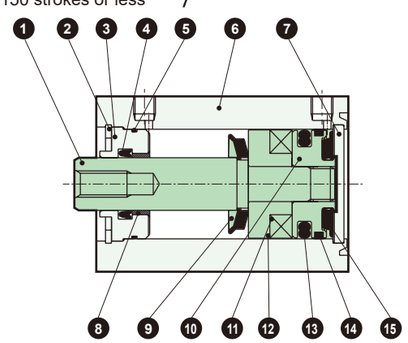
Outline Dimension Drawing

Same as double acting, high load SSD-K series. See P. 392 to 400. However, it does not come with a switch.

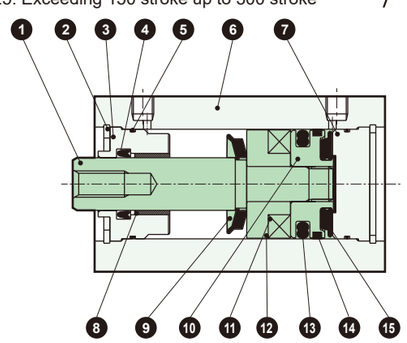
Internal Structure Diagram/Material

●SSD-KL-20C, 25C
(Double Acting, High Load Type, Rubber Air Cushion with Switch)

⟨ø20: 100 strokes or less
ø25: 150 strokes or less ⟩

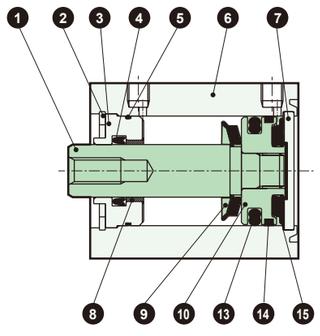


⟨ø20: Exceeding 100 stroke up to 200 stroke
ø25: Exceeding 150 stroke up to 300 stroke ⟩

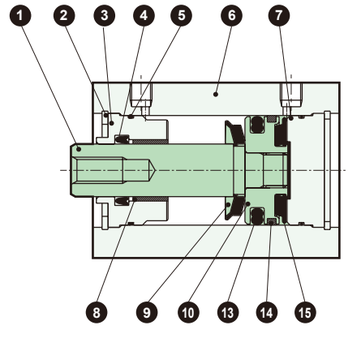


●SSD-K-20C, 25C
(Double Acting, High Load Type with Rubber Air Cushion)

⟨ø20: 100 strokes or less
ø25: 150 strokes or less ⟩



⟨ø20: Exceeding 100 stroke up to 200 stroke
ø25: Exceeding 150 stroke up to 300 stroke ⟩



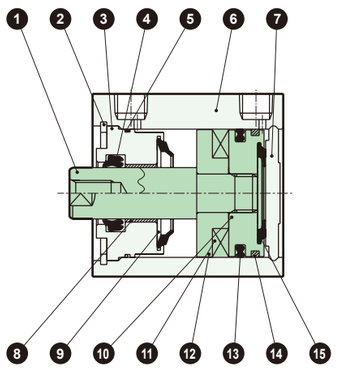
Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Piston Rod	Steel	Industrial Hard Chrome Plating	9	Rubber air cushion (R)	Special rubber	
2	C-type retaining ring	Steel	Zinc phosphate	10	Piston	Aluminum Alloy	Alumite
3	Rod Metal	Aluminum Alloy	Alumite	11	Magnet	Plastic	
4	Rod Packing	Nitrile Rubber		12	Spacer	Aluminum Alloy	Alumite
5	Rod metal gasket	Nitrile Rubber		13	Piston Packing	Nitrile Rubber	
6	Cylinder Body	Aluminum Alloy	Hard Anodized	14	Wear Ring	Polyacetal	
7	Cover	Aluminum Alloy		15	Rubber air cushion (H)	Special rubber	
8	Bushing	Bearing Alloy					

For maintenance parts, please visit the CKD Component Product Site
(https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

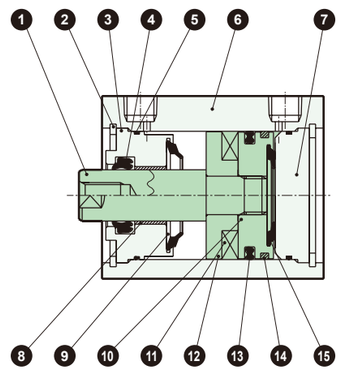
Internal Structure Diagram/Material

●SSD-KL-32C to 100C
(Double Acting, High Load Type, Rubber Air Cushion with Switch)

⟨ø32 to ø50: 150 stroke or less
ø63 to ø100: 200 stroke or less ⟩

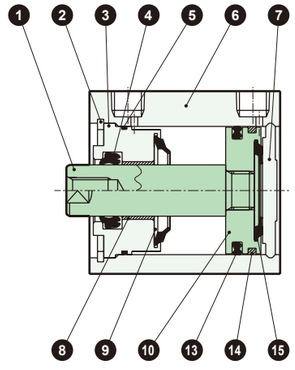


⟨ø32 to ø50: Stroke exceeding 150 and 300 or less
ø63 to ø100: Stroke exceeding 200 and 300 or less ⟩

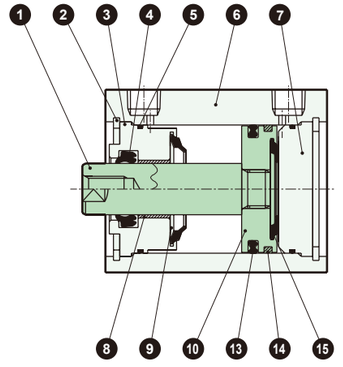


●SSD-K-32C to 100C
(Double Acting, High Load Type with Rubber Air Cushion)

⟨ø32 to ø50: 150 stroke or less
ø63 to ø100: 200 stroke or less ⟩



⟨ø32 to ø50: Stroke exceeding 150 and 300 or less
ø63 to ø100: Stroke exceeding 200 and 300 or less ⟩



Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Piston Rod	Steel	Industrial Hard Chrome Plating	9	Rubber air cushion (R)	Special rubber	
2	C-type retaining ring	Steel	Zinc phosphate	10	Piston	Aluminum Alloy	Alumite
3	Rod Metal	Aluminum Alloy	Alumite	11	Magnet	Plastic	
4	Rod Packing	Nitrile Rubber		12	Spacer	Aluminum Alloy	Alumite
5	Rod metal gasket	Nitrile Rubber		13	Piston Packing	Nitrile Rubber	
6	Cylinder Body	Aluminum Alloy	Hard Anodized	14	Wear Ring	Polyacetal	
7	Cover	Aluminum Alloy	Alumite	15	Rubber air cushion (H)	Special rubber	
8	Bushing	Bearing Alloy					

For maintenance parts, please visit the CKD Component Product Site
(https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Technical Data

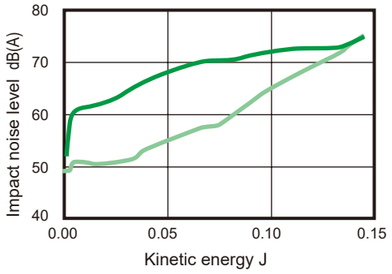
[Performance Comparison of Impact Noise Level]

Standard rubber cushion product:
Rubber air cushion product:

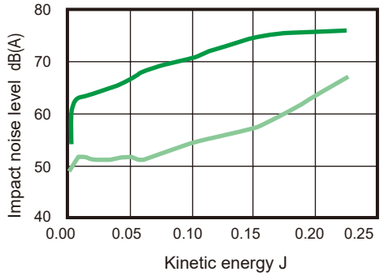
The data is a comparison example under the following conditions.
Values change depending on frame rigidity, etc., so they are not guaranteed values.

(Test Conditions)
Cylinder type: SSD
Cylinder Mounting Direction: Vertically upward
Cylinder supply pressure: 0.5 MPa
Sound level meter measurement position: 1 m from sample

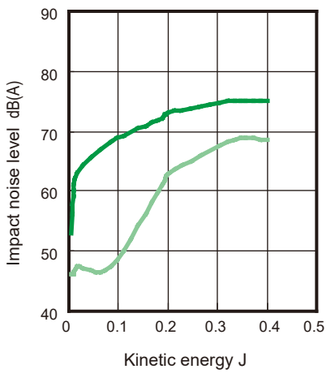
ø20



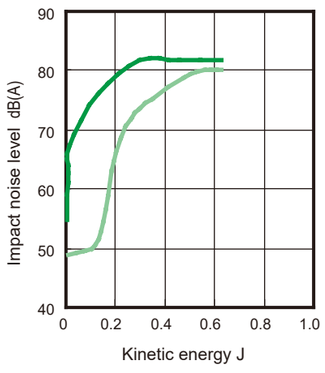
ø25



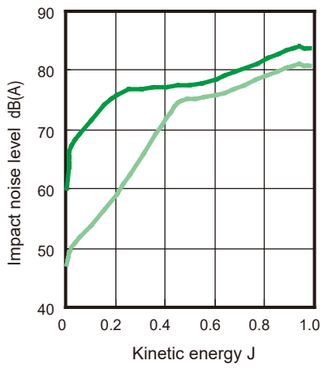
ø32



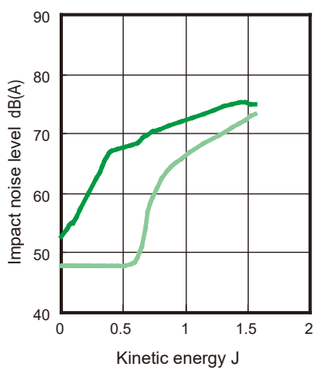
ø40



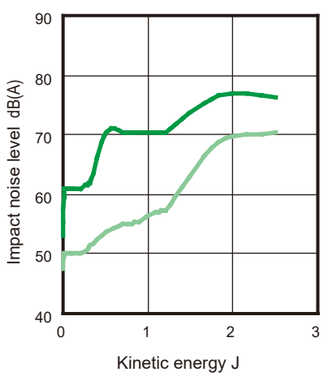
ø50



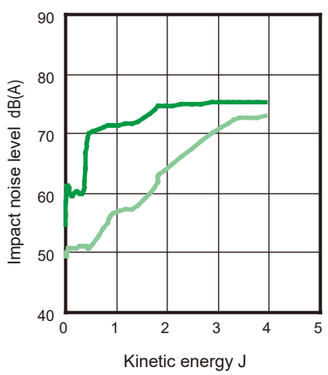
ø63



ø80



ø100

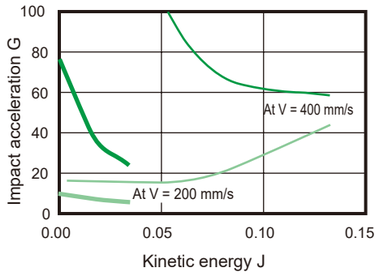


Technical Data

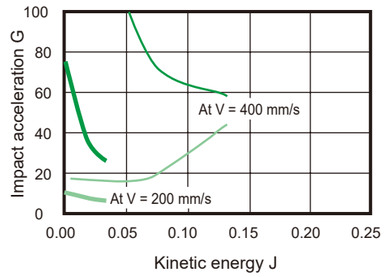
[Performance Comparison of Impact Acceleration]

Standard rubber cushion product:
Rubber air cushion product:

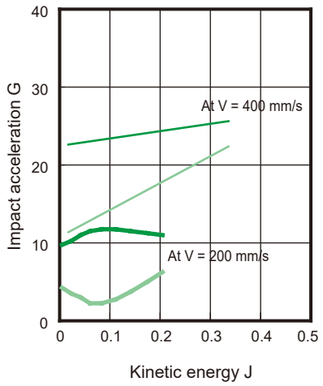
ø20



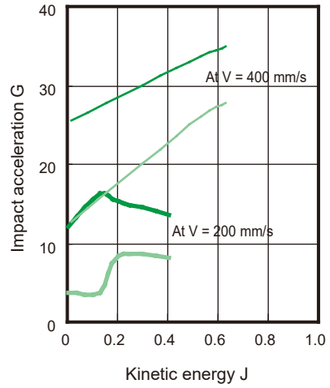
ø25



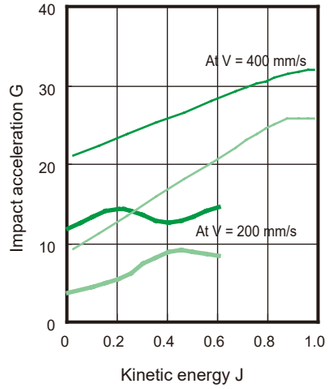
ø32



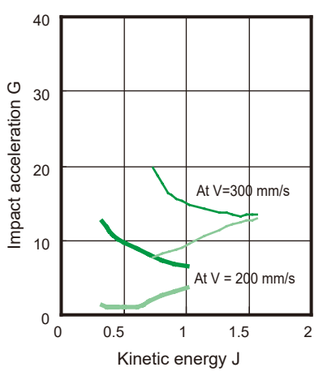
ø40



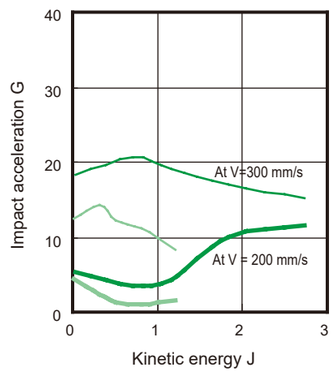
ø50



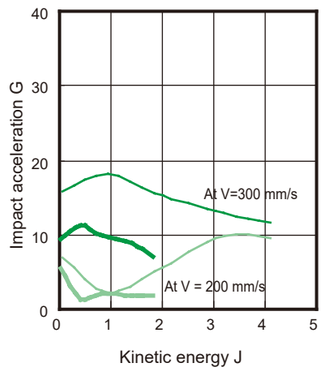
ø63



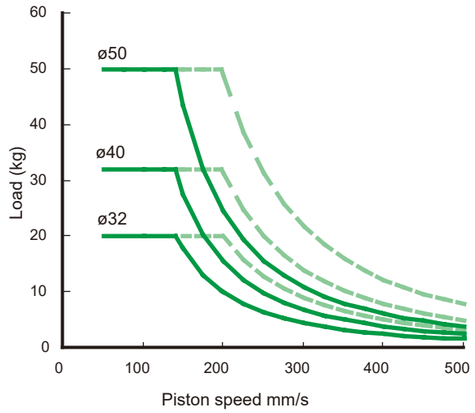
ø80

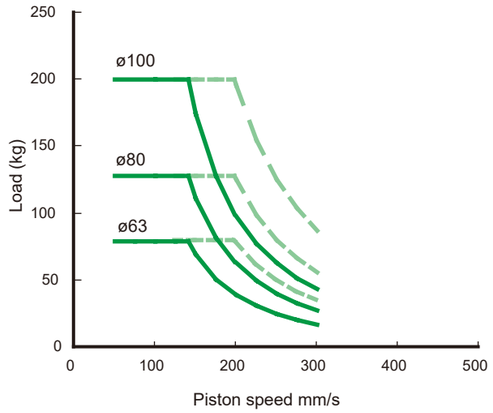


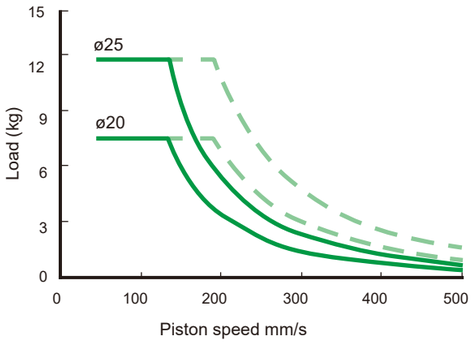
ø100



[Allowable Energy Value]







The usable range is to the lower left of the curve.
It can be used within the range indicated by the — — — line in the figure, but it is recommended to use it within the range of the solid line to make the silencing effect more effective.

MEMO

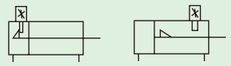
Space-Saving Type
SSD2
SSG
SSD
CAT
MDC2
SMG
MSD
FC□
Cylinder Switch
Ending

Compact Cylinder Double Acting, Drop Prevention Type

SSD-Q Series

● Bore size: ø16, ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100

Circuit Diagram Symbol



RoHS

Model No. Notation Method

Without Switch
(Without magnet for switch)

SSD-Q	16		5	R			N	LB	I
Model No.	1	2	3	4			7	8	9

With Switch
(Built-in magnet for switch)

SSD-QL	16		5	R	T0H	R	N	LB	I
Model No.	1	2	3	4	5	6	7	8	9
	Bore size	Piping thread type	Stroke	Fall prevention mechanism	Switch Model No.	Number of Switches	Option	Mounting bracket	Accessories

❶Bore Size (mm)

Code	Content
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

❷Piping thread type

Code	Content
Blank	M5 thread (ø16 to ø25)
	Rc thread (ø32 to ø100)
NN	NPT thread (Custom product) (ø32 to ø100)
GN	G thread (Custom product) (ø32 to ø100)

❸Stroke (mm)

Bore size	Stroke	Intermediate Stroke
ø16	5 to 100	Every 1 mm
ø20	5 to 200	
ø25 to ø100	5 to 300	

Note: For details on stroke, please refer to P. 458.

❹Fall prevention mechanism

Code	Content	
R	With rod side fall prevention	
H	With head side fall prevention	

❺Switch Model No.

For switch details, please refer to P. 869.
Switches are included to the product and shipped.

Contact	Indicator LED Special Function	Wiring (Output)	Load Voltage (V) AC	Load Voltage (V) DC	Load Current (mA) AC	Load Current (mA) DC	Lead Wire *1 Straight	Lead Wire *1 L-shape	
Solid State	1-Color	2-wire	85 to 265	—	5 to 100	—	T1H□	T1V□	
			—	10 to 30	—	5 to 20 *2	T2H□	T2V□	
		3-wire (NPN)	—	30 or less	—	100 or less	T3H□	T3V□	
		3-wire (PNP)	—		—		T3PH□	T3PV□	
	2-Color	2-wire	—	24 ± 10%	—	5 to 20	T2WH□	T2WV□	
		3-wire (NPN)	—	30 or less	—	50 or less	T3WH□	T3WV□	
	2-Color for AC Magnetic Field	2-wire	—	24 ± 10%	—	5 to 20	T2YD□	–	*3
			—		—		T2YDT□	–	
	1-Color Off-Delay Type		—	10 to 30	—	5 to 20 *2	T2JH□	T2JV□	
	1-Color Flexible Lead Wire Type		—		—		T2HR3□	T2VR3□	
Reed	1-Color	2-wire	110	12/24	7 to 20	5 to 50	T0H□	T0V□	
	No Indicator LED		110	5/12/24	20 or less	50 or less	T5H□	T5V□	
	1-Color		110/220	12/24	7 to 20 / 7 to 10	5 to 50	T8H□	T8V□	*4

*1: For "□" in the switch model number, enter the code selected from the "*Lead wire length" table.
*2: The maximum load current value above, 20 mA, is at 25°C. If the switch operating ambient temperature is higher than 25°C, it will be lower than 20 mA. (At 60°C, it will be 5 to 10 mA.)
*3: Switches for AC magnetic fields cannot be mounted on ø16.
*4: T8□ switches cannot be mounted on ø16.
*5: Switches other than the model numbers listed above are also available. (Custom products) For details, refer to P. 869.

***Lead wire length**

Code	Content
Blank	1 m (Standard)
3	3 m (Option)
5	5 m (Option)

Example) Lead wire length
1 m T0H
3 m T0H3
5 m T0H5

❻Number of Switches

Code	Content
R	With 1 pc on rod side
H	With 1 pc on head side
D	With 2 pcs

❼Option

Code	Content	
Blank	Rod end female thread	
N	Rod end male thread	

❽Mounting type

Mounting brackets are shipped included to the product.

Code	Content	
LB	Axial Foot Type	
*1 LB2	Axial foot type (Compact type)	
*1 FA	Rod Side Flange Type	
FB	Head Side Flange Type	
CB	Double Clevis Type (Pin and Retaining Ring Included)	
CB2	Double Clevis Type (Compact type) (Pins and retaining rings included)	

*1: When LB2 or FA is selected, the piston rod protrusion dimension WF differs from the standard. See P. 462, 463, 466, and 467 for outline dimension drawings. Also, the model number specifying the protrusion length will be printed at the end of the model number on the nameplate included to the main body. For cylinder model numbers when ordering cylinders and LB2/FA brackets separately, please contact us.

❾Accessories

Code	Content	
I	Single Knuckle	
I2	Single Knuckle (compact)	
Y	Double Knuckle (pin and retaining ring included)	
Y2	Double knuckle (compact) (pin and snap ring included)	

*1: Selectable when rod end male thread "N" is selected.
*2: "I", "I2", "Y", "Y2" cannot be selected at the same time.

*For combination of variations and options, refer to P. 356 to 361.

About Custom Product Specifications

For details, refer to P. 690 to P. 694.

Code	Content
-XP5	Knuckle Pin/Clevis Pin Split Pin
-XP7	Knuckle fixed by pin driving
-XP8	Knuckle pin/clevis pin split pin specification, knuckle fixed by pin driving
-A2	With 2 Rod Nuts
-R1, R2	With spigot joint
Rod End Shape Modification	Refer to Ending 11.

Model No. Example)
SSD-Q-..... -XP5

Rechargeable Battery Compatible Specification (Catalog No. CC-1226AA)

●Structure usable in secondary battery manufacturing processes

SSD-Q-..... -P4*

*Please contact us for details.

Switch Single Unit Model No. Notation Method

SW-T0H
5
Switch Model No.

Specifications

Item	SSD-Q SSD-QL (with switch)								
Bore size mm	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation method	Double Acting, Drop Prevention Type								
Operating Fluid	Compressed Air								
Max. Operating Pressure MPa	1.0								
Min. Operating Pressure MPa	0.15								
Proof pressure MPa	1.6								
Ambient Temperature °C	-10 to 60 (however, no freezing)								
Port Size	M5			Rc1/8		Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+2.5}_{0}$								
Operating Piston Speed mm/s	50 to 500						50 to 300		
Cushion	Rubber Cushion								
Lubrication	Not required (When lubricating, use turbine oil Class 1 ISO VG32)								
Fall prevention mechanism	Head Side or Rod Side								
Holding Force (N)	Max. Thrust × 0.7								
Allowable absorbed energy J	0.09	0.157	0.157	0.402	0.628	0.98	1.56	2.51	3.92

Stroke

Stroke (mm)		Applicable Bore								
		ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Standard Stroke	5	●	●							
	10	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●			
	20	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●			
	30	●	●	●	●	●	●	●	●	●
	40	●	●	●	●	●	●	●	●	●
	50	●	●	●	●	●	●	●	●	●
	60			●	●	●	●	●	●	●
	70			●	●	●	●	●	●	●
	80			●	●	●	●	●	●	●
	90			●	●	●	●	●	●	●
	100			●	●	●	●	●	●	●
Minimum Stroke (mm) *1		5								
Maximum Stroke (mm)		100	200	300						
Intermediate stroke *2		Every 1 mm								

***1: Cannot be manufactured for less than 5 mm with 1-color indicator switch, or less than 10 mm with 2-color indicator, off-delay type, AC magnetic field type, T1□, T8□ switch. For the number of switches that can be mounted and the minimum stroke, refer to the table below.**

*2: The overall length dimension for an intermediate stroke is the dimension with the intermediate stroke value entered as is.

Number of Switches Mounted and Min. Stroke (mm)

Switch Model No.	T□		T2WL	
Number of Switches / Bore size (mm)	1	2	1	2
ø16	5	5	20	20
ø20	5	5	15	15
ø25	5	5	10	15
ø32	5	5	10	15
ø40	5	5	10	15
ø50	5	5	10	15
ø63	5	5	10	15
ø80	5	5	10	15
ø100	5	5	10	15

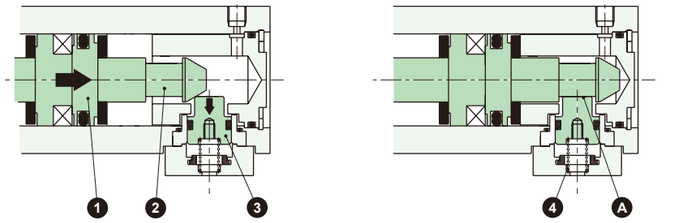
Note: Less than 10 mm with the 2-color LED, off-delay, AC magnetic field proof, T1□ or T8□ switch is not available.

Operation Explanation

●During Lock Operation

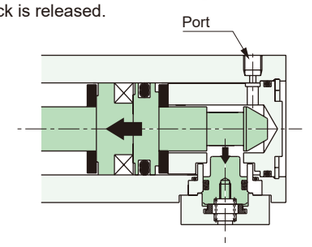
When the cylinder piston① approaches the stroke end, the stopper piston is pushed up along the slope of the③ sleeve②.

When the cylinder piston comes to the stroke end and the Ⓐsleeve groove reaches the stopper piston position, the stopper piston is pushed down by the ④spring and fits into the groove, completing the lock action.



●Lock Release Operation

If pressure is supplied to the port, the stopper piston pushes back the spring, disengages from the sleeve groove, and the lock is released.



Before use, be sure to read "Precautions for Use" Drop Prevention Type, P. 697 to 700.

Cylinder Weight Table

(Weight with switch is when 2 cylinder switches are included) (Unit: g)

Bore size (mm)	Product Weight at stroke 0		St = Added weight per 10 mm
	Without Switch	With Switch	
ø16	119	164	21
ø20	164	239	25
ø25	227	318	32
ø32	377	491	43
ø40	599	742	53
ø50	1197	1391	84
ø63	1703	1982	110
ø80	3651	4064	173
ø100	5291	5858	228

(Example) Product Weight
SSD-QL-40-50-T0H-D-H
- Product Weight at 0 mm stroke...742 g
- Added weight at 50 mm stroke... 53 × 5 = 265 g
- Product Weight.....742 + 265 = 1007 g

Theoretical Thrust Table

(Unit: N)

Bore size (mm)	Operating Direction	Operating Pressure MPa									
		0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø16	Push	30.2	40.2	60.3	80.4	1.01×10^{2}	1.21×10^{2}	1.41×10^{2}	1.61×10^{2}	1.81×10^{2}	2.01×10^{2}
	Pull	22.6	30.2	45.2	60.3	75.4	90.5	1.06×10^{2}	1.21×10^{2}	1.36×10^{2}	1.51×10^{2}
ø20	Push	47.1	62.8	94.2	1.26×10^{2}	1.57×10^{2}	1.88×10^{2}	2.20×10^{2}	2.51×10^{2}	2.83×10^{2}	3.14×10^{2}
	Pull	35.3	47.1	70.7	94.2	1.18×10^{2}	1.41×10^{2}	1.65×10^{2}	1.88×10^{2}	2.12×10^{2}	2.36×10^{2}
ø25	Push	73.6	98.2	1.47×10^{2}	1.96×10^{2}	2.45×10^{2}	2.95×10^{2}	3.44×10^{2}	3.93×10^{2}	4.42×10^{2}	4.91×10^{2}
	Pull	56.7	75.6	1.13×10^{2}	1.51×10^{2}	1.89×10^{2}	2.27×10^{2}	2.64×10^{2}	3.02×10^{2}	3.40×10^{2}	3.78×10^{2}
ø32	Push	1.21×10^{2}	1.61×10^{2}	2.41×10^{2}	3.22×10^{2}	4.02×10^{2}	4.83×10^{2}	5.63×10^{2}	6.43×10^{2}	7.24×10^{2}	8.04×10^{2}
	Pull	90.5	1.21×10^{2}	1.81×10^{2}	2.41×10^{2}	3.02×10^{2}	3.62×10^{2}	4.22×10^{2}	4.83×10^{2}	5.43×10^{2}	6.03×10^{2}
ø40	Push	1.88×10^{2}	2.51×10^{2}	3.77×10^{2}	5.03×10^{2}	6.28×10^{2}	7.54×10^{2}	8.80×10^{2}	1.01×10^{3}	1.13×10^{3}	1.26×10^{3}
	Pull	1.58×10^{2}	2.11×10^{2}	3.17×10^{2}	4.22×10^{2}	5.28×10^{2}	6.33×10^{2}	7.39×10^{2}	8.44×10^{2}	9.50×10^{2}	1.06×10^{3}
ø50	Push	2.95×10^{2}	3.93×10^{2}	5.89×10^{2}	7.85×10^{2}	9.82×10^{2}	1.18×10^{3}	1.37×10^{3}	1.57×10^{3}	1.77×10^{3}	1.96×10^{3}
	Pull	2.47×10^{2}	3.30×10^{2}	4.95×10^{2}	6.60×10^{2}	8.25×10^{2}	9.90×10^{2}	1.15×10^{3}	1.32×10^{3}	1.48×10^{3}	1.65×10^{3}
ø63	Push	4.68×10^{2}	6.23×10^{2}	9.35×10^{2}	1.25×10^{3}	1.56×10^{3}	1.87×10^{3}	2.18×10^{3}	2.49×10^{3}	2.81×10^{3}	3.12×10^{3}
	Pull	4.20×10^{2}	5.61×10^{2}	8.41×10^{2}	1.12×10^{3}	1.40×10^{3}	1.68×10^{3}	1.96×10^{3}	2.24×10^{3}	2.52×10^{3}	2.80×10^{3}
ø80	Push	7.54×10^{2}	1.01×10^{3}	1.51×10^{3}	2.01×10^{3}	2.51×10^{3}	3.02×10^{3}	3.52×10^{3}	4.02×10^{3}	4.52×10^{3}	5.03×10^{3}
	Pull	6.80×10^{2}	9.07×10^{2}	1.36×10^{3}	1.81×10^{3}	2.27×10^{3}	2.72×10^{3}	3.17×10^{3}	3.63×10^{3}	4.08×10^{3}	4.54×10^{3}
ø100	Push	1.18×10^{3}	1.57×10^{3}	2.36×10^{3}	3.14×10^{3}	3.93×10^{3}	4.71×10^{3}	5.50×10^{3}	6.28×10^{3}	7.07×10^{3}	7.85×10^{3}
	Pull	1.07×10^{3}	1.43×10^{3}	2.14×10^{3}	2.86×10^{3}	3.57×10^{3}	4.29×10^{3}	5.00×10^{3}	5.72×10^{3}	6.43×10^{3}	7.15×10^{3}

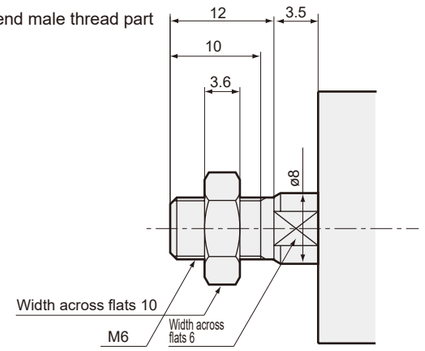
Mounting Bracket Model No. Notation Method

Bore Size (mm) / Mounting bracket	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Foot (LB)	SSD-LB-16	SSD-LB-20	SSD-LB-25	SSD-LB-32	SSD-LB-40	SSD-LB-50	SSD-LB-63	SSD-LB-80	SSD-LB-100
Foot (LB2)	SSD-LB2-16	SSD-LB2-20	SSD-LB2-25	SSD-LB2-32	SSD-LB2-40	SSD-LB2-50	SSD-LB2-63	SSD-LB2-80	SSD-LB2-100
Flange (FA/FB)	SSD-FA-16	SSD-FA-20	SSD-FA-25	SSD-FA-32	SSD-FA-40	SSD-FA-50	SSD-FA-63	SSD-FA-80	SSD-FA-100
Double Clevis (CB)	SSD-CB-16	SSD-CB-20	SSD-CB-25	SSD-CB-32	SSD-CB-40	SSD-CB-50	SSD-CB-63	SSD-CB-80	SSD-CB-100
Double knuckle clevis (CB2)	SSD-CB2-16	SSD-CB2-20	SSD-CB2-25	SSD-CB2-32	SSD-CB2-40	SSD-CB2-50	SSD-CB2-63	SSD-CB2-80	SSD-CB2-100

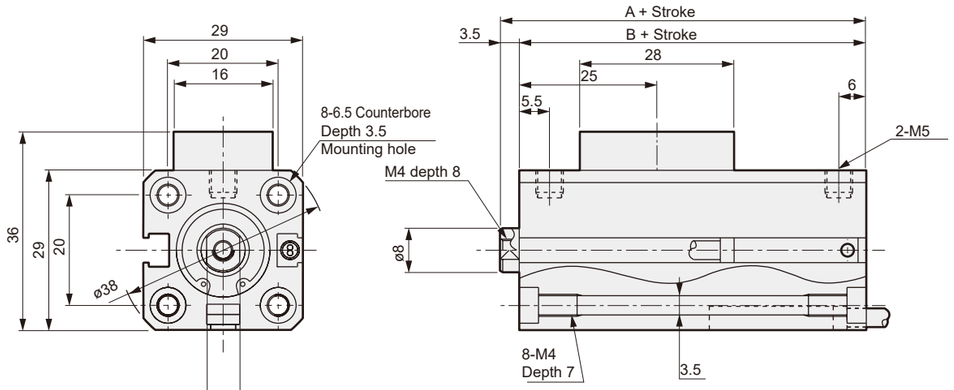
Note: Foot type mounting brackets are 2 pcs/set.

Outline dimension drawing (tube bore: ø16)

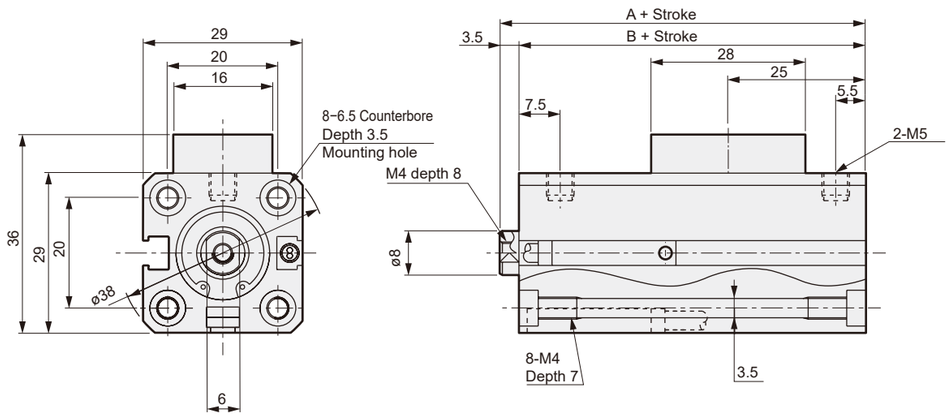
● Rod end male thread part



● SSD-Q (L)-16-R
(With rod side fall prevention)



● SSD-Q (L)-16-H
(With head side fall prevention)

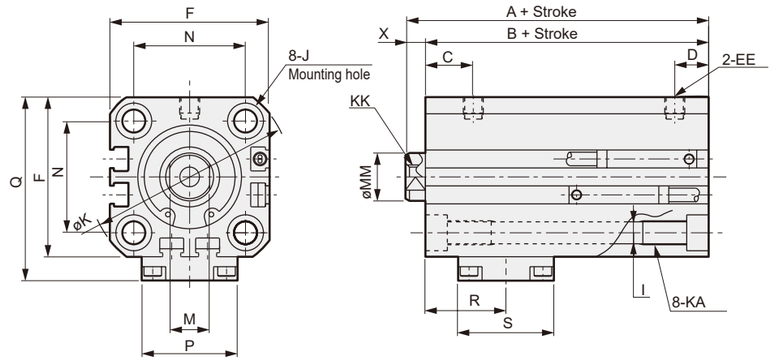


Code	Dimension with switch		Dimension without switch	
Bore Size (mm)	A *1	B *1	A *1	B *1
ø16	61.5	58	56.5	53

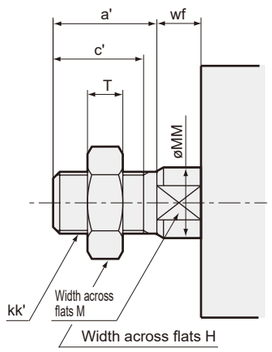
*1: When calculating A + stroke and B + stroke dimensions for intermediate strokes, enter the intermediate stroke value as is for the stroke.
(Example) For an intermediate stroke value of 7 mm, enter 7 mm as is for calculation.
***2: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**
***3: For dimensions with each switch, refer to P. 674 to 681.**

Outline Dimension Drawing (Bore size: ø20, ø25)

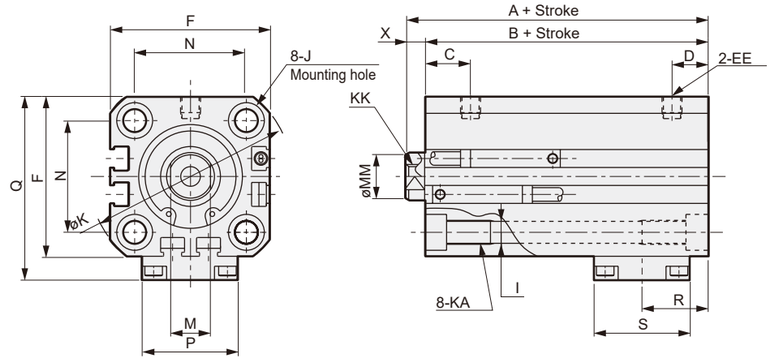
● SSD-Q (L)-20 to 25-R
(With rod side fall prevention)



● Rod end male thread part



● SSD-Q (L)-20 to 25-H
(With head side fall prevention)



Code	Dimension with switch		Dimension without switch		Common dimension							
Bore Size (mm)	A *1	B *1	A *1	B *1	C	D	EE	F	I	J *2	K	KA *2
ø20	68	63.5	58	53.5	9.5	8.5	M5	36	5.5	9 Counterbore depth 5.5	47	M6 depth 11
ø25	73.5	68.5	63.5	58.5	12	10.5	M5	40	5.5	9 Counterbore depth 5.5	51	M6 depth 11

Code	Common dimension							
Bore Size (mm)	KK	M	MM	N	P	Q	S	X
ø20	M5 depth 7	8	10	25.5	21	43	23.2	4.5
ø25	M6 Depth 12	10	12	28	24	46	24	5

Code	Common dimension	
	With rod side fall prevention mechanism	With head side fall prevention mechanism
Bore Size (mm)	R	R
ø20	18.6	18
ø25	20.5	18.8

*1: When calculating A + stroke and B + stroke dimensions for intermediate strokes, enter the intermediate stroke value as is for the stroke.
(Example) For an intermediate stroke value of 7 mm, enter 7 mm as is for calculation.
*2: For ø25, if the stroke exceeds 150, there is no counterbore J. In that case, the KA dimension will be M6 depth 17.
***3: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**
***4: For dimensions with each switch, refer to P. 674 to 681.**

● Rod end male thread dimensions

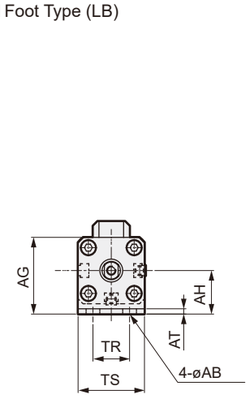
Code	a'	c'	H	kk'	M	MM	T	wf
Bore Size (mm)								
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10 × 1.25	10	12	6	5

Table 1 *2

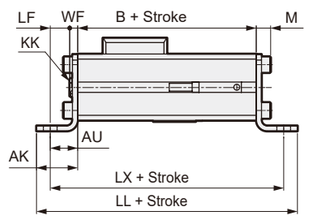
Bore size	J	KA
ø25	-	M6 depth 17

Outline Dimension Drawing (Bore size: ø16 to ø25)

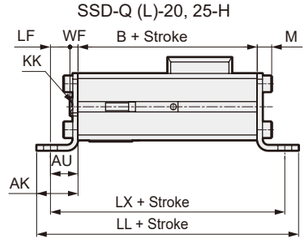
● Axial Foot Type (LB)



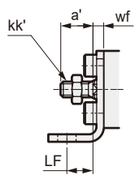
SSD-Q (L)-20, 25-R



SSD-Q (L)-20, 25-H

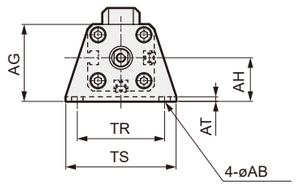


● For rod end male thread

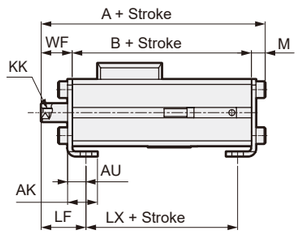


Code / Bore size (mm)	Common dimension									For female thread										For male thread			
	AB	AG	AH	AK	AT	AU	TR	TS	M	KK	WF	LF	With Switch B	With Switch LL	With Switch LX	Without Switch B	Without Switch LL	Without Switch LX	a'	kk'	wf	LF
ø16	6	33.5	19	18	2.3	12	16	29	6.3	M4 depth 8	3.5	8.5	58	94	82	53	89	77	12	M6	3.5	8.5
ø20	7	42	24	24	3.2	16	24	36	9.2	M5 depth 7	4.5	11.5	63.5	111.5	95.5	53.5	101.5	85.5	14	M8	4.5	11.5
ø25	7	46	26	24	3.2	16	28	40	9.2	M6 Depth 12	5	11	68.5	116.5	100.5	58.5	106.5	90.5	17.5	M10 × 1.25	5	11

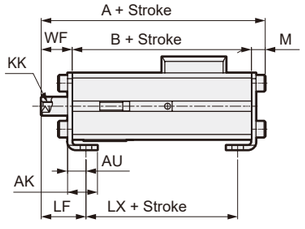
● Axial Foot Type (Compact Type) (LB2)



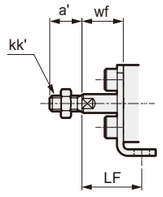
SSD-Q (L)-20, 25-R



SSD-Q (L)-20, 25-H



● For rod end male thread

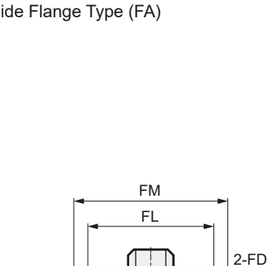


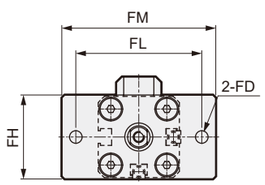
Code / Bore size (mm)	Common dimension									For female thread										For male thread			
	AB	AG	AH	AK	AT	AU	TR	TS	M	KK	WF	LF	With Switch A	With Switch B	With Switch LX	Without Switch A	Without Switch B	Without Switch LX	a'	kk'	wf	LF
ø16	5	33.5	19	13	2	8	38	48	6	M4 depth 8	13.5	19.5	77.5	58	46	72.5	53	41	12	M6	13.5	19.5
ø20	7	42	24	15	3.2	9.2	48	62	9.2	M5 depth 7	14.5	20.5	87.2	63.5	51.5	77.2	53.5	41.5	14	M8	14.5	20.5
ø25	7	46	26	16.5	3.2	10.7	52	66	9.2	M6 Depth 12	15	22.5	92.7	68.5	53.5	82.7	58.5	43.5	17.5	M10 × 1.25	15	22.5

Outline Dimension Drawing (Bore size: ø16 to ø25)

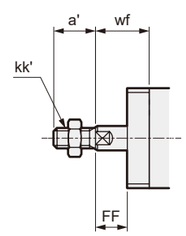
● Rod Side Flange Type (FA)

SSD-Q (L)-20, 25-R

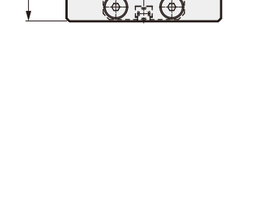




● For rod end male thread



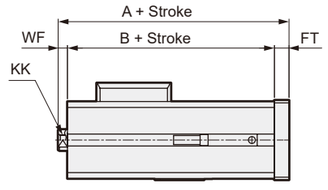
SSD-Q (L)-20, 25-H

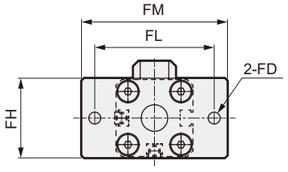


Code / Bore size (mm)	Common dimension					For female thread						For male thread			
	FD	FH	FL	FM	FT	FF	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	FF	a'	kk'	wf
ø16	4.5	30	45	55	5.5	8	M4 depth 8	13.5	71.5	58	66.5	53	8	12	M6	13.5
ø20	6.6	39	48	60	8	6.5	M5 depth 7	14.5	78	63.5	68	53.5	6.5	14	M8	14.5
ø25	6.6	42	52	64	8	7	M6 Depth 12	15	83.5	68.5	73.5	58.5	7	17.5	M10 × 1.25	15

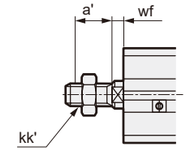
● Head Side Flange Type (FB)

SSD-Q (L)-20, 25-R

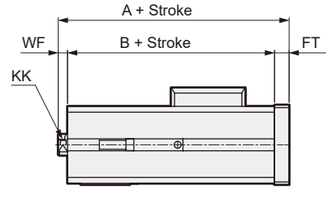




● For rod end male thread



SSD-Q (L)-20, 25-H

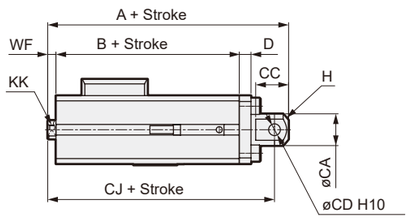


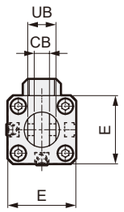
Code / Bore size (mm)	Common dimension					For female thread						For male thread			
	FD	FH	FL	FM	FT	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	a'	kk'	wf	
ø16	4.5	30	45	55	5.5	M4 depth 8	3.5	67	58	62	53	12	M6	3.5	
ø20	6.6	39	48	60	8	M5 depth 7	4.5	76	63.5	66	53.5	14	M8	4.5	
ø25	6.6	42	52	64	8	M6 Depth 12	5	81.5	68.5	71.5	58.5	17.5	M10 × 1.25	5	

Outline Dimension Drawing (Bore size: ø16 to ø25)

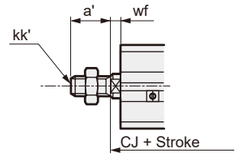
● Double Knuckle Clevis Type (CB)

SSD-Q (L)-20, 25-R

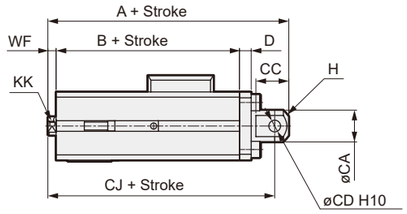




● For rod end male thread



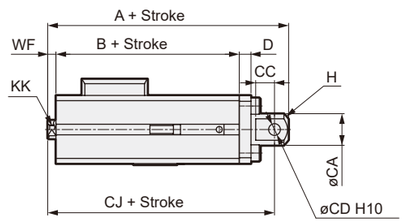
SSD-Q (L)-20, 25-H

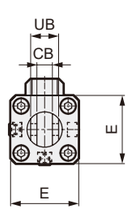


Code	Common dimension								For female thread								For male thread				
Bore size (mm)	CA	CB	CC	CD	D	E	H	UB	KK	WF	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	a'	kk'	wf	With Switch CJ	Without Switch CJ
ø16	15	6.5$^{+0.4}_{+0.1}$	8	5	5	29	C2	12$^{-0.1}_{-0.4}$	M4 depth 8	3.5	82.5	58	76.5	77.5	53	71.5	12	M6	3.5	76.5	71.5
ø20	24	8$^{+0.4}_{+0.1}$	12	10	8	36	C4	19$^{-0.1}_{-0.4}$	M5 depth 7	4.5	101	63.5	91	91	53.5	81	14	M8	4.5	91	81
ø25	27.5	10$^{+0.4}_{+0.1}$	16	12	8	40	C5	21$^{-0.1}_{-0.4}$	M6 Depth 12	5	112.5	68.5	100.5	102.5	58.5	90.5	17.5	M10 × 1.25	5	100.5	90.5

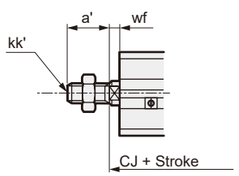
● Double clevis type (Compact type) (CB2)

SSD-Q (L)-20, 25-R

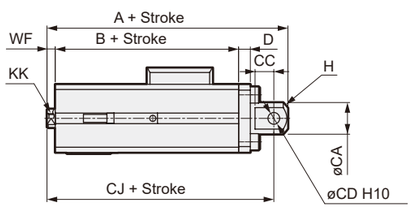




● For rod end male thread



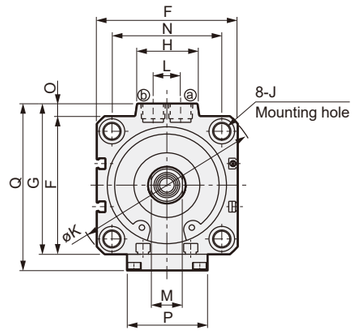
SSD-Q (L)-20, 25-H



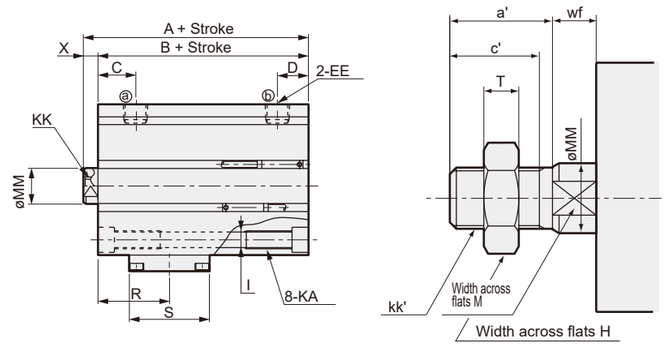
Code	Common dimension								For female thread								For male thread				
Bore size (mm)	CA	CB	CC	CD	D	E	H	UB	KK	WF	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	a'	kk'	wf	With Switch CJ	Without Switch CJ
ø16	15	6.5$^{+0.4}_{+0.1}$	8	5	5	29	C2	12$^{-0.1}_{-0.4}$	M4 depth 8	3.5	82.5	58	76.5	77.5	53	71.5	12	M6	3.5	76.5	71.5
ø20	20	8$^{+0.4}_{+0.1}$	12	8	5	36	C4	16$^{-0.1}_{-0.3}$	M5 depth 7	4.5	95	63.5	86	85	53.5	76	14	M8	4.5	86	76
ø25	24	10$^{+0.4}_{+0.1}$	14	10	5	40	C5	20$^{-0.1}_{-0.3}$	M6 Depth 12	5	103.5	68.5	93.5	93.5	58.5	83.5	17.5	M10 × 1.25	5	93.5	83.5

Outline Dimension Drawing (Bore size: ø32 to ø100)

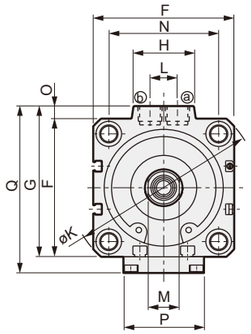
● SSD-Q (L)-32 to 100R
(With rod side fall prevention)

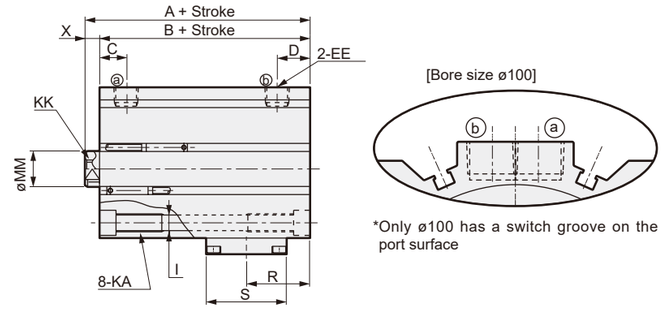


● Rod end male thread part



● SSD-Q (L)-32 to 100-H
(With head side fall prevention)





*Only ø100 has a switch groove on the port surface

Code	Dimension with switch		Dimension without switch		Common dimension								
Bore Size (mm)	A *1	B *1	A *1	B *1	C	D	EE	F	G	H	I	J *2	K
ø32	79	72	69	62	11	10	Rc1/8	45	49.5	24	5.5	9 Counterbore depth 5.5	60
ø40	93	86	83	76	14	11	Rc1/8	52	57	24	5.5	9 Counterbore depth 5.5	69
ø50	112.5	104.5	102.5	94.5	14.5	12.5	Rc1/4	64	71	33	6.9	11 Counterbore Depth 6.5	86
ø63	118	110	108	100	18.5	17	Rc1/4	77	84	33	8.7	14 Counterbore depth 9	103
ø80	149	139	139	129	18	17	Rc3/8	98	104	38	10.5	17.5 Counterbore depth 11	132
ø100	151	139	141	129	23	21	Rc3/8	117	123.5	38	10.5	17.5 Counterbore depth 11	156

Code	Common dimension										
Bore Size (mm)	KA *2	KK	L	M	MM	N	O	P	Q	S	X
ø32	M6 depth 11	M8 depth 13	10	14	16	34	4.5	24	58	38	7
ø40	M6 depth 11	M8 depth 13	10	14	16	40	5	24	65.5	38	7
ø50	M8 depth 13	M10 depth 15	15	17	20	50	7	44	79.5	43	8
ø63	M10 depth 25	M10 depth 15	15	17	20	60	7	47	92.5	47	8
ø80	M12 depth 28	M16 depth 21	15	22	25	77	6	47	112.5	47	10
ø100	M12 depth 28	M20 depth 27	15	27	30	94	6.5	55	133.5	55	12

Code	Common dimension	
Bore Size (mm)	With rod side fall prevention mechanism	With head side fall prevention mechanism
	R	R
ø32	23.2	20.9
ø40	36.2	23.9
ø50	39.1	33.4
ø63	39	34.8
ø80	60	52
ø100	57	50

Table 1 *2

Bore size	J	KA
ø32	-	M6 depth 17
ø40	-	M6 depth 17
ø50	-	M8 depth 20
ø63	-	M10 depth 34
ø80	-	M12 Depth 35
ø100	-	M12 Depth 35

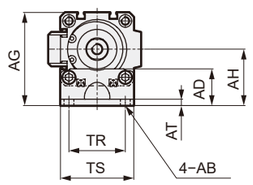
● Rod end male thread dimensions

Code	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14 × 1.5	14	16	8	5
ø40	23.5	20.5	22	M14 × 1.5	14	16	8	5
ø50	28.5	26	27	M18 × 1.5	17	20	11	5
ø63	28.5	26	27	M18 × 1.5	17	20	11	5
ø80	35.5	32.5	32	M22 × 1.5	22	25	13	8
ø100	35.5	32.5	41	M26 × 1.5	27	30	16	8

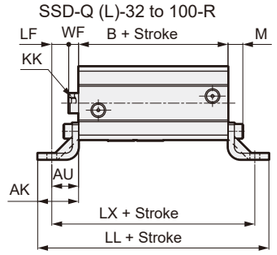
*1: When calculating A + stroke and B + stroke dimensions for intermediate strokes, enter the intermediate stroke value as is for the stroke.
(Example) For an intermediate stroke value of 7 mm, enter 7 mm as is for calculation.
*2: For ø32 to ø63: 150 strokes, ø80, ø100: If the stroke exceeds 130, there is no counterbore J. In that case, the KA dimension will be as shown in Table 1.
***3: For dimensions of models with switches, see P. 674 to 681.**
***4: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**

Outline Dimension Drawing (Bore size: ø32 to ø100)

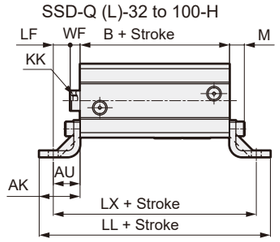
● Axial Foot Type (LB)



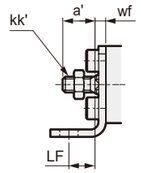
SSD-Q (L)-32 to 100-R



SSD-Q (L)-32 to 100-H

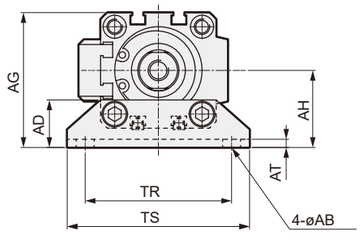


● For rod end male thread

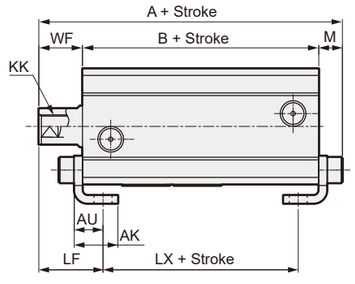


Code / Bore size (mm)	Common dimension										For female thread									For male thread			
	AB	AD	AG	AH	AK	AT	AU	TR	TS	M	KK	WF	LF	With Switch B	With Switch LL	With Switch LX	Without Switch B	Without Switch LL	Without Switch LX	a'	kk'	wf	LF
ø32	7	–	53.5	31	24	3.2	16	34	45	9.2	M8 depth 13	7	9	72	120	104	62	110	94	23.5	M14 × 1.5	5	11
ø40	7	26	71	40	29	4.5	19	40	52	10	M8 depth 13	7	12	86	144	124	76	134	114	23.5	M14 × 1.5	5	14
ø50	9	23	79	40	34	4.5	22	46	64	13	M10 depth 15	8	14	104.5	172.5	148.5	94.5	162.5	138.5	28.5	M18 × 1.5	5	17
ø63	11	33	96.5	51	40	4.5	25	60	77	15	M10 depth 15	8	17	110	190	160	100	180	150	28.5	M18 × 1.5	5	20
ø80	13	42	116.5	61.5	50	6	35	77	98	18	M16 depth 21	10	25	139	239	209	129	229	199	35.5	M22 × 1.5	8	27
ø100	13	48	134	69	50	6	35	94	117	18	M20 depth 27	12	23	139	239	209	129	229	199	35.5	M26 × 1.5	8	27

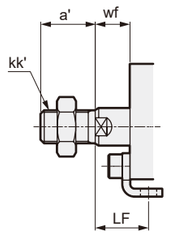
● Axial Foot Type (Compact Type) (LB2)



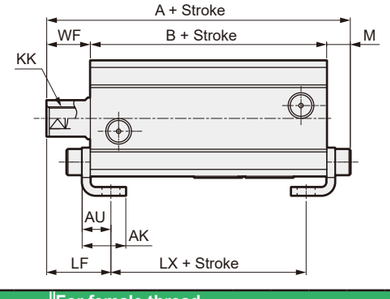
SSD-Q (L)-32 to 100-R



● For rod end male thread



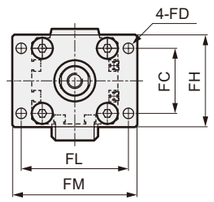
SSD-Q (L)-32 to 100-H



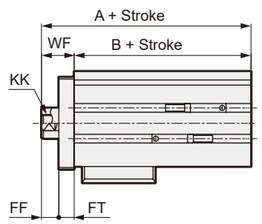
Code / Bore Size (mm)	Common dimension										For female thread									For male thread			
	AB	AD	AG	AH	AK	AT	AU	TR	TS	M	KK	WF	LF	With Switch A	With Switch B	With Switch LX	Without Switch A	Without Switch B	Without Switch LX	a'	kk'	wf	LF
ø32	7	18.5	57	30	17	3.2	11.2	57	71	9.2	M8 depth 13	17	25	98.2	72	56	88.2	62	46	23.5	M14 × 1.5	15	23
ø40	7	18	64	33	18.2	3.2	11.2	64	78	9.2	M8 depth 13	17	25	112.2	86	70	102.2	76	60	23.5	M14 × 1.5	15	23
ø50	9	22	78	39	22.7	3.2	14.7	79	95	11.2	M10 depth 15	18	29.5	133.7	104.5	81.5	123.7	94.5	71.5	28.5	M18 × 1.5	15	26.5
ø63	11	26	91.5	46	25.2	3.2	16.2	95	113	13.2	M10 depth 15	18	31	141.2	110	84	131.2	100	74	28.5	M18 × 1.5	15	28
ø80	13	39.5	114	59	30.5	4.5	19.5	118	140	16.5	M16 depth 21	20	35	175.5	139	109	165.5	129	99	35.5	M22 × 1.5	18	33
ø100	13	50	136	71	35.5	6	23	137	162	18	M20 depth 27	22	39	179	139	105	169	129	95	35.5	M26 × 1.5	18	35

Outline Dimension Drawing (Bore size: ø32 to ø100)

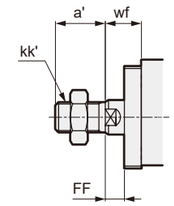
● Rod Side Flange Type (FA)



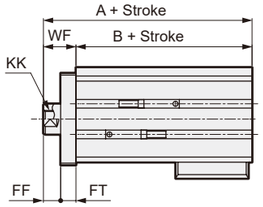
SSD-Q (L)-32 to 100-R



● For rod end male thread



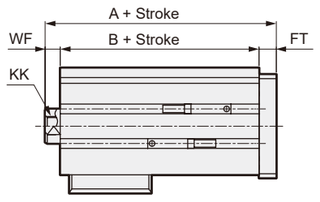
SSD-Q (L)-32 to 100-H

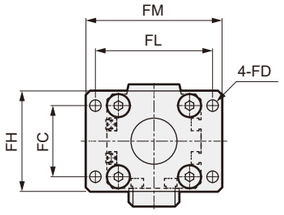


Code / Bore size (mm)	Common dimension						For female thread						For male thread			
	FC	FD	FH	FL	FM	FT	FF	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	FF	a'	kk'	wf
ø32	34	5.5	48	56	65	8	9	M8 depth 13	17	89	72	79	62	7	23.5	M14 × 1.5	15
ø40	40	5.5	54	62	72	8	9	M8 depth 13	17	103	86	93	76	7	23.5	M14 × 1.5	15
ø50	50	6.6	67	76	89	9	9	M10 depth 15	18	122.5	104.5	112.5	94.5	6	28.5	M18 × 1.5	15
ø63	60	9	80	92	108	9	9	M10 depth 15	18	128	110	118	100	6	28.5	M18 × 1.5	15
ø80	77	11	99	116	134	11	9	M16 depth 21	20	159	139	149	129	7	35.5	M22 × 1.5	18
ø100	94	11	117	136	154	11	11	M20 depth 27	22	161	139	151	129	7	35.5	M26 × 1.5	18

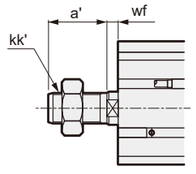
● Head Side Flange Type (FB)

SSD-Q (L)-32 to 100-R

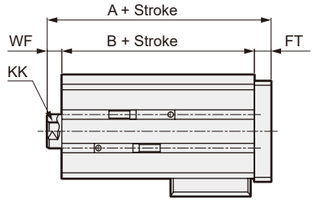




● For rod end male thread



SSD-Q (L)-32 to 100-H

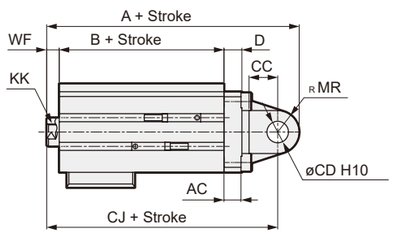


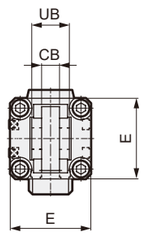
Code / Bore size (mm)	Common dimension						For female thread						For male thread			
	FC	FD	FH	FL	FM	FT	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	a'	kk'	wf
ø32	34	5.5	48	56	65	8	M8 depth 13	7	87	72	77	62	23.5	M14 × 1.5	5
ø40	40	5.5	54	62	72	8	M8 depth 13	7	101	86	91	76	23.5	M14 × 1.5	5
ø50	50	6.6	67	76	89	9	M10 depth 15	8	121.5	104.5	111.5	94.5	28.5	M18 × 1.5	5
ø63	60	9	80	92	108	9	M10 depth 15	8	127	110	117	100	28.5	M18 × 1.5	5
ø80	77	11	99	116	134	11	M16 depth 21	10	160	139	150	129	35.5	M22 × 1.5	8
ø100	94	11	117	136	154	11	M20 depth 27	12	162	139	152	129	35.5	M26 × 1.5	8

Outline Dimension Drawing (Bore size: ø32 to ø100)

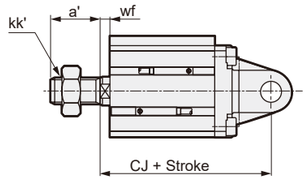
● Double Knuckle Clevis Type (CB)

SSD-Q (L)-32 to 100-R

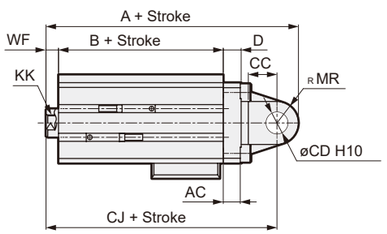




● For rod end male thread



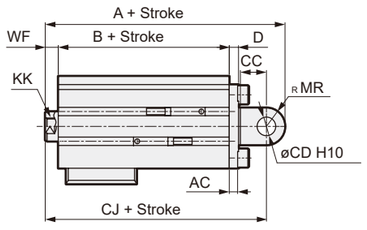
SSD-Q (L)-32 to 100-H

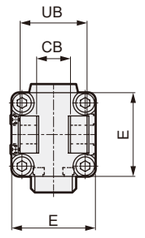


Code	Common dimension										For female thread							For male thread				
Bore size (mm)	AC	CA	CB	CC	CD	D	E	H	MR	UB	KK	WF	With Switch			Without Switch			a'	kk'	wf	With Switch	Without Switch
													A	B	CJ	A	B	CJ				CJ	CJ
ø32	9.5	–	$10^{+0.4}_{+0.1}$	16	12	10	45	–	12	$21^{0.1}_{0.4}$	M8 depth 13	7	121	72	109	111	62	99	23.5	M14 × 1.5	5	107	97
ø40	6.5	–	$18^{+0.4}_{+0.1}$	18	12	10	52	–	12	$36^{0.1}_{0.4}$	M8 depth 13	7	137	86	125	127	76	115	23.5	M14 × 1.5	5	123	113
ø50	6.5	–	$18^{+0.4}_{+0.1}$	18	12	10	64	–	12	$36^{0.1}_{0.4}$	M10 depth 15	8	156.5	104.5	144.5	146.5	94.5	134.5	28.5	M18 × 1.5	5	141.5	131.5
ø63	7.5	–	$20^{+0.4}_{+0.1}$	24	14	10	77	–	16	$40^{0.1}_{0.4}$	M10 depth 15	8	171	110	155	161	100	145	28.5	M18 × 1.5	5	152	142
ø80	10.5	–	$28^{+0.4}_{+0.1}$	30	20	14	98	–	20	$56^{0.1}_{0.4}$	M16 depth 21	10	221	139	201	211	129	191	35.5	M22 × 1.5	8	199	189
ø100	10.5	–	$28^{+0.4}_{+0.1}$	30	20	16	117	–	20	$56^{0.1}_{0.4}$	M20 depth 27	12	223	139	203	213	129	193	35.5	M26 × 1.5	8	199	189

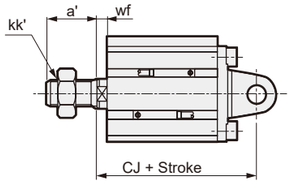
● Double clevis type (Compact type) (CB2)

SSD-Q (L)-32 to 100-R

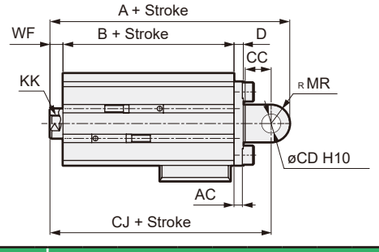




● For rod end male thread



SSD-Q (L)-32 to 100-H

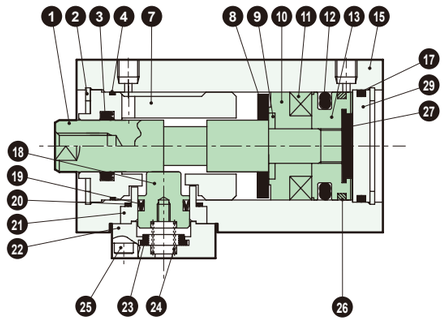


Code	Common dimension										For female thread							For male thread				
Bore size (mm)	AC	CA	CB	CC	CD	D	E	H	MR	UB	KK	WF	With Switch			Without Switch			a'	kk'	wf	With Switch	Without Switch
													A	B	CJ	A	B	CJ				CJ	CJ
ø32	4.5	–	$18^{+0.4}_{+0.1}$	14	10	5	45	–	10	$36^{0.1}_{0.3}$	M8 depth 13	7	109	72	99	99	62	89	23.5	M14 × 1.5	5	97	87
ø40	5	–	$18^{+0.4}_{+0.1}$	14	10	6	52	–	10	$36^{0.1}_{0.3}$	M8 depth 13	7	125	86	115	115	76	105	23.5	M14 × 1.5	5	113	103
ø50	6	–	$22^{+0.4}_{+0.1}$	20	14	7	64	–	14	$44^{0.1}_{0.3}$	M10 depth 15	8	154.5	104.5	140.5	144.5	94.5	130.5	28.5	M18 × 1.5	5	137.5	127.5
ø63	7	–	$22^{+0.4}_{+0.1}$	20	14	8	77	–	14	$44^{0.1}_{0.3}$	M10 depth 15	8	162	110	148	152	100	138	28.5	M18 × 1.5	5	145	135
ø80	9	–	$28^{+0.4}_{+0.1}$	27	18	10	98	–	18	$56^{0.1}_{0.3}$	M16 depth 21	10	205	139	187	195	129	177	35.5	M22 × 1.5	8	185	175
ø100	12	–	$32^{+0.4}_{+0.1}$	31	22	13	117	–	22	$64^{0.1}_{0.3}$	M20 depth 27	12	218	139	196	208	129	186	35.5	M26 × 1.5	8	192	182

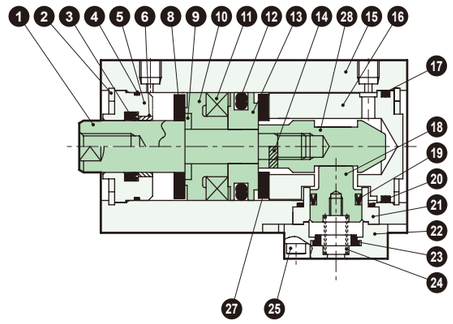
MEMO

Internal structure diagram/materials (bore size: ø16 to ø25)

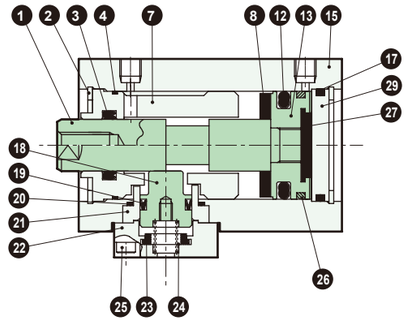
●SSD-QL-16 to 25-R
(Double acting, with switch, with rod side fall prevention)



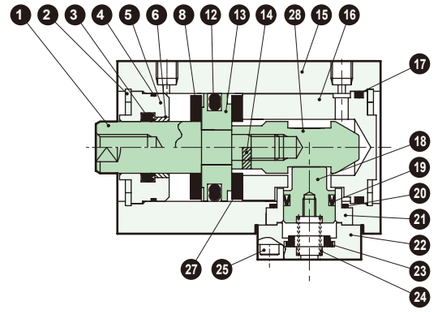
●SSD-QL-16 to 25-H
(Double acting, with switch, with head side fall prevention)



●SSD-Q-16 to 25-R
(Double acting, with rod side fall prevention)



●SSD-Q-16 to 25-H
(Double acting, with head side fall prevention)



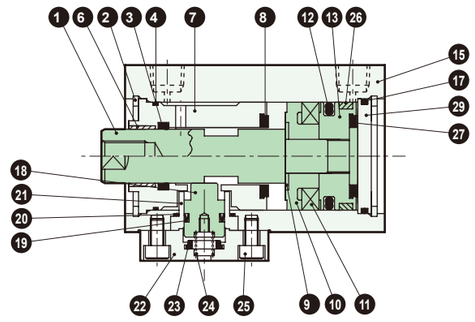
Part No.	Part Name	Material	Remarks
1	Piston Rod	Stainless Steel	Industrial Hard Chrome Plating
2	C-type retaining ring	Steel	Zinc phosphate
3	Rod Packing	Nitrile Rubber	
4	Rod metal gasket	Nitrile Rubber	
5	Rod Metal	Aluminum Alloy	Alumite
6	Bushing	Bearing Alloy	ø20, ø25 H side only
7	Rod Cover	Aluminum Alloy	Alumite
8	Cushion Rubber (R)	Urethane Rubber	
9	Spacer washer	Stainless Steel	
10	Spacer	Special Resin	
11	Magnet	Plastic	
12	Piston Packing	Nitrile Rubber	
13	Piston	Aluminum Alloy	Chromate
14	Spring Pin	Steel	Blackening (ø20, ø25 only)
15	Cylinder Body	Aluminum Alloy	Hard Anodized

Part No.	Part Name	Material	Remarks
16	Head Cover	Aluminum Alloy	Chromate
17	O-ring	Nitrile Rubber	
18	Stopper Piston	Steel	Nitriding Treatment
19	Stopper packing	Nitrile Rubber	
20	O-ring	Nitrile Rubber	
21	Stopper housing	Aluminum Alloy	Alumite
22	Stopper Cover	Aluminum Alloy	Alumite
23	Cushion Rubber	Urethane Rubber	
24	Coil Spring	Piano Wire	Electrodeposition Coating
25	Hexagon Socket Head Cap Screw	Steel	Black zinc plating
26	Wear Ring	Polyacetal	
27	Cushion rubber (H)	Urethane Rubber	
28	Sleeve	Steel	Nitriding Treatment
29	Cover	Aluminum Alloy	Chromate

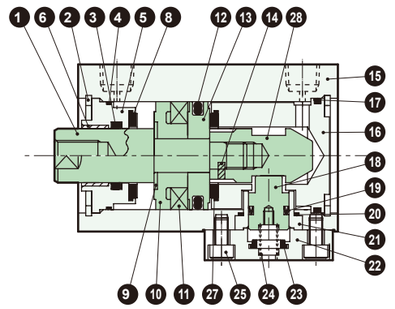
For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Internal structure diagram/materials (ø32 to ø40)

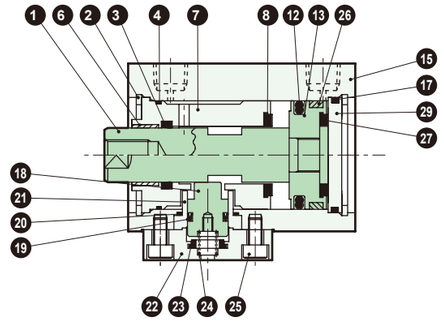
●SSD-QL-32 to 40-R
(Double acting, with switch, with rod side fall prevention)



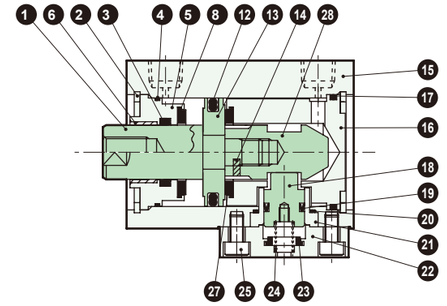
●SSD-QL-32 to 40-H
(Double acting, with switch, with head side fall prevention)



●SSD-Q-32 to 40-R
(Double acting, with rod side fall prevention)



●SSD-Q-32 to 40-H
(Double acting, with head side fall prevention)



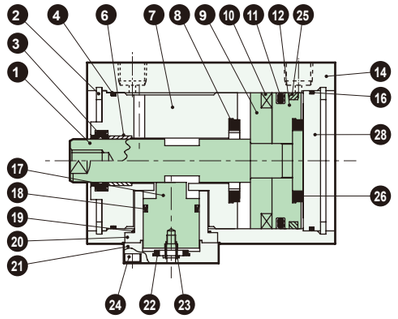
Part No.	Part Name	Material	Remarks
1	Piston Rod	Steel	Industrial Hard Chrome Plating
2	C-type retaining ring	Steel	Zinc phosphate
3	Rod Packing	Nitrile Rubber	
4	Rod metal gasket	Nitrile Rubber	
5	Rod Metal	Special aluminum	Alumite
6	Bushing	Bearing Alloy	
7	Rod Cover	Aluminum Alloy	Alumite
8	Cushion rubber (R)	Urethane Rubber	
9	Spacer washer	Stainless Steel	
10	Spacer	Special Resin	
11	Magnet	Plastic	
12	Piston Packing	Nitrile Rubber	
13	Piston	Aluminum Alloy	Chromate
14	Spring Pin	Steel	Black Oxide
15	Cylinder Body	Aluminum Alloy	Hard Anodized

Part No.	Part Name	Material	Remarks
16	Head Cover	Aluminum Alloy	Chromate
17	O-ring	Nitrile Rubber	
18	Stopper Piston	Steel	Nitriding Treatment
19	Stopper packing	Nitrile Rubber	
20	O-ring	Nitrile Rubber	
21	Stopper housing	Aluminum Alloy	Alumite
22	Stopper Cover	Aluminum Alloy	Alumite
23	Cushion Rubber	Urethane Rubber	
24	Coil Spring	Piano Wire	Electrodeposition Coating
25	Hexagon Socket Head Cap Screw	Steel	Black zinc plating
26	Wear Ring	Polyacetal	
27	Cushion rubber (H)	Urethane Rubber	
28	Sleeve	Steel	Nitriding Treatment
29	Cover	Aluminum Alloy	Chromate

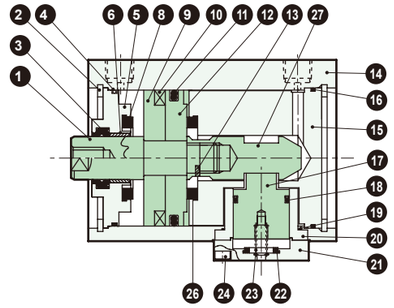
For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Internal structure diagram/materials (ø50 to ø100)

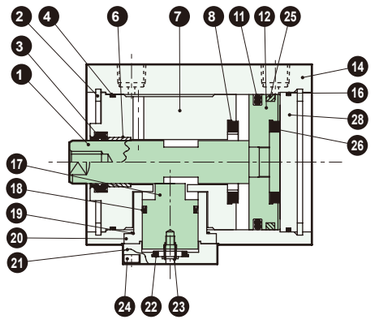
●SSD-QL-50 to 100-R
(Double acting, with switch, with rod side fall prevention)



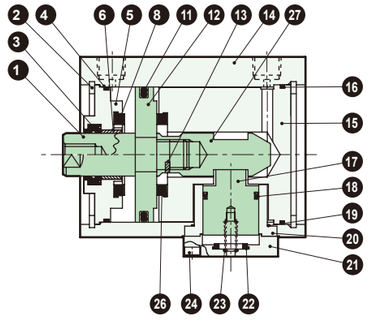
●SSD-QL-50 to 100-H
(Double acting, with switch, with head side fall prevention)



●SSD-Q-50 to 100-R
(Double acting, with rod side fall prevention)



●SSD-Q-50 to 100-H
(Double acting, with head side fall prevention)



Part No.	Part Name	Material	Remarks
1	Piston Rod	Steel	Industrial Hard Chrome Plating
2	C-type retaining ring	Steel	Zinc phosphate
3	Rod Packing	Nitrile Rubber	
4	Rod metal gasket	Nitrile Rubber	
5	Rod Metal	Aluminum Alloy	Chromate
6	Bushing	Bearing Alloy	
7	Rod Cover	Aluminum Alloy	Chromate
8	Cushion rubber (R)	Urethane Rubber	
9	Spacer	ø50: Special resin ø63 to ø100: Aluminum alloy	ø63 to ø100: Chromate
10	Magnet	Plastic	
11	Piston Packing	Nitrile Rubber	
12	Piston	Aluminum Alloy	Chromate
13	Spring Pin	Steel	Black Oxide
14	Cylinder Body	Aluminum Alloy	Hard Anodized

Part No.	Part Name	Material	Remarks
15	Head Cover	Aluminum Alloy	Chromate
16	O-ring	Nitrile Rubber	
17	Stopper Piston	Steel	Nitriding Treatment
18	Stopper packing	Nitrile Rubber	
19	O-ring	Nitrile Rubber	
20	Stopper housing	Aluminum Alloy	Alumite
21	Stopper Cover	Aluminum Alloy	Alumite
22	Cushion Rubber	Urethane Rubber	
23	Coil Spring	Piano Wire	Electrodeposition Coating
24	Hexagon Socket Head Cap Screw	Steel	Black zinc plating
25	Wear Ring	Polyacetal	
26	Cushion rubber (H)	Urethane Rubber	
27	Sleeve	Steel	Nitriding Treatment
28	Cover	Aluminum Alloy	Chromate

For maintenance parts, please visit the CKD Equipment Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts .

MEMO

Space-Saving Type
SSD2
SSG
SSD
CAT
MDC2
SMG
MSD
FC□
Cylinder Switch
Ending

Compact Cylinder Double Acting, Creep Speed Type

SSD-F / SSD-KF Series

● Bore size: ø12, ø16, ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100

Circuit Diagram Symbol 

RoHS

Model No. Notation Method

Without Switch
(Without magnet for switch)

SSD-F - 12 - □ - 5 ——— N - LB - I
1 2 3 4 7 8 9

With Switch
(Built-in magnet for switch)

SSD-LF - 12 - □ - 5 - T0H - R - N - LB - I
1 2 3 4 5 6 7 8 9

Off-delay type, With T1□ switch
(ø12/ø16 only)

SSD-L1F - 12 - □ - 10 - T2JH - R - N - LB - I
1 2 3 4 5 6 7 8 9

1 Model No. | 2 Bore size | 3 Piping thread type | 4 Stroke | 5 Switch Model No. | 6 Number of Switches | 7 Option | 8 Mounting bracket | 9 Accessories

1 Model No.

Code	Content
SSD-F	Double Acting/Ultra-slow Speed Type
SSD-LF	Double acting, Ultra low speed type, With switch
SSD-L1F	Double acting, Ultra low speed type, Off-delay type, With T1□ switch (ø12, ø16)
SSD-KF	Double Acting, High Load Type
SSD-KLF	Double Acting, High Load Type, With Switch

2 Bore Size (mm)

Code	Content	Code	Content
12	ø12	40	ø40
16	ø16	50	ø50
20	ø20	63	ø63
25	ø25	80	ø80
32	ø32	100	ø100

3 Port Thread Type:

Code	Content
Blank	M5 thread (ø12 to ø25)
	Rc thread (ø32 to ø100)
NN	NPT thread (Custom product) (ø32 to ø100)
GN	G thread (Custom product) (ø32 to ø100)

4 Stroke (mm)

●SSD-F

Bore size	Stroke	Intermediate Stroke
ø12 to ø20	1 to 30	Every 1 mm
ø25 to ø50	1 to 50	
ø63 to ø100	1 to 50	

●SSD-KF

Bore size	Stroke	Intermediate Stroke
ø12 to ø20	1 to 100	Every 1 mm
ø25 to ø50	1 to 150	
ø63 to ø100	1 to 200	

Note: For details on stroke, please refer to P. 476.

5 Switch Model No.

For switch details, please refer to P. 869.
Switches are included to the product and shipped.

Contact	Indicator LED Special Function	Wiring (Output)	Load Voltage (V) AC	Load Voltage (V) DC	Load Current (mA) AC	Load Current (mA) DC	Lead Wire *1 Straight	Lead Wire *1 L-shape	
Solid State	1-Color	2-wire	85 to 265	—	5 to 100	—	T1H□	T1V□	
			—	10 to 30	—	5 to 20 *2	T2H□	T2V□	
		3-wire (NPN)	—	30 or less	—	100 or less	T3H□	T3V□	
		3-wire (PNP)	—		—		T3PH□	T3PV□	
	2-Color	2-wire	—	24 ± 10%	—	5 to 20	T2WH□	T2WV□	
		3-wire (NPN)	—	30 or less	—	50 or less	T3WH□	T3WV□	
	2-Color Improved Water Resistance	2-wire	—	24 ± 10%	—	5 to 20	T2WLH□	T2WLV□	*3
	2-Color for AC Magnetic Field		—		—		T2YD□	–	*4
			—		—		T2YDT□	–	
	1-Color Off-Delay Type		—	10 to 30	—	5 to 20 *2	T2JH□	T2JV□	
	1-Color Flexible Lead Wire Type		—		—		T2HR3□	T2VR3□	
Reed	1-Color	2-wire	110	12/24	7 to 20	5 to 50	T0H□	T0V□	
	No Indicator LED		110	5/12/24	20 or less	50 or less	T5H□	T5V□	
	1-Color		110/220	12/24	7 to 20 / 7 to 10	5 to 50	T8H□	T8V□	*5

*7

*Lead wire length, connector specification

Code	Content
Blank	1 m (Standard)
3	3 m (Option)
5	5 m (Option)
W	M8 Connector, 1PIN (+) 4PIN (-) Lead Wire 0.3 m

*7: Only T2WLH, T2WLV can be selected.

Example) Lead wire length
1 m T0H
3 m T0H3
5 m T0H5

*1: For "□" in the switch model number, enter the code selected from the "*Lead wire length, connector specification" table.
*2: The maximum load current value above, 20 mA, is at 25°C. If the switch operating ambient temperature is higher than 25°C, it will be lower than 20 mA. (At 60°C, it will be 5 to 10 mA.)
*3: This does not guarantee the water resistance of the cylinder. When using in a water-resistant environment, use of an improved water resistance cylinder is recommended.
*4: AC magnetic field resistant switches cannot be mounted on ø12, ø16.
*5: T8□ switches cannot be mounted on the following bore sizes.
・SSD-L1F: ø12 to ø32
・SSD-KLF: ø12, ø16
*6: Switches other than the above switch model numbers are also available. (Custom products) For details, refer to P. 869.

6 Number of Switches

Code	Content
R	With 1 pc on rod side
H	With 1 pc on head side
D	With 2 pcs

7 Option

Code	Content	
Blank	Rod end female thread	
N	Rod end male thread	
*1 M	Piston Rod Material (Stainless Steel)	

*1: The piston rod material for ø12 to ø25 is stainless steel as standard. C-type retaining ring changes from steel to stainless steel. The nut material for rod end male thread type will be stainless steel.

8 Mounting type

Mounting brackets are shipped included to the product.

Code	Content	
LB	Axial Foot Type	
*1 LB2	Axial foot type (Compact type)	
*1 FA	Rod Side Flange Type	
FB	Head Side Flange Type	
CB	Double Clevis Type (Pin and Retaining Ring Included)	
CB2	Double Clevis Type (Compact type) (Pins and retaining rings included)	

*1: When LB2 or FA is selected, the piston rod protrusion dimension WF differs from the standard. See P. 369, 370, 373, 374, 393, 394, 398, and 399 for outline dimension drawings. Also, the model number specifying the protrusion length will be printed at the end of the model number on the nameplate included to the main body. For cylinder model numbers when ordering cylinders and LB2/FA brackets separately, please contact us.

9 Accessories

Code	Content	
I	Single Knuckle	
I2	Single Knuckle (compact)	
Y	Double Knuckle (pin and retaining ring included)	
Y2	Double knuckle (compact) (pin and snap ring included)	

*1: Selectable when rod end male thread "N" is selected.
*2: "I", "I2", "Y", "Y2" cannot be selected at the same time.

*For combination of variations and options, refer to P. 356 to 361.

About Custom Product Specifications

For details, refer to P. 690 to 694.

Code	Content
-XP5	Knuckle Pin/Clevis Pin Split Pin
-XP7	Knuckle fixed by pin driving
-XP8	Knuckle pin/clevis pin split pin specification, knuckle fixed by pin driving
-A2	With 2 Rod Nuts
-R1, R2	With spigot joint
Rod End Shape Modification	Refer to Ending 11.

Model No. Example)

SSD-F -..... - XP5

SSD-KF -..... - XP5

Switch Single Unit Model No. Notation Method

SW - T0H
5

Switch Model No.

Specifications

Item	SSD-F, SSD-LF (with switch)										SSD-KF, SSD-KLF (with switch)									
Bore size mm	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation method	Double Acting Type																			
Operating Fluid	Compressed Air																			
Max. Operating Pressure MPa	1.0																			
Min. Operating Pressure MPa	0.1						0.05				0.1						0.05			
Proof pressure MPa	1.6																			
Ambient Temperature °C	5 to 60																			
Port Size	M5			Rc1/8		Rc1/4		Rc3/8			M5			Rc1/8		Rc1/4		Rc3/8		
Stroke tolerance mm	+1.0 0										+2.0 0									
Operating Piston Speed mm/s	1 to 200																			
Cushion	None										Rubber Cushion									
Lubrication	Not Available																			
Allowable absorbed energy J	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12	0.27	0.56	0.04	0.09	0.16	0.16	0.40	0.63	0.98	1.56	2.51	3.92

Stroke

●SSD-F

Stroke (mm)		Applicable Bore									
		ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Standard Stroke	5	●	●	●	●	●	●	●	●	●	●
	10	●	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●			
	20	●	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●			
	30	●	●	●	●	●	●	●	●	●	●
	40				●	●	●	●	●	●	●
	50				●	●	●	●	●	●	●
Minimum Stroke (mm) *1		1									
Maximum Stroke (mm)		30			50						
Intermediate Stroke *2		Every 1 mm									

***1: Products less than 5 mm with a 1-color indicator switch, and products less than 10 mm with a 2-color indicator, off-delay type, for AC strong magnetic field, or with T1□ or T8□ switches cannot be manufactured. For the number of switches that can be mounted and the minimum stroke, see P. 477.**

*2: The overall length dimension for intermediate stroke is the same as the standard stroke above it.

***3: For minimum stroke for mounting brackets LB, LB2, refer to P. 369, P. 373.**

●SSD-KF

Stroke (mm)		Applicable Bore									
		ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Standard Stroke	5	●	●	●	●	●	●	●			
	10	●	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●			
	20	●	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●			
	30	●	●	●	●	●	●	●	●	●	●
	40	●	●	●	●	●	●	●	●	●	●
	50	●	●	●	●	●	●	●	●	●	●
	60				●	●	●	●	●	●	●
	70				●	●	●	●	●	●	●
	80				●	●	●	●	●	●	●
	90				●	●	●	●	●	●	●
	100				●	●	●	●	●	●	●
Minimum Stroke (mm) *1		1									
Maximum Stroke (mm)		100			150				200		
Intermediate stroke *2		Every 1 mm									

***1: Products less than 5 mm with a 1-color indicator switch, and products less than 10 mm with a 2-color indicator type or AC magnetic field switch cannot be manufactured. For the number of mountable switches and the minimum stroke, see P. 477.**

*2: The overall length dimension for intermediate stroke is the same as the standard stroke above it.

***3: For minimum stroke for mounting brackets LB, LB2, refer to P. 393, 397, 398.**

Number of Switches Mounted and Min. Stroke (mm)

●SSD-LF

Switch Model No.	SSD-LF				SSD-KLF			
	T□		T2WL		T□		T2WL	
Number of Switches / Bore size (mm)	1	2	1	2	1	2	1	2
ø12	5	5	20	20	5	5	20	20
ø16	5	5	20	20	5	5	20	20
ø20	5	5	20	20	5	5	15	15
ø25	5	5	20	20	5	5	15	15
ø32	5	5	20	20	5	5	15	15
ø40	5	5	15	15	5	5	10	15
ø50	5	5	15	15	5	5	10	15
ø63	5	5	10	15	5	5	10	15
ø80	5	5	10	15	5	5	10	15
ø100	5	5	10	15	5	5	10	15

Note: Less than 10mm with 2-color display, off-delay, AC magnetic field proof, T1□, T8□ switches is not available.

Theoretical Thrust Table

(Unit: N)

Bore size (mm)	Operating Direction	Operating Pressure MPa											
		0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø12	Push	-	11.3	17.0	22.6	33.9	45.2	56.5	67.9	79.2	90.5	1.02×10^2	1.13×10^2
	Pull	-	8.48	12.7	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
ø16	Push	-	20.1	30.2	40.2	60.3	80.4	1.01×10^2	1.21×10^2	1.41×10^2	1.61×10^2	1.81×10^2	2.01×10^2
	Pull	-	15.1	22.6	30.2	45.2	60.3	75.4	90.5	1.06×10^2	1.21×10^2	1.36×10^2	1.51×10^2
ø20	Push	-	31.4	47.1	62.8	94.2	1.26×10^2	1.57×10^2	1.88×10^2	2.20×10^2	2.51×10^2	2.83×10^2	3.14×10^2
	Pull	-	23.6	35.3	47.1	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2	1.88×10^2	2.12×10^2	2.36×10^2
ø25	Push	-	49.1	73.6	98.2	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2	3.93×10^2	4.42×10^2	4.91×10^2
	Pull	-	37.8	56.7	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
ø32	Push	-	80.4	1.21×10^2	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2	6.43×10^2	7.24×10^2	8.04×10^2
	Pull	-	60.3	90.5	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
ø40	Push	-	1.26×10^2	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	-	1.06×10^2	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push	-	1.96×10^2	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	-	1.65×10^2	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Push	1.56×10^2	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	1.40×10^2	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
ø80	Push	2.51×10^2	5.03×10^2	7.54×10^2	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3	4.02×10^3	4.52×10^3	5.03×10^3
	Pull	2.27×10^2	4.54×10^2	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
ø100	Push	3.93×10^2	7.85×10^2	1.18×10^3	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3	6.28×10^3	7.07×10^3	7.85×10^3
	Pull	3.57×10^2	7.15×10^2	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3

Mounting Bracket Model No. Notation Method

Bore Size (mm) / Mounting bracket	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Foot (LB)	SSD-LB-20	SSD-LB-25	SSD-LB-32	SSD-LB-40	SSD-LB-50	SSD-LB-63	SSD-LB-80	SSD-LB-100
Foot (LB2)	SSD-LB2-20	SSD-LB2-25	SSD-LB2-32	SSD-LB2-40	SSD-LB2-50	SSD-LB2-63	SSD-LB2-80	SSD-LB2-100
Flange (FA/FB)	SSD-FA-20	SSD-FA-25	SSD-FA-32	SSD-FA-40	SSD-FA-50	SSD-FA-63	SSD-FA-80	SSD-FA-100
Double Clevis (CB)	SSD-CB-20	SSD-CB-25	SSD-CB-32	SSD-CB-40	SSD-CB-50	SSD-CB-63	SSD-CB-80	SSD-CB-100
Double knuckle clevis (CB2)	SSD-CB2-20	SSD-CB2-25	SSD-CB2-32	SSD-CB2-40	SSD-CB2-50	SSD-CB2-63	SSD-CB2-80	SSD-CB2-100

Note: Foot type mounting brackets are 2 pcs/set.

Outline Dimension Drawing

Same as double acting, single rod SSD series and double acting, high load SSD-K series.
See P. 368 to 375 and 392 to 400.

Cylinder Weight Table (Weight with switch is when 2 cylinder switches are included)

●SSD-F

(Unit: g)

Stroke (mm)	5		10		15		20		25		30		40		50	
Bore Size (mm)	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch
ø12	36	86	44	86	53	95	61	103	70	112	72	114	-	-	-	-
ø16	48	104	59	104	69	114	80	125	91	136	102	147	-	-	-	-
ø20	63	118	75	150	88	163	101	176	113	188	126	201	-	-	-	-
ø25	87	178	102	193	118	209	134	225	150	241	165	256	197	288	228	319
ø32	122	236	144	258	166	280	188	302	209	323	231	345	275	389	318	432
ø40	183	326	210	353	236	379	263	406	290	433	316	459	369	512	422	565
ø50	299	493	341	535	383	577	425	619	467	661	510	704	594	788	678	872
ø63	452	731	507	786	-	-	617	896	-	-	727	1006	838	1117	948	1227
ø80	841	1254	928	1341	-	-	1101	1514	-	-	1274	1687	1448	1861	1621	2034
ø100	1319	1886	1433	2000	-	-	1660	2227	-	-	1888	2455	2115	2682	2343	2910

●SSD-KF

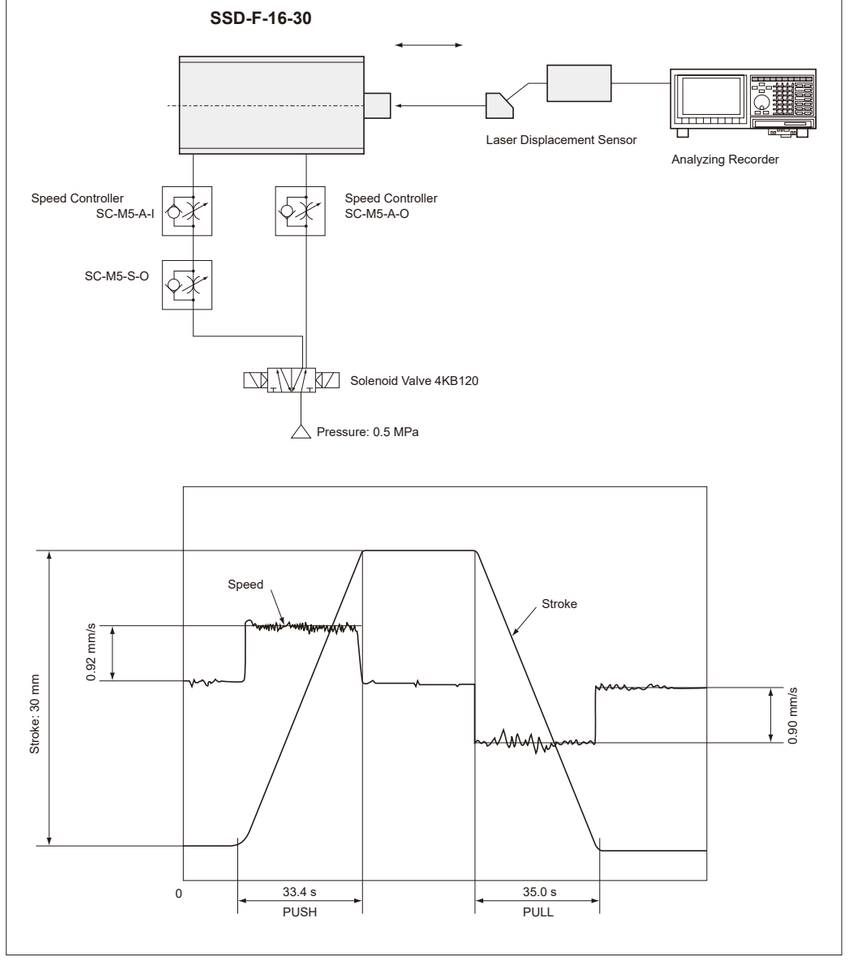
(Unit: g)

Stroke (mm)	5		10		15		20		25		30		40		50		60		70		80		90		100	
Bore size (mm)	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW
ø12	44	86	53	95	61	103	70	112	78	121	87	129	104	146	121	163	138	180	155	197	172	214	189	231	206	248
ø16	59	104	69	114	80	125	91	136	102	147	113	158	135	169	157	191	179	213	201	235	223	257	245	279	267	301
ø20	75	150	88	163	101	176	113	188	126	201	138	213	163	238	188	263	213	288	238	313	263	338	288	363	313	388
ø25	-	-	118	209	134	225	150	241	165	256	182	273	214	305	246	337	278	369	310	401	342	433	374	465	406	497
ø32	-	-	188	302	209	323	231	345	253	367	275	389	318	432	361	475	404	518	447	561	490	604	533	647	576	690
ø40	-	-	263	406	290	433	316	459	342	485	369	512	422	565	475	618	528	671	581	724	634	777	687	830	740	883
ø50	-	-	425	619	467	661	510	704	553	747	594	788	678	872	762	956	846	1040	930	1124	1014	1208	1098	1292	1182	1376
ø63	-	-	617	896	-	-	727	1006	-	-	838	1117	948	1227	1058	1337	1168	1447	1278	1557	1388	1667	1498	1777	1608	1887
ø80	-	-	1101	1514	-	-	1274	1687	-	-	1448	1861	1621	2034	1794	2207	1967	2380	2140	2553	2313	2726	2486	2899	2659	3072
ø100	-	-	1660	2227	-	-	1888	2455	-	-	2115	2682	2343	2910	2571	3138	2799	3366	3027	3594	3255	3822	3483	4050	3711	4278

Stroke (mm)	110		120		130		140		150		160		170		180		190		200	
Bore size (mm)	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW
ø25	438	529	470	561	502	593	534	625	566	657	-	-	-	-	-	-	-	-	-	-
ø32	619	733	662	776	705	819	748	862	791	905	-	-	-	-	-	-	-	-	-	-
ø40	793	936	846	989	899	1042	952	1095	1005	1148	-	-	-	-	-	-	-	-	-	-
ø50	1266	1460	1350	1544	1434	1628	1518	1712	1602	1796	-	-	-	-	-	-	-	-	-	-
ø63	1718	1997	1828	2107	1938	2217	2048	2327	2158	2437	2268	2547	2378	2657	2488	2767	2598	2877	2708	2987
ø80	2832	3245	3005	3418	3178	3591	3351	3764	3524	3937	3697	4110	3870	4283	4043	4456	4216	4629	4389	4802
ø100	3939	4506	4167	4734	4395	4962	4623	5190	4851	5418	5079	5646	5307	5874	5535	6102	5763	6830	5991	6558

Measurement Data

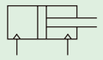
● Measurement method



Compact Cylinder Double Acting, Low Speed Type

SSD-O Series

● Bore size: ø12, ø16, ø20, ø25, ø32, ø40, ø50, ø63, ø83, ø100

Circuit Diagram Symbol 

RoHS

Model No. Notation Method

Without Switch
(Without magnet for switch)

SSD-O – 12 – □ – 5 ——— N – LB – I
1 2 3 4 7 8 9

With Switch
(Built-in magnet for switch)

SSD-OL – 12 – □ – 5 – T0H – R – N – LB – I
1 2 3 4 5 6 7 8 9

Off-delay type, With T1□ switch
(ø12, ø16 only)

SSD-OL1 – 12 – □ – 10 – T2JH – R – N – LB – I
1 2 3 4 5 6 7 8 9

1 Model No. 2 Bore size 3 Piping thread type 4 Stroke 5 Switch Model No. 6 Number of Switches 7 Option 8 Mounting bracket 9 Accessories

1 Model No.

Code	Content
SSD-O	Double Acting/Low Speed Type
SSD-OL	Double acting, Low speed type, With switch
SSD-OL1	Double acting, Low speed type, Off-delay type, With T1□ switch (ø12, ø16 only)

2 Bore Size (mm)

Code	Content	Code	Content
12	ø12	40	ø40
16	ø16	50	ø50
20	ø20	63	ø63
25	ø25	80	ø80
32	ø32	100	ø100

3 Piping thread type

Code	Content
Blank	M5 thread (ø12 to ø25)
	Rc thread (ø32 to ø100)
NN	NPT thread (Custom product) (ø32 to ø100)
GN	G thread (Custom product) (ø32 to ø100)

4 Stroke (mm)

Bore size	Stroke	Intermediate Stroke
ø12 to ø20	1 to 30	Every 1 mm
ø25 to ø50	1 to 50	
ø63 to ø100	1 to 50	

Note: For details on stroke, please refer to P. 482.

5 Switch Model No.

For switch details, please refer to P. 869.
Switches are included to the product and shipped.

Contact	Indicator LED Special Function	Wiring (Output)	Load Voltage (V) AC	Load Voltage (V) DC	Load Current (mA) AC	Load Current (mA) DC	Lead Wire *1 Straight	Lead Wire *1 L-shape	
Solid State	1-Color	2-wire	85 to 265	—	5 to 100	—	T1H□	T1V□	
			—	10 to 30	—	5 to 20 *2	T2H□	T2V□	
		3-wire (NPN)	—	30 or less	—	100 or less	T3H□	T3V□	
		3-wire (PNP)	—		—		T3PH□	T3PV□	
	2-Color	2-wire	—	24 ± 10%	—	5 to 20	T2WH□	T2WV□	
		3-wire (NPN)	—	30 or less	—	50 or less	T3WH□	T3WV□	
	2-Color Improved Water Resistance	2-wire	—	24 ± 10%	—	5 to 20	T2WLH□	T2WLV□	*3
	2-Color for AC Magnetic Field		—		—		T2YD□	–	*4
			—		—		T2YDT□	–	
	1-Color Off-Delay Type		—	10 to 30	—	5 to 20 *2	T2JH□	T2JV□	
	1-Color Flexible Lead Wire Type		—		—		T2HR3□	T2VR3□	
Reed	1-Color	2-wire	110	12/24	7 to 20	5 to 50	T0H□	T0V□	
	No Indicator LED		110	5/12/24	20 or less	50 or less	T5H□	T5V□	
	1-Color		110/220	12/24	7 to 20 / 7 to 10	5 to 50	T8H□	T8V□	*5

*1: For "□" in the switch model number, enter the code selected from the "*Lead wire length, connector specification" table.
*2: The maximum load current value above, 20 mA, is at 25°C. If the switch operating ambient temperature is higher than 25°C, it will be lower than 20 mA. (At 60°C, it will be 5 to 10 mA.)
*3: This does not guarantee the water resistance of the cylinder. When using in a water-resistant environment, use of an improved water resistance cylinder is recommended.
*4: AC magnetic field resistant switches cannot be mounted on ø12, ø16.
*5: T8□ switches cannot be mounted on ø12 to ø32.
*6: Switches other than the above switch model numbers are also available. (Custom products) For details, refer to P. 869.

*Lead wire length, connector specification

Code	Content
Blank	1 m (Standard)
3	3 m (Option)
5	5 m (Option)
W	M8 Connector, 1PIN (+) 4PIN (-) Lead Wire 0.3 m

*7: Only T2WLH, T2WLV can be selected.

Example) Lead wire length
1 m T0H
3 m T0H3
5 m T0H5

6 Number of Switches

Code	Content
R	With 1 pc on rod side
H	With 1 pc on head side
D	With 2 pcs

7 Option

Code	Content	
Blank	Rod end female thread	
N	Rod end male thread	
*1 M	Piston Rod Material (Stainless Steel)	

*1: The piston rod material for ø12 to ø25 is stainless steel as standard. C-type retaining ring changes from steel to stainless steel. The nut material for rod end male thread type will be stainless steel.

8 Mounting type

Mounting brackets are shipped included to the product.

Code	Content	
LB	Axial Foot Type	
*1 LB2	Axial foot type (Compact type)	
*1 FA	Rod Side Flange Type	
FB	Head Side Flange Type	
CB	Double Clevis Type (Pin and Retaining Ring Included)	
CB2	Double Clevis Type (Compact type) (Pins and retaining rings included)	

*1: When LB2 or FA is selected, the piston rod protrusion dimension WF differs from the standard. Refer to outline dimension drawings on P. 369, P. 370, P. 373, P. 374. Also, the model number specifying the protrusion length will be printed at the end of the model number on the nameplate included to the main body. For cylinder model numbers when ordering cylinders and LB2/FA brackets separately, please contact us.

9 Accessories

Code	Content	
I	Single Knuckle	
I2	Single Knuckle (compact)	
Y	Double Knuckle (pin and retaining ring included)	
Y2	Double knuckle (compact) (pin and snap ring included)	

*1: Selectable when rod end male thread "N" is selected.
*2: "I", "I2", "Y", "Y2" cannot be selected at the same time.

*For combination of variations and options, refer to P. 356 to 361.

About Custom Product Specifications

For details, refer to P. 690 to P. 694.

Code	Content
-XP5	Knuckle Pin/Clevis Pin Split Pin
-XP7	Knuckle fixed by pin driving
-XP8	Knuckle pin/clevis pin split pin specification, knuckle fixed by pin driving
-A2	With 2 Rod Nuts
-R1, R2	With spigot joint
Rod End Shape Modification	Refer to Ending 11.

Model No. Example)
SSD-O – ..... – XP5

Clean Specification (Catalog No. CB-033SAA)

● Dust generation prevention structure usable in cleanrooms

SSD-O – ..... – P7□

Switch Single Unit Model No. Notation Method

SW – T0H
5
Switch Model No.

Specifications

Item	SSD-O SSD-OL (with switch)									
Bore size mm	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation method	Double Acting Type									
Operating Fluid	Compressed Air									
Max. Operating Pressure MPa	1.0									
Min. Operating Pressure MPa	0.1							0.05		
Proof pressure MPa	1.6									
Ambient Temperature °C	-10 to 60 (No freezing)									
Port Size	M5				Rc1/8		Rc1/4		Rc3/8	
Stroke tolerance mm	+1.0 0									
Operating Piston Speed mm/s	10 to 200									
Cushion	None									
Lubrication	Not Available									
Allowable absorbed energy J	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12	0.27	0.56

Stroke

Stroke (mm)		Applicable Bore									
		ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Standard Stroke	5	●	●	●	●	●	●	●	●	●	●
	10	●	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●			
	20	●	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●			
	30	●	●	●	●	●	●	●	●	●	●
	40				●	●	●	●	●	●	●
	50				●	●	●	●	●	●	●
Minimum Stroke (mm) *1		1									
Maximum Stroke (mm)		30			50						
Intermediate Stroke *2		Every 1 mm									

***1: Cannot be manufactured for less than 5 mm with 1-color indicator switch, or less than 10 mm with 2-color indicator, off-delay type, AC magnetic field type, T1*, T8* switch. For the number of switches that can be mounted and the minimum stroke, refer to the table below.**

*2: The overall length dimension for intermediate stroke is the same as the standard stroke above it.

***3: For minimum stroke for mounting brackets LB, LB2, refer to P. 369, P. 373.**

Number of Switches Mounted and Min. Stroke (mm)

Switch Model No.	T□		T2WL	
Number of Switches / Bore Size (mm)	1	2	1	2
ø12	5	5	20	20
ø16	5	5	20	20
ø20	5	5	20	20
ø25	5	5	20	20
ø32	5	5	20	20
ø40	5	5	15	15
ø50	5	5	15	15
ø63	5	5	10	15
ø80	5	5	10	15
ø100	5	5	10	15

Note: Less than 10mm with 2-color display, off-delay, AC magnetic field proof, T1□, T8□ switches is not available.

Cylinder Weight Table (Weight with switch is when 2 cylinder switches are included)

(Unit: g)

Stroke (mm) / Bore Size (mm)	5		10		15		20		25		30		40		50	
	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch
ø12	36	86	44	86	53	95	61	103	70	112	72	114	-	-	-	-
ø16	48	104	59	104	69	114	80	125	91	136	102	147	-	-	-	-
ø20	63	118	75	150	88	163	101	176	113	188	126	201	-	-	-	-
ø25	87	178	102	193	118	209	134	225	150	241	165	256	197	288	228	319
ø32	122	236	144	258	166	280	188	302	209	323	231	345	275	389	318	432
ø40	183	326	210	353	236	379	263	406	290	433	316	459	369	512	422	565
ø50	299	493	341	535	383	577	425	619	467	661	510	704	594	788	678	872
ø63	452	731	507	786	-	-	617	896	-	-	727	1006	838	1117	948	1227
ø80	841	1254	928	1341	-	-	1101	1514	-	-	1274	1687	1448	1861	1621	2034
ø100	1319	1886	1433	2000	-	-	1660	2227	-	-	1888	2455	2115	2682	2343	2910

Theoretical Thrust Table

(Unit: N)

Bore size (mm)	Operating Direction	Operating Pressure MPa											
		0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø12	Push	-	11.3	17.0	22.6	33.9	45.2	56.5	67.9	79.2	90.5	1.02×10^2	1.13×10^2
	Pull	-	8.48	12.7	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
ø16	Push	-	20.1	30.2	40.2	60.3	80.4	1.01×10^2	1.21×10^2	1.41×10^2	1.61×10^2	1.81×10^2	2.01×10^2
	Pull	-	15.1	22.6	30.2	45.2	60.3	75.4	90.5	1.06×10^2	1.21×10^2	1.36×10^2	1.51×10^2
ø20	Push	-	31.4	47.1	62.8	94.2	1.26×10^2	1.57×10^2	1.88×10^2	2.20×10^2	2.51×10^2	2.83×10^2	3.14×10^2
	Pull	-	23.6	35.3	47.1	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2	1.88×10^2	2.12×10^2	2.36×10^2
ø25	Push	-	49.1	73.6	98.2	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2	3.93×10^2	4.42×10^2	4.91×10^2
	Pull	-	37.8	56.7	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
ø32	Push	-	80.4	1.21×10^2	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2	6.43×10^2	7.24×10^2	8.04×10^2
	Pull	-	60.3	90.5	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
ø40	Push	-	1.26×10^2	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	-	1.06×10^2	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push	-	1.96×10^2	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	-	1.65×10^2	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Push	1.56×10^2	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	1.40×10^2	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
ø80	Push	2.51×10^2	5.03×10^2	7.54×10^2	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3	4.02×10^3	4.52×10^3	5.03×10^3
	Pull	2.27×10^2	4.54×10^2	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
ø100	Push	3.93×10^2	7.85×10^2	1.18×10^3	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3	6.28×10^3	7.07×10^3	7.85×10^3
	Pull	3.57×10^2	7.15×10^2	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3

Mounting Bracket Model No. Notation Method

Bore Size (mm) / Mounting bracket	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Foot (LB)	SSD-LB-12	SSD-LB-16	SSD-LB-20	SSD-LB-25	SSD-LB-32	SSD-LB-40	SSD-LB-50	SSD-LB-63	SSD-LB-80	SSD-LB-100
Foot (LB2)	SSD-LB2-12	SSD-LB2-16	SSD-LB2-20	SSD-LB2-25	SSD-LB2-32	SSD-LB2-40	SSD-LB2-50	SSD-LB2-63	SSD-LB2-80	SSD-LB2-100
Flange (FA/FB)	SSD-FA-12	SSD-FA-16	SSD-FA-20	SSD-FA-25	SSD-FA-32	SSD-FA-40	SSD-FA-50	SSD-FA-63	SSD-FA-80	SSD-FA-100
Double Clevis (CB)	SSD-CB-12	SSD-CB-16	SSD-CB-20	SSD-CB-25	SSD-CB-32	SSD-CB-40	SSD-CB-50	SSD-CB-63	SSD-CB-80	SSD-CB-100
Double knuckle clevis (CB2)	SSD-CB2-12	SSD-CB2-16	SSD-CB2-20	SSD-CB2-25	SSD-CB2-32	SSD-CB2-40	SSD-CB2-50	SSD-CB2-63	SSD-CB2-80	SSD-CB2-100

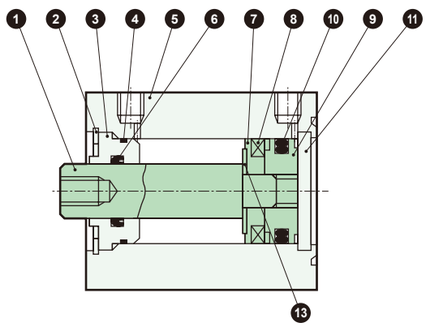
Note: Foot type mounting brackets are 2 pcs/set.

Outline Dimension Drawing

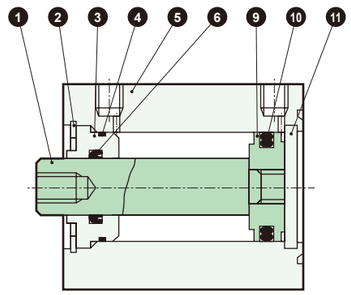
Same as double acting, single rod SSD series. See P. 368 to 375.

Internal Structure Diagram/Material

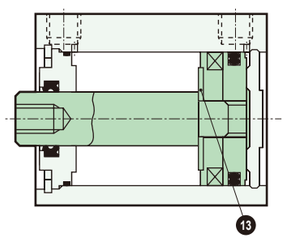
●SSD-OL-12 to 25 (Double acting, Low speed type, With switch)



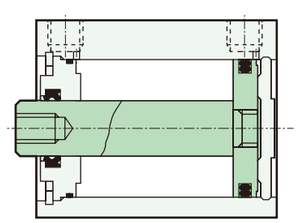
●SSD-O-12 to 25 (Double acting, Low speed type)



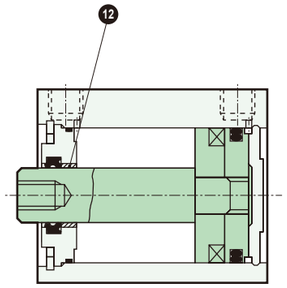
●SSD-OL-32 to 50 (Double acting, Low speed type, With switch)



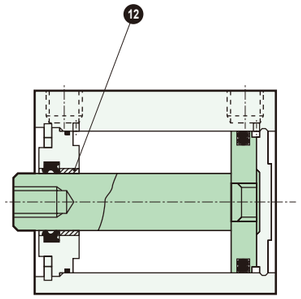
●SSD-O-32 to 50 (Double acting, Low speed type)



●SSD-OL-63 to 100 (Double acting, Low speed type, With switch)



●SSD-O-63 to 100 (Double acting, Low speed type)



Part No.	Part Name	Material	Remarks
1	Piston Rod	ø12 to ø25: Stainless steel ø32 to ø100: Steel	ø16 to ø100: Industrial hard chrome plating
2	C-type retaining ring	Steel	Zinc phosphate
3	Rod Metal	Aluminum Alloy	Alumite
4	Rod metal gasket	Nitrile Rubber	
5	Cylinder Body	Aluminum Alloy	Hard Anodized
6	Rod Packing	Nitrile Rubber	
7	Spacer	ø12, ø63 to ø100: Aluminum alloy ø16 to ø50: Special resin	ø12, ø63 to ø100: Chromate

Part No.	Part Name	Material	Remarks
8	Magnet	Plastic	
9	Piston	Aluminum Alloy	Chromate
10	Piston Packing	Nitrile Rubber	
11	Cover	ø12 to ø25: Stainless steel ø32 to ø100: Aluminum alloy	ø32 to ø100: Anodized
12	Bushing	Bearing Alloy	
13	Spacer washer	Stainless Steel	

Fluorine-based grease is used.

For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

MEMO

Compact Cylinder Double Acting, High Load, Low Friction Type

SSD-KU Series

● Bore size: ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100

Circuit Diagram Symbol 

RoHS

Model No. Notation Method

Without Switch
(Without magnet for switch)

SSD-KU – 20 – ( ) – 5 ——— N – LB – I

Model No. ❶ ❷ ❸ ❻ ❼ ❽

With Switch
(Built-in magnet for switch)

SSD-KUL – 20 – ( ) – 5 – T0H – R – N – LB – I

Model No. ❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶ Bore size ❷ Piping thread type ❸ Stroke ❹ Switch Model No. ❺ Number of Switches ❻ Option ❼ Mounting bracket ❽ Accessories

❶Bore Size (mm)

Code	Content
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

❷Piping thread type

Code	Content
Blank	M5 thread (ø20/ø25)
	Rc thread (ø32 to ø100)
NN	NPT thread (Custom product) (ø32 to ø100)
GN	G thread (Custom product) (ø32 to ø100)

❸Stroke (mm)

Bore size	Stroke	Intermediate Stroke
ø20	5 to 200	Every 1 mm
ø25 to ø50	5 to 300	
ø63 to ø100	5 to 300	

Note: For details on stroke, please refer to P. 488.

❹Switch Model No.

For switch details, please refer to P. 869. Switches are included to the product and shipped.

Contact	Indicator LED Special Function	Wiring (Output)	Load Voltage (V) AC	Load Voltage (V) DC	Load Current (mA) AC	Load Current (mA) DC	Lead Wire *1 Straight	Lead Wire *1 L-shape	
Solid State	1-Color	2-wire	85 to 265	—	5 to 100	—	T1H□	T1V□	
			—	10 to 30	—	5 to 20 *2	T2H□	T2V□	
		3-wire (NPN)	—	30 or less	—	100 or less	T3H□	T3V□	
		3-wire (PNP)	—		—		T3PH□	T3PV□	
	2-Color	2-wire	—	24 ± 10%	—	5 to 20	T2WH□	T2WV□	
		3-wire (NPN)	—	30 or less	—	50 or less	T3WH□	T3WV□	
	2-Color Improved Water Resistance	2-wire	—	24 ± 10%	—	5 to 20	T2WLH□	T2WLV□	*3
	2-Color for AC Magnetic Field		—		—		T2YD□	–	
			—		—		T2YDT□	–	
	1-Color Off-Delay Type		—	10 to 30	—	5 to 20 *2	T2JH□	T2JV□	
	1-Color Flexible Lead Wire Type		—		—		T2HR3□	T2VR3□	
Reed	1-Color	2-wire	110	12/24	7 to 20	5 to 50	T0H□	T0V□	
	No Indicator LED		110	5/12/24	20 or less	50 or less	T5H□	T5V□	
	1-Color		110/220	12/24	7 to 20 / 7 to 10	5 to 50	T8H□	T8V□	

*Lead wire length, connector specification

Code	Content
Blank	1 m (Standard)
3	3 m (Option)
5	5 m (Option)
W	M8 Connector, 1PIN (+) 4PIN (-) Lead Wire 0.3 m

*5

*5: Only T2WLH and T2WLV can be selected.

Example) Lead wire length
1 m T0H
3 m T0H3
5 m T0H5

*1: For "□" in the switch model number, enter the code selected from the "*Lead wire length, connector specification" table.
*2: The maximum load current value above, 20 mA, is at 25°C. If the switch operating ambient temperature is higher than 25°C, it will be lower than 20 mA. (At 60°C, it will be 5 to 10 mA.)
*3: This does not guarantee the water resistance of the cylinder. When using in a water-resistant environment, use of an improved water resistance cylinder is recommended.
*4: Switches other than the model numbers listed above are also available. (Custom products) For details, refer to P. 869.

❺Number of Switches

Code	Content
R	With 1 pc on rod side
H	With 1 pc on head side
D	With 2 pcs

❻Option

Code	Content	
Blank	Rod end female thread	
N	Rod end male thread	
*1 M	Piston Rod Material (Stainless Steel)	

*1: The piston rod material for ø20 to ø25 is stainless steel as standard. C-type retaining ring changes from steel to stainless steel. The nut material for rod end male thread type will be stainless steel.

❼Mounting type

Mounting brackets are shipped included to the product.

Code	Content	
LB	Axial Foot Type	
*1 LB2	Axial foot type (Compact type)	
*1 FA	Rod Side Flange Type	
FB	Head Side Flange Type	
CB	Double Clevis Type (Pin and Retaining Ring Attached)	
CB2	Double Clevis Type (Compact type) (Pins and retaining rings included)	

*1: When LB2 or FA is selected, the piston rod protrusion dimension WF differs from the standard. Refer to outline dimension drawings on P. 393, P. 394, P. 398, P. 399. Also, the model number specifying the protrusion length will be printed at the end of the model number on the nameplate included to the main body. For cylinder model numbers when ordering cylinders and LB2/FA brackets separately, please contact us.

❽Accessories

Code	Content	
I	Single Knuckle	
I2	Single Knuckle (compact)	
Y	Double Knuckle (pin and retaining ring included)	
Y2	Double knuckle (compact) (pin and snap ring included)	

*1: Selectable when rod end male thread "N" is selected.
*2: "I", "I2", "Y", "Y2" cannot be selected at the same time.

About Custom Product Specifications

For details, refer to P. 690 to 694.

Code	Content
-XP5	Knuckle Pin/Clevis Pin Split Pin
-XP7	Knuckle fixed by pin driving
-XP8	Knuckle pin/clevis pin split pin specification, knuckle fixed by pin driving
-A2	With 2 Rod Nuts
-R1, R2	With spigot joint
Rod End Shape Modification	Refer to Ending 11.

Model No. Example)
SSD-KU – ..... – XP5

Switch Single Unit Model No. Notation Method

SW – T0H
❹
Switch Model No.

Specifications

Item	SSD-KU SSD-KUL (with switch)							
Bore size	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation method	Double Acting Type							
Operating Fluid	Compressed Air							
Max. Operating Pressure MPa	0.7							
Min. Operating Pressure MPa	0.03							
Proof pressure MPa	1.0							
Ambient Temperature °C	5 to 60							
Port Size	M5		Rc1/8		Rc1/4		Rc3/8	
Stroke tolerance mm	+2.0 0							
Operating piston speed m/s	10 to 500					10 to 300		
Cushion	Rubber Cushion							
Lubrication	Not Available							
Allowable absorbed energy J	0.16	0.16	0.40	0.62	0.98	1.56	2.51	3.92
Internal leakage ℓ/min	5						8	

Stroke

Stroke (mm)		Applicable Bore							
		ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Standard Stroke	5	●							
	10	●	●	●	●	●	●	●	●
	15	●	●	●	●	●			
	20	●	●	●	●	●	●	●	●
	25	●	●	●	●	●			
	30	●	●	●	●	●	●	●	●
	40	●	●	●	●	●	●	●	●
	50	●	●	●	●	●	●	●	●
	60		●	●	●	●	●	●	●
	70		●	●	●	●	●	●	●
	80		●	●	●	●	●	●	●
	90		●	●	●	●	●	●	●
	100		●	●	●	●	●	●	●
Minimum Stroke (mm) *1		5							
Maximum Stroke (mm)		200	300						
Intermediate Stroke *2		Every 1 mm							

***1: Products less than 10 mm with 2-color indicator, off-delay type, for AC magnetic field, or with T1□ or T8□ switches cannot be manufactured. For the number of switches that can be mounted and the minimum stroke, refer to the table below.**

*2: The overall length dimension for intermediate stroke is the same as the standard stroke above it.

***3: For minimum stroke for mounting brackets LB, LB2, refer to P. 393, 397, 398.**

Number of Switches Mounted and Min. Stroke (mm)

Switch Model No.	T□		T2WL	
Number of Switches / Bore Size (mm)	1	2	1	2
ø20	5	5	20	20
ø25	5	5	20	20
ø32	5	5	20	20
ø40	5	5	15	15
ø50	5	5	15	15
ø63	5	5	10	15
ø80	5	5	10	15
ø100	5	5	10	15

Note: Less than 10mm with 2-color display, off-delay, AC magnetic field proof, T1□, T8□ switches is not available.

Mounting Bracket Model No. Notation Method

Bore Size (mm) / Mounting bracket	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Foot (LB)	SSD-LB-20	SSD-LB-25	SSD-LB-32	SSD-LB-40	SSD-LB-50	SSD-LB-63	SSD-LB-80	SSD-LB-100
Foot (LB2)	SSD-LB2-20	SSD-LB2-25	SSD-LB2-32	SSD-LB2-40	SSD-LB2-50	SSD-LB2-63	SSD-LB2-80	SSD-LB2-100
Flange (FA/FB)	SSD-FA-20	SSD-FA-25	SSD-FA-32	SSD-FA-40	SSD-FA-50	SSD-FA-63	SSD-FA-80	SSD-FA-100
Double Clevis (CB)	SSD-CB-20	SSD-CB-25	SSD-CB-32	SSD-CB-40	SSD-CB-50	SSD-CB-63	SSD-CB-80	SSD-CB-100
Double knuckle clevis (CB2)	SSD-CB2-20	SSD-CB2-25	SSD-CB2-32	SSD-CB2-40	SSD-CB2-50	SSD-CB2-63	SSD-CB2-80	SSD-CB2-100

Note: Foot type mounting brackets are 2 pcs/set.

Cylinder Weight Table (Weight with switch is when 2 cylinder switches are included)

(Unit: g)

Stroke (mm) / Bore size (mm)	5		10		15		20		25		30		40		50		60		70		80		90		100	
	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW
ø20	75	150	88	163	101	176	113	188	126	201	138	213	163	238	188	263	213	288	238	313	263	338	288	363	313	388
ø25	-	-	118	209	134	225	150	241	165	256	182	273	214	305	246	337	278	369	310	401	342	433	374	465	406	497
ø32	-	-	188	302	209	323	231	345	253	367	275	389	318	432	361	475	404	518	447	561	490	604	533	647	576	690
ø40	-	-	263	406	290	433	316	459	342	485	369	512	422	565	475	618	528	671	581	724	634	777	687	830	740	883
ø50	-	-	425	619	467	661	510	704	553	747	594	788	678	872	762	956	846	1040	930	1124	1014	1208	1098	1292	1182	1376
ø63	-	-	617	896	-	-	727	1006	-	-	838	1117	948	1227	1058	1337	1168	1447	1278	1557	1388	1667	1498	1777	1608	1887
ø80	-	-	1101	1514	-	-	1274	1687	-	-	1448	1861	1621	2034	1794	2207	1967	2380	2140	2553	2313	2726	2486	2899	2659	3072
ø100	-	-	1660	2227	-	-	1888	2455	-	-	2115	2682	2343	2910	2571	3138	2799	3366	3027	3594	3255	3822	3483	4050	3711	4278

Stroke (mm) / Bore size (mm)	110		120		130		140		150		160		170		180		190		200	
	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW
ø20	338	413	363	438	388	463	413	488	438	513	463	538	488	563	513	588	538	613	563	638
ø25	438	529	470	561	502	593	534	625	566	657	598	689	630	721	662	753	694	785	726	817
ø32	619	733	662	776	705	819	748	862	791	905	833	947	876	990	919	1033	962	1076	1005	1119
ø40	793	936	846	989	899	1042	952	1095	1005	1148	1058	1201	1111	1254	1164	1307	1217	1360	1270	1413
ø50	1266	1460	1350	1544	1434	1628	1518	1712	1602	1796	1700	1894	1785	1979	1870	2064	1955	2149	2040	2234
ø63	1718	1997	1828	2107	1938	2217	2048	2327	2158	2437	2268	2547	2378	2657	2488	2767	2598	2877	2708	2987
ø80	2832	3245	3005	3418	3178	3591	3351	3764	3524	3937	3697	4110	3870	4283	4043	4456	4216	4629	4389	4802
ø100	3939	4506	4167	4734	4395	4962	4623	5190	4851	5418	5079	5646	5307	5874	5535	6102	5763	6830	5991	6558

Stroke (mm) / Bore size (mm)	210		220		230		240		250		260		270		280		290		300	
	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW
ø25	769	849	801	881	833	913	865	945	897	977	929	1009	961	1041	993	1073	1025	1105	1057	1137
ø32	1048	1162	1091	1205	1134	1248	1177	1291	1220	1334	1263	1377	1306	1420	1349	1463	1392	1506	1435	1549
ø40	1323	1466	1376	1519	1429	1572	1482	1625	1535	1678	1588	1731	1641	1784	1694	1837	1747	1890	1800	1943
ø50	2125	2319	2210	2404	2295	2489	2380	2574	2465	2659	2550	2744	2635	2829	2720	2914	2805	2999	2890	3084
ø63	2817	3096	2927	3206	3037	3316	3147	3426	3257	3536	3367	3646	3477	3756	3587	3866	3697	3976	3807	4086
ø80	4561	4974	4734	5147	4907	5320	5080	5493	5253	5666	5426	5839	5599	6012	5772	6185	5945	6358	6118	6531
ø100	6220	6787	6448	7015	6676	7243	6904	7471	7132	7699	7360	7927	7588	8155	7816	8383	8044	8611	8272	8839

Theoretical Thrust Table

(Unit: N)

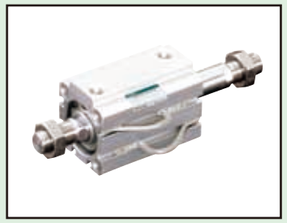
Bore size (mm)	Operating Direction	Operating Pressure MPa								
		0.03	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7
ø20	Push	9.42	31.4	47.1	62.8	94.2	1.26×10^2	1.57×10^2	1.88×10^2	2.20×10^2
	Pull	7.07	23.6	35.3	47.1	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2
ø25	Push	14.7	49.1	73.6	98.2	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2
	Pull	11.3	37.8	56.7	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2
ø32	Push	24.1	80.4	1.21×10^2	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2
	Pull	18.1	60.3	90.5	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2
ø40	Push	37.7	1.26×10^2	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2
	Pull	31.7	1.06×10^2	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2
ø50	Push	58.9	1.96×10^2	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3
	Pull	49.5	1.65×10^2	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3
ø63	Push	93.5	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3
	Pull	84.0	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3
ø80	Push	1.51×10^2	5.03×10^2	7.54×10^2	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3
	Pull	1.36×10^2	4.54×10^2	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3
ø100	Push	2.36×10^2	7.85×10^2	1.18×10^3	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3
	Pull	2.14×10^2	7.15×10^2	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3

Outline Dimension Drawing

Same as double acting, high load SSD-K series. See P. 392 to 400.

Technical Data

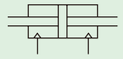
Refer to "Pneumatic Cylinder①" (No. RJ-002AA) for technical data regarding sliding resistance values. SSD-KU Series shows a similar trend to the data of "Pneumatic Cylinder①(No. RJ-002AA)", which is "SCM-U Series".



Compact Cylinder Double Acting, Double Rod Type

SSD-D Series

● Bore size: ø12, ø16, ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100, ø120, ø140, ø160

Circuit Diagram Symbol 

RoHS

Model No. Notation Method

Without Switch
(Without magnet for switch)

SSD-D – 12 – ( ) – 5 ——— N – LB – I

Model No. ❶ ❷ ❸ ❻ ❼ ❽

With Switch
(Built-in magnet for switch)

SSD-DL – 12 – ( ) – 5 – T0H – R – N – LB – I

Model No. ❶ Bore size ❷ Piping thread type ❸ Stroke ❹ Switch Model No. ❺ Number of Switches ❻ Option ❼ Mounting bracket ❽ Accessories

❶ Bore size (mm)

Code	Content
12	ø12
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100
125	ø120
140	ø140
160	ø160

❷ Piping thread type

Code	Content
Blank	M5 thread (ø12 to ø25)
	Rc thread (ø32 to ø160)
NN	NPT thread (Custom product) (ø32 to ø160)
GN	G thread (Custom product) (ø32 to ø160)

❸ Stroke (mm)

Bore size	Stroke	Intermediate Stroke
ø12 to ø20	1 to 30	Every 1 mm
ø25 to ø50	1 to 50	
ø63 to ø100	1 to 50	
ø125 to ø160	10 to 300	

Note: For details on stroke, please refer to P. 492.

❹ Switch Model No.

For switch details, please refer to P. 869. Switches are included to the product and shipped.

Contact	Indicator LED Special Function	Wiring (Output)	Load Voltage (V) AC	Load Voltage (V) DC	Load Current (mA) AC	Load Current (mA) DC	Lead Wire *1 Straight	Lead Wire *1 L-shape	
Solid State	1-Color	2-wire	85 to 265	—	5 to 100	—	T1H□	T1V□	
			—	10 to 30	—	5 to 20 *2	T2H□	T2V□	
		3-wire (NPN)	—	30 or less	—	100 or less	T3H□	T3V□	
		3-wire (PNP)	—		—		T3PH□	T3PV□	
	2-Color	2-wire	—	24 ± 10%	—	5 to 20	T2WH□	T2WV□	
		3-wire (NPN)	—	30 or less	—	50 or less	T3WH□	T3WV□	
	2-Color Improved Water Resistance	2-wire	—	24 ± 10%	—	5 to 20	T2WLH□	T2WLV□	*3
	2-Color for AC Magnetic Field		—		—		T2YD□	–	*4
			—		—		T2YDT□	–	
	1-Color Off-Delay Type		—	10 to 30	—	5 to 20 *2	T2JH□	T2JV□	
	1-Color Flexible Lead Wire Type		—		—		T2HR3□	T2VR3□	
Reed	1-Color	2-wire	110	12/24	7 to 20	5 to 50	T0H□	T0V□	
	No Indicator LED		110	5/12/24	20 or less	50 or less	T5H□	T5V□	
	1-Color		110/220	12/24	7 to 20 / 7 to 10	5 to 50	T8H□	T8V□	*5

*1: For "□" in the switch model number, enter the code selected from the "*Lead wire length, connector specification" table.
*2: The maximum load current value above, 20 mA, is at 25°C. If the switch operating ambient temperature is higher than 25°C, it will be lower than 20 mA. (At 60°C, it will be 5 to 10 mA.)
*3: This does not guarantee the water resistance of the cylinder. When using in a water-resistant environment, use of an improved water resistance cylinder is recommended.
*4: AC magnetic field resistant switches cannot be mounted on ø12, ø16.
*5: T8□ switches cannot be mounted on ø12, ø16.
*6: Switches other than the above switch model numbers are also available. (Custom products) For details, refer to P. 869.

*7

*Lead wire length, connector specification

Code	Content
Blank	1 m (Standard)
3	3 m (Option)
5	5 m (Option)
W	M8 Connector, 1PIN (+) 4PIN (-) Lead Wire 0.3 m

*7: Only T2WLH, T2WLV can be selected.

Example) Lead wire length
1 m T0H
3 m T0H3
5 m T0H5

❺ Number of Switches

Code	Content
R	With 1 pc on rod side
H	With 1 pc on head side
D	With 2 pcs

❻ Option

Code	Content	
Blank	Rod end female thread	
N	Rod end male thread	
*1, *2 M	Piston Rod Material (Stainless Steel)	

*1: The piston rod material for ø12 to ø25 is stainless steel as standard. C-type retaining ring changes from steel to stainless steel. The nut material for rod end male thread type will be stainless steel.
*2: ø125 to ø160 cannot be selected.

❼ Mounting type

Mounting brackets are shipped included to the product.

Code	Content	
LB	Axial Foot Type	
*1 LB2	Axial foot type (Compact type) (ø12 to ø100)	
*1 FA	Rod side flange type (ø12 to ø100)	

*1: When LB2 or FA is selected, the piston rod protrusion dimension WF differs from the standard. See P. 495, 496, 498, and 499 for outline dimension drawings. Also, the model number specifying the protrusion length will be printed at the end of the model number on the nameplate included to the main body. For cylinder model numbers when ordering cylinders and LB2/FA brackets separately, please contact us.

❽ Accessories

Code	Content	
I	Single Knuckle	
I2	Single Knuckle (Compact type)	
Y	Double Knuckle (Pin and retaining ring included)	
Y2	Double Knuckle (Compact type) (Pins and retaining rings included)	

*1: Selectable when rod end male thread "N" is selected.
*2: When selecting accessories, 2 pcs. will be included. If "IY" is specified, one of each will be included.

*For combination of variations and options, refer to P. 356 to 361.

About Custom Product Specifications

For details, refer to P. 690 to 694.

Code	Content
-XP5	Knuckle Pin/Clevis Pin Split Pin
-XP7	Knuckle fixed by pin driving
-XP8	Knuckle pin/clevis pin split pin specification, knuckle fixed by pin driving
-T2	Fluorine Packing Type
-A2	With 2 Rod Nuts
-R1	With spigot joint
Rod End Shape Modification	Refer to Ending 11.

Model No. Example)
SSD-D – ..... – XP5

Switch Single Unit Model No. Notation Method

SW – T0H
❹
Switch Model No.

Specifications

Item	SSD-D / SSD-DL (with switch)												
Bore size mm	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100	ø125	ø140	ø160
Actuation method	Double Acting Type												
Operating Fluid	Compressed Air												
Max. Operating Pressure MPa	1.0												
Min. Operating Pressure MPa	0.15							0.1			0.05		
Proof pressure MPa	1.6												
Ambient Temperature °C	-10 to 60 (No freezing)												
Port Size	M5				Rc1/8		Rc1/4			Rc3/8			
Stroke tolerance mm	+1.0 0										+2.0 0		
Operating Piston Speed mm/s	50 to 500							50 to 300					
Cushion	None										Rubber Cushion		
Lubrication	Not Required (When lubricating, use Turbine Oil ISO VG32)												
Allowable absorbed energy J	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12	0.27	0.56	6.52	6.52	7.78

Stroke

Stroke (mm)		Applicable Bore												
		ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100	ø125	ø140	ø160
Standard Stroke	5	●	●	●	●	●	●	●	●	●	●			
	10	●	●	●	●	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●						
	20	●	●	●	●	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●						
	30	●	●	●	●	●	●	●	●	●	●	●	●	●
	40				●	●	●	●	●	●	●	●	●	●
	50				●	●	●	●	●	●	●	●	●	●
	60											●	●	●
	70											●	●	●
	80											●	●	●
	90											●	●	●
	100											●	●	●
Minimum Stroke (mm) *1		1										10		
Maximum Stroke (mm)		30			50							300		
Intermediate Stroke *2		Every 1 mm												

***1: Cannot be manufactured for less than 5 mm with 1-color indicator switch, or less than 10 mm with 2-color indicator, off-delay type, AC magnetic field type, T1□, T8□ switch. For the number of switches that can be mounted and the minimum stroke, refer to the table below.**

*2: The handling method for intermediate strokes differs for ø12 to ø100 and ø125 to ø160 as follows. Please be careful.
[ø12 to ø100]
The overall length dimension for intermediate stroke is the same as the standard stroke above it.
[ø125 to ø160]
The overall length dimension for intermediate stroke will be handled with a length dedicated to intermediate stroke.

***3: For the minimum stroke when using mounting brackets LB and LB2, see P. 495 and 498.**

Number of Switches Mounted and Min. Stroke (mm)

Switch Model No.	T□		T2WL	
Number of Switches / Bore Size (mm)	1	2	1	2
ø12	5	5	20	20
ø16	5	5	20	20
ø20	5	5	15	15
ø25	5	5	10	15
ø32	5	5	10	15
ø40	5	5	10	15
ø50	5	5	10	15
ø63	5	5	10	15
ø80	5	5	10	15
ø100	5	5	10	15
ø125	10	10	10	15
ø140	10	10	10	15
ø160	10	10	10	15

Note: Less than 10mm with 2-color display, off-delay, AC magnetic field proof, T1□, T8□ switches is not available.

Cylinder Weight Table (Weight with switch is when 2 cylinder switches are included)

● ø12 to ø100 (Unit: g)

Stroke (mm) / Bore Size (mm)	5		10		15		20		25		30		40		50	
	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch
ø12	52	105	60	105	69	115	77	124	86	134	95	147	-	-	-	-
ø16	74	133	85	133	95	144	106	156	117	168	128	177	-	-	-	-
ø20	131	187	143	222	161	238	179	254	196	269	214	285	-	-	-	-
ø25	147	238	162	253	178	269	194	285	210	301	226	316	257	348	288	379
ø32	184	299	230	344	275	390	322	436	366	481	413	527	507	617	601	707
ø40	283	426	310	453	336	479	363	506	390	533	416	569	469	612	522	665
ø50	458	652	508	702	558	751	608	803	658	851	708	901	808	1001	911	1105
ø63	827	953	902	1266	-	-	1052	1416	-	-	1202	1566	1353	1717	1503	1867
ø80	1491	1421	1608	1538	-	-	1841	2294	-	-	2074	2527	2308	2771	2541	3004
ø100	2314	2941	2483	3105	-	-	2820	3402	-	-	3158	3770	3495	4097	3833	4425

Cylinder Weight Table (Weight with switch is when 2 cylinder switches are included)

● ø125 to ø160 (Unit: kg)

Stroke (mm) / Bore Size (mm)	10		20		30		40		50		60		70		80		90		100	
	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch
ø125	4.64	4.74	4.98	5.08	5.32	5.42	5.66	5.76	6	6.1	6.64	6.44	6.68	6.78	7.02	7.12	7.36	7.46	7.7	7.8
ø140	6.62	6.73	7	7.11	7.93	7.5	7.77	7.88	8.15	8.26	8.54	8.65	8.92	9.03	9.3	9.41	9.68	9.79	10.07	10.18
ø160	9.1	9.22	9.58	9.7	10.06	10.18	10.54	10.66	11.02	11.14	11.5	11.62	11.97	12.09	12.45	12.57	12.93	13.05	13.41	13.53

Theoretical Thrust Table

(Unit: N)

Bore Size (mm)	Operating Direction	Operating Pressure MPa											
		0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø12	Pull	-	-	12.7	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
ø16	Pull	-	-	22.6	30.2	45.2	60.3	75.4	90.5	1.06×10^2	1.21×10^2	1.36×10^2	1.51×10^2
ø20	Pull	-	-	35.3	47.1	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2	1.88×10^2	2.12×10^2	2.36×10^2
ø25	Pull	-	-	56.7	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
ø32	Pull	-	-	90.5	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
ø40	Pull	-	-	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Pull	-	-	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Pull	-	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
ø80	Pull	-	4.54×10^2	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
ø100	Pull	-	7.15×10^2	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3
ø125	Pull	5.65×10^2	1.13×10^3	1.70×10^3	2.26×10^3	3.39×10^3	4.52×10^3	5.65×10^3	6.79×10^3	7.92×10^3	9.05×10^3	1.02×10^4	1.13×10^4
ø140	Pull	7.21×10^2	1.44×10^3	2.16×10^3	2.89×10^3	4.33×10^3	5.77×10^3	7.22×10^3	8.66×10^3	1.01×10^4	1.15×10^4	1.30×10^4	1.44×10^4
ø160	Pull	9.42×10^2	1.88×10^3	2.83×10^3	3.77×10^3	5.65×10^3	7.54×10^3	9.42×10^3	1.13×10^4	1.32×10^4	1.51×10^4	1.70×10^4	1.88×10^4

Mounting Bracket Model No. Notation Method

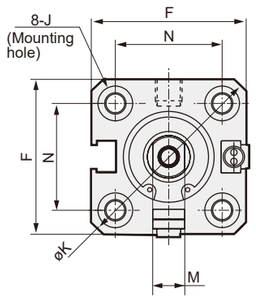
Bore Size (mm) / Mounting bracket	ø12	ø16	ø20	ø25	ø32	ø40	ø50
Foot (LB)	SSD-LB-12	SSD-LB-16	SSD-LB-20	SSD-LB-25	SSD-LB-32	SSD-LB-40	SSD-LB-50
Foot (LB2)	SSD-LB2-12	SSD-LB2-16	SSD-LB2-20	SSD-LB2-25	SSD-LB2-32	SSD-LB2-40	SSD-LB2-50
Flange (FB)	SSD-FA-12	SSD-FA-16	SSD-FA-20	SSD-FA-25	SSD-FA-32	SSD-FA-40	SSD-FA-50
Bore Size (mm) / Mounting bracket	**ø63**	**ø80**	**ø100**	**ø125**	**ø140**	**ø160**	
Foot (LB)	SSD-LB-63	SSD-LB-80	SSD-LB-100	SSD-LB-125	SSD-LB-140	SSD-LB-160	
Foot (LB2)	SSD-LB2-63	SSD-LB2-80	SSD-LB2-100	–	–	–	
Flange (FB)	SSD-FA-63	SSD-FA-80	SSD-FA-100	–	–	–	

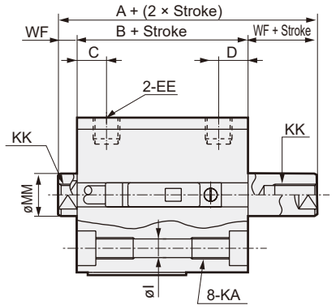
Note: Foot type mounting brackets are 2 pcs/set.

Outline Dimension Drawing (Bore size: ø12 to ø25)

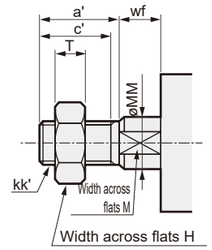
● SSD-D (L)-12 to 25

ø12, ø16

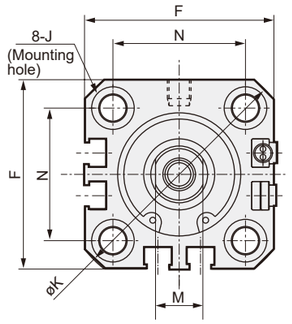


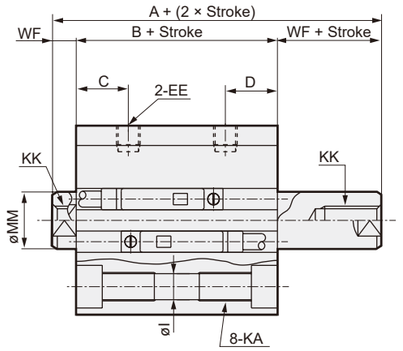


● Rod end male thread part



ø20, ø25





Note: The positions for the left and right width across flats are unspecified.

Code / Bore Size (mm)	Dimension with switch A *1	Dimension with switch B *1	Dimension without switch A *1	Dimension without switch B *1	C	D	EE	F	I	J	K	KA	KK	M	MM	N	WF
ø12	34	27	29	22	5.5	5.5	M5	25	3.5	6.5 Counterbore depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
ø16	34	27	29	22	5.5	5.5	M5	29	3.5	6.5 Counterbore depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
ø20	45	36	35	26	8	8	M5	36	5.5	9 Counterbore depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
ø25	51	41	41	31	11	11	M5	40	5.5	9 Counterbore depth 5.5	51	M6 depth 11	M6 Depth 12	10	12	28	5

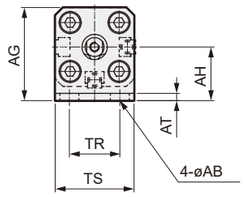
*1: When calculating A + (2 x stroke), B + stroke, and WF + stroke dimensions for intermediate strokes, do not use the intermediate stroke value for the stroke; instead, use the value of the standard stroke above it. Rod protrusion dimensions differ on the left and right.
(Example) For an intermediate stroke of 7 mm, enter the standard stroke of 10 mm for calculation.
***2: For dimensions with each switch, refer to P. 674 to 681.**
***3: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**

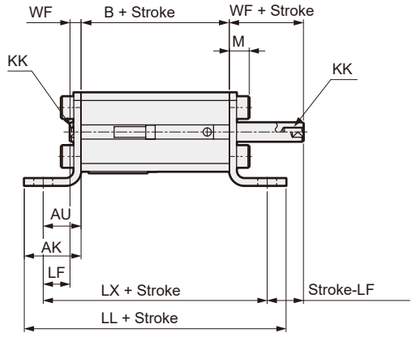
● Rod end male thread part dimension table

Code / Bore Size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10 × 1.25	10	12	6	5

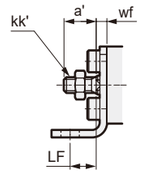
Outline Dimension Drawing (Bore size: ø12 to ø25)

● Axial Foot Type (LB)



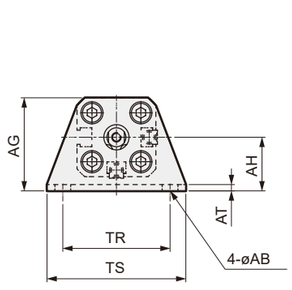


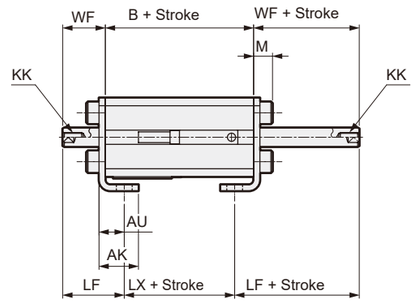
● For rod end male thread



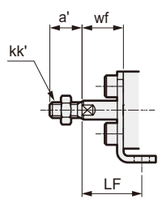
Code / Bore size (mm)	Common dimension AB	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch B	With Switch LL	With Switch LX	Without Switch B	Without Switch LL	Without Switch LX	For male thread a'	kk'	wf	LF
ø12	6	29.5	17	18	2.3	12	16	25	6.3	M3 depth 6	3.5	8.5	27	63	51	22	58	46	10.5	M5	3.5	8.5
ø16	6	33.5	19	18	2.3	12	16	29	6.3	M4 depth 8	3.5	8.5	27	63	51	22	58	46	12	M6	3.5	8.5
ø20	7	42	24	24	3.2	16	24	36	9.2	M5 depth 7	4.5	11.5	36	84	68	26	74	58	14	M8	4.5	11.5
ø25	7	46	26	24	3.2	16	28	40	9.2	M6 Depth 12	5	11	41	89	73	31	79	63	17.5	M10 × 1.25	5	11

● Axial Foot Type (Compact Type) (LB2)





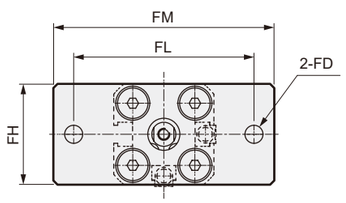
● For rod end male thread



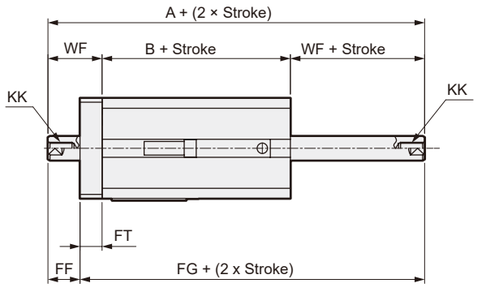
Code / Bore size (mm)	Common dimension AB	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch B	With Switch LX	Without Switch B	Without Switch LX	For male thread a'	kk'	wf	LF
ø12	5	29.5	17	12.5	2	8	34	44	6	M3 depth 6	13.5	19.5	27	15	22	10	10.5	M5	13.5	19.5
ø16	5	33.5	19	13	2	8	38	48	6	M4 depth 8	13.5	19.5	27	15	22	10	12	M6	13.5	19.5
ø20	7	42	24	15	3.2	9.2	48	62	9.2	M5 depth 7	14.5	20.5	36	24	26	14	14	M8	14.5	20.5
ø25	7	46	26	16.5	3.2	10.7	52	66	9.2	M6 Depth 12	15	22.5	41	26	31	16	17.5	M10 × 1.25	15	22.5

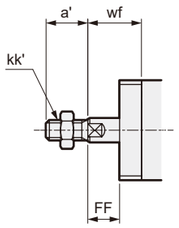
Outline Dimension Drawing (Bore size: ø12 to ø25)

● Rod Side Flange Type (FA)



● For rod end male thread

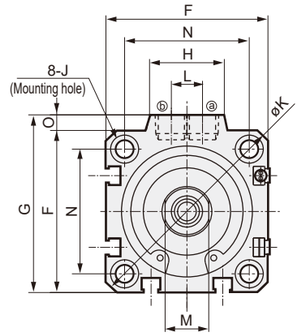


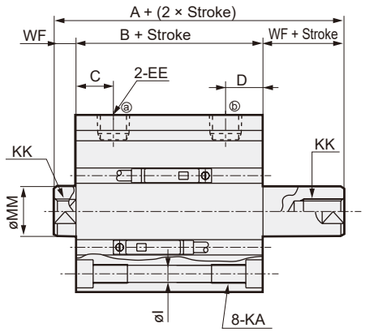


Code / Bore size (mm)	Common dimension FD	FH	FL	FM	FT	For female thread FF	KK	WF	With Switch A	B	FG	Without Switch A	B	FG	For male thread FF	a'	kk'	wf
ø12	4.5	25	45	55	5.5	8	M3 depth 6	13.5	54	27	46	49	22	41.0	8	10.5	M5	13.5
ø16	4.5	30	45	55	5.5	8	M4 depth 8	13.5	54	27	46	49	22	41	8	12	M6	13.5
ø20	6.6	39	48	60	8	6.5	M5 depth 7	14.5	65	36	58.5	55	26	48.5	6.5	14	M8	14.5
ø25	6.6	42	52	64	8	7	M6 Depth 12	15	71	41	64	61	31	54	7	17.5	M10 × 1.25	15

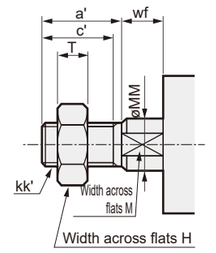
Outline Dimension Drawing (Bore size: ø32 to ø100)

● SSD-D (L)-32 to 100

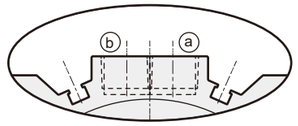




● Rod end male thread part



[Bore size ø100]



*Only ø100 has a switch groove on the port surface

Note: The positions for the left and right width across flats are unspecified.

Code / Bore Size (mm)	Dimension with switch A *1	B *1	Dimension without switch A *1	B *1	Common dimension C	D	EE	F	G	H	I	J	K	KA	KK	L	M	MM	N	O	WF *1
ø32	54.5	40.5	44.5	30.5	8	8	Rc1/8	45	49.5	24	5.5	9 Counterbore Depth 5.5	60	M6 depth 11	M8 depth 13	10	14	16	34	4.5	7
ø40	63	49	53	39	12	12	Rc1/8	52	57	24	5.5	9 Counterbore Depth 5.5	69	M6 depth 11	M8 depth 13	10	14	16	40	5	7
ø50	65	49	55	39	10.5	10.5	Rc1/4	64	71	33	6.9	11 Counterbore Depth 6.5	86	M8 depth 13	M10 depth 15	15	17	20	50	7	8
ø63	67	51	57	41	13	13	Rc1/4	77	84	33	8.7	14 Counterbore Depth 9	103	M10 depth 25	M10 depth 15	15	17	20	60	7	8
ø80	78.5	58.5	68.5	48.5	16	16	Rc3/8	98	104	38	10.5	17.5 Counterbore Depth 11	132	M12 depth 28	M16 depth 21	15	22	25	77	6	10
ø100	92	68	82	58	23	23	Rc3/8	117	123.5	38	10.5	17.5 Counter-bore depth 11	156	M12 depth 28	M20 depth 27	15	27	30	94	6.5	12

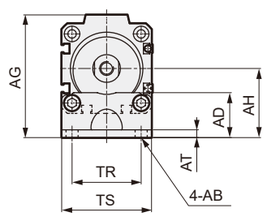
*1: When calculating A + (2 x stroke), B + stroke, and WF + stroke dimensions for intermediate strokes, do not use the intermediate stroke value for the stroke; instead, use the value of the standard stroke above it. Rod protrusion dimensions differ on the left and right. (Example) For an intermediate stroke of 7 mm, enter the standard stroke of 10 mm for calculation.
***2: For dimensions with each switch, refer to P. 674 to P. 681.**
***3: For outline dimension drawings of individual accessories, refer to P. 379 to P. 381.**

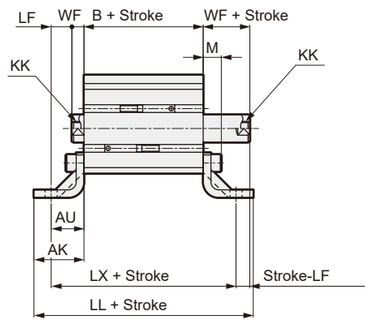
● Rod end male thread part dimension table

Code / Bore Size (mm)	a'	c'	H	kk'	M	MM	T	WF *1
ø32	23.5	20.5	22	M14 × 1.5	14	16	8	5
ø40	23.5	20.5	22	M14 × 1.5	14	16	8	5
ø50	28.5	26	27	M18 × 1.5	17	20	11	5
ø63	28.5	26	27	M18 × 1.5	17	20	11	5
ø80	35.5	32.5	32	M22 × 1.5	22	25	13	8
ø100	35.5	32.5	41	M26 × 1.5	27	30	16	8

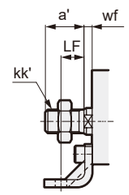
Outline Dimension Drawing (Bore size: ø32 to ø100)

● Axial Foot Type (LB)





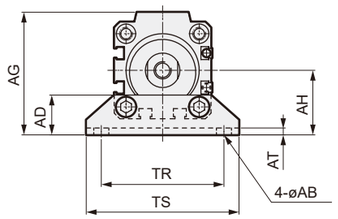
● For rod end male thread

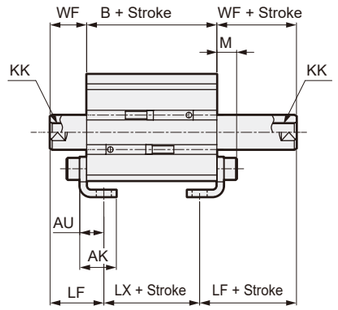


Code / Bore size (mm)	Common dimension										For female thread									For male thread			
	AB	AD	AG	AH	AK	AT	AU	TR	TS	M	KK	WF	LF	With Switch B	With Switch LL	With Switch LX	Without Switch B	Without Switch LL	Without Switch LX	a'	kk'	wf	LF
ø32	7	–	53.5	31	24	3.2	16	34	45	9.2	M8 depth 13	7	9	40.5	88.5	72.5	30.5	78.5	62.5	23.5	M14 × 1.5	5	11
ø40	7	26	71	40	29	4.5	19	40	52	10	M8 depth 13	7	12	49	107	87	39	97	77	23.5	M14 × 1.5	5	14
ø50	9	23	79	40	34	4.5	22	46	64	13	M10 depth 15	8	14	49	117	93	39	107	83	28.5	M18 × 1.5	5	17
ø63	11	33	96.5	51	40	4.5	25	60	77	15	M10 depth 15	8	17	51	131	101	41	121	91	28.5	M18 × 1.5	5	20
ø80	13	42	116.5	61.5	50	6	35	77	98	18	M16 depth 21	10	25	58.5	158.5	128.5	48.5	148.5	118.5	35.5	M22 × 1.5	8	27
ø100	13	48	134	69	50	6	35	94	117	18	M20 depth 27	12	23	68	168	138	58	158	128	35.5	M26 × 1.5	8	27

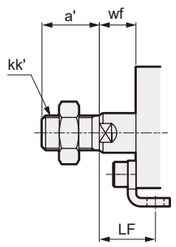
*1: If the value of B + stroke is less than or equal to the value below, LB cannot be selected.
ø80, ø100: 69 or less

● Axial Foot Type (Compact Type) (LB2)





● For rod end male thread

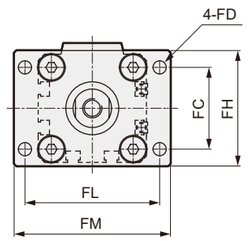


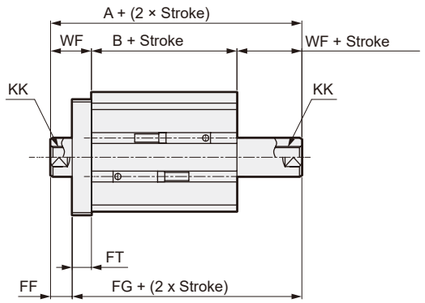
Code / Bore size (mm)	Common dimension										For female thread							For male thread			
	AB	AD	AG	AH	AK	AT	AU	TR	TS	M	KK	WF	LF	With Switch B	With Switch LX	Without Switch B	Without Switch LX	a'	kk'	wf	LF
ø32	7	18.5	57	30	17	3.2	11.2	57	71	9.2	M8 depth 13	17	25	40.5	24.5	30.5	14.5	23.5	M14 × 1.5	15	23
ø40	7	18	64	33	18.2	3.2	11.2	64	78	9.2	M8 depth 13	17	25	49	33	39	23	23.5	M14 × 1.5	15	23
ø50	9	22	78	39	22.7	3.2	14.7	79	95	11.2	M10 depth 15	18	29.5	49	26	39	16	28.5	M18 × 1.5	15	26.5
ø63	11	26	91.5	46	25.2	3.2	16.2	95	113	13.2	M10 depth 15	18	31	51	25	41	15	28.5	M18 × 1.5	15	28
ø80	13	39.5	114	59	30.5	4.5	19.5	118	140	16.5	M16 depth 21	20	35	58.5	28.5	48.5	18.5	35.5	M22 × 1.5	18	33
ø100	13	50	136	71	35.5	6	23	137	162	18	M20 depth 27	22	39	68	34	58	24	35.5	M26 × 1.5	18	35

*1: If the value of B + stroke is less than or equal to the value below, LB2 cannot be selected.
ø80: 72 or less ø100: 69 or less

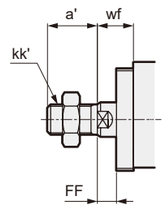
Outline Dimension Drawing (Bore size: ø32 to ø100)

● Rod Side Flange Type (FA)





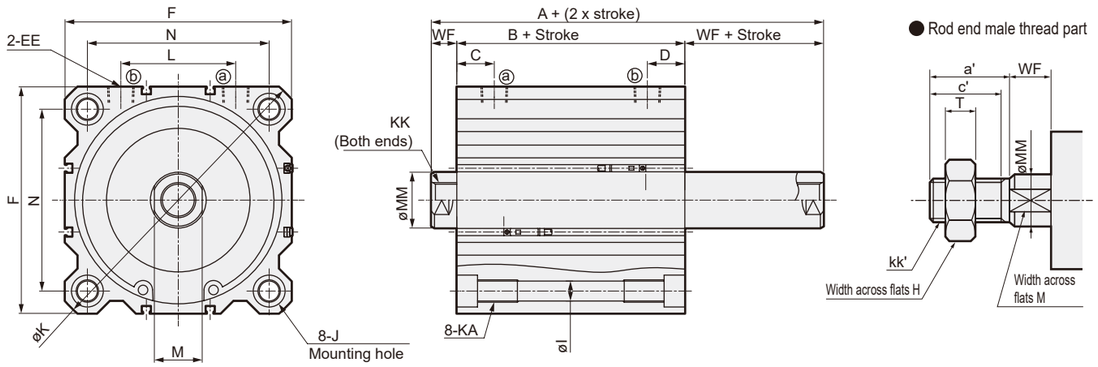
● For rod end male thread



Code / Bore size (mm)	Common dimension						For female thread										For male thread			
	FC	FD	FH	FL	FM	FT	FF	KK	WF	With Switch A	With Switch B	With Switch FG	Without Switch A	Without Switch B	Without Switch FG	FF	a'	kk'	wf
ø32	34	5.5	48	56	65	8	9	M8 depth 13	17	74.5	40.5	65.5	64.5	30.5	55.5	7	23.5	M14 × 1.5	15
ø40	40	5.5	54	62	72	8	9	M8 depth 13	17	83	49	74	73	39	64	7	23.5	M14 × 1.5	15
ø50	50	6.6	67	76	89	9	9	M10 depth 15	18	85	49	76	75	39	66	6	28.5	M18 × 1.5	15
ø63	60	9	80	92	108	9	9	M10 depth 15	18	87	51	78	77	41	68	6	28.5	M18 × 1.5	15
ø80	77	11	99	116	134	11	9	M16 depth 21	20	98.5	58.5	89.5	88.5	48.5	79.5	7	35.5	M22 × 1.5	18
ø100	94	11	117	136	154	11	11	M20 depth 27	22	112	68	101	102	58	91	7	35.5	M26 × 1.5	18

Outline Dimension Drawing (Bore size: ø125 to ø160)

● SSD-D (L)-125 to 160



● Rod end male thread part

Note: The positions for the left and right width across flats are unspecified.

Code / Bore Size (mm)	Common dimension A	B	C	D	EE	F	I	J	K	KA	KK *2
ø125	104	72	23.5	23.5	Rc3/8	142	12.5	20 Counterbore Depth 13	190	M14 depth 25	M22 x 2.5 Depth 30 (22)
ø140	114	82	27	27	Rc3/8	158	12.5	20 Counterbore Depth 13	210	M14 depth 25	M22 x 2.5 Depth 30 (22)
ø160	125	91	30	30	Rc3/8	178	14.7	23 Counterbore depth 15.2	238	M16 depth 28	M24×3 depth 33 (24)

Code / Bore Size (mm)	Common dimension L	M	MM	N	WF
ø125	72	30	35	114	16
ø140	80	30	35	128	16
ø160	90	36	40	144	17

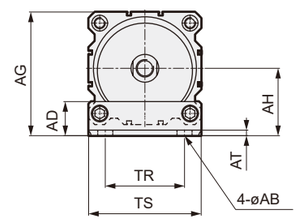
***1: For dimensions with each switch, refer to P. 674 to P. 681.**
*2: The value in parentheses for the KK dimension indicates the effective thread length on one side at 10 strokes.
***3: For outline dimension drawings of individual accessories, refer to P. 379 to P. 381.**

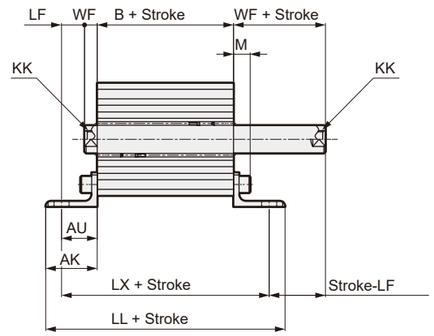
Rod End Male Thread Dimension Table

Code / Bore Size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø125	45	42	46	M30 × 1.5	30	35	18	13
ø140	45	42	46	M30 × 1.5	30	35	18	13
ø160	50	47	55	M36 × 1.5	36	40	21	14

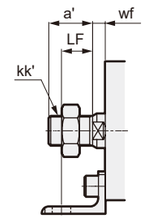
Outline Dimension Drawing (Bore size: ø125 to ø160)

● Axial Foot Type (LB)





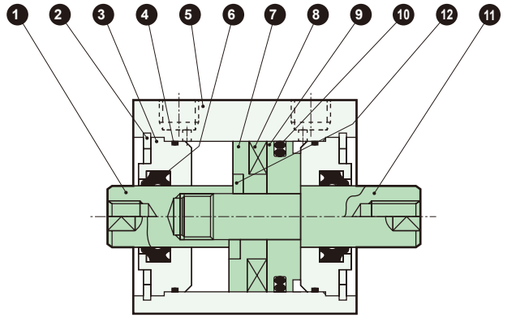
● For rod end male thread



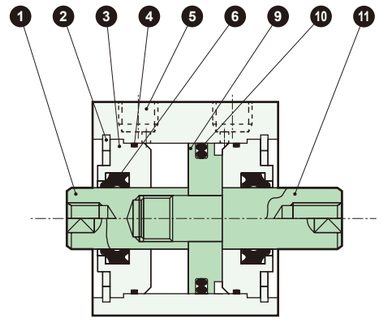
Code / Bore size (mm)	Common dimension AB	AD	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	B	LL	LX	For male thread a'	kk'	wf	LF
ø125	19	43	156	85	65	7	45	100	142	21	M22 depth 30	16	29	72	202	162	45	M30 × 1.5	13	32
ø140	19	51	179	100	70	8	50	112	158	22	M22 depth 30	16	34	82	222	182	45	M30 × 1.5	13	37
ø160	19	52	195	106	73	10	53	118	178	26	M24 depth 33	17	36	91	237	197	50	M36 × 1.5	14	39

Internal Structure Diagram/Material (Bore size: ø12 to ø50)

● SSD-DL-12 to 50 (Double acting, Double rod type, With switch)



● SSD-D-12 to 50 (Double acting, Double rod type)

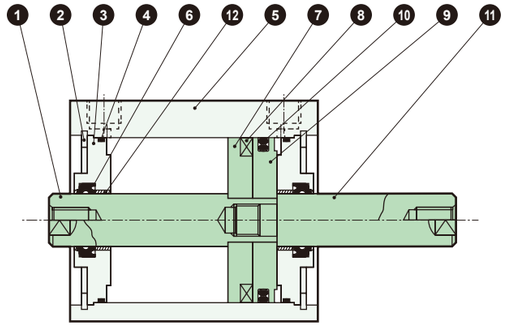


Part No.	Part Name	Material	Remarks
1	Piston Rod Ⓐ	ø12 to ø25: Stainless steel ø32 to ø50: Steel	ø16 to ø50: Industrial chrome plating
2	C-type retaining ring	Steel	Zinc phosphate
3	Rod Metal	Aluminum Alloy	Alumite
4	Rod metal gasket	Nitrile Rubber	
5	Cylinder Body	Aluminum Alloy	Hard Anodized
6	Rod Packing	Nitrile Rubber	
7	Spacer	ø12, ø20, ø32, ø40: Aluminum alloy ø16, ø25, ø50: Special resin	ø12, 20, 32, 40: Chromate
8	Magnet	Plastic	
9	Piston	Aluminum Alloy	Chromate
10	Piston Packing	Nitrile Rubber	
11	Piston Rod Ⓑ	ø12 to ø25: Stainless steel ø32 to ø50: Steel	ø16 to ø50: Industrial chrome plating
12	Spacer washer	Stainless Steel	ø25, 50 only

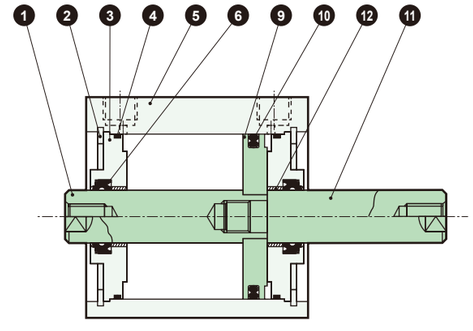
For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Internal Structure Diagram/Material (Bore size: ø63 to ø100)

● SSD-DL-63 to 100 (Double acting, Double rod type, With switch)



● SSD-D-63 to 100 (Double acting, Double rod type)

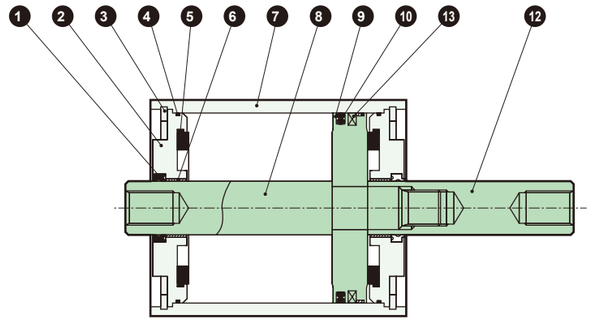


Part No.	Part Name	Material	Remarks
1	Piston Rod Ⓐ	Steel	Industrial Hard Chrome Plating
2	C-type retaining ring	Steel	Zinc phosphate
3	Rod Metal	Aluminum Alloy	Alumite
4	Rod metal gasket	Nitrile Rubber	
5	Cylinder Body	Aluminum Alloy	Hard Anodized
6	Rod Packing	Nitrile Rubber	
7	Spacer	Aluminum Alloy	Chromate
8	Magnet	Plastic	
9	Piston	Aluminum Alloy	Chromate
10	Piston Packing	Nitrile Rubber	
11	Piston Rod Ⓑ	Steel	Industrial Hard Chrome Plating
12	Bushing	Bearing Alloy	

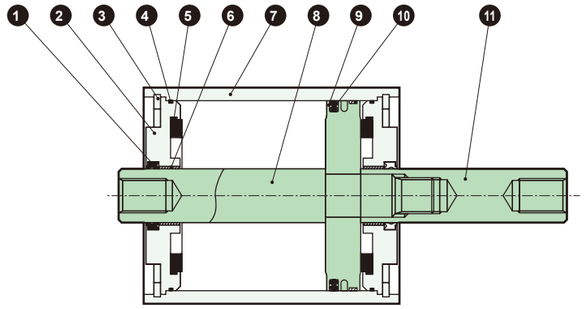
For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Internal Structure Diagram/Material (Bore size: ø125 to ø160)

●SSD-DL-125 to 160 (Double acting, Double rod type, With switch)



●SSD-D-125 to 160 (Double acting, Double rod type)



Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Rod Packing	Nitrile Rubber		7	Cylinder Body	Aluminum Alloy	Hard Anodized
2	Rod Metal	Aluminum Alloy	Chromate	8	Piston Rod Ⓐ	Steel	Industrial Hard Chrome Plating
3	C-type retaining ring	Steel	Zinc phosphate	9	Piston	Aluminum Alloy	
4	Metal gasket	Nitrile Rubber		10	Piston Packing	Nitrile Rubber	
5	Cushion Rubber	Urethane Rubber		11	Piston Rod Ⓑ	Steel	Industrial Hard Chrome Plating
6	Bushing	Bearing Alloy		12	Magnet	Rubber	SSD-DL only

For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

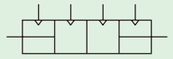
MEMO

Space-Saving Type
SSD2
SSG
SSD
CAT
MDC2
SMG
MSD
FC□
Cylinder Switch
Ending

Compact Cylinder Double Acting, Back-to-Back Type

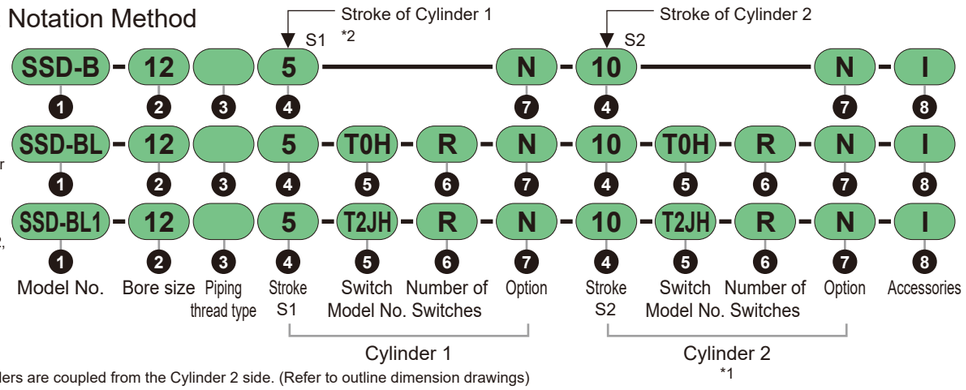
SSD-B Series

● Bore size: ø12, ø16, ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100

Circuit Diagram Symbol 

RoHS

Model No. Notation Method



*1: The two cylinders are coupled from the Cylinder 2 side. (Refer to outline dimension drawings) Pay attention to the mounting method and determine cylinders 1 and 2.

❶Model No.

Code	Contents
SSD-B	Double Acting, Back-to-Back Type
SSD-BL	Double Acting, Back-to-Back Type with Switch
SSD-BL1	Double acting, Back-to-back type, Off-delay type with T1□ switch (ø12, ø16)

❷Bore Size (mm)

Code	Contents	Code	Contents
12	ø12	40	ø40
16	ø16	50	ø50
20	ø20	63	ø63
25	ø25	80	ø80
32	ø32	100	ø100

❸Piping thread type

Code	Contents
Blank	M5 thread (ø12 to ø25)
	Rc thread (ø32 to ø100)
NN	NPT thread (Custom product) (ø32 to ø100)
GN	G thread (Custom product) (ø32 to ø100)

❹Stroke (mm)

Bore size	Stroke	Intermediate Stroke
ø12 to ø20	1 to 30	Every 1 mm
ø25 to ø50	1 to 50	
ø63 to ø100	1 to 50	

*1: For details regarding stroke, see P. 508.
*2: If the S1 stroke is less than or equal to the value in the table on the right, the length of the usable mounting bolts will differ from the standard. Please contact our sales department.

Bore	Without Switch	With Switch
	S1 Stroke	
ø20	10 or less	-
ø25	5 or less	-
ø32	5 or less	-
ø50	5 or less	-
ø63	15 or less	5 or less
ø80	20 or less	10 or less
ø100	10 or less	-

❺Switch Model No.

For switch details, please refer to P. 869. Switches are included to the product and shipped.

Contact	Indicator LED Special Function	Wiring (Output)	Load Voltage (V) AC	Load Voltage (V) DC	Load Current (mA) AC	Load Current (mA) DC	Lead Wire *1 Straight	Lead Wire *1 L-shape	
Solid State	1-Color	2-wire	85 to 265	—	5 to 100	—	T1H□	T1V□	
			—	10 to 30	—	5 to 20 *2	T2H□	T2V□	
		3-wire (NPN)	—	30 or less	—	100 or less	T3H□	T3V□	
		3-wire (PNP)	—		—		T3PH□	T3PV□	
	2-Color	2-wire	—	24 ± 10%	—	5 to 20	T2WH□	T2WV□	
		3-wire (NPN)	—	30 or less	—	50 or less	T3WH□	T3WV□	
	2-Color Improved Water Resistance	2-wire	—	24 ± 10%	—	5 to 20	T2WLH□	T2WLV□	*3
	2-Color for AC Magnetic Field		—		—		T2YD□	–	*4
			—		—		T2YDT□	–	
	1-Color Off-Delay Type		—	10 to 30	—	5 to 20 *2	T2JH□	T2JV□	
	1-Color Flexible Lead Wire Type		—		—		T2HR3□	T2VR3□	
Reed	1-Color	2-wire	110	12/24	7 to 20	5 to 50	T0H□	T0V□	
	No Indicator LED		110	5/12/24	20 or less	50 or less	T5H□	T5V□	
	1-Color		110/220	12/24	7 to 20/7 to 10	5 to 50	T8H□	T8V□	*5

*1: For "□" in the switch model number, enter the code selected from the "*Lead wire length, connector specification" table.
*2: The maximum load current value above, 20 mA, is at 25°C. If the switch operating ambient temperature is higher than 25°C, it will be lower than 20 mA. (At 60°C, it will be 5 to 10 mA.)
*3: This does not guarantee the water resistance of the cylinder. When using in a water-resistant environment, use of an improved water resistance cylinder is recommended.
*4: AC magnetic field resistant switches cannot be mounted on ø12, ø16.
*5: T8□ switches cannot be mounted on ø12 to ø32.
*6: Switches other than the above switch model numbers are also available. (Custom products) For details, refer to P. 869.

*Lead wire length, connector specification

Code	Contents
Blank	1 m (Standard)
3	3 m (Option)
5	5 m (Option)
W	M8 Connector, 1PIN (+) 4PIN (-) Lead Wire 0.3 m

*7

*7: Only T2WLH, T2WLV can be selected.

Example) Lead wire length
1 m T0H
3 m T0H3
5 m T0H5

❻Number of Switches

Code	Contents
R	With 1 pc on rod side
H	With 1 pc on head side
D	With 2 pcs

❼Option

*1

Code	Contents	
Blank	Rod end female thread	
N	Rod end male thread	
M	Piston Rod Material (Stainless Steel)	

*1: The option code "N" needs to be indicated for both S1 and S2 sides, but for other option codes, only the S2 side notation is required.

❽Accessories

Code	Contents	
I	Single Knuckle	
I2	Single Knuckle (Compact type)	
Y	Double Knuckle (Pin and retaining ring included)	
Y2	Double Knuckle (Compact type) (Pins and retaining rings included)	

*1: Selectable when rod end male thread "N" is selected.
*2: When selecting accessories, 2 pcs. will be included. If "IY" is selected, 1 pc. of each will be included.

*For combination of variations and options, refer to P. 356 to 361.

About Custom Product Specifications

For details, refer to P. 690 to 694.

Code	Contents
-XP5	Knuckle Pin/Clevis Pin Split Pin
-XP7	Knuckle fixed by pin driving
-XP8	Knuckle pin/clevis pin split pin specification, knuckle fixed by pin driving
-T2	Fluorine Packing Type
-A2	With 2 Rod Nuts
-R1	With spigot joint
Rod End Shape Modification	Refer to Ending 11.

Model No. Example)
SSD-B-.....-XP5

Rechargeable Battery Compatible Specification (Catalog No. CC-1226AA)

●Structure usable in secondary battery manufacturing processes

SSD-B-.....-P4*

*Please contact us for details.

Switch Single Unit Model No. Notation Method

SW-T0H
5
Switch Model No.

Specifications

Item	SSD-B / SSD-BL (with switch)									
Bore size mm	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation method	Double Acting, Back-to-Back Type									
Operating Fluid	Compressed Air									
Max. Operating Pressure MPa	1.0									
Min. Operating Pressure MPa	0.1							0.05		
Proof pressure MPa	1.6									
Ambient Temperature °C	-10 to 60 (No freezing)									
Port Size	M5				Rc1/8		Rc1/4		Rc3/8	
Stroke tolerance mm	$S_1=^{+1.0}_{0}$							$S_2=^{+1.0}_{0}$		
Operating Piston Speed mm/s	50 to 500							50 to 300		
Cushion	None									
Lubrication	Not Required (When lubricating, use Turbine Oil ISO VG32)									
Allowable absorbed energy J	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12	0.27	0.56

Stroke

Stroke (mm)		Applicable Bore									
		ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Standard Stroke	5	●	●	●	●	●	●	●	●	●	●
	10	●	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●			
	20	●	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●			
	30	●	●	●	●	●	●	●	●	●	●
	40				●	●	●	●	●	●	●
	50				●	●	●	●	●	●	●
Minimum Stroke (mm) *1		1									
Maximum Stroke (mm)		30			50						
Intermediate Stroke *2		Every 1 mm									

***1: Products less than 5 mm with a 1-color indicator switch, and products less than 10 mm with a 2-color indicator, off-delay type, for AC magnetic field, or with T1□ or T8□ switches cannot be manufactured.**
For the number of switches that can be mounted and the minimum stroke, refer to the table below.

*2: The overall length dimension for intermediate stroke is the same as the standard stroke above it.

Number of Switches Mounted and Min. Stroke (mm)

Switch Model No.	T□		T2WL	
Number of Switches / Bore Size (mm)	1	2	1	2
ø12	5	5	20	20
ø16	5	5	20	20
ø20	5	5	20	20
ø25	5	5	20	20
ø32	5	5	20	20
ø40	5	5	15	15
ø50	5	5	15	15
ø63	5	5	10	15
ø80	5	5	10	15
ø100	5	5	10	15

Note: Less than 10mm with 2-color display, off-delay, AC magnetic field proof, T1□, T8□ switches is not available.

Cylinder Weight Table (Weight with switch is when 2 cylinder switches are included)

(Unit: g)

Stroke (mm) / Bore Size (mm)	5		10		15		20		25		30		40		50	
	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch
ø12	84	188	102	188	122	208	140	226	160	246	178	264	-	-	-	-
ø16	108	224	132	224	154	246	178	270	202	294	226	318	-	-	-	-
ø20	160	278	188	346	218	376	248	406	276	434	306	464	-	-	-	-
ø25	212	402	246	436	282	472	318	508	354	544	388	578	460	650	530	720
ø32	282	518	330	566	378	614	426	662	472	708	520	756	616	852	710	946
ø40	404	698	462	756	518	812	578	870	634	928	690	984	804	1098	918	1212
ø50	682	1086	774	1178	866	1270	958	1362	1050	1454	1144	1548	1328	1732	1512	1916
ø63	1044	1626	1166	1748	-	-	1410	1992	-	-	1654	2236	1900	2482	2144	2726
ø80	1920	2778	2110	2968	-	-	2488	3348	-	-	2868	3730	3252	4114	3634	4500
ø100	2908	4074	3152	4320	-	-	3640	4810	-	-	4132	5302	4622	5796	5118	6292

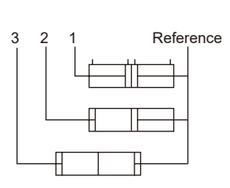
Theoretical Thrust Table

(Unit: N)

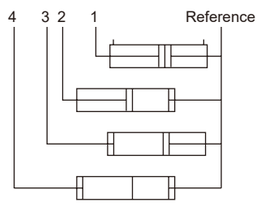
Bore size (mm)	Operating Direction	Operating Pressure MPa											
		0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø12	Push	-	11.3	17.0	22.6	33.9	45.2	56.5	67.9	79.2	90.5	1.02×10^2	1.13×10^2
	Pull	-	8.48	12.7	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
ø16	Push	-	20.1	30.2	40.2	60.3	80.4	1.01×10^2	1.21×10^2	1.41×10^2	1.61×10^2	1.81×10^2	2.01×10^2
	Pull	-	15.1	22.6	30.2	45.2	60.3	75.4	90.5	1.06×10^2	1.21×10^2	1.36×10^2	1.51×10^2
ø20	Push	-	31.4	47.1	62.8	94.2	1.26×10^2	1.57×10^2	1.88×10^2	2.20×10^2	2.51×10^2	2.83×10^2	3.14×10^2
	Pull	-	23.6	35.3	47.1	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2	1.88×10^2	2.12×10^2	2.36×10^2
ø25	Push	-	49.1	73.6	98.2	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2	3.93×10^2	4.42×10^2	4.91×10^2
	Pull	-	37.8	56.7	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
ø32	Push	-	80.4	1.21×10^2	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2	6.43×10^2	7.24×10^2	8.04×10^2
	Pull	-	60.3	90.5	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
ø40	Push	-	1.26×10^2	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	-	1.06×10^2	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push	-	1.96×10^2	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	-	1.65×10^2	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Push	1.56×10^2	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	1.40×10^2	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
ø80	Push	2.51×10^2	5.03×10^2	7.54×10^2	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3	4.02×10^3	4.52×10^3	5.03×10^3
	Pull	2.27×10^2	4.54×10^2	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
ø100	Push	3.93×10^2	7.85×10^2	1.18×10^3	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3	6.28×10^3	7.07×10^3	7.85×10^3
	Pull	3.57×10^2	7.15×10^2	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3

SSD-B Usage Example

When combining same strokes. 3 positions can be taken.

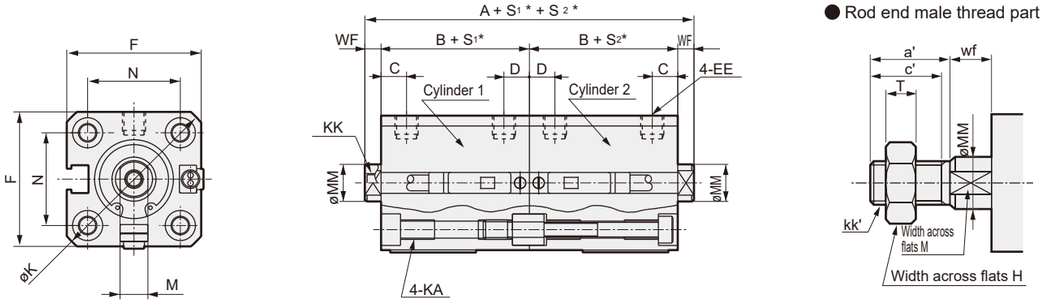


When combining different strokes. 4 positions can be taken.



Outline dimension drawing (bore size: ø12, ø16)

● SSD-B(L) -12/16



*: S1 = Stroke of Cylinder 1, S2 = Stroke of Cylinder 2

Code / Bore Size (mm)	Dimension with switch A *1	Dimension with switch B *1	Dimension without switch A *1	Dimension without switch B *1	C	D	EE	F	J	K	KA	KK	M	MM	N	WF
ø12	51	22	41	17	5.5	5.5	M5	25	6.5 Counterbore depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
ø16	51	22	41	17	5.5	5.5	M5	29	6.5 Counterbore depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5

*1: When calculating A + S 1 + S 2, B + S 1, and B + S 2 dimensions for intermediate strokes, do not use the intermediate stroke values for the strokes; instead, use the values of the standard strokes above them, respectively.
(Example) For an intermediate stroke of 7 mm, enter the standard stroke of 10 mm for calculation.

*2: In the outline dimension table above, if the stroke S1 or S2 of ø12 or ø16 with a switch is 5 mm, then (B+S1), (B+S2), and (A+S1+S2) are as shown in the table below.

Code / Bore Size	Condition	B+S1	B+S2	A+S1+S2
ø12 ø16	When S 1 = 5	32	22+S2	61+S2
	When S 2 = 5	22+S1	32	61+S1
	When S 1 = S 2 = 5	32	32	71

The S1 and S2 dimensions for intermediate strokes are the same as the standard strokes above them.

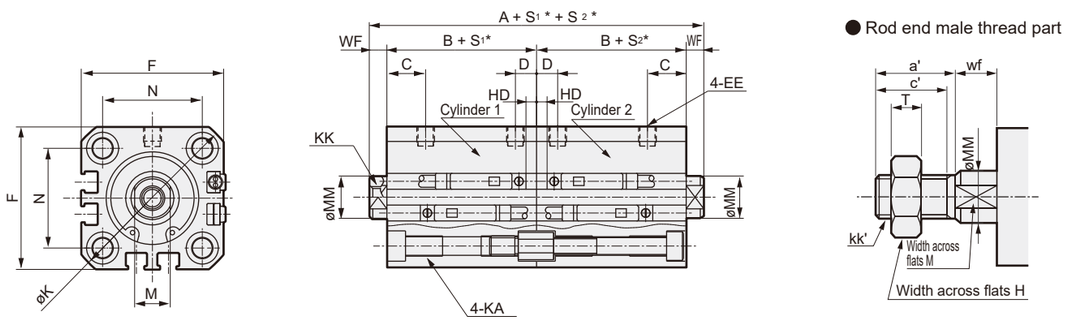
***3: For dimensions with each switch, refer to P. 674 to 681.**
***4: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**

● Rod end male thread part dimension table

Code / Bore Size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5

Outline dimension drawing (bore size: ø20, ø25)

● SSD-B (L)-20/25



*: S1 = Stroke of Cylinder 1, S2 = Stroke of Cylinder 2

Code / Bore Size (mm)	Dimension with switch A *1	Dimension with switch B *1	Dimension without switch A *1	Dimension without switch B *1	C	D	EE	F	J	K	KA	KK	M	MM	N	WF
ø20	68	29.5	48	19.5	8	5.5	M5	36	9 Counterbore depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
ø25	75	32.5	55	22.5	11	6	M5	40	9 Counterbore depth 5.5	51	M6 depth 11	M6 Depth 12	10	12	28	5

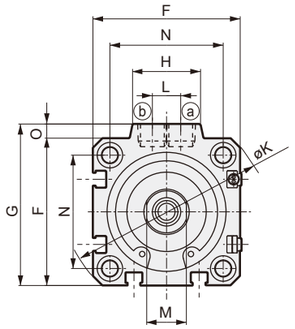
*1: When calculating A + S 1 + S 2, B + S 1, and B + S 2 dimensions for intermediate strokes, do not use the intermediate stroke value for the stroke; instead, use the value of the standard stroke above it.
(Example) For an intermediate stroke of 7 mm, enter the standard stroke of 10 mm for calculation.
***2: For dimensions with each switch, refer to P. 674 to P. 681.**
***3: For outline dimension drawings of individual accessories, refer to P. 379 to P. 381.**

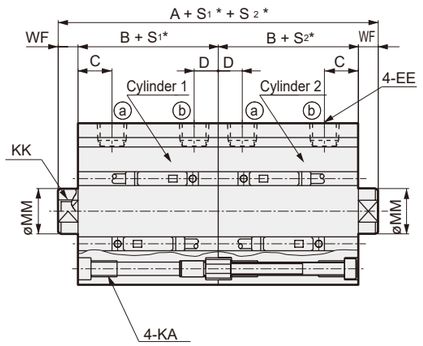
● Rod end male thread part dimension table

Code / Bore Size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10 × 1.25	10	12	6	5

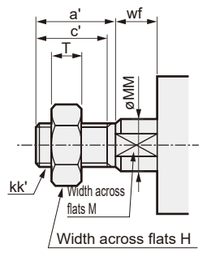
Outline Dimension Drawing (Bore size: ø32 to ø100)

●SSD-B (L)-32 to 100

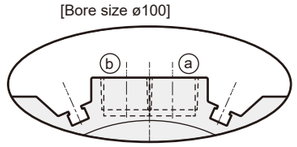




● Rod end male thread part



[Bore size ø100]



*Only ø100 has a switch groove on the port surface

*: S1 = Stroke of Cylinder 1, S2 = Stroke of Cylinder 2

Code / Bore Size (mm)	Dimension with switch A *1	Dimension with switch B *1	Dimension without switch A *1	Dimension without switch B *1	Common dimension C	D	EE	F	FB	G	H	J	K
ø32	80	33	60	23	8	8	Rc1/8	45	20.5	49.5	24	9 Counterbore depth 5.5	60
ø40	93	39.5	73	29.5	12	8.5	Rc1/8	52	27.5	57	24	9 Counterbore depth 5.5	69
ø50	97	40.5	77	30.5	10.5	10.5	Rc1/4	64	28.5	71	33	11 Counterbore Depth 6.5	86
ø63	108	46	88	36	13	11	Rc1/4	77	28.5	84	33	14 Counterbore depth 9	103
ø80	127	53.5	107	43.5	16	13	Rc3/8	98	28.5	104	38	17.5 Counterbore depth 11	132
ø100	150	63	130	53	23	15	Rc3/8	117	28.5	123.5	38	17.5 Counterbore depth 11	156

Code / Bore Size (mm)	Common dimension KA	KK	L	M	MM	N	O	WF
ø32	M6 depth 11	M8 depth 13	10	14	16	34	4.5	7
ø40	M6 depth 11	M8 depth 13	10	14	16	40	5	7
ø50	M8 depth 13	M10 depth 15	15	17	20	50	7	8
ø63	M10 depth 25	M10 depth 15	15	17	20	60	7	8
ø80	M12 depth 28	M16 depth 21	15	22	25	77	6	10
ø100	M12 depth 28	M20 depth 27	15	27	30	94	6.5	12

*1: When calculating A + S1 + S2, B + S1, and B + S2 dimensions for intermediate strokes, do not use the intermediate stroke value for the stroke; instead, use the value of the standard stroke above it.
(Example) For an intermediate stroke of 7 mm, enter the standard stroke of 10 mm for calculation.

***2: For dimensions with each switch, refer to P. 674 to P. 681.**
***3: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**

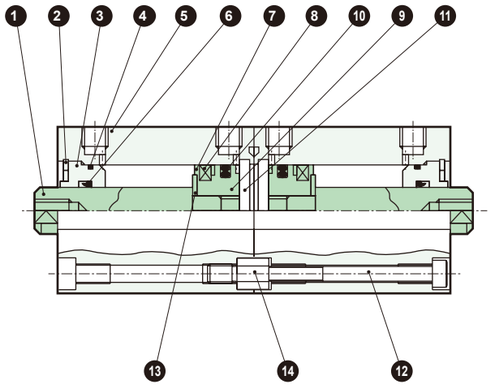
● Rod end male thread part dimension table

Code / Bore Size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14 × 1.5	14	16	8	5
ø40	23.5	20.5	22	M14 × 1.5	14	16	8	5
ø50	28.5	26	27	M18 × 1.5	17	20	11	5
ø63	28.5	26	27	M18 × 1.5	17	20	11	5
ø80	35.5	32.5	32	M22 × 1.5	22	25	13	8
ø100	35.5	32.5	41	M26 × 1.5	27	30	16	8

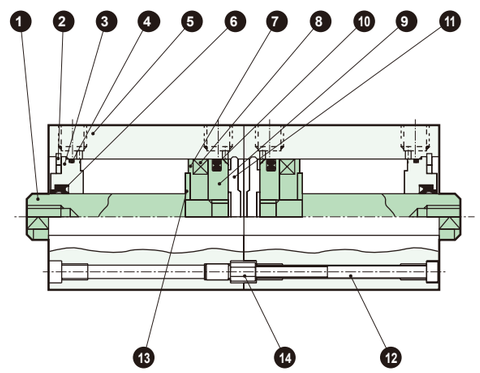
MEMO

Internal Structure Diagram/Material (Bore size: ø12 to ø25)

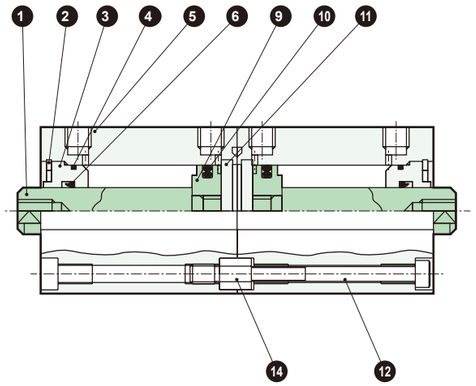
●SSD-BL-12 to 25 (Double acting, Back-to-back type, With switch)



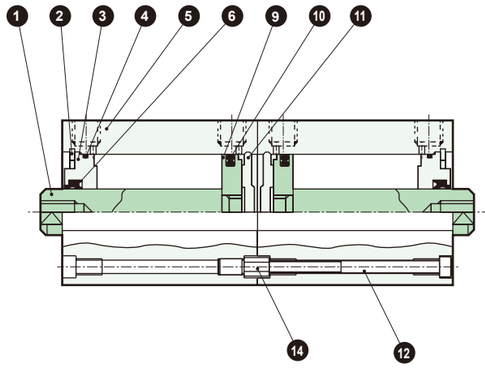
●SSD-BL-32 to 50 (Double acting, Back-to-back type, With switch)



●SSD-B-12 to 25 (Double acting, Back-to-back type)



●SSD-B-32 to 50 (Double acting, Back-to-back type)

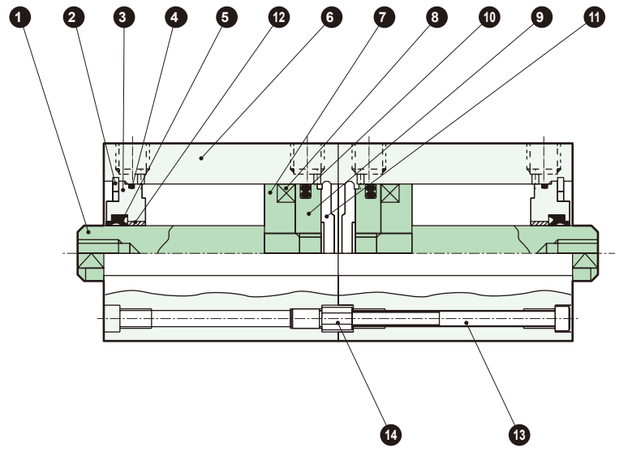


Part No.	Part Name	Material	Remarks
1	Piston Rod	ø12 to ø25: Stainless steel ø32 to ø50: Steel	Industrial Hard Chrome Plating
2	C-type retaining ring	Steel	Zinc phosphate
3	Rod Metal	Aluminum Alloy	Alumite
4	Rod metal gasket	Nitrile Rubber	
5	Cylinder Body	Aluminum Alloy	Hard Anodized
6	Rod Packing	Nitrile Rubber	
7	Spacer	ø12: Aluminum alloy ø16 to ø50: Special resin	ø12: Chromate
8	Magnet	Plastic	
9	Piston	Aluminum Alloy	Chromate
10	Piston Packing	Nitrile Rubber	
11	Cover	ø12 to ø25: Stainless steel ø32 to ø50: Aluminum alloy	ø32 to ø50: Alumite
12	Hexagon Socket Head Cap Screw	Alloy Steel	Black Oxide
13	Spacer washer	Stainless Steel	
14	Connector	Steel	Zinc Chromate

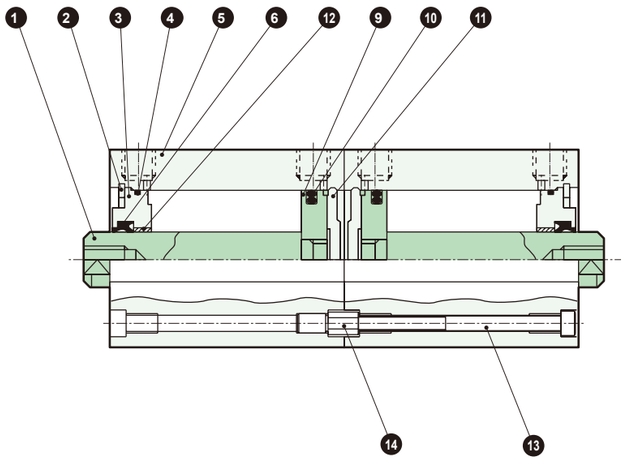
For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Internal Structure Diagram/Material (Bore size: ø63 to ø100)

●SSD-BL-63 to 100 (Double acting, Back-to-back type, With switch)



●SSD-B-63 to 100 (Double acting, Back-to-back type)



Part No.	Part Name	Material	Remarks
1	Piston Rod	ø12 to ø25: Stainless steel ø32 to ø50: Steel	Industrial Hard Chrome Plating
2	C-type retaining ring	Steel	Zinc phosphate
3	Rod Metal	Aluminum Alloy	Alumite
4	Rod metal gasket	Nitrile Rubber	
5	Cylinder Body	Aluminum Alloy	Hard Anodized
6	Rod Packing	Nitrile Rubber	
7	Spacer	Aluminum Alloy	Chromate
8	Magnet	Plastic	
9	Piston	Aluminum Alloy	Chromate
10	Piston Packing	Nitrile Rubber	
11	Cover	Aluminum Alloy	Alumite
12	Bushing	Bearing Alloy	
13	Hexagon Socket Head Cap Screw	Alloy Steel	Black Oxide
14	Connector	Steel	Zinc Chromate

For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

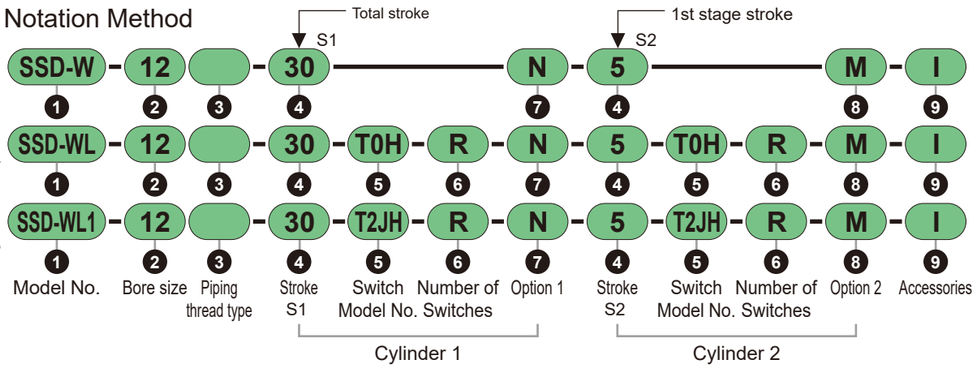
Compact Cylinder Double Acting, Tandem Type

SSD-W Series

● Bore size: ø12, ø16, ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100

RoHS

Model No. Notation Method



Note: As two cylinders are fastened at four positions from cylinder 2 (head side), they cannot be mounted at the head side. Head-side mounting is supported by custom order, so please request separately.

❶Model No.

Code	Content
SSD-W	Double Acting, Two-Stage Type
SSD-WL	Double Acting, Tandem Type with Switch
SSD-WL1	Double acting/two-stage, off-delay, with T1□ switch (ø12, ø16)

❷Bore Size (mm)

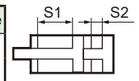
Code	Content	Code	Content
12	ø12	40	ø40
16	ø16	50	ø50
20	ø20	63	ø63
25	ø25	80	ø80
32	ø32	100	ø100

❸Piping thread type

Code	Content
Blank	M5 thread (ø12 to ø25)
	Rc thread (ø32 to ø100)
NN	NPT thread (Custom product) (ø32 to ø100)
GN	G thread (Custom product) (ø32 to ø100)

❹Stroke (mm)

Bore size	Stroke	Intermediate Stroke
ø12 to ø20	1 to 30	Every 1 mm
ø25 to ø50	1 to 50	
ø63 to ø100	1 to 50	



Note: For details on stroke, please refer to P. 518.

❺Switch Model No.

For switch details, please refer to P. 869. Switches are included to the product and shipped.

Contact	Indicator LED Special Function	Wiring (Output)	Load Voltage (V) AC	Load Voltage (V) DC	Load Current (mA) AC	Load Current (mA) DC	Lead Wire *1 Straight	Lead Wire *1 L-shape	
Solid State	1-Color	2-wire	85 to 265	—	5 to 100	—	T1H□	T1V□	
			—	10 to 30	—	5 to 20 *2	T2H□	T2V□	
		3-wire (NPN)	—	30 or less	—	100 or less	T3H□	T3V□	
		3-wire (PNP)	—		—		T3PH□	T3PV□	
	2-Color	2-wire	—	24 ± 10%	—	5 to 20	T2WH□	T2WV□	
		3-wire (NPN)	—	30 or less	—	50 or less	T3WH□	T3WV□	
	2-Color Improved Water Resistance	2-wire	—	24 ± 10%	—	5 to 20	T2WLH□	T2WLV□	*3
	2-Color for AC Magnetic Field		—		—		T2YD□	–	*4
			—		—		T2YDT□	–	
	1-Color Off-Delay Type		—	10 to 30	—	5 to 20 *2	T2JH□	T2JV□	
	1-Color Flexible Lead Wire Type		—		—		T2HR3□	T2VR3□	
Reed	1-Color	2-wire	110	12/24	7 to 20	5 to 50	T0H□	T0V□	
	No Indicator LED		110	5/12/24	20 or less	50 or less	T5H□	T5V□	
	1-Color		110/220	12/24	7 to 20 / 7 to 10	5 to 50	T8H□	T8V□	*5

*Lead wire length, connector specification

Code	Content
Blank	1 m (Standard)
3	3 m (Option)
5	5 m (Option)
W	M8 Connector, 1PIN (+) 4PIN (-) Lead Wire 0.3 m

*7

*7: Only T2WLH, T2WLV can be selected.

Example) Lead wire length
1 m T0H
3 m T0H3
5 m T0H5

*1: For "□" in the switch model number, enter the code selected from the "*Lead wire length, connector specification" table.
*2: The maximum load current value above, 20 mA, is at 25°C. If the switch operating ambient temperature is higher than 25°C, it will be lower than 20 mA. (At 60°C, it will be 5 to 10 mA.)
*3: This does not guarantee the water resistance of the cylinder. When using in a water-resistant environment, use of an improved water resistance cylinder is recommended.
*4: AC magnetic field resistant switches cannot be mounted on ø12, ø16.
*5: T8□ switches cannot be mounted on ø12 to ø32.
*6: Switches other than the above switch model numbers are also available. (Custom products) For details, refer to P. 869.

❻Number of Switches

Code	Content
R	With 1 pc on rod side
H	With 1 pc on head side
D	With 2 pcs

❼Option 1

Code	Content	
Blank	Rod end female thread	
N	Rod end male thread	

❽Option 2

Code	Content
M	Piston Rod Material (Stainless Steel)

Note: The piston rod material for ø12 to ø25 is stainless steel as standard. C-type retaining ring changes from steel to stainless steel. The nut material for rod end male thread type will be stainless steel.

❾Accessories

Code	Content	
I	Single Knuckle	
I2	Single Knuckle (compact)	
Y	Double Knuckle (pin and retaining ring included)	
Y2	Double knuckle (compact) (pin and snap ring included)	

*1: Selectable when rod end male thread "N" is selected.
*2: "I", "I2", "Y", "Y2" cannot be selected at the same time.

*For combination of variations and options, refer to P. 356 to 361.

About Custom Product Specifications

For details, refer to P. 690 to 694.

Code	Content
-XP5	Knuckle Pin/Clevis Pin Split Pin
-XP7	Knuckle fixed by pin driving
-XP8	Knuckle pin/clevis pin split pin specification, knuckle fixed by pin driving
-T2	Fluorine Packing Type
-A2	With 2 Rod Nuts
-R1, R2	With spigot joint
Rod End Shape Modification	Refer to Ending 11.

Model No. Example)
SSD-W – ..... – XP5

Rechargeable Battery Compatible Specification (Catalog No. CC-1226AA)

●Structure usable in secondary battery manufacturing processes

SSD-W – ..... – P4*

*Please contact us for details.

Switch Single Unit Model No. Notation Method

SW – T0H
5
Switch Model No.

Specifications

Item	SSD-W SSD-WL (with switch)									
Bore size mm	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation method	Double Acting, Two-Stage Type									
Operating Fluid	Compressed Air									
Max. Operating Pressure MPa	1.0 (Note)									
Min. Operating Pressure MPa	0.15							0.1		
Proof pressure MPa	1.6									
Ambient Temperature °C	-10 to 60 (No freezing)									
Port Size	M5				Rc1/8		Rc1/4		Rc3/8	
Stroke tolerance mm	S_1= +1.0 0							S_2= 0 -1.5		
Operating Piston Speed mm/s	50 to 500							50 to 300		
Cushion	None									
Lubrication	Not Required (When lubricating, use Turbine Oil ISO VG32)									
Allowable absorbed energy J	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12	0.27	0.56

Note: If S1 and S2 are the same, use with a maximum operating pressure of 0.5 MPa.

Stroke

Stroke (mm)		Applicable Bore									
		ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Standard Stroke	5	●	●	●	●	●	●	●	●	●	●
	10	●	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●			
	20	●	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●			
	30	●	●	●	●	●	●	●	●	●	●
	40				●	●	●	●	●	●	●
	50				●	●	●	●	●	●	●
Minimum Stroke (mm) *1		1									
Maximum Stroke (mm)		30			50						
Intermediate Stroke *2		Every 1 mm									

***1: Products less than 5 mm with a 1-color indicator switch, and products less than 10 mm with a 2-color indicator, off-delay type, for AC magnetic field, or with T1□ or T8□ switches cannot be manufactured. For the number of switches that can be mounted and the minimum stroke, refer to the table below.**

*2: The overall length dimension for intermediate stroke is the same as the standard stroke above it.

Number of Switches Mounted and Min. Stroke (mm)

Switch Model No.	T□		T2WL	
Number of Switches / Bore Size (mm)	1	2	1	2
ø12	5	5	20	20
ø16	5	5	20	20
ø20	5	5	20	20
ø25	5	5	20	20
ø32	5	5	20	20
ø40	5	5	15	15
ø50	5	5	15	15
ø63	5	5	10	15
ø80	5	5	10	15
ø100	5	5	10	15

Note: Less than 10mm with 2-color display, off-delay, AC magnetic field proof, T1□, T8□ switches is not available.

Cylinder Weight Table (Weight with switch is when 2 cylinder switches are included)

(Unit: g)

Stroke (mm) / Bore Size (mm)	5		10		15		20		25		30		40		50	
	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch
ø12	88	191	104	191	122	210	138	227	156	246	163	267	-	-	-	-
ø16	122	237	144	237	164	258	186	281	208	304	230	324	-	-	-	-
ø20	194	305	218	372	249	401	280	430	309	457	340	486	-	-	-	-
ø25	234	416	264	446	296	478	328	510	360	542	391	572	454	636	516	698
ø32	306	535	374	602	441	670	510	738	575	804	644	872	782	1006	919	1139
ø40	466	752	520	806	572	858	626	912	680	966	732	1028	838	1124	944	1230
ø50	757	1145	849	1237	941	1328	1033	1422	1125	1512	1218	1605	1402	1789	1589	1977
ø63	1279	1684	1409	2052	-	-	1669	2312	-	-	1929	2572	2191	2834	2451	3094
ø80	2332	2675	2536	2879	-	-	2942	3808	-	-	3348	4214	3756	4632	4162	5038
ø100	3633	4827	3916	5105	-	-	4480	5629	-	-	5046	6225	5610	6779	6176	7335

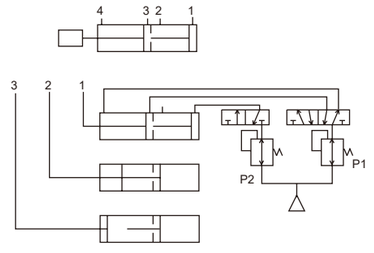
SSD-W Usage Example

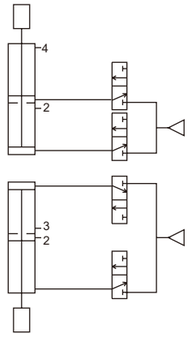
Set the pressure to P2 > P1.

● First stage push
With port 4 pressurized, pressurize port 1.

● Second stage push
With port 1 pressurized, pressurize port 3.

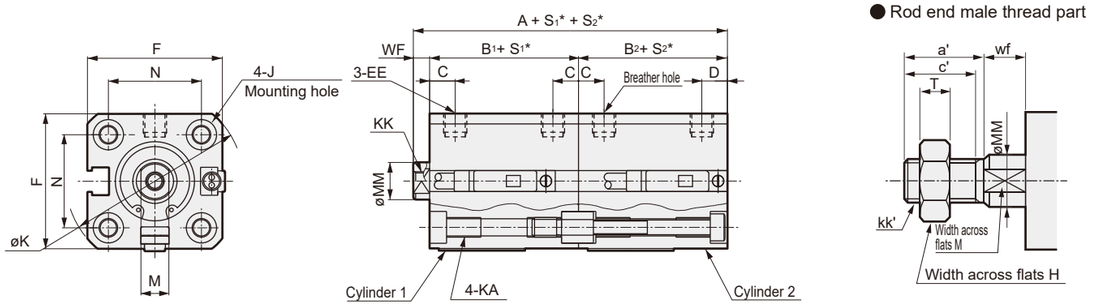
Depending on the direction of the load, P2 may not equal P1. In the case of single-acting use due to natural fall of the load, ports 2 and 4 in the right diagram, and ports 2 and 3 in the right diagram, become breather ports. Basically, Port 2, which does not require piping, has a plug with a filter.





Outline dimension drawing (bore size: ø12, ø16)

● SSD-W (L)-12/16



● Rod end male thread part

*: S1 = Stroke of Cylinder 1, S2 = Stroke of Cylinder 2

Code / Bore Size (mm)	Dimension with switch A *1	B1 *1	B2 *1	Dimension without switch A *1	B1 *1	B2 *1	C	D	EE	F	J	K	KA	KK	M	MM	N	WF
ø12	52.5	27	22	42.5	22	17	5.5	5.5	M5	25	6.5 Counterbore depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
ø16	52.5	27	22	42.5	22	17	5.5	5.5	M5	29	6.5 Counterbore depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5

*1: When calculating A + S_1 + S_2, B_1 + S_1, and B_2 + S_2 dimensions for intermediate strokes, do not use the intermediate stroke value for the stroke; instead, use the value of the standard stroke above it.
(Example) For an intermediate stroke of 7 mm, enter the standard stroke of 10 mm for calculation.
*2: For ø12 and ø16 with a switch, if stroke S_2 is 5 mm, (B_2 + S_2) and (A + S_1 + S_2) are as shown in the table below.

Bore size	A+S_1+S_2	B_1 +S_1	B_2 +S_2
ø12	62.5+S_1	27+S_1	32
ø16	62.5+S_1	27+S_1	32

S_1 and S_2 for intermediate strokes are the same dimensions as the standard stroke above them.

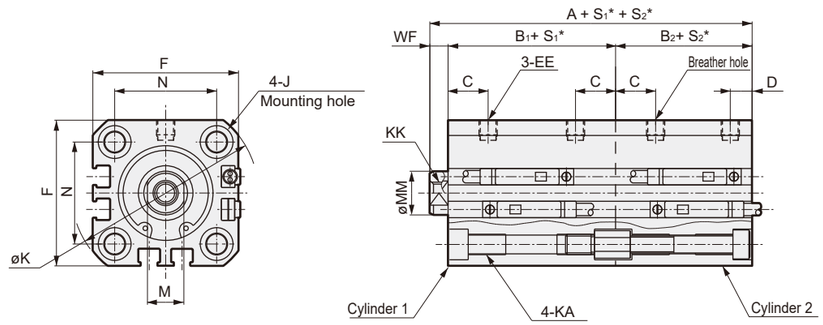
***3: For dimensions with each switch, refer to P. 674 to P. 681.**
***4: For outline dimension drawings of individual accessories, refer to P. 379 to P. 381.**

● Rod end male thread part dimension table

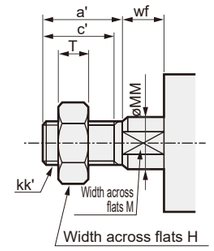
Code / Bore Size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5

Outline dimension drawing (bore size: ø20, ø25)

● SSD-W (L)-20/25



● Rod end male thread part



*: S1 = Stroke of Cylinder 1, S2 = Stroke of Cylinder 2

Code / Bore Size (mm)	Dimension with switch A *1	B1 *1	B2 *1	Dimension without switch A *1	B1 *1	B2 *1	C	D	EE	F	J	K	KA	KK	M	MM	N	WF
ø20	70	36	29.5	50	26	19.5	8	5.5	M5	36	9 Counterbore depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
ø25	78.5	41	32.5	58.5	31	22.5	11	6	M5	40	9 Counterbore depth 5.5	51	M6 depth 11	M6 Depth 12	10	12	28	5

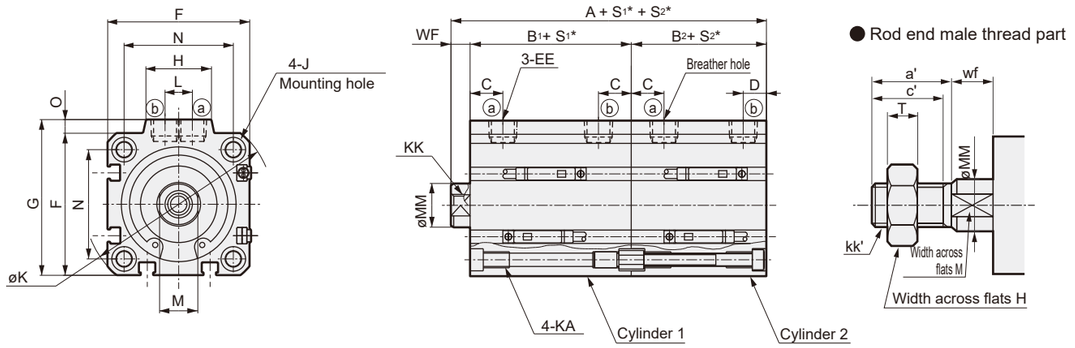
*1: When calculating A + S_1 + S_2, B_1 + S_1, and B_2 + S_2 dimensions for intermediate strokes, do not use the intermediate stroke value for the stroke; instead, use the value of the standard stroke above it.
(Example) For an intermediate stroke of 7 mm, enter the standard stroke of 10 mm for calculation.
***2: For dimensions with each switch, refer to P. 674 to P. 681.**
***3: For outline dimension drawings of individual accessories, refer to P. 379 to P. 381.**

● Rod end male thread part dimension table

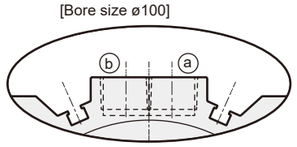
Code / Bore Size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10 × 1.25	10	12	6	5

Outline Dimension Drawing (Bore size: ø32 to ø100)

●SSD-W (L)-32 to 100



[Bore size ø100]



*Only ø100 has a switch groove on the port surface

*: S1 = Stroke of Cylinder 1, S2 = Stroke of Cylinder 2

Code / Bore Size (mm)	Dimension with switch A *1	Dimension with switch B1 *1	Dimension with switch B2 *1	Dimension without switch A *1	Dimension without switch B1 *1	Dimension without switch B2 *1	C	D	EE	F	G	H	J	K	KA	KK	L	M	MM	N	O	WF
ø32	80.5	40.5	33	60.5	30.5	23	8	8	Rc1/8	45	49.5	24	9 Counterbore depth 5.5	60	M6 depth 11	M8 depth 13	10	14	16	34	4.5	7
ø40	95.5	49	39.5	75.5	39	29.5	12	8.5	Rc1/8	52	57	24	9 Counterbore depth 5.5	69	M6 depth 11	M8 depth 13	10	14	16	40	5	7
ø50	97.5	49	40.5	77.5	39	30.5	10.5	10.5	Rc1/4	64	71	33	11 Counterbore Depth 6.5	86	M8 depth 13	M10 depth 15	15	17	20	50	7	8
ø63	105	51	46	85	41	36	13	11	Rc1/4	77	84	33	14 Counterbore depth 9	103	M10 depth 25	M10 depth 15	15	17	20	60	7	8
ø80	122	58.5	53.5	102	48.5	43.5	16	13	Rc3/8	98	104	38	17.5 Counterbore depth 11	132	M12 depth 28	M16 depth 21	15	22	25	77	6	10
ø100	143	68	53	123	58	53	23	15	Rc3/8	117	123.5	38	17.5 Counterbore depth 11	156	M12 depth 28	M20 depth 27	15	27	30	94	6.5	12

*1: When calculating A+S1+S2, B1+S1+B2+S2 dimensions for intermediate strokes, do not use the intermediate stroke value for the stroke; instead, use the value of the standard stroke above it for calculation.
(Example) For an intermediate stroke of 7 mm, enter the standard stroke of 10 mm for calculation.

***2: For dimensions with each switch, refer to P. 674 to P. 681.**

***3: For outline dimension drawings of individual accessories, refer to P. 379 to P. 381.**

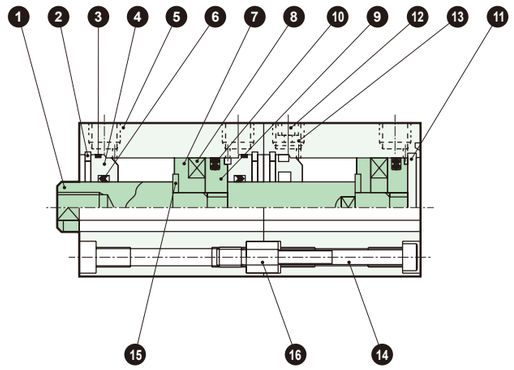
● Rod end male thread part dimension table

Code / Bore Size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14 × 1.5	14	16	8	5
ø40	23.5	20.5	22	M14 × 1.5	14	16	8	5
ø50	28.5	26	27	M18 × 1.5	17	20	11	5
ø63	28.5	26	27	M18 × 1.5	17	20	11	5
ø80	35.5	32.5	32	M22 × 1.5	22	25	13	8
ø100	35.5	32.5	41	M26 × 1.5	27	30	16	8

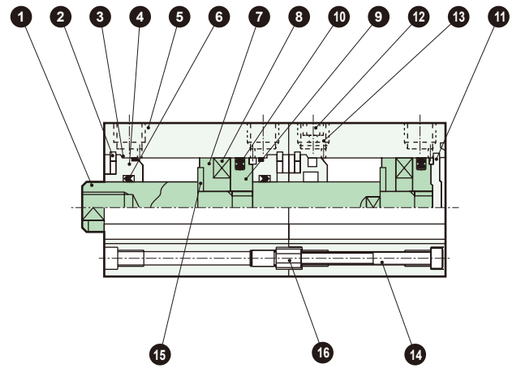
MEMO

Internal Structure Diagram/Material (Bore size: ø12 to ø25)

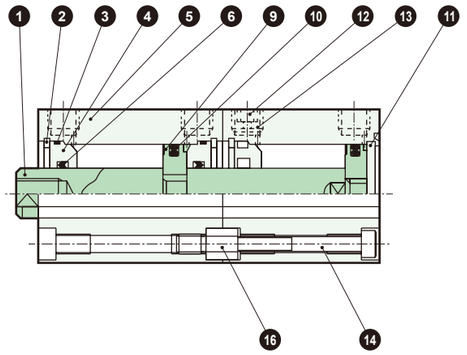
●SSD-WL-12 to 25 (Double acting, 2-stage type, With switch)



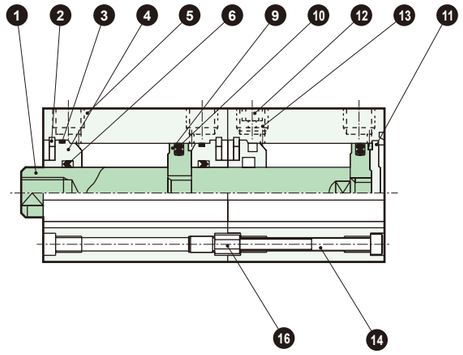
●SSD-WL-32 to 50 (Double acting, 2-stage type, With switch)



●SSD-W-12 to 25 (Double acting, 2-stage type)



●SSD-W-32 to 50 (Double acting, 2-stage type)



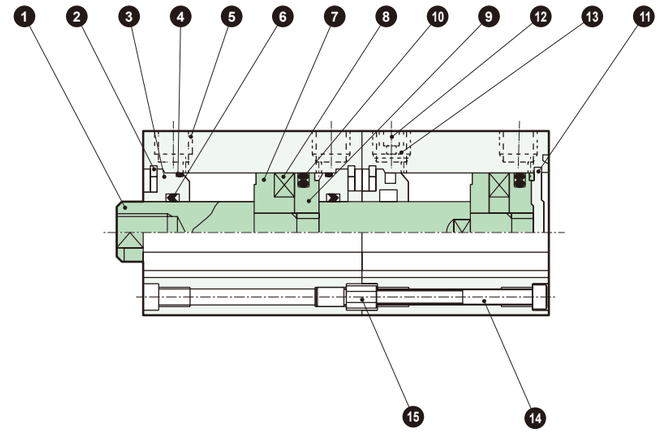
Part No.	Part Name	Material	Remarks
1	Piston Rod	ø12 to ø25: Stainless steel ø32 to ø50: Steel	ø16 to ø50: Industrial chrome plating
2	C-type retaining ring	Steel	Zinc phosphate
3	Rod Metal	Aluminum Alloy	Alumite
4	Rod metal gasket	Nitrile Rubber	
5	Cylinder Body	Aluminum Alloy	Hard Anodized
6	Rod Packing	Nitrile Rubber	
7	Spacer	ø12: Aluminum alloy ø16 to ø50: Special resin	ø12: Chromate
8	Magnet	Plastic	

Part No.	Part Name	Material	Remarks
9	Piston	Aluminum Alloy	Chromate
10	Piston Packing	Nitrile Rubber	
11	Cover	ø12 to ø25: Stainless steel ø32 to ø50: Aluminum alloy	ø32 to ø50: Alumite
12	Plug	Stainless Steel	
13	Stainless Steel Wire Mesh	Stainless Steel	
14	Hexagon Socket Head Cap Screw	Steel	Black Oxide
15	Spacer washer	Stainless Steel	
16	Connector	Steel	

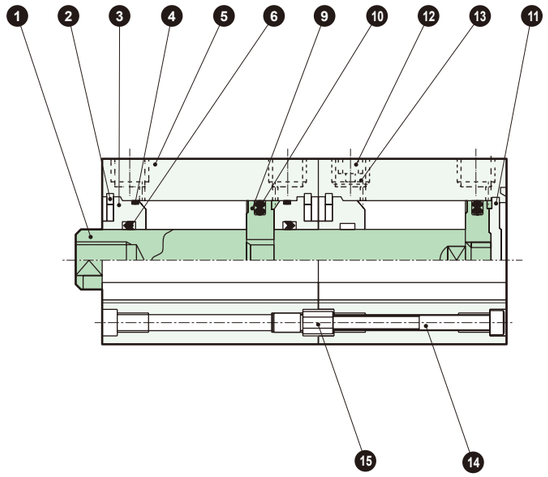
For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Internal Structure Diagram/Material (Bore size: ø63 to ø100)

●SSD-WL-63 to 100 (Double acting, 2-stage type, With switch)



●SSD-W-63 to 100 (Double acting, 2-stage type)



Part No.	Part Name	Material	Remarks
1	Piston Rod	Steel	Industrial Hard Chrome Plating
2	C-type retaining ring	Steel	Zinc phosphate
3	Rod Metal	Aluminum Alloy	Alumite
4	Rod Metal Gasket	Nitrile Rubber	
5	Cylinder Body	Aluminum Alloy	Hard Anodized
6	Rod Packing	Nitrile Rubber	
7	Spacer	Aluminum Alloy	Chromate

Part No.	Part Name	Material	Remarks
8	Magnet	Plastic	
9	Piston	Aluminum Alloy	Chromate
10	Piston Packing	Nitrile Rubber	
11	Cover	Aluminum Alloy	Alumite
12	Plug	Stainless Steel	
13	Stainless Steel Wire Mesh	Stainless Steel	
14	Hexagon Socket Head Cap Screw	Steel	Black Oxide
15	Connector	Steel	

For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Compact Cylinder Double Acting, Non-rotating Type

SSD-M Series

● Bore size: ø12, ø16, ø20, ø25, ø32, ø40, ø50, ø63

Circuit Diagram Symbol 

RoHS

Model No. Notation Method

Without Switch
(Without magnet for switch)

SSD-M – 12 – 5 – N – LB – I
1 2 3 4 7 8 9

With Switch
(Built-in magnet for switch)

SSD-ML – 12 – 5 – T0H – R – N – LB – I
1 2 3 4 5 6 7 8 9

Off-delay type with T1* switch
(ø12, ø16 only)

SSD-ML1 – 12 – 10 – T2JH – R – N – LB – I
1 2 3 4 5 6 7 8 9

1 Model No. 2 Bore size 3 Piping thread type 4 Stroke 5 Switch Model No. 6 Number of Switches 7 Option 8 Mounting bracket 9 Accessories

1 Model No.

Code	Content
SSD-M	Double Acting, Non-Rotating Type
SSD-ML	Double Acting, Non-rotating Type with Switch
SSD-ML1	Double acting, Non-rotating type, Off-delay type with T1□ switch (ø12, ø16)

2 Bore Size (mm)

Code	Content	Code	Content
12	ø12	32	ø32
16	ø16	40	ø40
20	ø20	50	ø50
25	ø25	63	ø63

3 Piping thread type

Code	Content
Blank	M5 thread (ø12 to ø25)
	Rc thread (ø32 to ø63)
NN	NPT thread (custom order) (ø32 to ø63)
GN	G thread (custom order) (ø32 to ø63)

4 Stroke (mm)

Bore size	Stroke	Intermediate Stroke
ø12 to ø20	1 to 30	Every 1 mm
ø25 to ø50	1 to 50	
ø63	1 to 50	

Note: For details on stroke, please refer to P. 528.

5 Switch Model No.

For switch details, please refer to P. 869. Switches are included to the product and shipped.

Contact	Indicator LED Special Function	Wiring (Output)	Load Voltage (V) AC	Load Voltage (V) DC	Load Current (mA) AC	Load Current (mA) DC	Lead Wire *1 Straight	Lead Wire *1 L-shape	
Solid State	1-Color	2-wire	85 to 265	—	5 to 100	—	T1H□	T1V□	
			—	10 to 30	—	5 to 20 *2	T2H□	T2V□	
		3-wire (NPN)	—	30 or less	—	100 or less	T3H□	T3V□	
		3-wire (PNP)	—		—		T3PH□	T3PV□	
	2-Color	2-wire	—	24 ± 10%	—	5 to 20	T2WH□	T2WV□	
		3-wire (NPN)	—	30 or less	—	50 or less	T3WH□	T3WV□	
	2-Color Improved Water Resistance	2-wire	—	24 ± 10%	—	5 to 20	T2WLH□	T2WLV□	*3
	2-Color for AC Magnetic Field		—		—		T2YD□	–	*4
			—		—		T2YDT□	–	
	1-Color Off-Delay Type		—	10 to 30	—	5 to 20 *2	T2JH□	T2JV□	
	1-Color Flexible Lead Wire Type		—		—		T2HR3□	T2VR3□	
Reed	1-Color	2-wire	110	12/24	7 to 20	5 to 50	T0H□	T0V□	
	No Indicator LED		110	5/12/24	20 or less	50 or less	T5H□	T5V□	
	1-Color		110/220	12/24	7 to 20 / 7 to 10	5 to 50	T8H□	T8V□	*5

*Lead wire length, connector specification

Code	Content
Blank	1 m (Standard)
3	3 m (Option)
5	5 m (Option)
W	M8 Connector, 1PIN (+), 4PIN (−) Lead Wire 0.3 m

*7

*7: Only T2WLH, T2WLV can be selected.

Example) Lead wire length
1 m T0H
3 m T0H3
5 m T0H5

*1: For "□" in the switch model number, enter the code selected from the "*Lead wire length, connector specification" table.
*2: The maximum load current value above, 20 mA, is at 25°C. If the switch operating ambient temperature is higher than 25°C, it will be lower than 20 mA. (At 60°C, it will be 5 to 10 mA.)
*3: This does not guarantee the water resistance of the cylinder. When using in a water-resistant environment, use of an improved water resistance cylinder is recommended.
*4: AC magnetic field resistant switches cannot be mounted on ø12, ø16.
*5: T8□ switches cannot be mounted on ø12 to ø32.
*6: Switches other than the above switch model numbers are also available. (Custom products) For details, refer to P. 869.

6 Number of Switches

Code	Content
R	With 1 pc on rod side
H	With 1 pc on head side
D	With 2 pcs

7 Option

Code	Content	
Blank	Rod end female thread	
N	Rod end male thread	
*1 M	Piston Rod Material (Stainless Steel)	

*1: The piston rod material for ø12 to ø25 is stainless steel as standard. C-type retaining ring changes from steel to stainless steel. The nut material for rod end male thread type will be stainless steel.

8 Mounting type

Mounting brackets are shipped included to the product.

Code	Content	
LB	Axial Foot Type	
*1 LB2	Axial foot type (Compact type)	
*1 FA	Rod Side Flange Type	
FB	Head Side Flange Type	
CB	Double Clevis Type (Pin and Retaining Ring Attached)	
CB2	Clevis bracket (compact) (pin and snap ring attached)	

*1: When LB2 or FA is selected, the piston rod protrusion dimension WF differs from the standard. See P. 531, 532, 535, and 536 for outline dimension drawings. Also, the model number specifying the protrusion length will be printed at the end of the model number on the nameplate included to the main body. For cylinder model numbers when ordering cylinders and LB2/FA brackets separately, please contact us.

9 Accessories

Code	Content	
I	Single Knuckle	
I2	Single Knuckle (compact)	
Y	Double Knuckle (pin and retaining ring included)	
Y2	Double knuckle (compact) (pin and snap ring included)	

*1: Selectable when rod end male thread "N" is selected.
*2: "I", "I2", "Y", "Y2" cannot be selected at the same time.

*For combination of variations and options, refer to P. 356 to 361.

About Custom Product Specifications

For details, refer to P. 690 to 694.

Code	Content
-XP5	Knuckle Pin/Clevis Pin Split Pin
-XP7	Knuckle fixed by pin driving
-XP8	Knuckle pin/clevis pin split pin specification, knuckle fixed by pin driving
-A2	With 2 Rod Nuts
-R1, R2	With spigot joint
Rod End Shape Modification	Refer to Ending 11.

Model No. Example)

SSD-M – ..... – XP5

Switch Single Unit Model No. Notation Method

SW – T0H
5
Switch Model No.

Specifications

Item		SSD-M SSD-ML (with switch)							
Bore size	mm	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63
Actuation method		Double Acting Type							
Operating Fluid		Compressed Air							
Max. Operating Pressure	MPa	1.0							
Min. Operating Pressure	MPa	0.1							0.05
Proof pressure	MPa	1.6							
Ambient Temperature	°C	-10 to 60 (No freezing)							
Port Size		M5				Rc1/8		Rc1/4	
Stroke tolerance	mm	+1.0 0							
Operating Piston Speed	mm/s	50 to 500							50 to 300
Cushion		None							
Lubrication		Not Required (When lubricating, use Turbine Oil ISO VG32)							
Non-rotation accuracy		±2°		±1.5°			±1°		
Allowable Absorbed Energy	J	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12

Stroke

Stroke (mm)		Applicable Bore							
		ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63
Standard Stroke	5	●	●	●	●	●	●	●	●
	10	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	
	20	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●	
	30	●	●	●	●	●	●	●	●
	40				●	●	●	●	●
	50				●	●	●	●	●
Minimum Stroke (mm) *1		1							
Maximum Stroke (mm)		30			50				
Intermediate Stroke *2		Every 1 mm							

***1: Products less than 5 mm with a 1-color indicator switch, and products less than 10 mm with a 2-color indicator, off-delay type, for AC magnetic field, or with T1□ or T8□ switches cannot be manufactured. For the number of switches that can be mounted and the minimum stroke, refer to the table below.**

*2: The overall length dimension for intermediate stroke is the same as the standard stroke above it.

Number of Switches Mounted and Min. Stroke (mm)

Switch Model No.	T□		T2WL	
Number of Switches / Bore Size (mm)	1	2	1	2
ø12	5	5	20	20
ø16	5	5	20	20
ø20	5	5	20	20
ø25	5	5	20	20
ø32	5	5	20	20
ø40	5	5	15	15
ø50	5	5	15	15
ø63	5	5	10	15

Note: Less than 10mm with 2-color display, off-delay, AC magnetic field proof, T1□, T8□ switches is not available.

Cylinder Weight Table (Weight with switch is when 2 cylinder switches are included)

(Unit: g)

Stroke (mm)	5		10		15		20		25		30		40		50	
Bore Size (mm)	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch
ø12	44	94	52	94	61	103	69	111	78	120	80	122	—	—	—	—
ø16	58	114	69	114	79	124	90	135	101	146	112	157	—	—	—	—
ø20	76	131	88	163	101	176	114	189	126	201	139	214	—	—	—	—
ø25	102	193	117	208	133	224	149	240	165	256	180	271	212	303	243	334
ø32	166	280	188	302	210	324	232	346	253	367	275	389	319	433	362	476
ø40	210	353	237	380	263	406	290	433	317	460	343	486	396	539	449	592
ø50	341	535	383	577	425	619	467	661	509	703	552	746	636	830	720	914
ø63	507	786	562	841	—	—	672	951	—	—	782	1061	893	1172	1003	1282

Theoretical Thrust Table

(Unit: N)

Bore size (mm)	Operating Direction	Operating Pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø12	Push	11.3	17.0	22.6	33.9	45.2	56.5	67.9	79.2	90.5	1.02×10^2	1.13×10^2
	Pull	8.48	12.7	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
ø16	Push	20.1	30.2	40.2	60.3	80.4	1.01×10^2	1.21×10^2	1.41×10^2	1.61×10^2	1.81×10^2	2.01×10^2
	Pull	15.1	22.6	30.2	45.2	60.3	75.4	90.5	1.06×10^2	1.21×10^2	1.36×10^2	1.51×10^2
ø20	Push	31.4	47.1	62.8	94.2	1.26×10^2	1.57×10^2	1.88×10^2	2.20×10^2	2.51×10^2	2.83×10^2	3.14×10^2
	Pull	23.6	35.3	47.1	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2	1.88×10^2	2.12×10^2	2.36×10^2
ø25	Push	49.1	73.6	98.2	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2	3.93×10^2	4.42×10^2	4.91×10^2
	Pull	37.8	56.7	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
ø32	Push	80.4	1.21×10^2	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2	6.43×10^2	7.24×10^2	8.04×10^2
	Pull	60.3	90.5	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
ø40	Push	1.26×10^2	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	1.06×10^2	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push	1.96×10^2	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	1.65×10^2	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Push	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3

Mounting Bracket Model No. Notation Method

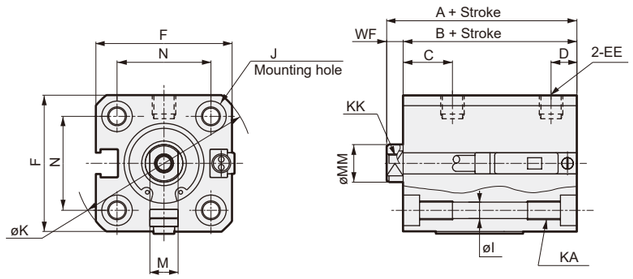
Bore Size (mm) / Mounting bracket	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63
Foot (LB)	SSD-LB-12	SSD-LB-16	SSD-LB-20	SSD-LB-25	SSD-LB-32	SSD-LB-40	SSD-LB-50	SSD-LB-63
Foot (LB2)	SSD-LB2-12	SSD-LB2-16	SSD-LB2-20	SSD-LB2-25	SSD-LB2-32	SSD-LB2-40	SSD-LB2-50	SSD-LB2-63
Flange (FA/FB)	SSD-FA-12	SSD-FA-16	SSD-FA-20	SSD-FA-25	SSD-FA-32	SSD-FA-40	SSD-FA-50	SSD-FA-63
Double Clevis (CB)	SSD-CB-12	SSD-CB-16	SSD-CB-20	SSD-CB-25	SSD-CB-32	SSD-CB-40	SSD-CB-50	SSD-CB-63
Double knuckle clevis (CB2)	SSD-CB2-12	SSD-CB2-16	SSD-CB2-20	SSD-CB2-25	SSD-CB2-32	SSD-CB2-40	SSD-CB2-50	SSD-CB2-63

Note: Foot type mounting brackets are 2 pcs/set.

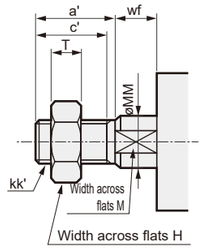
Outline Dimension Drawing (Bore size: ø12 to ø25)

● SSD-M (L)-12 to 25

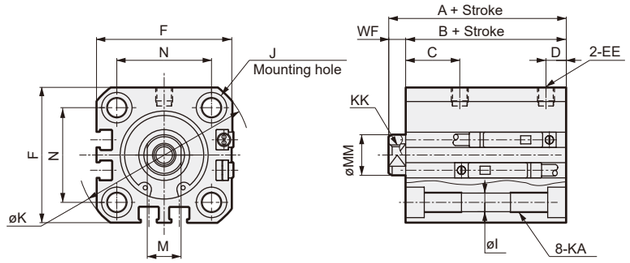
ø12, ø16



● Rod end male thread part



ø20, ø25



Code / Bore Size (mm)	Dimension with switch A *1	Dimension with switch B *1	Dimension without switch A *1	Dimension without switch B *1	C	D	EE	F	I	J	K	KA	KK	M	MM	N	WF
ø12	30.5	27	25.5	22	10.5	5.5	M5	25	3.5	6.5 Counterbore depth 3.5	32	M4 depth 7	M3 depth 6	5	6	15.5	3.5
ø16	30.5	27	25.5	22	10.5	5.5	M5	29	3.5	6.5 Counterbore depth 3.5	38	M4 depth 7	M4 depth 8	6	8	20	3.5
ø20	39	34.5	29	24.5	13	5.5	M5	36	5.5	9 Counterbore depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
ø25	42.5	37.5	32.5	27.5	16	6	M5	40	5.5	9 Counterbore depth 5.5	51	M6 depth 11	M6 Depth 12	10	12	28	5

*1: When calculating A + stroke and B + stroke dimensions for intermediate strokes, do not use the intermediate stroke value for the stroke; instead, use the value of the standard stroke above it.
(Example) For an intermediate stroke of 7 mm, enter the standard stroke of 10 mm for calculation.

*2: For ø12 and ø16 with a switch and a 5 mm stroke, the (A + stroke) and (B + stroke) dimensions are as shown in Table 1.

***3: For dimensions with each switch, refer to P. 674 to 681.**

***4: For outline dimension drawings of individual accessories, refer to P. 379 to P. 381.**

Table 1 *2

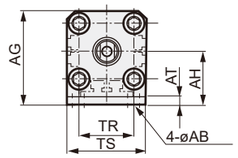
Bore size	A + Stroke	B + Stroke
ø12	40.5	37
ø16	40.5	37

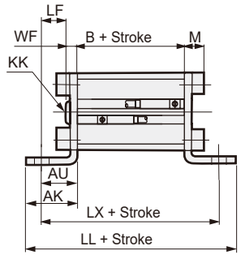
● Rod end male thread part dimension table

Code / Bore Size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10 × 1.25	10	12	6	5

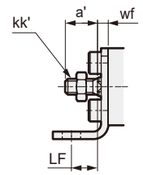
Outline Dimension Drawing (Bore size: ø12 to ø25)

● Axial Foot Type (LB)





● For rod end male thread

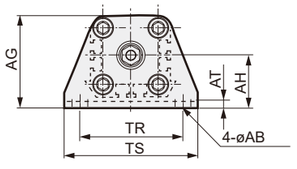


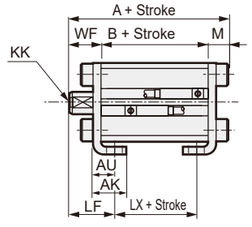
Code / Bore size (mm)	Common dimension AB	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch B	With Switch LL	With Switch LX	Without Switch B	Without Switch LL	Without Switch LX	For male thread a'	kk'	wf	LF
ø12	6	29.5	17	18	2.3	12	16	25	6.3	M3 depth 6	3.5	8.5	27	63	51	22	58	46	10.5	M5	3.5	8.5
ø16	6	33.5	19	18	2.3	12	16	29	6.3	M4 depth 8	3.5	8.5	27	63	51	22	58	46	12	M6	3.5	8.5
ø20	7	42	24	24	3.2	16	24	36	9.2	M5 depth 7	4.5	11.5	34.5	82.5	66.5	24.5	72.5	56.5	14	M8	4.5	11.5
ø25	7	46	26	24	3.2	16	28	40	9.2	M6 Depth 12	5	11	37.5	85.5	69.5	27.5	75.5	59.5	17.5	M10 × 1.25	5	11

*1: For 5 strokes with switch, the dimensions are as follows.

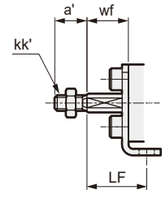
Bore size	For female thread B	LL	LX
ø12	32	68	56
ø16	32	68	56

● Axial Foot Type (Compact Type) (LB2)





● For rod end male thread



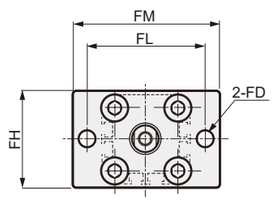
Code / Bore size (mm)	Common dimension AB	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch A	With Switch B	With Switch LX	Without Switch A	Without Switch B	Without Switch LX	For male thread a'	kk'	wf	LF
ø12	5	29.5	17	12.5	2	8	34	44	6	M3 depth 6	13.5	19.5	46.5	27	15	41.5	22	10	10.5	M5	13.5	19.5
ø16	5	33.5	19	13	2	8	38	48	6	M4 depth 8	13.5	19.5	46.5	27	15	41.5	22	10	12	M6	13.5	19.5
ø20	7	42	24	15	3.2	9.2	48	62	9.2	M5 depth 7	14.5	20.5	58.2	34.5	22.5	48.2	24.5	12.5	14	M8	14.5	20.5
ø25	7	46	26	16.5	3.2	10.7	52	66	9.2	M6 Depth 12	15	22.5	61.7	37.5	22.5	51.7	27.5	12.5	17.5	M10 × 1.25	15	22.5

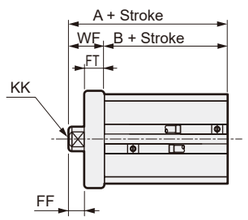
*1: For 5 strokes with switch, the dimensions are as follows.

Bore size	For female thread A	B	LX
ø12	51.5	32	20
ø16	51.5	32	20

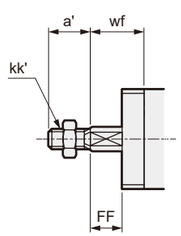
Outline Dimension Drawing (Bore size: ø12 to ø25)

● Rod Side Flange Type (FA)





● For rod end male thread

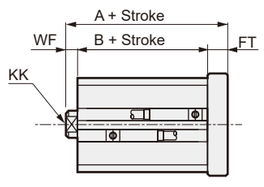


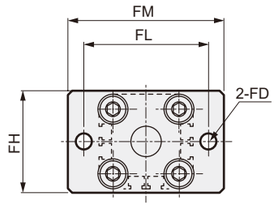
Code / Bore size (mm)	Common dimension FD	FH	FL	FM	FT	For female thread FF	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	For male thread FF	a'	kk'	wf
ø12	4.5	25	45	55	5.5	8	M3 depth 6	13.5	40.5	27	35.5	22	8	10.5	M5	13.5
ø16	4.5	30	45	55	5.5	8	M4 depth 8	13.5	40.5	27	35.5	22	8	12	M6	13.5
ø20	6.6	39	48	60	8	6.5	M5 depth 7	14.5	49	34.5	39	24.5	6.5	14	M8	14.5
ø25	6.6	42	52	64	8	7	M6 Depth 12	15	52.5	37.5	42.5	27.5	7	17.5	M10 × 1.25	15

*1: For 5 strokes with switch, the dimensions are as follows.

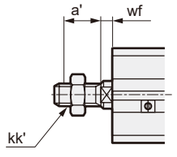
Bore size	For female thread A	B
ø12	45.5	32
ø16	45.5	32

● Head Side Flange Type (FB)





● For rod end male thread



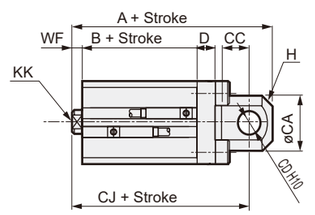
Code / Bore size (mm)	Common dimension FD	FH	FL	FM	FT	For female thread KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	For male thread a'	kk'	wf
ø12	4.5	25	45	55	5.5	M3 depth 6	3.5	36	27	31	22	10.5	M5	3.5
ø16	4.5	30	45	55	5.5	M4 depth 8	3.5	36	27	31	22	12	M6	3.5
ø20	6.6	39	48	60	8	M5 depth 7	4.5	47	34.5	37	24.5	14	M8	4.5
ø25	6.6	42	52	64	8	M6 Depth 12	5	50.5	37.5	40.5	27.5	17.5	M10 × 1.25	5

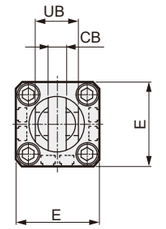
*1: For 5 strokes with switch, the dimensions are as follows.

Bore size	For female thread A	B
ø12	41	32
ø16	41	32

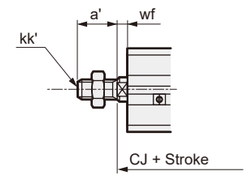
Outline Dimension Drawing (Bore size: ø12 to ø25)

● Double Knuckle Clevis Type (CB)





● For rod end male thread

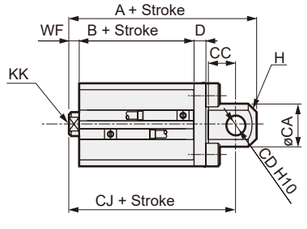


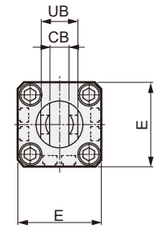
Code / Bore size (mm)	Common dimension CA	CB	CC	CD	D	E	H	UB	For female thread KK	WF	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	For male thread a'	kk'	wf	With Switch CJ	Without Switch CJ
ø12	13.5	6.5 +0.4 +0.1	7	5	5	25	C1.5	12 -0.1 -0.4	M3 depth 6	3.5	50.5	27	44.5	45.5	22	39.5	10.5	M5	3.5	44.5	39.5
ø16	15	6.5 +0.4 +0.1	8	5	5	29	C2	12 -0.1 -0.4	M4 depth 8	3.5	51.5	27	45.5	46.5	22	40.5	12	M6	3.5	45.5	40.5
ø20	24	8 +0.4 +0.1	12	10	8	36	C4	19 -0.1 -0.4	M5 depth 7	4.5	72	34.5	62	62	24.5	52	14	M8	4.5	62	52
ø25	27.5	10 +0.4 +0.1	16	12	8	40	C5	21 -0.1 -0.4	M6 Depth 12	5	81.5	37.5	69.5	71.5	27.5	59.5	17.5	M10 × 1.25	5	69.5	59.5

*1: For 5 strokes with switch, the dimensions are as follows.

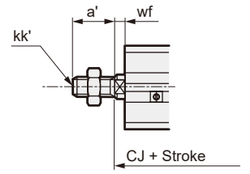
Bore size	For female thread A	B	CJ	For male thread CJ
ø12	55.5	32	49.5	49.5
ø16	56.5	32	50.5	50.5

● Double clevis type (Compact type) (CB2)





● For rod end male thread



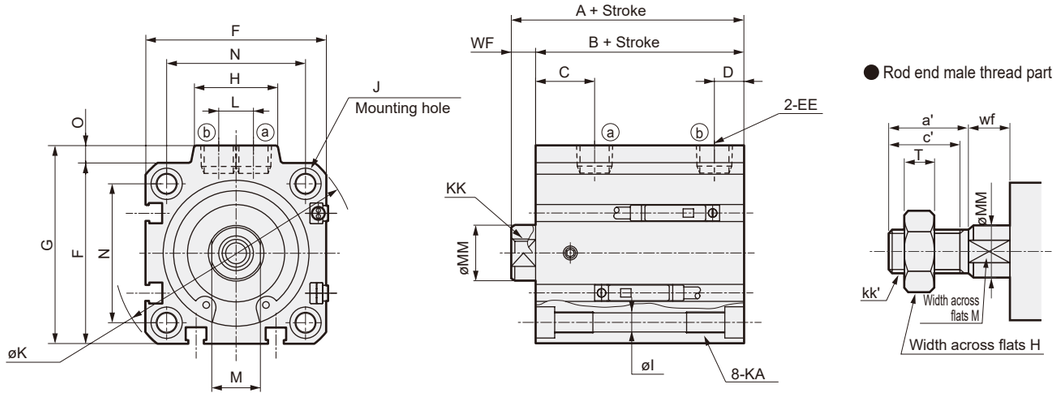
Code / Bore size (mm)	Common dimension CA	CB	CC	CD	D	E	H	UB	For female thread KK	WF	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	For male thread a'	kk'	wf	With Switch CJ	Without Switch CJ
ø12	12	5 +0.4 +0.1	7	5	4	25	C1.5	10 -0.1 -0.3	M3 depth 6	3.5	50.5	27	44.5	45.5	22	39.5	10.5	M5	3.5	44.5	39.5
ø16	15	6.5 +0.4 +0.1	8	5	5	29	C2	12 -0.1 -0.4	M4 depth 8	3.5	51.5	27	45.5	46.5	22	40.5	12	M6	3.5	45.5	40.5
ø20	20	8 +0.4 +0.1	12	8	5	36	C4	16 -0.1 -0.3	M5 depth 7	4.5	66	34.5	57	56	24.5	47	14	M8	4.5	57	47
ø25	24	10 +0.4 +0.1	14	10	5	40	C5	20 -0.1 -0.3	M6 Depth 12	5	72.5	37.5	62.5	62.5	27.5	52.5	17.5	M10 × 1.25	5	62.5	52.5

*1: For 5 strokes with switch, the dimensions are as follows.

Bore size	For female thread A	B	CJ	For male thread CJ
ø12	55.5	32	49.5	49.5
ø16	56.5	32	50.5	50.5

Outline dimension drawing (bore size: ø32 to ø63)

● SSD-M (L)-32 to 63



Code / Bore Size (mm)	Dimension with switch A	Dimension with switch B	Dimension without switch A *1	Dimension without switch B *1	C	D	EE	F	G	H	I	J	K	KA	KK	L	M	MM	N	O	WF
ø32	50	43	40	33	18	8	Rc1/8	45	49.5	24	5.5	9 Counterbore depth 5.5	60	M6 depth 11	M8 depth 13	10	14	16	34	4.5	7
ø40	51.5	44.5	41.5	34.5	17	8.5	Rc1/8	52	57	24	5.5	9 Counterbore depth 5.5	69	M6 depth 11	M8 depth 13	10	14	16	40	5	7
ø50	53.5	45.5	43.5	35.5	15.5	10.5	Rc1/4	64	71	33	6.9	11 Counterbore Depth 6.5	86	M8 depth 13	M10 depth 15	15	18	20	50	7	8
ø63	59	51	49	41	18	11	Rc1/4	77	84	33	8.7	14 Counterbore depth 9	103	M10 depth 25	M10 depth 15	15	18	20	60	7	8

*1: When calculating A + stroke and B + stroke dimensions for intermediate strokes, do not use the intermediate stroke value for the stroke; instead, use the value of the standard stroke above it.
(Example) For an intermediate stroke of 7 mm, enter the standard stroke of 10 mm for calculation.
***2: For dimensions with each switch, refer to P. 674 to 681.**
***3: For outline dimension drawings of individual accessories, refer to P. 379 to P. 381.**

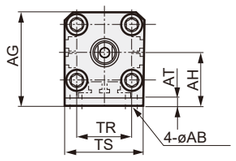
● Rod end male thread part dimension table

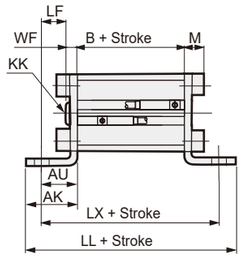
Code / Bore Size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14 × 1.5	14	16	8	5
ø40	23.5	20.5	22	M14 × 1.5	14	16	8	5
ø50	28.5	26	27	M18 × 1.5	18	20	11	5
ø63	28.5	26	27	M18 × 1.5	18	20	11	5

Outline dimension drawing (bore size: ø32 to ø63)

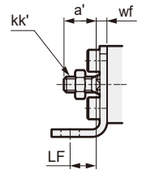
● Axial Foot Type (LB)

• ø32

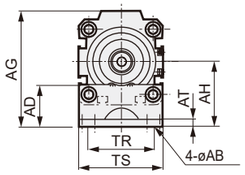


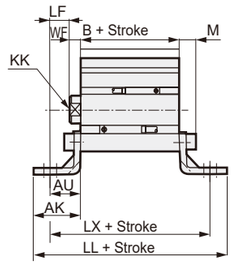


● For rod end male thread

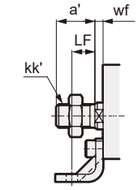


• ø40 to ø63





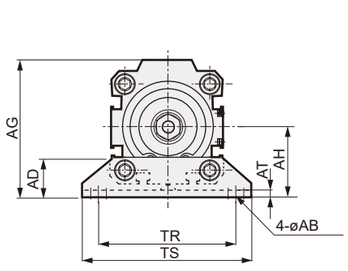
● For rod end male thread

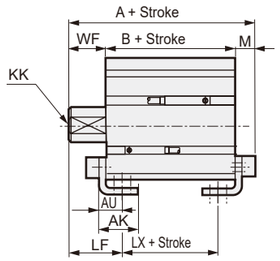


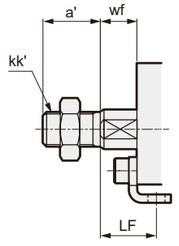
Code / Bore size (mm)	Common dimension AB	AD	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch B	With Switch LL	With Switch LX	Without Switch B	Without Switch LL	Without Switch LX	For male thread a'	kk'	wf	LF
ø32	7	–	53.5	31	24	3.2	16	34	45	9.2	M8 depth 13	7	9	43	91	75	33	81	65	23.5	M14 × 1.5	5	11
ø40	7	26	71	40	29	4.5	19	40	52	10	M8 depth 13	7	12	44.5	102.5	82.5	34.5	92.5	72.5	23.5	M14 × 1.5	5	14
ø50	9	23	79	40	34	4.5	22	46	64	13	M10 depth 15	8	14	45.5	113.5	89.5	35.5	103.5	79.5	28.5	M18 × 1.5	5	17
ø63	11	33	96.5	51	40	4.5	25	60	77	15	M10 depth 15	8	17	51	131	101	41	121	91	28.5	M18 × 1.5	5	20

● Axial Foot Type (Compact Type) (LB2)

● For rod end male thread



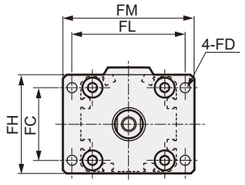


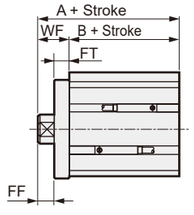


Code / Bore size (mm)	Common dimension AB	AD	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch A	With Switch B	With Switch LX	Without Switch A	Without Switch B	Without Switch LX	For male thread a'	kk'	wf	LF
ø32	7	18.5	57	30	17	3.2	11.2	57	71	9.2	M8 depth 13	17	25	69.2	43	27	59.2	33	17	23.5	M14 × 1.5	15	23
ø40	7	18	64	33	18.2	3.2	11.2	64	78	9.2	M8 depth 13	17	25	70.7	44.5	28.5	60.7	34.5	18.5	23.5	M14 × 1.5	15	23
ø50	9	22	78	39	22.7	3.2	14.7	79	95	11.2	M10 depth 15	18	29.5	74.7	45.5	22.5	64.7	35.5	12.5	28.5	M18 × 1.5	15	26.5
ø63	11	26	91.5	46	25.2	3.2	16.2	95	113	13.2	M10 depth 15	18	31	82.2	51	25	72.2	41	15	28.5	M18 × 1.5	15	28

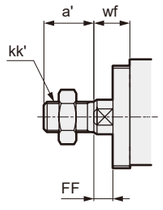
Outline dimension drawing (bore size: ø32 to ø63)

● Rod Side Flange Type (FA)



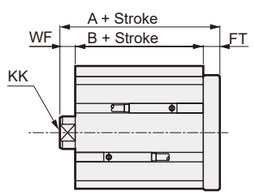


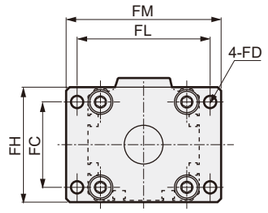
● For rod end male thread



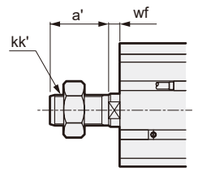
Code	Common dimension						For female thread							For male thread			
Bore size (mm)	FC	FD	FH	FL	FM	FT	FF	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	FF	a'	kk'	wf
ø32	34	5.5	48	56	65	8	9	M8 depth 13	17	60	43	50	33	7	23.5	M14 × 1.5	15
ø40	40	5.5	54	62	72	8	9	M8 depth 13	17	61.5	44.5	51.5	34.5	7	23.5	M14 × 1.5	15
ø50	50	6.6	67	76	89	9	9	M10 depth 15	18	63.5	45.5	53.5	35.5	6	28.5	M18 × 1.5	15
ø63	60	9	80	92	108	9	9	M10 depth 15	18	69	51	59	41	6	28.5	M18 × 1.5	15

● Head Side Flange Type (FB)





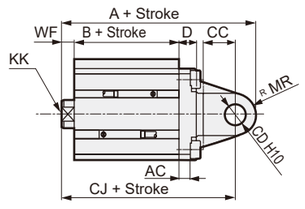
● For rod end male thread

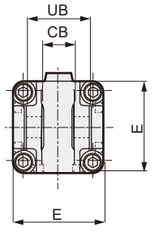


Code	Common dimension						For female thread						For male thread			
Bore size (mm)	FC	FD	FH	FL	FM	FT	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	a'	kk'	wf	
ø32	34	5.5	48	56	65	8	M8 depth 13	7	58	43	48	33	23.5	M14 × 1.5	5	
ø40	40	5.5	54	62	72	8	M8 depth 13	7	59.5	44.5	49.5	34.5	23.5	M14 × 1.5	5	
ø50	50	6.6	67	76	89	9	M10 depth 15	8	62.5	45.5	52.5	35.5	28.5	M18 × 1.5	5	
ø63	60	9	80	92	108	9	M10 depth 15	8	68	51	58	41	28.5	M18 × 1.5	5	

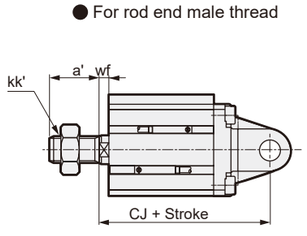
Outline dimension drawing (bore size: ø32 to ø63)

● Double Knuckle Clevis Type (CB)



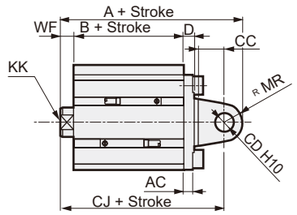


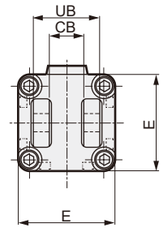
● For rod end male thread



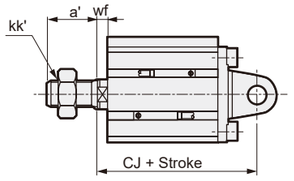
Code	Common dimension								For female thread								For male thread				
Bore size (mm)	AC	CB	CC	CD	D	E	MR	UB	KK	WF	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	a'	kk'	wf	With Switch CJ	Without Switch CJ
ø32	9.5	$10^{+0.4}_{+0.1}$	16	12	10	45	12	$21^{-0.1}_{-0.4}$	M8 depth 13	7	92	43	80	82	33	70	23.5	M14 × 1.5	5	78	68
ø40	6.5	$18^{+0.4}_{+0.1}$	18	12	10	52	12	$36^{-0.1}_{-0.4}$	M8 depth 13	7	95.5	44.5	83.5	85.5	34.5	73.5	23.5	M14 × 1.5	5	81.5	71.5
ø50	6.5	$18^{+0.4}_{+0.1}$	18	12	10	64	12	$36^{-0.1}_{-0.4}$	M10 depth 15	8	97.5	45.5	85.5	87.5	35.5	75.5	28.5	M18 × 1.5	5	82.5	72.5
ø63	7.5	$20^{+0.4}_{+0.1}$	24	14	10	77	16	$40^{-0.1}_{-0.4}$	M10 depth 15	8	112	51	96	102	41	86	28.5	M18 × 1.5	5	93	83

● Double clevis type (Compact type) (CB2)





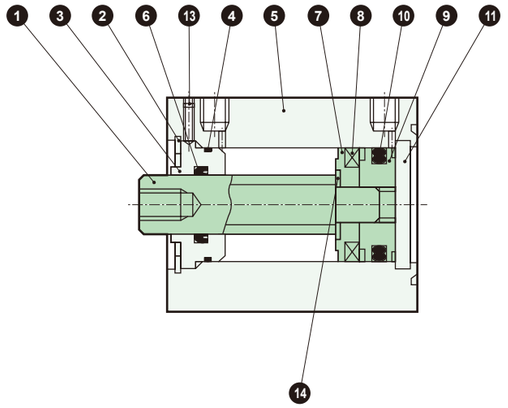
● For rod end male thread



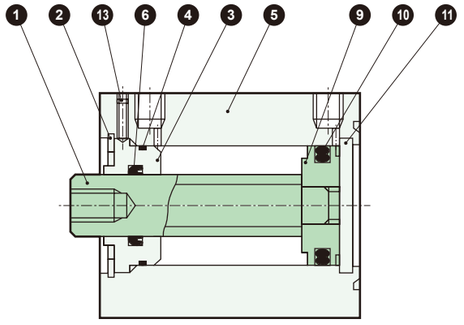
Code	Common dimension								For female thread								For male thread				
Bore size (mm)	AC	CB	CC	CD	D	E	MR	UB	KK	WF	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	a'	kk'	wf	With Switch CJ	Without Switch CJ
ø32	4.5	$18^{+0.4}_{+0.1}$	14	10	5	45	10	$36^{-0.1}_{-0.3}$	M8 depth 13	7	80	43	70	70	33	60	23.5	M14 × 1.5	5	68	58
ø40	5	$18^{+0.4}_{+0.1}$	14	10	6	52	10	$36^{-0.1}_{-0.3}$	M8 depth 13	7	83.5	44.5	73.5	73.5	34.5	63.5	23.5	M14 × 1.5	5	71.5	61.5
ø50	6	$22^{+0.4}_{+0.1}$	20	14	7	64	14	$44^{-0.1}_{-0.3}$	M10 depth 15	8	95.5	45.5	81.5	85.5	35.5	71.5	28.5	M18 × 1.5	5	78.5	68.5
ø63	7	$22^{+0.4}_{+0.1}$	20	14	8	77	14	$44^{-0.1}_{-0.3}$	M10 depth 15	8	103	51	89	93	41	79	28.5	M18 × 1.5	5	86	76

Internal Structure Diagram/Material (Bore size: ø12 to ø25)

●SSD-ML-12 to 25 (Double acting, Non-rotating type, With switch)



●SSD-M-12 to 25 (Double acting, Non-rotating type)

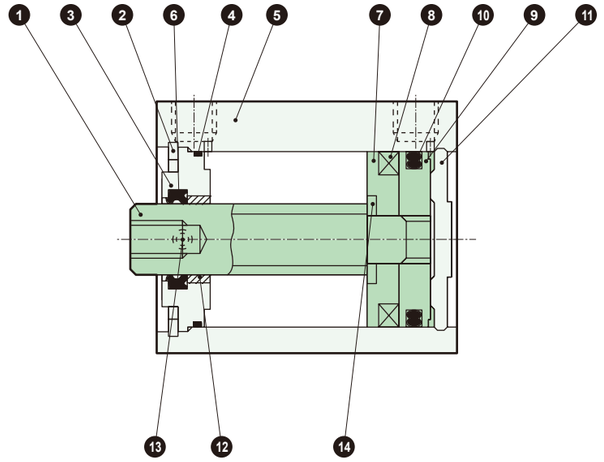


Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Piston Rod	Stainless Steel		8	Magnet	Plastic	
2	C-type retaining ring	Steel	Zinc phosphate	9	Piston	Aluminum Alloy	Chromate
3	Rod Metal	Aluminum Alloy	Alumite	10	Piston Packing	Nitrile Rubber	
4	Rod metal gasket	Nitrile Rubber		11	Cover	Stainless Steel	
5	Cylinder Body	Aluminum Alloy	Hard Anodized	13	Hexagon socket head set screw	Steel	
6	Rod Packing	Nitrile Rubber		14	Spacer washer	Stainless Steel	ø20 to ø25 only
7	Spacer	ø12: Aluminum alloy ø16 to ø25: Special resin	ø12: Chromate				

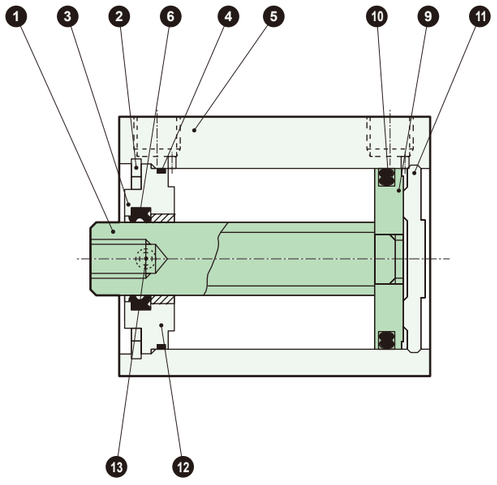
For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Internal Structure Diagram/Material (Bore size: ø32 to ø63)

●SSD-ML-32 to 63 (Double acting, Non-rotating type, With switch)



●SSD-M-32 to 63 (Double acting, Non-rotating type)



Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Piston Rod	Steel	Industrial Hard Chrome Plating	8	Magnet	Plastic	
2	C-type retaining ring	Steel	Zinc phosphate	9	Piston	Aluminum Alloy	Chromate
3	Rod Metal	Aluminum Alloy	Alumite	10	Piston Packing	Nitrile Rubber	
4	Rod metal gasket	Nitrile Rubber		11	Cover	Aluminum Alloy	Alumite
5	Cylinder Body	Aluminum Alloy	Hard Anodized	12	Bushing	Oil-Impregnated Bearing Alloy	
6	Rod Packing	Nitrile Rubber		13	Hexagon socket head set screw	Steel	
7	Spacer	ø32 to ø50: Special resin ø63: Aluminum alloy	ø63: Chromate	14	Spacer washer	Stainless Steel	ø32 to ø50 only

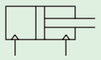
For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Compact Cylinder Double Acting, Cutting Oil Resistant Type

SSD-G2/G3 Series

● Bore size: ø16, ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100

Circuit Diagram Symbol



RoHS

Model No. Notation Method

Without Switch
(Without magnet for switch)

SSD - G2 - 16 - [ ] - 30 ——— N - LB - I

With Switch
(Built-in magnet for switch)

SSD - G2L - 16 - [ ] - 30 - T2YLH - R - N - LB - I

❶	❷	❸	❹	❺	❻	❼	❽	❾
Protection structure level	Bore size	Piping thread type	Stroke	Switch Model No.	Number of Switches	Option	Mounting bracket	Accessories

❶Protection structure level

Code	Content
G2	Cutting Oil Resistant Scraper + NBR Packing
G3	Cutting Oil Resistant Scraper + FKM Packing
G2L	Cutting oil resistant scraper + NBR packing with switch
G3L	Cutting oil resistant scraper + FKM packing with switch

❷Bore Size (mm)

Code	Content
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

❸Piping thread type

Code	Content
Blank	M5 thread (ø16 to ø25)
	Rc thread (ø32 to ø100)
NN	NPT thread (Custom product) (ø32 to ø100)
GN	G thread (Custom product) (ø32 to ø100)

❹Stroke (mm)

Bore size	Stroke	Intermediate Stroke
ø16, ø20	1 to 30	Every 1 mm
ø25 to ø50	1 to 50	
ø63 to ø100	1 to 50	

Note: For details on stroke, please refer to P. 542.

❺Switch Model No.

For switch details, please refer to P. 869.
Switches are included to the product and shipped.

Contact	LED Indicator Special Function	Wiring (Output)	Load Voltage (V) AC	Load Voltage (V) DC	Load Current (mA) AC	Load Current (mA) DC	Lead Wire *1 Straight	Lead Wire *1 L-shape	
Solid State	2-Color Improved Water Resistance	2-wire	-	24 ± 10%	-	5 to 20	T2WLH□	T2WLV□	
Solid State	For 2-Color Cutting Oil	2-wire	-	10 to 30	-	5 to 20	T2YLH□	T2YLV□	
Solid State	For 2-Color Cutting Oil	3-wire (NPN)	-	30 or less	-	50 or less	T3YLH□	T3YLV□	

*1: For "□" in the switch model No., enter the code selected from the "*Lead wire length, connector specification" table.
*2: Switches other than the above switch model No.s are also available. (Custom products) For details, refer to P. 869.

*3

***Lead wire length, connector specification**

Code	Content
Blank	1 m (Standard)
3	3 m (Option)
5	5 m (Option)
W	M8 Connector, 1PIN (+) 4PIN (-) Lead Wire 0.3 m

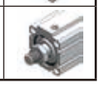
*3: Only T2WLH, T2WLV can be selected.

Example) Lead wire length
1 m T2WLH
3 m T2WLH3
5 m T2WLH5

❻Number of Switches

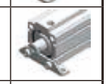
Code	Content
R	With 1 pc on rod side
H	With 1 pc on head side
D	With 2 pcs

❼Option

Code	Content	
Blank	Rod end female thread	
N	Rod end male thread	

❽Mounting type

Mounting brackets are shipped included to the product.

	Code	Content	
	LB	Axial foot (φ16 to φ25 customized product)	
*2	LB2	Axial foot (compact) (ø16 to ø25 customized product)	
*2	FA	Rod side flange (ø16 to ø25 custom product)	
	FB	Head Side Flange Type	
	CB	Double clevis (pin and retaining ring included)	
	CB2	Clevis bracket (compact) (pin and snap ring included)	

*1: For ø16 to ø25, due to structural reasons, foot brackets (LB, LB2) and flange brackets (FA) cannot be retrofitted to the rod side. The assembly configuration at the time of product shipment is a custom specification.
*2: When LB2 or FA is selected, the piston rod protrusion dimension WF differs from the standard. See P. 545 and 546 for outline dimension drawings. In addition, the model No. specifying the protrusion length will be printed at the end of the model No. printed on the nameplate included to the main body. For cylinder model No.s when ordering cylinders and LB2/FA brackets separately, please contact us. (Excluding ø16 to ø25)

❾Accessories

Code	Content	
I	Single Knuckle	
I2	Single Knuckle (compact)	
Y	Double Knuckle (pin and retaining ring included)	
Y2	Double knuckle (compact) (pin and snap ring included)	

*1: Selectable when rod end male thread "N" is selected.
*2: "I", "I2", "Y", "Y2" cannot be selected at the same time.

*For combination of variations and options, refer to P. 356 to 361.

About Custom Product Specifications

For details, refer to P. 690 to 694.

Code	Content
-XP5	Knuckle Pin/Clevis Pin Split Pin
-XP7	Knuckle fixed by pin driving
-XP8	Knuckle pin/clevis pin split pin specification, knuckle fixed by pin driving
-A2	With 2 Rod Nuts
Rod End Shape Modification	Refer to Ending 11.

Model No. Example)
SSD-G2 - ..... - XP5
SSD-G3 - ..... - XP5

Switch Single Unit Model No. Notation Method

SW - T2YLH
5
Switch Model No.

Specifications

Item	SSD-G2/ G3 SSD-G2L/G3L (with switch)								
Bore size mm	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation method	Double Acting Type								
Operating Fluid	Compressed Air								
Max. Operating Pressure MPa	1.0								
Min. Operating Pressure MPa	0.15						0.1		
Proof pressure MPa	1.6								
Ambient Temperature °C	-10 to 60 (No freezing)								
Port Size	M5			Rc1/8		Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+1.0}_{0}$								
Operating Piston Speed mm/s	50 to 500						50 to 300		
Cushion	None								
Lubrication	Not required (When lubricating, use turbine oil Class 1 ISO VG32)								
Allowable absorbed energy J	0.01	0.016	0.021	0.025	0.092	0.1	0.12	0.27	0.56

Stroke

Stroke (mm)		Applicable Bore								
		ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Standard Stroke	5	●	●	●	●	●	●	●	●	●
	10	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●			
	20	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●			
	30	●	●	●	●	●	●	●	●	●
	40			●	●	●	●	●	●	●
	50			●	●	●	●	●	●	●
Minimum Stroke (mm) *1		1								
Maximum Stroke (mm)		30		50						
Intermediate Stroke *2		Every 1 mm								

***1: Cannot be manufactured for less than 10 mm with switch. For the number of switches that can be mounted and the minimum stroke, refer to the table below.**

*2: The overall length dimension for intermediate stroke is the same as the standard stroke above it.

***3: Refer to page 545 for the min. stroke with mounting brackets LB and LB2.**

Number of Switches Mounted and Min. Stroke (mm)

Switch Model No.	T2YL, T3YL		T2WL	
Number of Switches / Bore Size (mm)	1	2	1	2
ø16	10	10	20	20
ø20	10	10	20	20
ø25	10	10	20	20
ø32	10	10	20	20
ø40	10	10	15	15
ø50	10	10	15	15
ø63	10	10	10	15
ø80	10	10	10	15
ø100	10	10	10	15

Cylinder Weight Table (Weight with switch is when 2 cylinder switches are included)

(Unit: g)

Stroke	5		10		15		20		25		30		40		50	
Bore Size (mm)	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch
ø16	62	118	73	118	83	158	94	139	105	150	116	161				
ø20	108	163	120	195	133	208	146	221	158	233	171	246				
ø25	151	242	166	257	182	273	198	289	214	305	229	320	261	352	292	383
ø32	230	344	252	366	274	388	296	410	317	431	339	453	383	497	426	540
ø40	301	444	328	471	354	497	381	524	408	551	434	577	487	630	540	683
ø50	471	665	513	707	555	749	597	791	639	833	682	876	766	960	850	1044
ø63	678	957	733	1012			843	1122			953	1232	1064	1343	1174	1453
ø80	1445	1858	1532	1945			1705	2118			1878	2288	2052	2465	2225	2638
ø100	2098	2665	2212	2779			2439	3006			2667	3234	2894	3461	3122	3689

Theoretical Thrust Table

(Unit: N)

Bore size (mm)	Operating Direction	Operating Pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø16	Push	–	30.2	40.2	60.3	80.4	1.01×10^{2}	1.21×10^{2}	1.41×10^{2}	1.61×10^{2}	1.81×10^{2}	2.01×10^{2}
	Pull	–	22.6	30.2	45.2	60.3	75.4	90.5	1.06×10^{2}	1.21×10^{2}	1.36×10^{2}	1.51×10^{2}
ø20	Push	–	47.1	62.8	94.2	1.26×10^{2}	1.57×10^{2}	1.88×10^{2}	2.20×10^{2}	2.51×10^{2}	2.83×10^{2}	3.14×10^{2}
	Pull	–	35.3	47.1	70.7	94.2	1.18×10^{2}	1.41×10^{2}	1.65×10^{2}	1.88×10^{2}	2.12×10^{2}	2.36×10^{2}
ø25	Push	–	73.6	98.2	1.47×10^{2}	1.96×10^{2}	2.45×10^{2}	2.95×10^{2}	3.44×10^{2}	3.93×10^{2}	4.42×10^{2}	4.91×10^{2}
	Pull	–	56.7	75.6	1.13×10^{2}	1.51×10^{2}	1.89×10^{2}	2.27×10^{2}	2.64×10^{2}	3.02×10^{2}	3.40×10^{2}	3.78×10^{2}
ø32	Push	–	1.21×10^{2}	1.61×10^{2}	2.41×10^{2}	3.22×10^{2}	4.02×10^{2}	4.83×10^{2}	5.63×10^{2}	6.43×10^{2}	7.24×10^{2}	8.04×10^{2}
	Pull	–	90.5	1.21×10^{2}	1.81×10^{2}	2.41×10^{2}	3.02×10^{2}	3.62×10^{2}	4.22×10^{2}	4.83×10^{2}	5.43×10^{2}	6.03×10^{2}
ø40	Push	–	1.88×10^{2}	2.51×10^{2}	3.77×10^{2}	5.03×10^{2}	6.28×10^{2}	7.54×10^{2}	8.80×10^{2}	1.01×10^{3}	1.13×10^{3}	1.26×10^{3}
	Pull	–	1.58×10^{2}	2.11×10^{2}	3.17×10^{2}	4.22×10^{2}	5.28×10^{2}	6.33×10^{2}	7.39×10^{2}	8.44×10^{2}	9.50×10^{2}	1.06×10^{3}
ø50	Push	–	2.95×10^{2}	3.93×10^{2}	5.89×10^{2}	7.85×10^{2}	9.82×10^{2}	1.18×10^{3}	1.37×10^{3}	1.57×10^{3}	1.77×10^{3}	1.96×10^{3}
	Pull	–	2.47×10^{2}	3.30×10^{2}	4.95×10^{2}	6.60×10^{2}	8.25×10^{2}	9.90×10^{2}	1.15×10^{3}	1.32×10^{3}	1.48×10^{3}	1.65×10^{3}
ø63	Push	3.12×10^{2}	4.68×10^{2}	6.23×10^{2}	9.35×10^{2}	1.25×10^{3}	1.56×10^{3}	1.87×10^{3}	2.18×10^{3}	2.49×10^{3}	2.81×10^{3}	3.12×10^{3}
	Pull	2.80×10^{2}	4.20×10^{2}	5.61×10^{2}	8.41×10^{2}	1.12×10^{3}	1.40×10^{3}	1.68×10^{3}	1.96×10^{3}	2.24×10^{3}	2.52×10^{3}	2.80×10^{3}
ø80	Push	5.03×10^{2}	7.54×10^{2}	1.01×10^{3}	1.51×10^{3}	2.01×10^{3}	2.51×10^{3}	3.02×10^{3}	3.52×10^{3}	4.02×10^{3}	4.52×10^{3}	5.03×10^{3}
	Pull	4.54×10^{2}	6.80×10^{2}	9.07×10^{2}	1.36×10^{3}	1.81×10^{3}	2.27×10^{3}	2.72×10^{3}	3.17×10^{3}	3.63×10^{3}	4.08×10^{3}	4.54×10^{3}
ø100	Push	7.85×10^{2}	1.18×10^{3}	1.57×10^{3}	2.36×10^{3}	3.14×10^{3}	3.93×10^{3}	4.71×10^{3}	5.50×10^{3}	6.28×10^{3}	7.07×10^{3}	7.85×10^{3}
	Pull	7.15×10^{2}	1.07×10^{3}	1.43×10^{3}	2.14×10^{3}	2.86×10^{3}	3.57×10^{3}	4.29×10^{3}	5.00×10^{3}	5.72×10^{3}	6.43×10^{3}	7.15×10^{3}

Mounting Bracket Model No. Notation Method

Bore Size (mm) / Mounting bracket	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Foot (LB)	SSD-LB-16	SSD-LB-20	SSD-LB-25	SSD-LB-32	SSD-LB-40	SSD-LB-50	SSD-LB-63	SSD-LB-80	SSD-LB-100
Foot (LB2)	SSD-LB2-16	SSD-LB2-20	SSD-LB2-25	SSD-LB2-32	SSD-LB2-40	SSD-LB2-50	SSD-LB2-63	SSD-LB2-80	SSD-LB2-100
Flange (FA/FB)	SSD-FA-16	SSD-FA-20	SSD-FA-25	SSD-FA-32	SSD-FA-40	SSD-FA-50	SSD-FA-63	SSD-FA-80	SSD-FA-100
Double Clevis (CB)	SSD-CB-16	SSD-CB-20	SSD-CB-25	SSD-CB-32	SSD-CB-40	SSD-CB-50	SSD-CB-63	SSD-CB-80	SSD-CB-100
Double knuckle clevis (CB2)	SSD-CB2-16	SSD-CB2-20	SSD-CB2-25	SSD-CB2-32	SSD-CB2-40	SSD-CB2-50	SSD-CB2-63	SSD-CB2-80	SSD-CB2-100

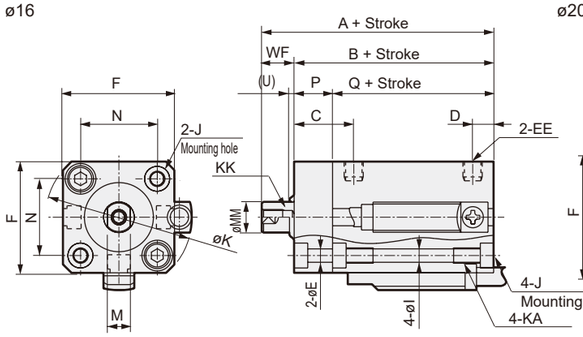
*1: Foot type mounting brackets are 2 pcs/set.

*2: For ø16 to ø25, due to the structure, foot brackets (LB, LB2) and flange brackets (FA) cannot be included to the rod side later. Please contact our sales department.

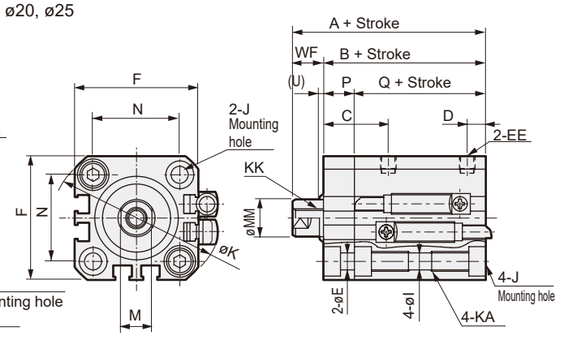
Outline Dimension Drawing

● Degree of protection: NBR Packing
SSD-G2(L)
● Degree of protection: FKM Packing
SSD-G3(L)

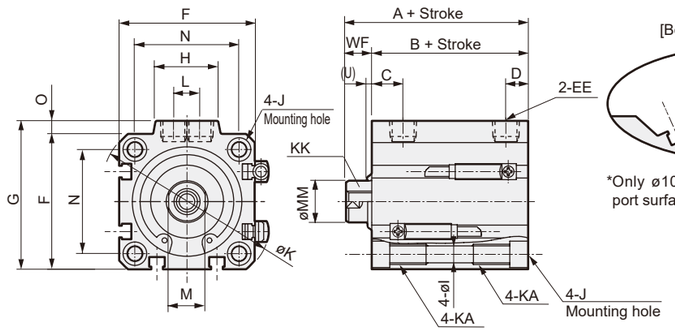
ø16



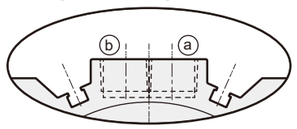
ø20, ø25



ø32 to ø100

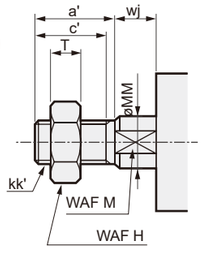


[Bore size ø100]



*Only ø100 has a switch groove on the port surface

● Rod end male thread part



Code / Bore Size (mm)	Dimension with switch A *1	B *1	Q *1	Dimension without switch A *1	B *1	Q *1	C	D	E	EE	F	G	H	I	J	K	KA
ø16	45.5	37	27	35.5	27	17	15.5	5.5	3.4	M5	29	–	–	3.5	ø6.5 Counterbore Depth 3.5	38	M4 depth 7
ø20	49	39.5	29.5	39	29.5	19.5	18	5.5	5.5	M5	36	–	–	5.5	ø9 Counterbore depth 5.5	47	M6 depth 11
ø25	52.5	42.5	32.5	42.5	32.5	22.5	21	6	5.5	M5	40	–	–	5.5	ø9 Counterbore depth 5.5	51	M6 depth 11
ø32	55	43	–	45	33	–	8	8	5.5	Rc1/8	45	49.5	24	5.5	ø9 Counterbore depth 5.5	60	M6 depth 11
ø40	61.5	49.5	–	51.5	39.5	–	12	8.5	5.5	Rc1/8	52	57	24	5.5	ø9 Counterbore depth 5.5	69	M6 depth 11
ø50	63.5	50.5	–	53.5	40.5	–	10.5	10.5	5.5	Rc1/4	64	71	33	6.9	ø11 Counterbore depth 6.5	86	M8 depth 13
ø63	69	56	–	59	46	–	13	11	5.5	Rc1/4	77	84	33	8.7	ø14 Counterbore depth 9	103	M10 depth 25
ø80	78.5	63.5	–	68.5	53.5	–	16	13	5.5	Rc3/8	98	104	38	10.5	ø17.5 Counterbore depth 11	132	M12 depth 28
ø100	90	73	–	80	63	–	23	15	5.5	Rc3/8	117	123.5	38	10.5	ø17.5 Counterbore depth 11	156	M12 depth 28

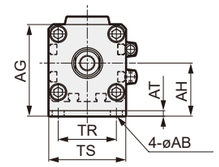
Code / Bore Size (mm)	Common dimension KK	L	M	MM	N	O	P	U	WF	Rod end male thread part outline dimension a'	c'	H	kk'	M	MM	T	wj
ø16	M4 depth 8	–	6	8	20	–	10	3	8.5	12	10	10	M6	6	8	3.6	8.5
ø20	M5 depth 7	–	8	10	25.5	–	10	3	9.5	14	12	13	M8	8	10	5	9.5
ø25	M6 Depth 12	–	10	12	28	–	10	3	10	17.5	15	17	M10×1.25	10	12	6	10
ø32	M8 depth 13	10	14	16	34	4.5	–	0	12	23.5	20.5	22	M14×1.5	14	16	8	10
ø40	M8 depth 13	10	14	16	40	5	–	2	12	23.5	20.5	22	M14×1.5	14	16	8	10
ø50	M10 depth 15	15	17	20	50	7	–	2	13	28.5	26	27	M18×1.5	17	20	11	10
ø63	M10 depth 15	15	17	20	60	7	–	2	13	28.5	26	27	M18×1.5	17	20	11	10
ø80	M16 depth 21	15	22	25	77	6	–	2	15	35.5	32.5	32	M22×1.5	22	25	13	13
ø100	M20 depth 27	15	27	30	94	6.5	–	2	17	35.5	32.5	41	M26×1.5	27	30	16	13

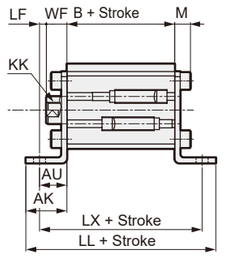
*1: When calculating A + Stroke and B + Stroke dimensions for intermediate strokes, do not enter the intermediate stroke value for the stroke; instead, enter the value of the standard stroke above it. (Example) For an intermediate stroke of 7 mm, enter the standard stroke of 10 mm for calculation.
***2: For dimensions with each switch, refer to P. 674 to 681.**
***3: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**

Outline Dimension Drawing (Bore size: ø32 to ø100)

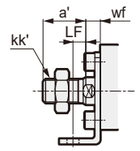
● Axial foot type (LB)

• ø32

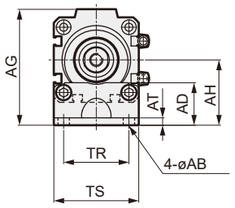


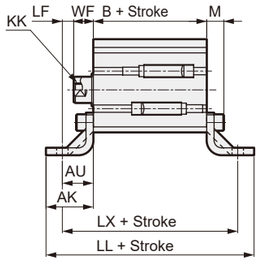


● For rod end male thread

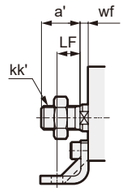


• ø40 to ø100





● For rod end male thread

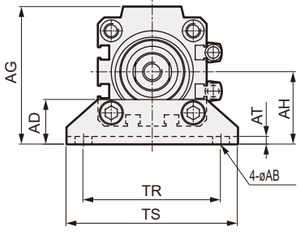


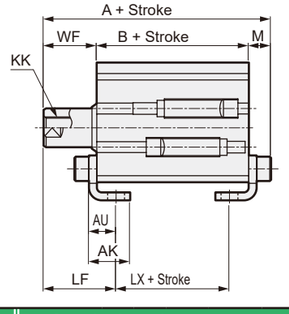
Code / Bore size (mm)	Common dimension AB	AD	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch B	With Switch LL	With Switch LX	Without Switch B	Without Switch LL	Without Switch LX	For male thread a'	kk'	wf	LF
ø32	7	–	53.5	31	24	3.2	16	34	45	9.2	M8 depth 13	12	9	43	91	75	33	81	65	23.5	M14×1.5	10	11
ø40	7	26	71	40	29	4.5	19	40	52	10	M8 depth 13	12	12	49.5	107.5	87.5	39.5	97.5	77.5	23.5	M14×1.5	10	14
ø50	9	23	79	40	34	4.5	22	46	64	13	M10 depth 15	13	14	50.5	118.5	94.5	40.5	108.5	84.5	28.5	M18×1.5	10	17
ø63	11	33	96.5	51	40	4.5	25	60	77	15	M10 depth 15	13	17	56	136	106	46	126	96	28.5	M18×1.5	10	20
ø80	13	42	116.5	61.5	50	6	35	77	98	18	M16 depth 21	15	25	63.5	163.5	133.5	53.5	153.5	123.5	35.5	M22×1.5	13	27
ø100	13	48	134	69	50	6	35	94	117	18	M20 depth 27	17	23	73	173	143	63	163	133	35.5	M26×1.5	13	27

*1: If B + stroke is less than or equal to the value below, LB cannot be selected.
ø80, ø100: 69 or less

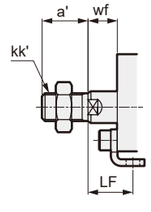
● Axial Foot Type (Compact Type) (LB2)

· ø32 to ø100





● For rod end male thread



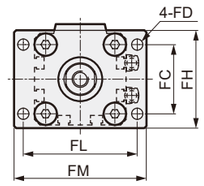
Code / Bore size (mm)	Common dimension AB	AD	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch A	With Switch B	With Switch LX	Without Switch A	Without Switch B	Without Switch LX	For male thread a'	kk'	wf	LF
ø32	7	18.5	57	30	17	3.2	11.2	57	71	9.2	M8 depth 13	22	25	74.2	43	27	64.2	33	17	23.5	M14×1.5	20	23
ø40	7	18	64	33	18.2	3.2	11.2	64	78	9.2	M8 depth 13	22	25	80.7	49.5	33.5	70.7	39.5	23.5	23.5	M14×1.5	20	23
ø50	9	22	78	39	22.7	3.2	14.7	79	95	11.2	M10 depth 15	23	29.5	84.7	50.5	27.5	74.7	40.5	17.5	28.5	M18×1.5	20	26.5
ø63	11	26	91.5	46	25.2	3.2	16.2	95	113	13.2	M10 depth 15	23	31	92.2	56	30	82.2	46	20	28.5	M18×1.5	20	28
ø80	13	39.5	114	59	30.5	4.5	19.5	118	140	16.5	M16 depth 21	25	35	105	63.5	33.5	95	53.5	23.5	35.5	M22×1.5	23	33
ø100	13	50	136	71	35.5	6	23	137	162	18	M20 depth 27	27	39	118	73	39	108	63	29	35.5	M26×1.5	23	35

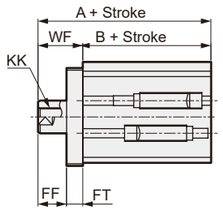
*1: If B + stroke is less than or equal to the value below, LB2 cannot be selected.
ø80: 72 or less ø100: 69 or less

Outline dimension drawing (bore size: ø16 to ø100)

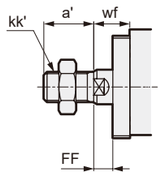
● Rod Side Flange Type (FA)

・ø32 to ø100





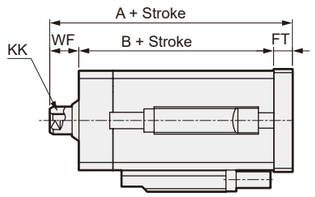
● For rod end male thread

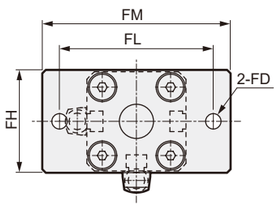


Code / Bore size (mm)	Common dimension						For female thread								For male thread			
	FC	FD	FH	FL	FM	FT	FF	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	FF	a'	kk'	wf
ø32	34	5.5	48	56	65	8	14	M8 depth 13	22	65	43	55	33	12	23.5	M14×1.5	20
ø40	40	5.5	54	62	72	8	14	M8 depth 13	22	71.5	49.5	61.5	39.5	12	23.5	M14×1.5	20
ø50	50	6.6	67	76	89	9	14	M10 depth 15	23	73.5	50.5	63.5	40.5	11	28.5	M18×1.5	20
ø63	60	9	80	92	108	9	14	M10 depth 15	23	79	56	69	46	11	28.5	M18×1.5	20
ø80	77	11	99	116	134	11	14	M16 depth 21	25	88.5	63.5	78.5	53.5	12	35.5	M22×1.5	23
ø100	94	11	117	136	154	11	16	M20 depth 27	27	100	73	90	63	12	35.5	M26×1.5	23

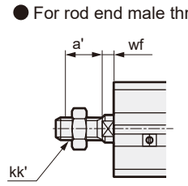
● Head Side Flange Type (FB)

・ø16 to ø25

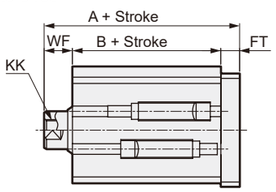


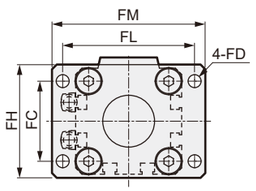


● For rod end male thread

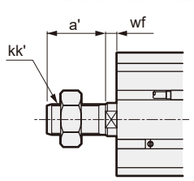


・ø32 to ø100





● For rod end male thread

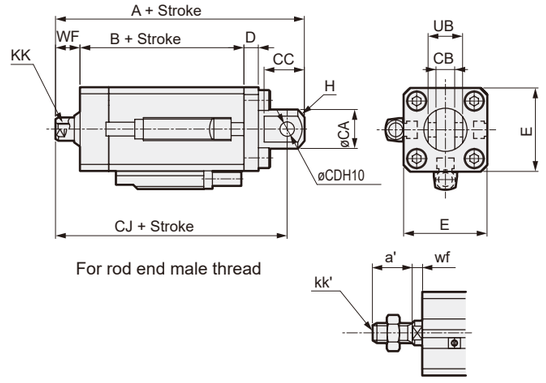


Code / Bore size (mm)	Common dimension						For female thread						For male thread		
	FC	FD	FH	FL	FM	FT	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	a'	kk'	wf
ø16	–	4.5	30	45	55	5.5	M4 depth 8	8.5	51	37	41	27	12	M6	8.5
ø20	–	6.6	39	48	60	8	M5 depth 7	9.5	57	39.5	47	29.5	14	M8	9.5
ø25	–	6.6	42	52	64	8	M6 Depth 12	10	60.5	42.5	50.5	32.5	17.5	M10×1.25	10
ø32	34	5.5	48	56	65	8	M8 depth 13	12	63	43	53	33	23.5	M14×1.5	10
ø40	40	5.5	54	62	72	8	M8 depth 13	12	69.5	49.5	59.5	39.5	23.5	M14×1.5	10
ø50	50	6.6	67	76	89	9	M10 depth 15	13	72.5	50.5	62.5	40.5	28.5	M18×1.5	10
ø63	60	9	80	92	108	9	M10 depth 15	13	78	56	68	46	28.5	M18×1.5	10
ø80	77	11	99	116	134	11	M16 depth 21	15	89.5	63.5	79.5	53.5	35.5	M22×1.5	13
ø100	94	11	117	136	154	11	M20 depth 27	17	101	73	91	63	35.5	M26×1.5	13

Outline dimension drawing (bore size: ø16 to ø100)

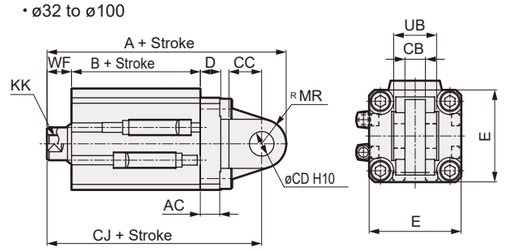
● Double Knuckle Clevis Type (CB)

・ø16 to ø25

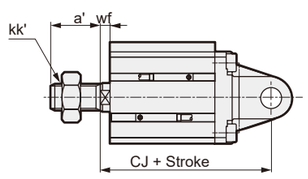


For rod end male thread

・ø32 to ø100



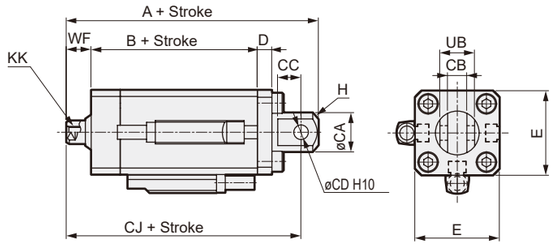
For rod end male thread



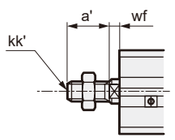
Code / Bore size (mm)	Common dimension										For female thread		With Switch			Without Switch			For male thread			With Switch	Without Switch
	AC	CA	CB	CC	CD	D	E	H	MR	UB	KK	WF	A	B	CJ	A	B	CJ	a'	kk'	wf	CJ	CJ
ø16	–	15	6.5 +0.4 +0.1	8	5	5	29	C2	–	12 -0.1 -0.4	M4 depth 8	3.5	61.5	37	55.5	51.5	27	45.5	12	M6	3.5	55.5	45.5
ø20	–	24	8 +0.4 +0.1	12	10	8	36	C4	–	19 -0.1 -0.4	M5 depth 7	4.5	77	39.5	67	67	29.5	57	14	M8	4.5	67	57
ø25	–	27.5	10 +0.4 +0.1	16	12	8	40	C5	–	21 -0.1 -0.4	M6 Depth 12	5	86.5	42.5	74.5	76.5	32.5	64.5	17.5	M10×1.25	5	74.5	64.5
ø32	9.5	–	10 +0.4 +0.1	16	12	10	45	–	12	21 -0.1 -0.4	M8 depth 13	7	92	43	80	82	33	70	23.5	M14×1.5	5	78	68
ø40	6.5	–	18 +0.4 +0.1	18	12	10	52	–	12	36 -0.1 -0.4	M8 depth 13	7	100.5	49.5	88.5	90.5	39.5	78.5	23.5	M14×1.5	5	86.5	76.5
ø50	6.5	–	18 +0.4 +0.1	18	12	10	64	–	12	36 -0.1 -0.4	M10 depth 15	8	102.5	50.5	90.5	92.5	40.5	80.5	28.5	M18×1.5	5	87.5	77.5
ø63	7.5	–	20 +0.4 +0.1	24	14	10	77	–	16	40 -0.1 -0.4	M10 depth 15	8	117	56	101	107	46	91	28.5	M18×1.5	5	98	88
ø80	10.5	–	28 +0.4 +0.1	30	20	14	98	–	20	56 -0.1 -0.4	M16 depth 21	10	145.5	63.5	125.5	135.5	53.5	115.5	35.5	M22×1.5	8	123.5	113.5
ø100	10.5	–	28 +0.4 +0.1	30	20	16	117	–	20	56 -0.1 -0.4	M20 depth 27	12	157	73	137	147	63	127	35.5	M26×1.5	8	133	123

● Double clevis type (Compact type) (CB2)

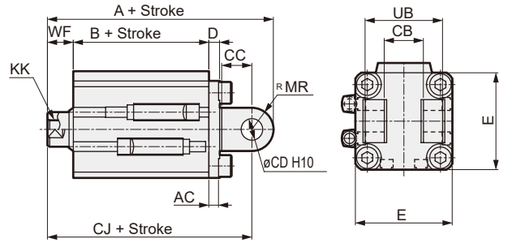
・ø16 to ø25



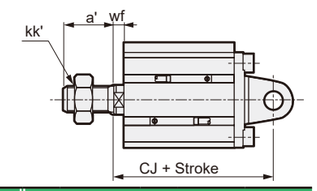
For rod end male thread



・ø32 to ø100



For rod end male thread

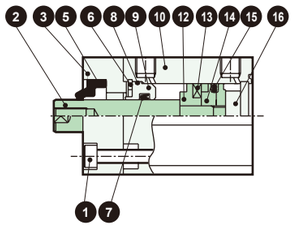


Code / Bore size (mm)	Common dimension										For female thread		With Switch			Without Switch			For male thread			With Switch	Without Switch
	AC	CA	CB	CC	CD	D	E	H	MR	UB	KK	WF	A	B	CJ	A	B	CJ	a'	kk'	wf	CJ	CJ
ø16	–	15	6.5 +0.4 +0.1	8	5	5	29	C2	–	12 -0.1 -0.4	M4 depth 8	3.5	61.5	37	55.5	51.5	27	45.5	12	M6	3.5	55.5	45.5
ø20	–	20	8 +0.4 +0.1	12	8	5	36	C4	–	16 -0.1 -0.3	M5 depth 7	4.5	71	39.5	62	61	29.5	52	14	M8	4.5	62	52
ø25	–	24	10 +0.4 +0.1	14	10	5	40	C5	–	20 -0.1 -0.3	M6 Depth 12	5	77.5	42.5	67.5	67.5	32.5	57.5	17.5	M10×1.25	5	67.5	57.5
ø32	4.5	–	18 +0.4 +0.1	14	10	5	45	–	10	36 -0.1 -0.3	M8 depth 13	7	80	43	70	70	33	60	23.5	M14×1.5	5	68	58
ø40	5	–	18 +0.4 +0.1	14	10	6	52	–	10	36 -0.1 -0.3	M8 depth 13	7	88.5	49.5	78.5	78.5	39.5	68.5	23.5	M14×1.5	5	76.5	66.5
ø50	6	–	22 +0.4 +0.1	20	14	7	64	–	14	44 -0.1 -0.3	M10 depth 15	8	100.5	50.5	86.5	90.5	40.5	76.5	28.5	M18×1.5	5	83.5	73.5
ø63	7	–	22 +0.4 +0.1	20	14	8	77	–	14	44 -0.1 -0.3	M10 depth 15	8	108	56	94	98	46	84	28.5	M18×1.5	5	91	81
ø80	9	–	28 +0.4 +0.1	27	18	10	98	–	18	56 -0.1 -0.3	M16 depth 21	10	129.5	63.5	111.5	119.5	53.5	101.5	35.5	M22×1.5	8	109.5	99.5
ø100	12	–	32 +0.4 +0.1	31	22	13	117	–	22	64 -0.1 -0.3	M20 depth 27	12	152	73	130	142	63	120	35.5	M26×1.5	8	126	116

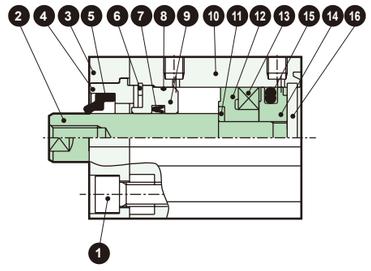
Internal Structure Diagram/Material

- Degree of protection: Packing NBR SSD-G2/G2L
- Degree of protection: Packing FKM SSD-G3/G3L

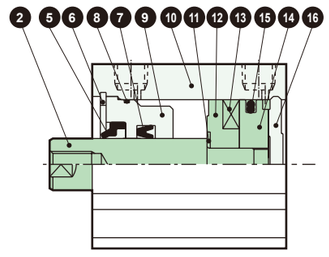
●SSD-G$\frac{2}{3}$L-16
(double acting/coolant proof scraper with switch)



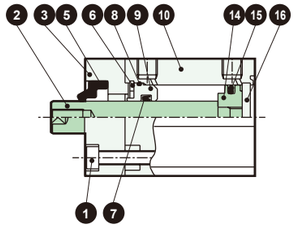
●SSD-G$\frac{2}{3}$L-20, 25
(double acting/coolant proof scraper with switch)



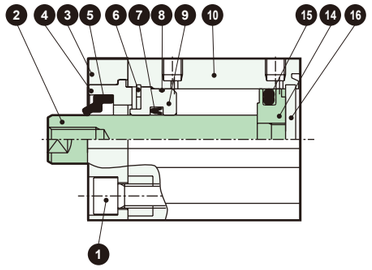
●SSD-G$\frac{2}{3}$L-32 to 50
(double acting/coolant proof scraper with switch)



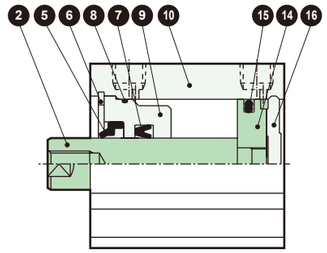
●SSD-G$\frac{2}{3}$-16
(double acting/coolant proof scraper)



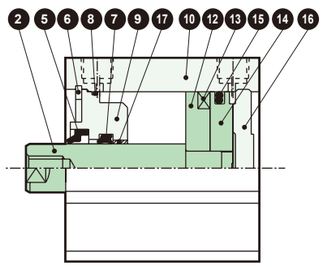
●SSD-G$\frac{2}{3}$-20, 25
(double acting/coolant proof scraper)



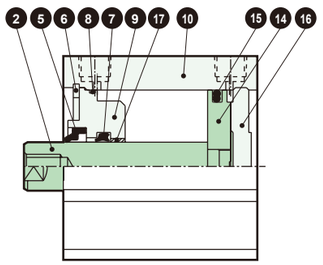
●SSD-G$\frac{2}{3}$-32 to 50
(double acting/coolant proof scraper)



●SSD-G$\frac{2}{3}$L-63 to 100
(double acting/coolant proof scraper with switch)



●SSD-G$\frac{2}{3}$-63 to 100
(double acting/coolant proof scraper)



Material

Part No.	Part Name		Material	Remarks
1	Hexagon Socket Head Cap Screw		Stainless Steel	ø16 to ø25
2	Piston Rod		Stainless Steel	Industrial Hard Chrome Plating
3	Adapter (A)		Aluminum Alloy	Alumite
4	Adapter (B)		Aluminum Alloy	Alumite
5	Scraper	G2	Nitrile Rubber	
		G3	Fluoro Rubber	
6	C-type retaining ring (for hole)		Stainless Steel	
7	Rod Packing	G2	Nitrile Rubber	
		G3	Fluoro Rubber	
8	Rod metal gasket	G2	Nitrile Rubber	
		G3	Fluoro Rubber	
9	Rod Metal		Aluminum Alloy	Alumite
10	Cylinder Body		Aluminum alloy	Hard Anodized
11	Spacer washer		Stainless Steel	
12	Spacer		ø16 to ø50: Special resin ø63 to ø100: Aluminum alloy	
13	Magnet		Plastic	
14	Piston		Aluminum Alloy	Chromate
15	Piston Packing	G2	Nitrile Rubber	
		G3	Fluoro Rubber	
16	Cover		ø16 to ø25: Stainless steel	
			ø32 to ø100: Aluminum alloy	Alumite
17	Bushing		Bearing Alloy	

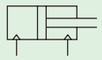
For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Compact Cylinder
Double Acting, High Load, Cutting Oil Resistant Type

SSD-KG2 / KG3 Series

● Bore size: ø16, ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100

Circuit Diagram Symbol



RoHS

Model No. Notation Method

Without Switch
(Without magnet for switch)

SSD - KG2 - 16 - 30 ——— N - LB - I
1 2 3 6 7 8

With Switch
(Built-in magnet for switch)

SSD - KG2L - 16 - 30 - T2YLH - R - N - LB - I
1 2 3 4 5 6 7 8

1 Protection structure level
2 Bore size
3 Stroke
4 Switch Model No.
5 Number of Switches
6 Option
7 Mounting bracket
8 Accessories

1 Protection structure level

Code	Content
KG2	High load + Cutting oil resistant scraper + NBR packing
KG3	High load + Cutting oil resistant scraper + FKM packing
KG2L	High load + Cutting oil resistant scraper + NBR packing with switch
KG3L	High load + Cutting oil resistant scraper + FKM packing with switch

2 Bore Size (mm)

Code	Content
16	ø16
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

3 Stroke (mm)

Bore size	Stroke	Intermediate Stroke
ø16, ø20	1 to 100	Every 1 mm
ø25 to ø50	1 to 150	
ø63 to ø100	1 to 200	

Note: For details on stroke, please refer to P. 552.

4 Switch Model No.

For switch details, please refer to P. 869.
Switches are included to the product and shipped.

Contact	LED Indicator Special Function	Wiring (Output)	Load Voltage (V) AC	Load Voltage (V) DC	Load Current (mA) AC	Load Current (mA) DC	Lead Wire *1 Straight	Lead Wire *1 L-shape	
Solid State	2-Color Improved Water Resistance	2-wire	-	24 ± 10%	-	5 to 20	T2WLH□	T2WLV□	
	2-Color For Cutting Oil	2-wire	-	10 to 30	-	5 to 20	T2YLH□	T2YLV□	
	2-Color For Cutting Oil	3-wire (NPN)	-	30 or less	-	50 or less	T3YLH□	T3YLV□	

*1: For "□" in the switch model No., enter the code selected from the "*Lead wire length, connector specification" table.
*2: Switches other than the above switch model No.s are also available. (Custom products) For details, refer to P. 869.

*3

*Lead wire length, connector specification

Code	Content
Blank	1 m (Standard)
3	3 m (Option)
5	5 m (Option)
W	M8 Connector, 1PIN (+) 4PIN (-) Lead Wire 0.3 m

*3: Only T2WLH, T2WLV can be selected.

Example) Lead wire length
1 m T2WLH
3 m T2WLH3
5 m T2WLH5

5 Number of Switches

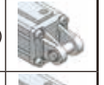
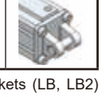
Code	Content
R	With 1 pc on rod side
H	With 1 pc on head side
D	With 2 pcs

6 Option

Code	Content	
Blank	Rod end female thread	
N	Rod end male thread	

7 Mounting type

Mounting brackets are shipped included to the product.

	Code	Content	
	LB	Axial foot (ø16 to ø25 customized product)	
*2	LB2	Axial foot (compact) (ø16 to ø25 customized product)	
*2	FA	Rod side flange (ø16 to ø25 custom product)	
	FB	Head Side Flange Type	
	CB	Double clevis (pin and retaining ring included)	
	CB2	Clevis bracket (compact) (pin and snap ring included)	

*1: For ø16 to ø25, due to structural reasons, foot brackets (LB, LB2) and flange brackets (FA) cannot be retrofitted to the rod side. Assembly at the time of product shipment is made-to-order.
*2: When LB2 or FA is selected, the piston rod protrusion dimension WF differs from the standard. See P. 555 and 556 for outline dimension drawings. In addition, the model No. specifying the protrusion length will be printed at the end of the model No. printed on the nameplate included to the main body. For cylinder model No.s when ordering cylinders and LB2/FA brackets separately, please contact us. (Excluding ø16 to ø25)

8 Accessories

Code	Content	
I	Single Knuckle	
I2	Single Knuckle (compact)	
Y	Double Knuckle (pin and retaining ring included)	
Y2	Double knuckle (compact) (pin and snap ring included)	

*1: Selectable when rod end male thread "N" is selected.
*2: "I", "I2", "Y", "Y2" cannot be selected at the same time.

*For combination of variations and options, refer to P. 356 to 361.

About Custom Product Specifications

For details, refer to P. 690 to 694.

Code	Content
-XP5	Knuckle Pin/Clevis Pin Split Pin
-XP7	Knuckle fixed by pin driving
-XP8	Knuckle pin/clevis pin split pin specification, knuckle fixed by pin driving
-A2	With 2 Rod Nuts
Rod End Shape Modification	Refer to Ending 11.

Model No. Example)
SSD-KG2 - ..... - XP5
SSD-KG3 - ..... - XP5

Switch Single Unit Model No. Notation Method

SW - T2YLH
4
Switch Model No.

Specifications

Item	SSD-KG2/KG3 SSD-KG2L/KG3L (with switch)								
Bore size mm	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation method	Double Acting Type								
Operating Fluid	Compressed Air								
Max. Operating Pressure MPa	1.0								
Min. Operating Pressure MPa	0.15						0.1		
Proof pressure MPa	1.6								
Ambient Temperature °C	-10 to 60 (No freezing)								
Port Size	M5×0.8			Rc1/8		Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+2.0}_{0}$								
Operating Piston Speed mm/s	50 to 500						50 to 300		
Cushion	Rubber Cushion								
Lubrication	Not required (When lubricating, use turbine oil Class 1 ISO VG32)								
Allowable absorbed energy J	0.09	0.16	0.16	0.4	0.63	0.98	1.56	2.51	3.92

Stroke

Stroke (mm)		Applicable Bore								
		ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Standard Stroke	5	●	●							
	10	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●			
	20	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●			
	30	●	●	●	●	●	●	●	●	●
	40	●	●	●	●	●	●	●	●	●
	50	●	●	●	●	●	●	●	●	●
	60			●	●	●	●	●	●	●
	70			●	●	●	●	●	●	●
	80			●	●	●	●	●	●	●
	90			●	●	●	●	●	●	●
	100			●	●	●	●	●	●	●
Minimum Stroke (mm) *1		1								
Maximum Stroke (mm)		100		150				200		
Intermediate Stroke *2		Every 1 mm								

***1: Cannot be manufactured for less than 10 mm with switch. For the number of switches that can be mounted and the minimum stroke, refer to the table below.**

*2: The overall length dimension for intermediate stroke is the same as the standard stroke above it.

Number of Switches Mounted and Min. Stroke (mm)

Switch Model No.	T2YL, T3YL		T2WL	
Number of Switches / Bore Size (mm)	1	2	1	2
ø16	10	10	20	20
ø20	10	10	20	20
ø25	10	10	20	20
ø32	10	10	15	15
ø40	10	10	15	15
ø50	10	10	15	15
ø63	10	10	10	15
ø80	10	10	10	15
ø100	10	10	10	15

Cylinder Weight

(Unit: g)

Stroke	5		10		15		20		25		30		40		50		60		70		80		90		100	
Bore Size (mm)	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch
ø16	69	114	79	124	90	135	101	146	112	157	123	168	145	179	167	201	189	223	211	245	233	267	255	289	277	311
ø20	88	163	101	176	114	189	126	201	139	214	151	226	176	251	201	276	226	301	251	326	276	351	301	376	326	401
ø25			134	225	150	241	166	257	181	272	198	289	230	321	262	353	294	385	326	417	358	449	390	481	422	513
ø32			232	346	253	367	275	389	297	411	319	433	362	476	405	519	448	562	491	605	534	648	577	691	620	734
ø40			316	459	343	486	369	512	395	538	422	565	475	618	528	671	581	724	634	777	687	830	740	883	793	936
ø50			509	703	551	745	594	788	637	831	678	872	762	956	846	1040	930	1124	1014	1208	1098	1292	1182	1376	1266	1460
ø63			727	1006			837	1116			948	1227	1058	1337	1168	1447	1278	1557	1388	1667	1498	1777	1608	1887	1718	1997
ø80			1274	1687			1447	1860			1621	2034	1794	2207	1967	2380	2140	2553	2313	2726	2486	2899	2659	3072	2832	3245
ø100			1887	2454			2115	2682			2342	2909	2570	3137	2798	3365	3026	3593	3254	3821	3482	4049	3710	4277	3938	4505

Stroke	110		120		130		140		150		160		170		180		190		200	
Bore Size (mm)	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch
ø20	351	426	376	451	401	476	426	501	451	526										
ø25	454	545	486	577	518	609	550	641	582	673										
ø32	663	777	706	820	749	863	792	906	835	949										
ø40	846	989	899	1042	952	1095	1005	1148	1058	1201										
ø50	1350	1544	1434	1628	1518	1712	1602	1796	1686	1880										
ø63	1828	2107	1938	2217	2048	2327	2158	2437	2268	2547	2378	2657	2488	2767	2598	2877	2708	2987	2818	3097
ø80	3005	3418	3178	3591	3351	3764	3524	3937	3697	4110	3870	4283	4043	4456	4216	4629	4389	4802	4562	4975
ø100	4166	4733	4394	4961	4622	5189	4850	5417	5078	5645	5306	5873	5534	6101	5762	6329	5990	6557	6218	6785

Theoretical Thrust Table

(Unit: N)

Bore size (mm)	Operating Direction	Operating Pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø16	Push	–	30.2	40.2	60.3	80.4	1.01×10^2	1.21×10^2	1.41×10^2	1.61×10^2	1.81×10^2	2.01×10^2
	Pull	–	22.6	30.2	45.2	60.3	75.4	90.5	1.06×10^2	1.21×10^2	1.36×10^2	1.51×10^2
ø20	Push	–	47.1	62.8	94.2	1.26×10^2	1.57×10^2	1.88×10^2	2.20×10^2	2.51×10^2	2.83×10^2	3.14×10^2
	Pull	–	35.3	47.1	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2	1.88×10^2	2.12×10^2	2.36×10^2
ø25	Push	–	73.6	98.2	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2	3.93×10^2	4.42×10^2	4.91×10^2
	Pull	–	56.7	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
ø32	Push	–	1.21×10^2	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2	6.43×10^2	7.24×10^2	8.04×10^2
	Pull	–	90.5	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
ø40	Push	–	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	–	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push	–	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	–	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Push	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
ø80	Push	5.03×10^2	7.54×10^2	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3	4.02×10^3	4.52×10^3	5.03×10^3
	Pull	4.54×10^2	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
ø100	Push	7.85×10^2	1.18×10^3	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3	6.28×10^3	7.07×10^3	7.85×10^3
	Pull	7.15×10^2	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3

Mounting Bracket Model No. Notation Method

Bore Size (mm) / Mounting bracket	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Foot (LB)	SSD-LB-16	SSD-LB-20	SSD-LB-25	SSD-LB-32	SSD-LB-40	SSD-LB-50	SSD-LB-63	SSD-LB-80	SSD-LB-100
Foot (LB2)	SSD-LB2-16	SSD-LB2-20	SSD-LB2-25	SSD-LB2-32	SSD-LB2-40	SSD-LB2-50	SSD-LB2-63	SSD-LB2-80	SSD-LB2-100
Flange (FA/FB)	SSD-FA-16	SSD-FA-20	SSD-FA-25	SSD-FA-32	SSD-FA-40	SSD-FA-50	SSD-FA-63	SSD-FA-80	SSD-FA-100
Double Clevis (CB)	SSD-CB-16	SSD-CB-20	SSD-CB-25	SSD-CB-32	SSD-CB-40	SSD-CB-50	SSD-CB-63	SSD-CB-80	SSD-CB-100
Double knuckle clevis (CB2)	SSD-CB2-16	SSD-CB2-20	SSD-CB2-25	SSD-CB2-32	SSD-CB2-40	SSD-CB2-50	SSD-CB2-63	SSD-CB2-80	SSD-CB2-100

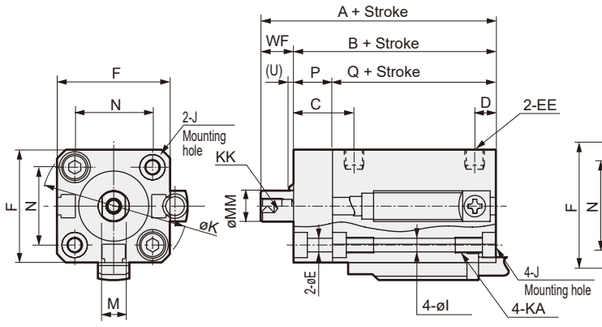
*1: Foot type mounting brackets are 2 pcs/set.

*2: For ø16 to ø25, due to the structure, foot brackets (LB, LB2) and flange brackets (FA) cannot be included to the rod side later. Please contact our sales department.

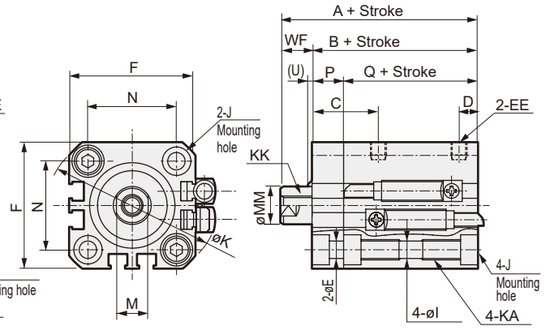
Outline Dimension Drawing

● SSD-KG2 (L) / KG3 (L)

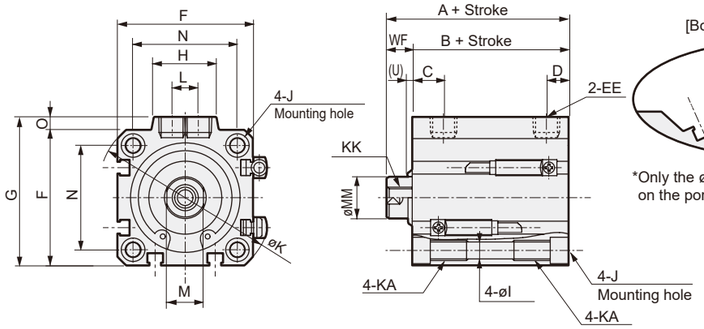
・ø16



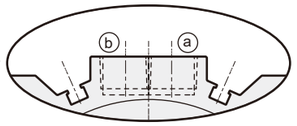
・ø20, ø25



・ø32 to ø100

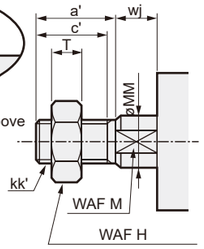


[Bore size ø100]



*Only the ø100 model has a switch groove on the port surface.

● Rod end male thread part



Code / Bore Size (mm)	Dimension with switch A *1	B *1	Q *1	Dimension without switch A *1	B *1	Q *1	C	D	E	EE	F	G	H	I	J	K	KA
ø16	45.5	37	27	40.5	32	22	15.5	5.5	3.4	M5	29	–	–	3.5	ø6.5 Counterbore Depth 3.5	38	M4 depth 7
ø20	54	44.5	34.5	44	34.5	24.5	18	5.5	5.5	M5	36	–	–	5.5	ø9 Counterbore depth 5.5	47	M6 depth 11
ø25	57.5	47.5	37.5	47.5	37.5	27.5	21	6	5.5	M5	40	–	–	5.5	ø9 Counterbore depth 5.5	51	M6 depth 11
ø32	65	53	–	55	43	–	8	8	5.5	Rc1/8	45	49.5	24	5.5	ø9 Counterbore depth 5.5	60	M6 depth 11
ø40	71.5	59.5	–	61.5	49.5	–	12	8.5	5.5	Rc1/8	52	57	24	5.5	ø9 Counterbore depth 5.5	69	M6 depth 11
ø50	73.5	60.5	–	63.5	50.5	–	10.5	10.5	5.5	Rc1/4	64	71	33	6.9	ø11 Counterbore depth 6.5	86	M8 depth 13
ø63	79	66	–	69	56	–	13	11	5.5	Rc1/4	77	84	33	8.7	ø14 Counterbore depth 9	103	M10 depth 25
ø80	88.5	73.5	–	78.5	63.5	–	16	13	5.5	Rc3/8	98	104	38	10.5	ø17.5 Counterbore depth 11	132	M12 depth 28
ø100	100	83	–	90	73	–	23	15	5.5	Rc3/8	117	123.5	38	10.5	ø17.5 Counterbore depth 11	156	M12 depth 28

Code / Bore Size (mm)	Common dimension KK	L	M	MM	N	O	P	U	WF	Rod End Male Thread Dimension a'	c'	H	kk'	M	MM	T	wj
ø16	M4 depth 8	–	6	8	20	–	10	3	8.5	12	10	10	M6	6	8	3.6	8.5
ø20	M5 depth 7	–	8	10	25.5	–	10	3	9.5	14	12	13	M8	8	10	5	9.5
ø25	M6 Depth 12	–	10	12	28	–	10	3	10	17.5	15	17	M10×1.25	10	12	6	10
ø32	M8 depth 13	10	14	16	34	4.5	–	0	12	23.5	20.5	22	M14×1.5	14	16	8	10
ø40	M8 depth 13	10	14	16	40	5	–	2	12	23.5	20.5	22	M14×1.5	14	16	8	10
ø50	M10 depth 15	15	17	20	50	7	–	2	13	28.5	26	27	M18×1.5	17	20	11	10
ø63	M10 depth 15	15	17	20	60	7	–	2	13	28.5	26	27	M18×1.5	17	20	11	10
ø80	M16 depth 21	15	22	25	77	6	–	2	15	35.5	32.5	32	M22×1.5	22	25	13	13
ø100	M20 depth 27	15	27	30	94	6.5	–	2	17	35.5	32.5	41	M26×1.5	27	30	16	13

*1: When calculating A + Stroke and B + Stroke dimensions for intermediate strokes, do not enter the intermediate stroke value for the stroke; instead, enter the value of the standard stroke above it. (Example) For an intermediate stroke of 7 mm, enter the standard stroke of 10 mm for calculation.

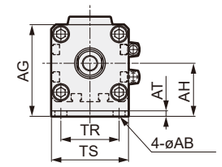
***2: For dimensions with each switch, refer to P. 674 to 681.**

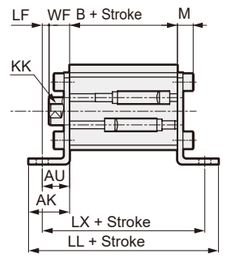
***3: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**

Outline Dimension Drawing (Bore size: ø32 to ø100)

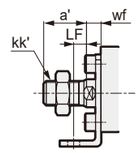
● Axial foot type (LB)

・ø32

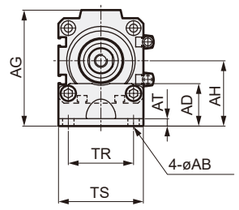


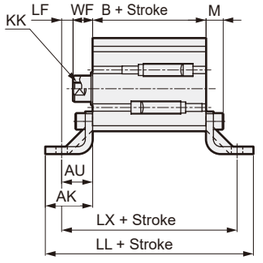


● For rod end male thread

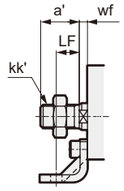


・ø40 to ø100





● For rod end male thread

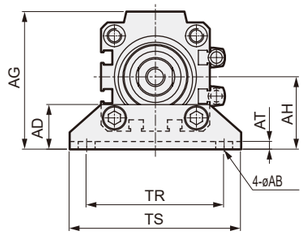


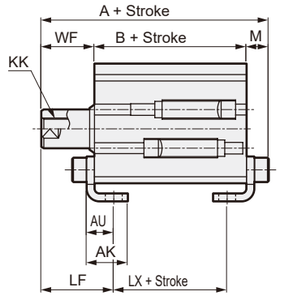
Code / Bore size (mm)	Common dimension AB	AD	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch B	With Switch LL	With Switch LX	Without Switch B	Without Switch LL	Without Switch LX	For male thread a'	kk'	wf	LF
ø32	7	–	53.5	31	24	3.2	16	34	45	9.2	M8 depth 13	12	9	53	101	85	43	91	75	23.5	M14×1.5	10	11
ø40	7	26	71	40	29	4.5	19	40	52	10	M8 depth 13	12	12	59.5	117.5	97.5	49.5	107.5	87.5	23.5	M14×1.5	10	14
ø50	9	23	79	40	34	4.5	22	46	64	13	M10 depth 15	13	14	60.5	128.5	104.5	50.5	118.5	94.5	28.5	M18×1.5	10	17
ø63	11	33	96.5	51	40	4.5	25	60	77	15	M10 depth 15	13	17	66	146	116	56	136	106	28.5	M18×1.5	10	20
ø80	13	42	116.5	61.5	50	6	35	77	98	18	M16 depth 21	15	25	73.5	173.5	143.5	63.5	163.5	133.5	35.5	M22×1.5	13	27
ø100	13	48	134	69	50	6	35	94	117	18	M20 depth 27	17	23	83	183	153	73	173	143	35.5	M26×1.5	13	27

*1: If B + stroke is less than or equal to the value below, LB cannot be selected.
ø80: 69 or less

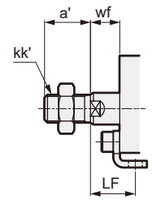
● Axial Foot Type (Compact Type) (LB2)

· ø32 to ø100





● For rod end male thread



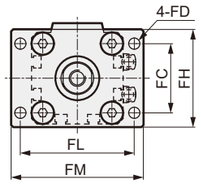
Code / Bore size (mm)	Common dimension AB	AD	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch A	With Switch B	With Switch LX	Without Switch A	Without Switch B	Without Switch LX	For male thread a'	kk'	wf	LF
ø32	7	18.5	57	30	17	3.2	11.2	57	71	9.2	M8 depth 13	22	25	84.2	53	37	74.2	43	27	23.5	M14×1.5	20	23
ø40	7	18	64	33	18.2	3.2	11.2	64	78	9.2	M8 depth 13	22	25	90.7	59.5	43.5	80.7	49.5	33.5	23.5	M14×1.5	20	23
ø50	9	22	78	39	22.7	3.2	14.7	79	95	11.2	M10 depth 15	23	29.5	94.7	60.5	37.5	84.7	50.5	27.5	28.5	M18×1.5	20	26.5
ø63	11	26	91.5	46	25.2	3.2	16.2	95	113	13.2	M10 depth 15	23	31	102.2	66	40	92.2	56	30	28.5	M18×1.5	20	28
ø80	13	39.5	114	59	30.5	4.5	19.5	118	140	16.5	M16 depth 21	25	35	115	73.5	43.5	105	63.5	33.5	35.5	M22×1.5	23	33
ø100	13	50	136	71	35.5	6	23	137	162	18	M20 depth 27	27	39	128	83	49	118	73	39	35.5	M26×1.5	23	35

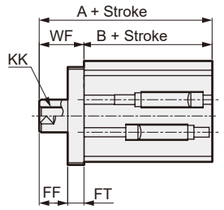
*1: If B + stroke is less than or equal to the value below, LB2 cannot be selected.
ø80: 72 or less

Outline dimension drawing (bore size: ø16 to ø100)

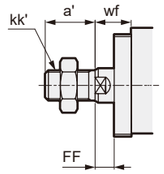
● Rod Side Flange Type (FA)

• ø32 to ø100





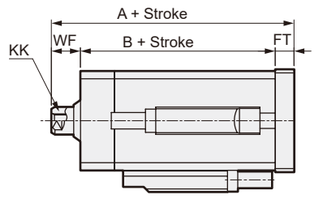
● For rod end male thread

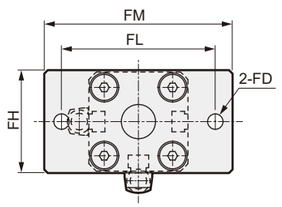


Code / Bore size (mm)	Common dimension						For female thread							For male thread			
	FC	FD	FH	FL	FM	FT	FF	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	FF	a'	kk'	wf
ø32	34	5.5	48	56	65	8	14	M8 depth 13	22	75	53	65	43	12	23.5	M14×1.5	20
ø40	40	5.5	54	62	72	8	14	M8 depth 13	22	81.5	59.5	71.5	49.5	12	23.5	M14×1.5	20
ø50	50	6.6	67	76	89	9	14	M10 depth 15	23	83.5	60.5	73.5	50.5	11	28.5	M18×1.5	20
ø63	60	9	80	92	108	9	14	M10 depth 15	23	89	66	79	56	11	28.5	M18×1.5	20
ø80	77	11	99	116	134	11	14	M16 depth 21	25	98.5	73.5	88.5	63.5	12	35.5	M22×1.5	23
ø100	94	11	117	136	154	11	16	M20 depth 27	27	110	83	100	73	12	35.5	M26×1.5	23

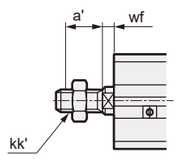
● Head Side Flange Type (FB)

• ø16 to ø25

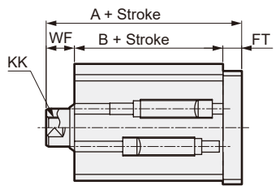


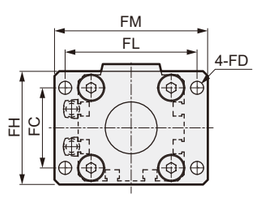


● For rod end male thread

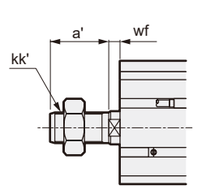


• ø32 to ø100





● In case of male thread at rod end

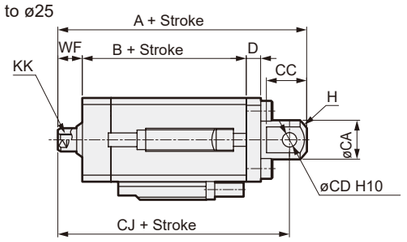


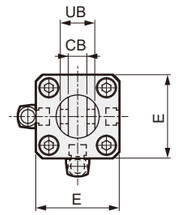
Code / Bore size (mm)	Common dimension						For female thread						For male thread			
	FC	FD	FH	FL	FM	FT	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	a'	kk'	wf
ø16	–	4.5	30	45	55	5.5	M4 depth 8	8.5	51	37	46	32	12	M6	8.5
ø20	–	6.6	39	48	60	8	M5 depth 7	9.5	62	44.5	52	34.5	14	M8	9.5
ø25	–	6.6	42	52	64	8	M6 Depth 12	10	65.5	47.5	55.5	37.5	17.5	M10×1.25	10
ø32	34	5.5	48	56	65	8	M8 depth 13	12	73	53	63	43	23.5	M14×1.5	10
ø40	40	5.5	54	62	72	8	M8 depth 13	12	79.5	59.5	69.5	49.5	23.5	M14×1.5	10
ø50	50	6.6	67	76	89	9	M10 depth 15	13	82.5	60.5	72.5	50.5	28.5	M18×1.5	10
ø63	60	9	80	92	108	9	M10 depth 15	13	88	66	78	56	28.5	M18×1.5	10
ø80	77	11	99	116	134	11	M16 depth 21	15	99.5	73.5	89.5	63.5	35.5	M22×1.5	13
ø100	94	11	117	136	154	11	M20 depth 27	17	111	83	101	73	35.5	M26×1.5	13

Outline dimension drawing (bore size: ø16 to ø100)

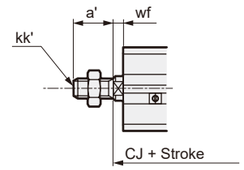
● Double Knuckle Clevis Type (CB)

• ø16 to ø25

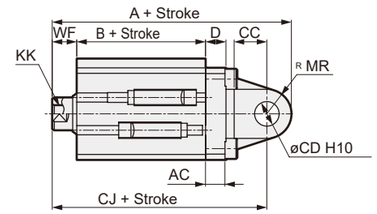


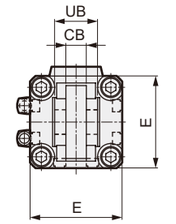


● For rod end male thread

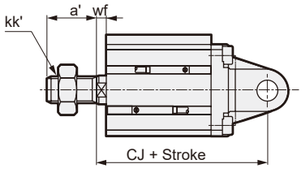


• ø32 to ø100





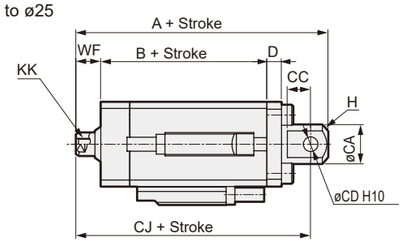
● For rod end male thread

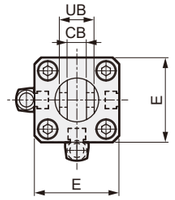


Code / Bore size (mm)	Common dimension										For female thread							For male thread				
	AC	CA	CB	CC	CD	D	E	H	MR	UB	KK	WF	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	a'	kk'	wf	With Switch CJ	Without Switch CJ
ø16	–	15	$6.5^{+0.4}_{+0.1}$	8	5	5	29	C2	–	$12^{-0.1}_{-0.4}$	M4 depth 8	3.5	61.5	37	55.5	56.5	32	50.5	12	M6	3.5	55.5	50.5
ø20	–	24	$8^{+0.4}_{+0.1}$	12	10	8	36	C4	–	$19^{-0.1}_{-0.4}$	M5 depth 7	4.5	82	44.5	72	72	34.5	62	14	M8	4.5	72	62
ø25	–	27.5	$10^{+0.4}_{+0.1}$	16	12	8	40	C5	–	$21^{-0.1}_{-0.4}$	M6 Depth 12	5	91.5	47.5	79.5	81.5	37.5	69.5	17.5	M10×1.25	5	79.5	69.5
ø32	9.5	–	$10^{+0.4}_{+0.1}$	16	12	10	45	–	12	$21^{-0.1}_{-0.4}$	M8 depth 13	7	102	53	90	92	43	80	23.5	M14×1.5	5	88	78
ø40	6.5	–	$18^{+0.4}_{+0.1}$	18	12	10	52	–	12	$36^{-0.1}_{-0.4}$	M8 depth 13	7	110.5	59.5	98.5	100.5	49.5	88.5	23.5	M14×1.5	5	96.5	86.5
ø50	6.5	–	$18^{+0.4}_{+0.1}$	18	12	10	64	–	12	$36^{-0.1}_{-0.4}$	M10 depth 15	8	112.5	60.5	100.5	102.5	50.5	90.5	28.5	M18×1.5	5	97.5	87.5
ø63	7.5	–	$20^{+0.4}_{+0.1}$	24	14	10	77	–	16	$40^{-0.1}_{-0.4}$	M10 depth 15	8	127	66	111	117	56	101	28.5	M18×1.5	5	108	98
ø80	10.5	–	$28^{+0.4}_{+0.1}$	30	20	14	98	–	20	$56^{-0.1}_{-0.4}$	M16 depth 21	10	155.5	73.5	135.5	145.5	63.5	125.5	35.5	M22×1.5	8	133.5	123.5
ø100	10.5	–	$28^{+0.4}_{+0.1}$	30	20	16	117	–	20	$56^{-0.1}_{-0.4}$	M20 depth 27	12	167	83	147	157	73	137	35.5	M26×1.5	8	143	133

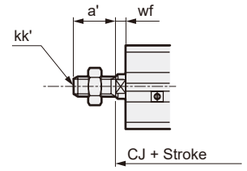
● Double clevis type (Compact type) (CB2)

• ø16 to ø25

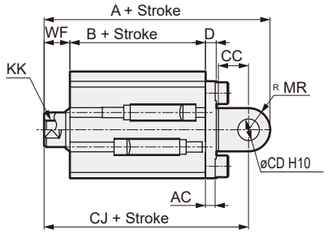


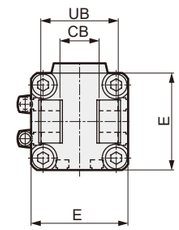


● For rod end male thread

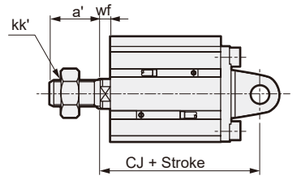


• ø32 to ø100





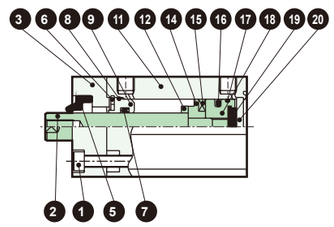
● For rod end male thread



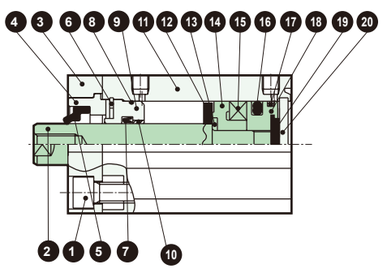
Code / Bore size (mm)	Common dimension										For female thread							For male thread				
	AC	CA	CB	CC	CD	D	E	H	MR	UB	KK	WF	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	a'	kk'	wf	With Switch CJ	Without Switch CJ
ø16	–	15	$6.5^{+0.4}_{+0.1}$	8	5	5	29	C2	–	$12^{-0.1}_{-0.4}$	M4 depth 8	3.5	61.5	37	55.5	56.5	32	50.5	12	M6	3.5	55.5	50.5
ø20	–	20	$8^{+0.4}_{+0.1}$	12	8	5	36	C4	–	$16^{-0.1}_{-0.3}$	M5 depth 7	4.5	76	44.5	67	66	34.5	57	14	M8	4.5	67	57
ø25	–	24	$10^{+0.4}_{+0.1}$	14	10	5	40	C5	–	$20^{-0.1}_{-0.3}$	M6 Depth 12	5	82.5	47.5	72.5	72.5	37.5	62.5	17.5	M10×1.25	5	72.5	62.5
ø32	4.5	–	$18^{+0.4}_{+0.1}$	14	10	5	45	–	10	$36^{-0.1}_{-0.3}$	M8 depth 13	7	90	53	80	80	43	70	23.5	M14×1.5	5	78	68
ø40	5	–	$18^{+0.4}_{+0.1}$	14	10	6	52	–	10	$36^{-0.1}_{-0.3}$	M8 depth 13	7	98.5	59.5	88.5	88.5	49.5	78.5	23.5	M14×1.5	5	86.5	76.5
ø50	6	–	$22^{+0.4}_{+0.1}$	20	14	7	64	–	14	$44^{-0.1}_{-0.3}$	M10 depth 15	8	110.5	60.5	96.5	100.5	50.5	86.5	28.5	M18×1.5	5	93.5	83.5
ø63	7	–	$22^{+0.4}_{+0.1}$	20	14	8	77	–	14	$44^{-0.1}_{-0.3}$	M10 depth 15	8	118	66	104	108	56	94	28.5	M18×1.5	5	101	91
ø80	9	–	$28^{+0.4}_{+0.1}$	27	18	10	98	–	18	$56^{-0.1}_{-0.3}$	M16 depth 21	10	139.5	73.5	121.5	129.5	63.5	111.5	35.5	M22×1.5	8	119.5	109.5
ø100	12	–	$32^{+0.4}_{+0.1}$	31	22	13	117	–	22	$64^{-0.1}_{-0.3}$	M20 depth 27	12	162	83	140	152	73	130	35.5	M26×1.5	8	136	126

Internal Structure Diagram/Material

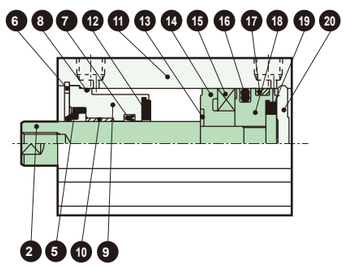
●SSD-KG $\frac{2}{3}$ L-16
(Double acting, High load, Cutting oil resistant scraper with switch)



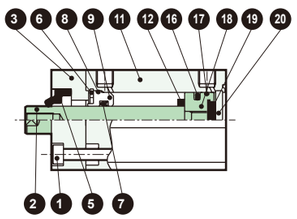
●SSD-KG $\frac{2}{3}$ L-20, 25
(Double acting, High load, Cutting oil resistant scraper with switch)



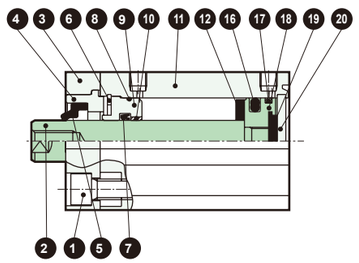
●SSD-KG $\frac{2}{3}$ L-32 to 50
(Double acting, High load, Cutting oil resistant scraper with switch)



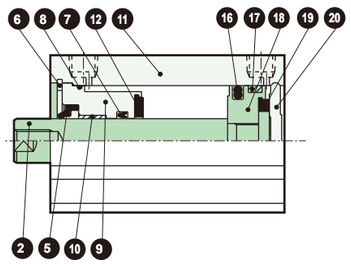
●SSD-KG $\frac{2}{3}$ -16
(Double acting, High load, Cutting oil resistant scraper)



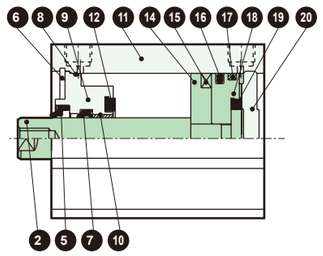
●SSD-KG $\frac{2}{3}$ -20, 25
(Double acting, High load, Cutting oil resistant scraper)



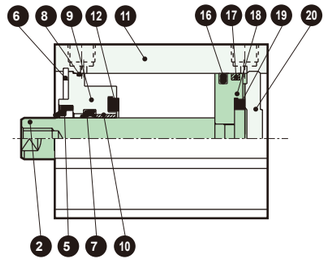
●SSD-KG $\frac{2}{3}$ -32 to 50
(Double acting, High load, Cutting oil resistant scraper)



●SSD-KG $\frac{2}{3}$ L-63 to 100
(Double acting, High load, Cutting oil resistant scraper with switch)



●SSD-KG $\frac{2}{3}$ -63 to 100
(Double acting, High load, Cutting oil resistant scraper)



Material

Part No.	Part Name		Material	Remarks
1	Hexagon Socket Head Cap Screw		Stainless Steel	ø16 to ø25 only
2	Piston Rod		Stainless Steel	Industrial Hard Chrome Plating
3	Adapter (A)		Aluminum Alloy	Alumite
4	Adapter (B)		Aluminum Alloy	Alumite
5	Scraper	G2	Nitrile Rubber	
		G3	Fluoro Rubber	
6	C-type retaining ring (for hole)		Stainless Steel	
7	Rod Packing	G2	Nitrile Rubber	
		G3	Fluoro Rubber	
8	Rod metal gasket	G2	Nitrile Rubber	
		G3	Fluoro Rubber	
9	Rod Metal		Aluminum Alloy	Alumite
10	Bushing		Bearing Alloy	

Part No.	Part Name		Material	Remarks
11	Cylinder Body		Aluminum alloy	Hard Anodized
12	Cushion rubber (R)		Urethane Rubber	
13	Spacer washer		Stainless Steel	
14	Spacer		ø16 to ø50: Special resin ø63 to ø100: Aluminum alloy	
15	Magnet		Plastic	
16	Piston Packing	G2	Nitrile Rubber	
		G3	Fluoro Rubber	
17	Wear Ring		Polyacetal	
18	Piston		Aluminum Alloy	Chromate
19	Cushion rubber (H)		Urethane Rubber	
20	Cover		ø16 to ø25: Stainless steel	
			ø32 to ø100: Aluminum alloy	Alumite

For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Compact Cylinder
Double acting, Single rod, Coil scraper type

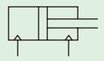
SSD-G1 Series

Compact Cylinder
Double acting, Single rod, Spatter adhesion prevention

SSD-G4 Series

● Bore size: ø25, ø32, ø40, ø50, ø63, ø80, ø100

Circuit Diagram Symbol



RoHS

Model No. Notation Method

Without Switch
(Without magnet for switch)

SSD-G4 - 32 - 10 ——— N - LB - I
1 2 3 6 7 8

With Switch
(Built-in magnet for switch)

SSD-G4L - 32 - 10 - T2YD - R - N - LB - I
1 2 3 4 5 6 7 8

1 Model No. | 2 Bore size | 3 Stroke | 4 Switch Model No. | 5 Number of Switches | 6 Option | 7 Mounting bracket | 8 Accessories

1 Model No.

Code	Content
SSD-G1	Double acting, Single rod, Coil scraper type
SSD-G1L	Double acting, Single rod, Coil scraper type with switch
SSD-G4	Double acting, Single rod, Spatter adhesion prevention type
SSD-G4L	Double acting, Single rod, Spatter adhesion prevention type with switch

2 Bore Size (mm)

Code	Content
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

3 Stroke (mm)

Bore size	Stroke	Intermediate Stroke
ø25 to ø50	1 to 50	Every 1 mm
ø63 to ø100	1 to 50	

Note: For details on stroke, please refer to P. 562.

4 Switch Model No.

For switch details, please refer to P. 869. Switches are included to the product and shipped.

	LED Indicator Special Function	Wiring (Output)	Load Voltage (V) AC	Load Voltage (V) DC	Load Current (mA) AC	Load Current (mA) DC	Lead Wire *1 Straight	Lead Wire *1 L-shape	
Contact									
Solid State	2-Color for AC Magnetic Field	2-wire	—	24 ± 10%	—	5 to 20	T2YD□	–	
			—		—		T2YDT□	–	

1: For "" in the switch model No., enter the code selected from the "*Lead wire length" table.
*2: Switches other than the above switch model No.s are also available. (Custom products) For details, refer to P. 869.

***Lead wire length**

Code	Content
Blank	1 m (Standard)
3	3 m (Option)
5	5 m (Option)

Example) Lead wire length
1 m T2YD
3 m T2YD3
5 m T2YD5

5 Number of Switches

Code	Content
R	With 1 pc on rod side
H	With 1 pc on head side
D	With 2 pcs

6 Option

Code	Content	
Blank	Rod end female thread	
N	Rod end male thread	

7 Mounting type

Mounting brackets are shipped included to the product.

	Code	Content	
	LB	Axial Foot Type	
*1	LB2	Axial foot type (Compact type)	
*1	FA	Rod Side Flange Type	
	FB	Head Side Flange Type	
	CB	Double Clevis Type (pin and retaining ring included)	
	CB2	Clevis bracket (compact) (pin and snap ring included)	

*1: When LB2 or FA is selected, the piston rod protrusion dimension WF differs from the standard. See P. 565, 566, 569, and 570 for outline dimension drawings. Also, the model No. specifying the protrusion length will be printed at the end of the model No. on the nameplate included to the main body. For cylinder model No.s when ordering cylinders and LB2/FA brackets separately, please contact us.

8 Accessories

Code	Content	
I	Single Knuckle	
I2	Single Knuckle (compact)	
Y	Double Knuckle (pin and retaining ring included)	
Y2	Double knuckle (compact) (pin and snap ring included)	

*1: Selectable when rod end male thread "N" is selected.
*2: "I", "I2", "Y", "Y2" cannot be selected at the same time.

About Custom Product Specifications

For details, refer to P. 690 to 694.

Code	Content
-XP5	Knuckle Pin/Clevis Pin Split Pin
-XP7	Knuckle fixed by pin driving
-XP8	Knuckle pin/clevis pin split pin specification, knuckle fixed by pin driving
-A2	With 2 Rod Nuts
-R1, R2	With spigot joint
Rod End Shape Modification	Refer to Ending 11.

Model No. Example)

SSD-G1 - ..... - XP5

SSD-G4 - ..... - XP5

Switch Single Unit Model No. Notation Method

SW - T2YD□
4
Switch Model No.

Specifications

Item	SSD-G1/G4 SSD-G1L/G4L (with switch)						
Bore size mm	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation method	Double Acting Type						
Operating Fluid	Compressed Air						
Max. Operating Pressure MPa	1.0						
Min. Operating Pressure MPa	0.15				0.1		
Proof pressure MPa	1.6						
Ambient Temperature °C	-10 to 60 (No freezing)						
Port Size	M5	Rc1/8		Rc1/4		Rc3/8	
Stroke tolerance mm	+1.0 0						
Operating Piston Speed mm/s	50 to 500				50 to 300		
Cushion	None						
Lubrication	Not required (When lubricating, use turbine oil Class 1 ISO VG32)						
Allowable absorbed energy J	0.021	0.025	0.092	0.1	0.12	0.27	0.56

Stroke

Stroke (mm)		Applicable Bore						
		ø25	ø32	ø40	ø50	ø63	ø80	ø100
Standard stroke *1	5	●	●	●	●	●	●	●
	10	●	●	●	●	●	●	●
	15	●	●	●	●			
	20	●	●	●	●	●	●	●
	25	●	●	●	●			
	30	●	●	●	●	●	●	●
	40	●	●	●	●	●	●	●
	50	●	●	●	●	●	●	●
Minimum stroke (mm) *2		1						
Maximum Stroke (mm)		50						
Intermediate stroke *3		Every 1 mm						

***1: If the standard stroke is exceeded, it will be a high load type (K). For specifications, see P. 390, and for outline dimensions, see P. 392 to 400.**

*2: Products less than 10 mm with an AC magnetic field switch cannot be manufactured.

*3: The overall length dimension for intermediate stroke is the same as the standard stroke above it.

***4: For the minimum stroke when using mounting brackets LB and LB2, see P. 565 and 569.**

Cylinder Weight Table (Weight with switch is when 2 cylinder switches are included)

(Unit: g)

Stroke (mm) / Bore Size (mm)	5		10		15		20		25		30		40		50	
	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch
ø25	131	222	146	237	162	253	178	269	194	285	209	300	241	332	272	363
ø32	184	298	206	320	228	342	250	364	271	385	293	407	337	451	380	494
ø40	265	408	292	435	318	461	345	488	372	515	398	541	451	594	504	647
ø50	418	612	460	654	502	696	544	738	586	780	629	823	713	907	797	991
ø63	603	882	658	937	–	–	768	1047	–	–	878	1157	989	1268	1099	1378
ø80	1093	1506	1180	1593	–	–	1353	1766	–	–	1526	1939	1700	2113	1873	2286
ø100	1654	2221	1768	2335	–	–	1995	2562	–	–	2223	2790	2450	3017	2678	3245

Theoretical Thrust Table

(Unit: N)

Bore size (mm)	Operating Direction	Operating Pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø25	Push	–	73.6	98.2	1.47×10^{2}	1.96×10^{2}	2.45×10^{2}	2.95×10^{2}	3.44×10^{2}	3.93×10^{2}	4.42×10^{2}	4.91×10^{2}
	Pull	–	56.7	75.6	1.13×10^{2}	1.51×10^{2}	1.89×10^{2}	2.27×10^{2}	2.64×10^{2}	3.02×10^{2}	3.40×10^{2}	3.78×10^{2}
ø32	Push	–	1.21×10^{2}	1.61×10^{2}	2.41×10^{2}	3.22×10^{2}	4.02×10^{2}	4.83×10^{2}	5.63×10^{2}	6.43×10^{2}	7.24×10^{2}	8.04×10^{2}
	Pull	–	90.5	1.21×10^{2}	1.81×10^{2}	2.41×10^{2}	3.02×10^{2}	3.62×10^{2}	4.22×10^{2}	4.83×10^{2}	5.43×10^{2}	6.03×10^{2}
ø40	Push	–	1.88×10^{2}	2.51×10^{2}	3.77×10^{2}	5.03×10^{2}	6.28×10^{2}	7.54×10^{2}	8.80×10^{2}	1.01×10^{3}	1.13×10^{3}	1.26×10^{3}
	Pull	–	1.58×10^{2}	2.11×10^{2}	3.17×10^{2}	4.22×10^{2}	5.28×10^{2}	6.33×10^{2}	7.39×10^{2}	8.44×10^{2}	9.50×10^{2}	1.06×10^{3}
ø50	Push	–	2.95×10^{2}	3.93×10^{2}	5.89×10^{2}	7.85×10^{2}	9.82×10^{2}	1.18×10^{3}	1.37×10^{3}	1.57×10^{3}	1.77×10^{3}	1.96×10^{3}
	Pull	–	2.47×10^{2}	3.30×10^{2}	4.95×10^{2}	6.60×10^{2}	8.25×10^{2}	9.90×10^{2}	1.15×10^{3}	1.32×10^{3}	1.48×10^{3}	1.65×10^{3}
ø63	Push	3.12×10^{2}	4.68×10^{2}	6.23×10^{2}	9.35×10^{2}	1.25×10^{3}	1.56×10^{3}	1.87×10^{3}	2.18×10^{3}	2.49×10^{3}	2.81×10^{3}	3.12×10^{3}
	Pull	2.80×10^{2}	4.20×10^{2}	5.61×10^{2}	8.41×10^{2}	1.12×10^{3}	1.40×10^{3}	1.68×10^{3}	1.96×10^{3}	2.24×10^{3}	2.52×10^{3}	2.80×10^{3}
ø80	Push	5.03×10^{2}	7.54×10^{2}	1.01×10^{3}	1.51×10^{3}	2.01×10^{3}	2.51×10^{3}	3.02×10^{3}	3.52×10^{3}	4.02×10^{3}	4.52×10^{3}	5.03×10^{3}
	Pull	4.54×10^{2}	6.80×10^{2}	9.07×10^{2}	1.36×10^{3}	1.81×10^{3}	2.27×10^{3}	2.72×10^{3}	3.17×10^{3}	3.63×10^{3}	4.08×10^{3}	4.54×10^{3}
ø100	Push	7.85×10^{2}	1.18×10^{3}	1.57×10^{3}	2.36×10^{3}	3.14×10^{3}	3.93×10^{3}	4.71×10^{3}	5.50×10^{3}	6.28×10^{3}	7.07×10^{3}	7.85×10^{3}
	Pull	7.15×10^{2}	1.07×10^{3}	1.43×10^{3}	2.14×10^{3}	2.86×10^{3}	3.57×10^{3}	4.29×10^{3}	5.00×10^{3}	5.72×10^{3}	6.43×10^{3}	7.15×10^{3}

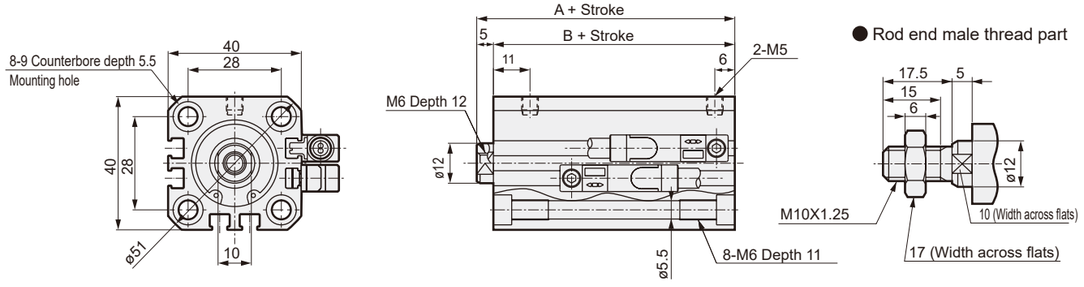
Mounting Bracket Model No. Notation Method

Bore Size (mm) / Mounting bracket	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Foot (LB)	SSD-LB-25	SSD-LB-32	SSD-LB-40	SSD-LB-50	SSD-LB-63	SSD-LB-80	SSD-LB-100
Foot (LB2)	SSD-LB2-25	SSD-LB2-32	SSD-LB2-40	SSD-LB2-50	SSD-LB2-63	SSD-LB2-80	SSD-LB2-100
Flange (FA/FB)	SSD-FA-25	SSD-FA-32	SSD-FA-40	SSD-FA-50	SSD-FA-63	SSD-FA-80	SSD-FA-100
Double Clevis (CB)	SSD-CB-25	SSD-CB-32	SSD-CB-40	SSD-CB-50	SSD-CB-63	SSD-CB-80	SSD-CB-100
Double knuckle clevis (CB2)	SSD-CB2-25	SSD-CB2-32	SSD-CB2-40	SSD-CB2-50	SSD-CB2-63	SSD-CB2-80	SSD-CB2-100

Note: Foot type mounting brackets are 2 pcs/set.

Outline Dimension Drawing (Bore size: ø25)

● SSD-G1 (L)/G4 (L)-25



Code / Bore Size (mm)	Dimension without switch A *1	Dimension without switch B *1	Dimension with switch A *1	Dimension with switch B *1
ø25	37.5	32.5	47.5	42.5

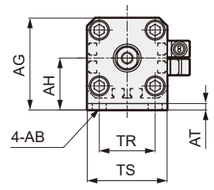
*1: When calculating A + stroke and B + stroke dimensions for intermediate strokes, do not use the intermediate stroke value for the stroke; instead, use the value of the standard stroke above it. (Example) For an intermediate stroke of 17 mm, use the standard stroke of 20 mm for calculation.

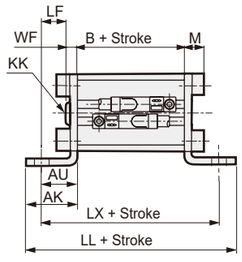
***2: For dimensions with each switch, refer to P. 674 to 681.**

***3: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**

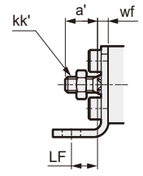
Outline Dimension Drawing (Bore size: ø25)

● Axial Foot Type (LB)



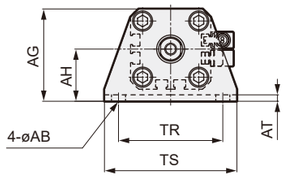


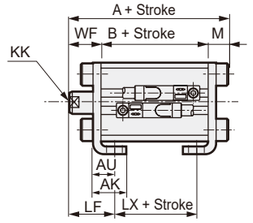
● For rod end male thread



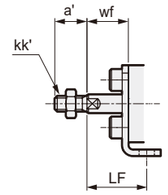
Code / Bore size (mm)	Common dimension AB	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch B	With Switch LL	With Switch LX	Without Switch B	Without Switch LL	Without Switch LX	For male thread a'	kk'	wf	LF
ø25	7	46	26	24	3.2	16	28	40	9.2	M6 Depth 12	5	11	42.5	90.5	74.5	32.5	80.5	64.5	17.5	M10×1.25	5	11

● Axial Foot Type (Compact Type) (LB2)





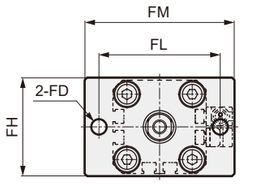
● For rod end male thread

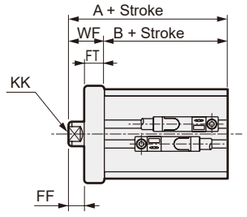


Code / Bore size (mm)	Common dimension AB	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch A	With Switch B	With Switch LX	Without Switch A	Without Switch B	Without Switch LX	For male thread a'	kk'	wf	LF
ø25	7	46	26	16.5	3.2	10.7	52	66	9.2	M6 Depth 12	15	22.5	66.7	42.5	27.5	56.7	32.5	17.5	17.5	M10×1.25	15	22.5

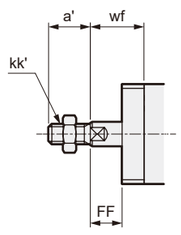
Outline Dimension Drawing (Bore size: ø25)

● Rod Side Flange Type (FA)



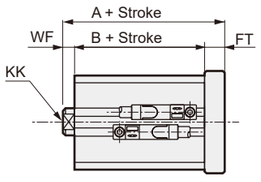


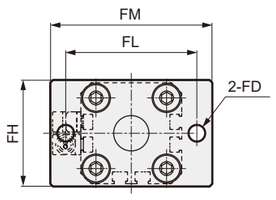
● For rod end male thread



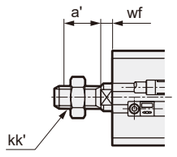
Code / Bore size (mm)	Common dimension					For female thread							For male thread			
	FD	FH	FL	FM	FT	FF	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	FF	a'	kk'	wf
ø25	6.6	42	52	64	8	7	M6 Depth 12	15	57.5	42.5	47.5	32.5	7	17.5	M10×1.25	15

● Head Side Flange Type (FB)





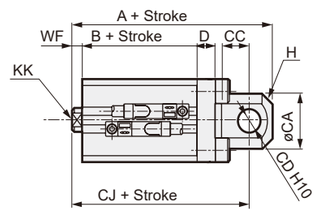
● For rod end male thread

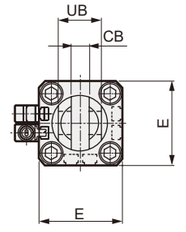


Code / Bore size (mm)	Common dimension					For female thread						For male thread			
	FD	FH	FL	FM	FT	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	a'	kk'	wf	
ø25	6.6	42	52	64	8	M6 Depth 12	5	55.5	42.5	45.5	32.5	17.5	M10×1.25	5	

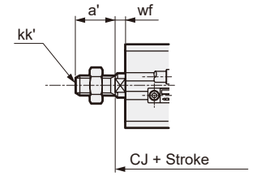
Outline Dimension Drawing (Bore size: ø25)

● Double Knuckle Clevis Type (CB)



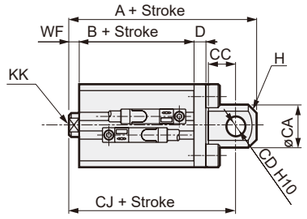


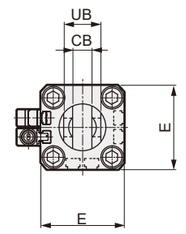
● For rod end male thread



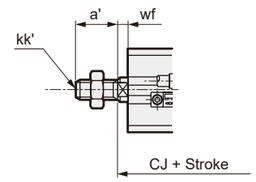
Code / Bore size (mm)	Common dimension								For female thread								For male thread				
	CA	CB	CC	CD	D	E	H	UB	KK	WF	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	a'	kk'	wf	With Switch CJ	Without Switch CJ
ø25	27.5	$10^{+0.4}_{+0.1}$	16	12	8	40	C5	$21^{-0.1}_{-0.4}$	M6 Depth 12	5	86.5	42.5	74.5	76.5	32.5	64.5	17.5	M10×1.25	5	74.5	64.5

● Double clevis type (Compact type) (CB2)





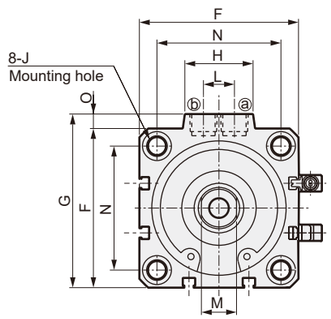
● For rod end male thread

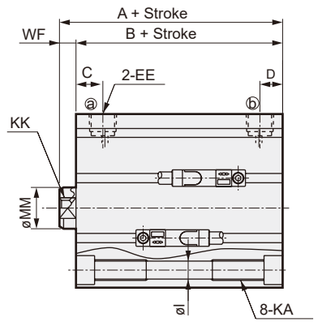


Code / Bore size (mm)	Common dimension								For female thread								For male thread				
	CA	CB	CC	CD	D	E	H	UB	KK	WF	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	a'	kk'	wf	With Switch CJ	Without Switch CJ
ø25	24	$10^{+0.4}_{+0.1}$	14	10	5	40	C5	$20^{-0.1}_{-0.3}$	M6 Depth 12	5	77.5	42.5	67.5	67.5	32.5	57.5	17.5	M10×1.25	5	67.5	57.5

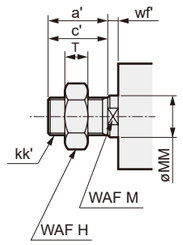
Outline Dimension Drawing (Bore size: ø32 to ø100)

●SSD-G1 (L)/G4 (L)-32 to 100





● Rod end male thread part



Code / Bore Size (mm)	Dimension with switch A *1	Dimension with switch B *1	Dimension without switch A *1	Dimension without switch B *1	Common dimension C	D	EE	F	G	H	I
ø32	50	43	40	33	8	8	Rc1/8	45	49.5	24	5.5
ø40	56.5	49.5	46.5	39.5	12	8.5	Rc1/8	52	57	24	5.5
ø50	58.5	50.5	48.5	40.5	10.5	10.5	Rc1/4	64	71	33	6.9
ø63	64	56	54	46	13	11	Rc1/4	77	84	33	8.7
ø80	73.5	63.5	63.5	53.5	16	13	Rc3/8	98	104	38	10.5
ø100	85	73	75	63	23	15	Rc3/8	117	123.5	38	10.5

Code / Bore Size (mm)	Common dimension J	KA	KK	M	MM	N	O	WF
ø32	9 Counterbore depth 5.5	M6 depth 11	M8 depth 13	14	16	34	4.5	7
ø40	9 Counterbore depth 5.5	M6 depth 11	M8 depth 13	14	16	40	5	7
ø50	11 Counterbore Depth 6.5	M8 depth 13	M10 depth 15	17	20	50	7	8
ø63	14 Counterbore depth 9	M10 depth 25	M10 depth 15	17	20	60	7	8
ø80	17.5 Counterbore depth 11	M12 depth 28	M16 depth 21	22	25	77	6	10
ø100	17.5 Counterbore depth 11	M12 depth 28	M20 depth 27	27	30	94	6.5	12

*1: When calculating A + stroke and B + stroke dimensions for intermediate strokes, do not use the intermediate stroke value for the stroke; instead, use the value of the standard stroke above it.
(Example) For an intermediate stroke of 17 mm, use the standard stroke of 20 mm for calculation.
***2: For dimensions with each switch, refer to P. 674 to 681.**
***3: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**

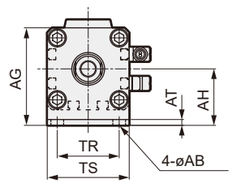
● Rod end male thread part dimension table

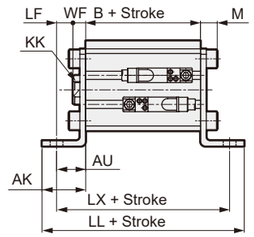
Code / Bore Size (mm)	a'	C'	H	kk'	M	MM	T	wf'
ø32	23.5	20.5	22	M14×1.5	14	16	8	5
ø40	23.5	20.5	22	M14×1.5	14	16	8	5
ø50	28.5	26	27	M18×1.5	17	20	11	5
ø63	28.5	26	27	M18×1.5	17	20	11	5
ø80	35.5	32.5	32	M22×1.5	22	25	13	8
ø100	35.5	32.5	41	M26×1.5	27	30	16	8

Outline Dimension Drawing (Bore size: ø32 to ø100)

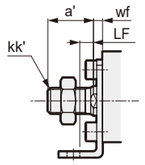
● Axial Foot Type (LB)

· ø32

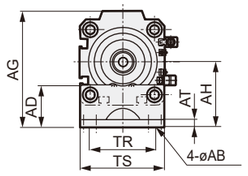


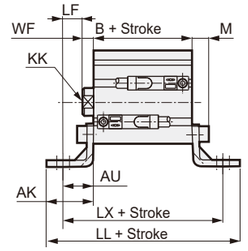


● For rod end male thread

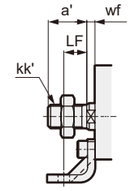


· ø40 to ø100





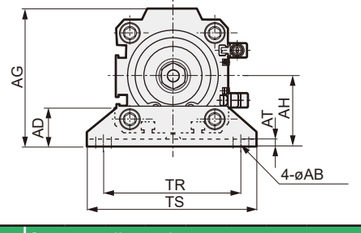
● For rod end male thread

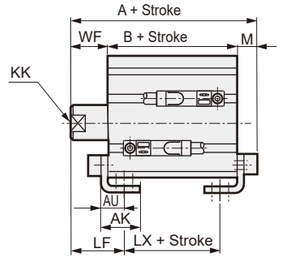


Code / Bore size (mm)	Common dimension AB	AD	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch B	With Switch LL	With Switch LX	Without Switch B	Without Switch LL	Without Switch LX	For male thread a'	kk'	wf	LF
ø32	7	–	53.5	31	24	3.2	16	34	45	9.2	M8 depth 13	7	9	43	91	75	33	81	65	23.5	M14×1.5	5	11
ø40	7	26	71	40	29	4.5	19	40	52	10	M8 depth 13	7	12	49.5	107.5	87.5	39.5	97.5	77.5	23.5	M14×1.5	5	14
ø50	9	23	79	40	34	4.5	22	46	64	13	M10 depth 15	8	14	50.5	118.5	94.5	40.5	108.5	84.5	28.5	M18×1.5	5	17
ø63	11	33	96.5	51	40	4.5	25	60	77	15	M10 depth 15	8	17	56	136	106	46	126	96	28.5	M18×1.5	5	20
ø80	13	42	116.5	61.5	50	6	35	77	98	18	M16 depth 21	10	25	63.5	163.5	133.5	53.5	153.5	123.5	35.5	M22×1.5	8	27
ø100	13	48	134	69	50	6	35	94	117	18	M20 depth 27	12	23	73	173	143	63	163	133	35.5	M26×1.5	8	27

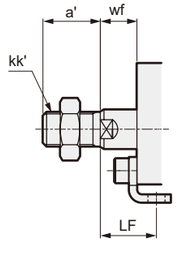
Note: LB cannot be selected when B + stroke is at or less than the value below.
ø80, ø100: 69 or less

● Axial Foot Type (Compact Type) (LB2)





● For rod end male thread

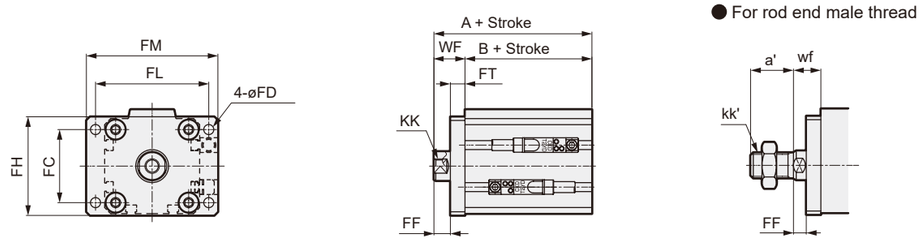


Code / Bore size (mm)	Common dimension AB	AD	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch A	With Switch B	With Switch LX	Without Switch A	Without Switch B	Without Switch LX	For male thread a'	kk'	wf	LF
ø32	7	18.5	57	30	17	3.2	11.2	57	71	9.2	M8 depth 13	17	25	69.2	43	27	59.2	33	17	23.5	M14×1.5	15	23
ø40	7	18	64	33	18.2	3.2	11.2	64	78	9.2	M8 depth 13	17	25	75.7	49.5	33.5	65.7	39.5	23.5	23.5	M14×1.5	15	23
ø50	9	22	78	39	22.7	3.2	14.7	79	95	11.2	M10 depth 15	18	29.5	79.7	50.5	27.5	69.7	40.5	17.5	28.5	M18×1.5	15	26.5
ø63	11	26	91.5	46	25.2	3.2	16.2	95	113	13.2	M10 depth 15	18	31	87.2	56	30	77.2	46	20	28.5	M18×1.5	15	28
ø80	13	39.5	114	59	30.5	4.5	19.5	118	140	16.5	M16 depth 21	20	35	100	63.5	33.5	90	53.5	23.5	35.5	M22×1.5	18	33
ø100	13	50	136	71	35.5	6	23	137	162	18	M20 depth 27	22	39	113	73	39	103	63	29	35.5	M26×1.5	18	35

Note: LB2 cannot be selected when B + stroke is at or less than the value below.
ø80: 72 or less ø100: 69 or less

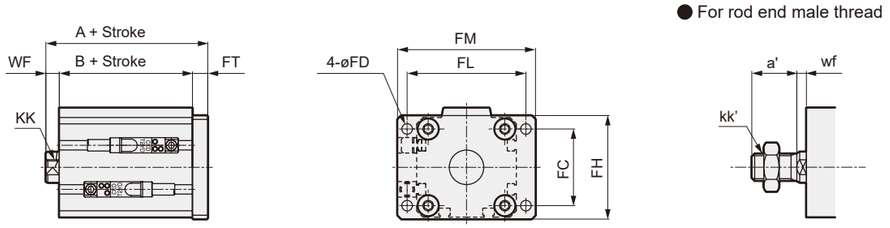
Outline Dimension Drawing (Bore size: ø32 to ø100)

● Rod Side Flange Type (FA)



Code	Common dimension						For female thread							For male thread			
Bore size (mm)	FC	FD	FH	FL	FM	FT	FF	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	FF	a'	kk'	wf
ø32	34	5.5	48	56	65	8	9	M8 depth 13	17	60	43	50	33	7	23.5	M14×1.5	15
ø40	40	5.5	54	62	72	8	9	M8 depth 13	17	66.5	49.5	56.5	39.5	7	23.5	M14×1.5	15
ø50	50	6.6	67	76	89	9	9	M10 depth 15	18	68.5	50.5	58.5	40.5	6	28.5	M18×1.5	15
ø63	60	9	80	92	108	9	9	M10 depth 15	18	74	56	64	46	6	28.5	M18×1.5	15
ø80	77	11	99	116	134	11	9	M16 depth 21	20	83.5	63.5	73.5	53.5	7	35.5	M22×1.5	18
ø100	94	11	117	136	154	11	11	M20 depth 27	22	95	73	85	63	7	35.5	M26×1.5	18

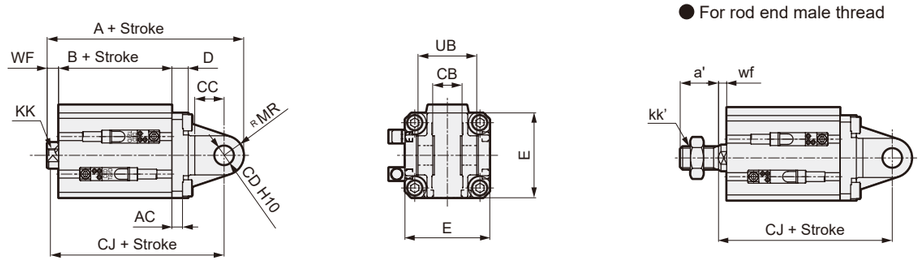
● Head Side Flange Type (FB)



Code	Common dimension						For female thread							For male thread			
Bore size (mm)	FC	FD	FH	FL	FM	FT	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	a'	kk'	wf	With Switch CJ	Without Switch CJ
ø32	34	5.5	48	56	65	8	M8 depth 13	7	58	43	48	33	23.5	M14×1.5	5	68	58
ø40	40	5.5	54	62	72	8	M8 depth 13	7	64.5	49.5	54.5	39.5	23.5	M14×1.5	5	76.5	66.5
ø50	50	6.6	67	76	89	9	M10 depth 15	8	67.5	50.5	57.5	40.5	28.5	M18×1.5	5	83.5	73.5
ø63	60	9	80	92	108	9	M10 depth 15	8	73	56	63	46	28.5	M18×1.5	5	91	81
ø80	77	11	99	116	134	11	M16 depth 21	10	84.5	63.5	74.5	53.5	35.5	M22×1.5	8	109.5	99.5
ø100	94	11	117	136	154	11	M20 depth 27	12	96	73	86	63	35.5	M26×1.5	8	126	116

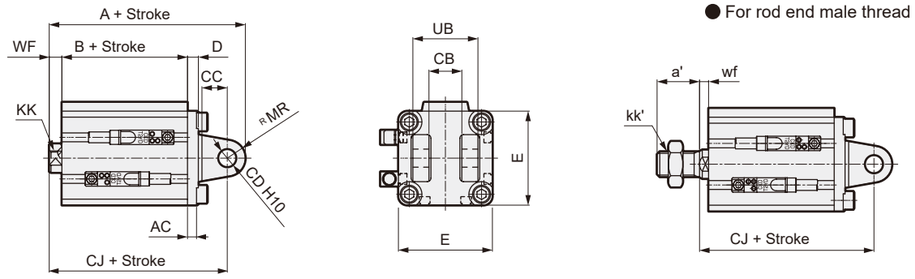
Outline Dimension Drawing (Bore size: ø32 to ø100)

● Double Knuckle Clevis Type (CB)



Code	Common dimension								For female thread								For male thread				
Bore size (mm)	AC	CB	CC	CD	D	E	MR	UB	KK	WF	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	a'	kk'	wf	With Switch CJ	Without Switch CJ
ø32	9.5	$10^{+0.4}_{+0.1}$	16	12	10	45	12	$21^{-0.1}_{-0.4}$	M8 depth 13	7	92	43	80	82	33	70	23.5	M14×1.5	5	78	68
ø40	6.5	$18^{+0.4}_{+0.1}$	18	12	10	52	12	$36^{-0.1}_{-0.4}$	M8 depth 13	7	100.5	49.5	88.5	90.5	39.5	78.5	23.5	M14×1.5	5	86.5	76.5
ø50	6.5	$18^{+0.4}_{+0.1}$	18	12	10	64	12	$36^{-0.1}_{-0.4}$	M10 depth 15	8	102.5	50.5	90.5	92.5	40.5	80.5	28.5	M18×1.5	5	87.5	77.5
ø63	7.5	$20^{+0.4}_{+0.1}$	24	14	10	77	16	$40^{-0.1}_{-0.4}$	M10 depth 15	8	117	56	101	107	46	91	28.5	M18×1.5	5	98	88
ø80	10.5	$28^{+0.4}_{+0.1}$	30	20	14	98	20	$56^{-0.1}_{-0.4}$	M16 depth 21	10	145.5	63.5	125.5	135.5	53.5	115.5	35.5	M22×1.5	8	123.5	113.5
ø100	10.5	$28^{+0.4}_{+0.1}$	30	20	16	117	20	$56^{-0.1}_{-0.4}$	M20 depth 27	12	157	73	137	147	63	127	35.5	M26×1.5	8	133	123

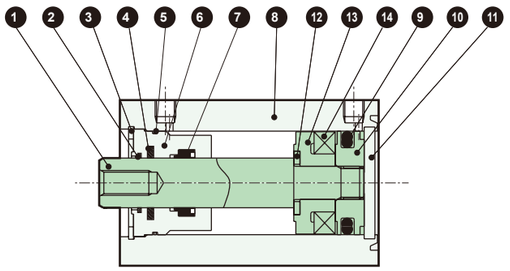
● Double clevis type (Compact type) (CB2)



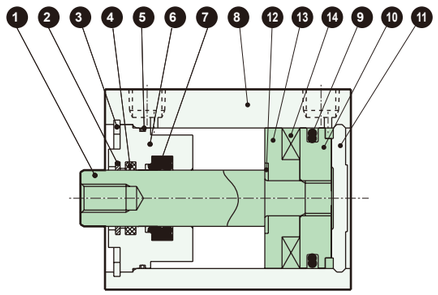
Code	Common dimension								For female thread								For male thread				
Bore size (mm)	AC	CB	CC	CD	D	E	MR	UB	KK	WF	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	a'	kk'	wf	With Switch CJ	Without Switch CJ
ø32	4.5	$18^{+0.4}_{+0.1}$	14	10	5	45	10	$36^{-0.1}_{-0.3}$	M8 depth 13	7	80	43	70	70	33	60	23.5	M14×1.5	5	68	58
ø40	5	$18^{+0.4}_{+0.1}$	14	10	6	52	10	$36^{-0.1}_{-0.3}$	M8 depth 13	7	88.5	49.5	78.5	78.5	39.5	68.5	23.5	M14×1.5	5	76.5	66.5
ø50	6	$22^{+0.4}_{+0.1}$	20	14	7	64	14	$44^{-0.1}_{-0.3}$	M10 depth 15	8	100.5	50.5	86.5	90.5	40.5	76.5	28.5	M18×1.5	5	83.5	73.5
ø63	7	$22^{+0.4}_{+0.1}$	20	14	8	77	14	$44^{-0.1}_{-0.3}$	M10 depth 15	8	108	56	94	98	46	84	28.5	M18×1.5	5	91	81
ø80	9	$28^{+0.4}_{+0.1}$	27	18	10	98	18	$56^{-0.1}_{-0.3}$	M16 depth 21	10	129.5	63.5	111.5	119.5	53.5	101.5	35.5	M22×1.5	8	109.5	99.5
ø100	12	$32^{+0.4}_{+0.1}$	31	22	13	117	22	$64^{-0.1}_{-0.3}$	M20 depth 27	12	152	73	130	142	63	120	35.5	M26×1.5	8	126	116

Internal Structure Diagram/Material

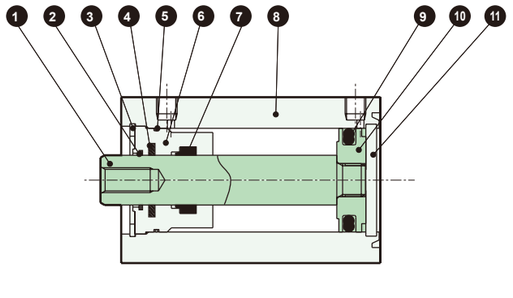
● SSD-G1L-25 (Double acting with coil scraper with switch)
SSD-G4L-25 (Double acting, Spatter adhesion prevention type with switch)



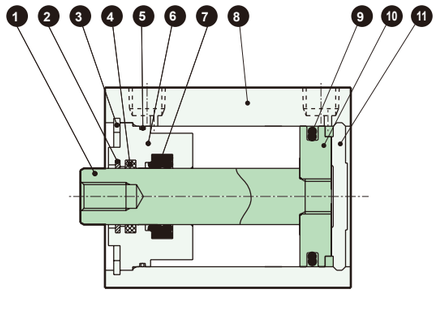
● SSD-G1L-32 to 50 (Double acting with coil scraper with switch)
SSD-G4L-32 to 50 (Double acting, Spatter adhesion prevention type with switch)



● SSD-G1-25 (Double acting with coil scraper)
SSD-G4-25 (Double acting, Spatter adhesion prevention type)



● SSD-G1-32 to 50 (Double acting with coil scraper)
SSD-G4-32 to 50 (Double acting, Spatter adhesion prevention type)

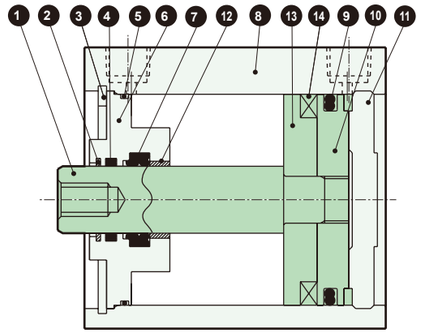


Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Piston Rod	ø25: Stainless steel ø32 to ø50: Steel	Industrial Hard Chrome Plating	8	Cylinder Body	Aluminum Alloy	Hard Anodized
				9	Piston Packing	Nitrile Rubber	
2	Coil scraper	Phosphor bronze		10	Piston	Aluminum Alloy	Chromate
3	C-type retaining ring for bore	Steel	Zinc phosphate	11	Cover	ø25: Stainless steel ø32 to ø50: Aluminum alloy	Anodized (ø32 to ø50)
4	Lube keeper	Special rubber	G4, G4L only				
5	Rod metal gasket	Nitrile Rubber		12	Spacer washer	Stainless Steel	
6	Rod Metal	Aluminum Alloy	Alumite	13	Spacer	Special Resin	
7	Rod Packing	Nitrile Rubber		14	Magnet	Plastic	

For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Internal Structure Diagram/Material

● SSD-G1L-63 to 100 (Double acting with coil scraper with switch)
SSD-G4L-63 to 100 (Double acting, Spatter adhesion prevention type with switch)



● SSD-G1-63 to 100 (Double acting with coil scraper)
SSD-G4-63 to 100 (Double acting, Spatter adhesion prevention type)

Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Piston Rod	Steel	Industrial Hard Chrome Plating	8	Cylinder Body	Aluminum Alloy	Hard Anodized
2	Coil scraper	Phosphor bronze		9	Piston Packing	Nitrile Rubber	
3	C-type retaining ring for bore	Steel	Zinc phosphate	10	Piston	Aluminum Alloy	Chromate
4	Lube keeper	Special rubber	G4, G4L only	11	Cover	Aluminum Alloy	Alumite
5	Rod metal gasket	Nitrile Rubber		12	Bushing	Bearing Alloy	
6	Rod Metal	Aluminum Alloy		13	Spacer	Aluminum Alloy	Chromate
7	Rod Packing	Nitrile Rubber	Chromate	14	Magnet	Plastic	

For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Compact Cylinder
Double Acting, Single Rod, High Load, Coil Scraper Type

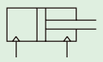
SSD-KG1 Series

Compact Cylinder
Double Acting, Single Rod, High Load, Spatter Adhesion Prevention

SSD-KG4 Series

● Bore size: ø25, ø32, ø40, ø50, ø63, ø80, ø100

Circuit Diagram Symbol



RoHS

Model No. Notation Method

Without Switch
(Without magnet for switch)

SSD-KG4 - 32 - 10 ——— N - LB - I
1 2 3 6 7 8

With Switch
(Built-in magnet for switch)

SSD-KG4L - 32 - 10 - T2YD - R - N - LB - I
1 2 3 4 5 6 7 8

1 Model No. | 2 Bore size | 3 Stroke | 4 Switch Model No. | 5 Number of Switches | 6 Option | 7 Mounting bracket | 8 Accessories

1 Model No.

Code	Content
SSD-KG1	Double Acting, Single Rod, High Load, Coil Scraper Type
SSD-KG1L	Double Acting, Single Rod, High Load, Coil Scraper Type with Switch
SSD-KG4	Double Acting, Single Rod, High Load, Spatter Adhesion Prevention Type
SSD-KG4L	Double Acting, Single Rod, High Load, Spatter Adhesion Prevention Type with Switch

2 Bore Size (mm)

Code	Content
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

3 Stroke (mm)

Bore size	Stroke	Intermediate Stroke
ø25 to ø50	1 to 300	Every 1 mm
ø63 to ø100	1 to 300	

Note: For details on stroke, please refer to P. 576.

4 Switch Model No.

For switch details, please refer to P. 869. Switches are included to the product and shipped.

Contact	LED Indicator Special Function	Wiring (Output)	Load Voltage (V) AC	Load Voltage (V) DC	Load Current (mA) AC	Load Current (mA) DC	Lead Wire *1 Straight	Lead Wire *1 L-shape	
Solid State	2-Color AC For Magnetic Field	2-wire	—	24 ± 10%	—	5 to 20	T2YD□	–	
			—		—		T2YDT□	–	

*1: For "□" in the switch model No., enter the code selected from the "*Lead wire length" table.
*2: Switches other than the above switch model No.s are also available. (Custom products) For details, refer to P. 869.

***Lead wire length**

Code	Content
Blank	1 m (Standard)
3	3 m (Option)
5	5 m (Option)

Example) Lead wire length
1 m T2YD
3 m T2YD3
5 m T2YD5

5 Number of Switches

Code	Content
R	With 1 pc on rod side
H	With 1 pc on head side
D	With 2 pcs

6 Option

Code	Content	
Blank	Rod end female thread	
N	Rod end male thread	

7 Mounting type

Mounting brackets are shipped included to the product.

	Code	Content	
	LB	Axial Foot Type	
*1	LB2	Axial foot type (Compact type)	
*1	FA	Rod Side Flange Type	
	FB	Head Side Flange Type	
	CB	Double Clevis Type (pin and retaining ring included)	
	CB2	Clevis bracket (compact) (pin and snap ring included)	

*1: When LB2 or FA is selected, the piston rod protrusion dimension WF differs from the standard. See P. 579, 580, 584, and 585 for outline dimension drawings. Also, the model No. specifying the protrusion length will be printed at the end of the model No. on the nameplate included to the main body. For cylinder model No.s when ordering cylinders and LB2/FA brackets separately, please contact us.

8 Accessories

Code	Content	
I	Single Knuckle	
I2	Single Knuckle (compact)	
Y	Double Knuckle (pin and retaining ring included)	
Y2	Double knuckle (compact) (pin and snap ring included)	

*1: Selectable when rod end male thread "N" is selected.
*2: "I", "I2", "Y", "Y2" cannot be selected at the same time.

About Custom Product Specifications

For details, refer to P. 690 to 694.

Code	Content
-XP5	Knuckle Pin/Clevis Pin Split Pin
-XP7	Knuckle fixed by pin driving
-XP8	Knuckle pin/clevis pin split pin specification, knuckle fixed by pin driving
-A2	With 2 Rod Nuts
-R1, R2	With spigot joint
Rod End Shape Modification	Refer to Ending 11.

Model No. Example)

SSD-KG1 - ..... - XP5

SSD-KG4 - ..... - XP5

Switch Single Unit Model No. Notation Method

SW - T2YD
4

Switch Model No.

Specifications

Item	SSD-KG1/KG4 SSD-KG1L/KG4L (with switch)						
Bore size mm	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation method	Double Acting Type						
Operating Fluid	Compressed Air						
Max. Operating Pressure MPa	1.0						
Min. Operating Pressure MPa	0.15				0.1		
Proof pressure MPa	1.6						
Ambient Temperature °C	-10 to 60 (No freezing)						
Port Size	M5	Rc1/8		Rc1/4		Rc3/8	
Stroke tolerance mm	+2.0 0						
Operating Piston Speed mm/s	50 to 500				50 to 300		
Cushion	Rubber Cushion						
Lubrication	Not Required (When lubricating, use Turbine Oil ISO VG32)						
Allowable absorbed energy J	0.16	0.40	0.63	0.98	1.56	2.51	3.92

Stroke

Stroke (mm)		Applicable Bore						
		ø25	ø32	ø40	ø50	ø63	ø80	ø100
Standard Stroke	10	●	●	●	●	●	●	●
	15	●	●	●	●			
	20	●	●	●	●	●	●	●
	25	●	●	●	●			
	30	●	●	●	●	●	●	●
	40	●	●	●	●	●	●	●
	50	●	●	●	●	●	●	●
	60	●	●	●	●	●	●	●
	70	●	●	●	●	●	●	●
	80	●	●	●	●	●	●	●
	90	●	●	●	●	●	●	●
	100	●	●	●	●	●	●	●

Minimum Stroke (mm) *1	1
Maximum Stroke (mm)	300
Intermediate Stroke *2	Every 1 mm

*1: Products less than 10 mm with an AC magnetic field switch cannot be manufactured.
*2: The overall length dimension for intermediate stroke is the same as the standard stroke above it.

Cylinder Weight Table (Weight with switch is when 2 cylinder switches are included)

(Unit: g)

Stroke (mm) / Bore Size (mm)	10		15		20		25		30		40		50		60		70		80		90		100	
	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch
ø25	162	253	178	269	194	285	209	300	226	317	258	349	290	381	322	413	354	445	386	477	418	509	450	541
ø32	249	363	270	384	292	406	314	428	336	450	379	493	422	536	465	579	508	622	551	665	594	708	637	751
ø40	345	488	372	515	398	541	424	567	451	594	504	647	557	700	610	753	663	806	716	859	769	912	822	965
ø50	549	743	591	785	634	828	677	871	718	912	802	996	886	1080	970	1164	1054	1248	1138	1332	1222	1416	1306	1500
ø63	782	1061	-	-	892	1171	-	-	1003	1282	1113	1392	1223	1502	1333	1612	1443	1722	1553	1832	1663	1942	1773	2052
ø80	1382	1795	-	-	1555	1968	-	-	1729	2142	1902	2315	2075	2488	2248	2661	2421	2834	2594	3007	2767	3180	2940	3353
ø100	2029	2596	-	-	2257	2824	-	-	2484	3051	2712	3279	2940	3507	3168	3735	3396	3963	3624	4191	3852	4419	4080	4647

(Unit: g)

Stroke (mm) / Bore Size (mm)	110		120		130		140		150		160		170		180		190		200	
	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch
ø25	482	573	514	605	546	637	578	669	610	701	642	733	674	765	706	797	738	829	770	861
ø32	680	794	723	837	766	880	809	923	852	966	894	1008	937	1051	980	1094	1023	1137	1066	1180
ø40	875	1018	928	1071	981	1124	1034	1177	1087	1230	1140	1283	1193	1336	1246	1389	1299	1442	1352	1495
ø50	1390	1584	1474	1668	1558	1752	1642	1836	1726	1920	1824	2018	1909	2103	1994	2188	2079	2273	2164	2358
ø63	1883	2162	1993	2272	2103	2382	2213	2492	2323	2602	2433	2712	2543	2822	2653	2932	2763	3042	2873	3152
ø80	3113	3526	3286	3699	3459	3872	3632	4045	3805	4218	3978	4391	4151	4564	4324	4737	4497	4910	4670	5083
ø100	4308	4875	4536	5103	4764	5331	4992	5559	5220	5787	5448	6015	5676	6243	5904	6471	6132	6699	6360	6927

(Unit: g)

Stroke (mm) / Bore Size (mm)	210		220		230		240		250		260		270		280		290		300	
	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch
ø25	813	893	845	925	877	957	909	989	941	1021	973	1053	1005	1085	1037	1117	1069	1149	1101	1181
ø32	1109	1223	1152	1266	1195	1309	1238	1352	1281	1395	1324	1438	1367	1481	1410	1524	1453	1567	1496	1610
ø40	1405	1548	1458	1601	1511	1654	1564	1707	1617	1760	1670	1813	1723	1866	1776	1919	1829	1972	1882	2025
ø50	2249	2443	2334	2528	2419	2613	2504	2698	2589	2783	2674	2868	2759	2953	2844	3038	2929	3123	3014	3208
ø63	2982	3261	3092	3371	3202	3481	3312	3591	3422	3701	3532	3811	3642	3921	3752	4031	3862	4141	3972	4251
ø80	4842	5255	5015	5428	5188	5601	5361	5774	5534	5947	5707	6120	5880	6293	6053	6466	6226	6639	6399	6812
ø100	6589	7156	6817	7384	7045	7612	7273	7840	7501	8068	7729	8296	7957	8524	8185	8752	8413	8980	8641	9208

Theoretical Thrust Table

(Unit: N)

Bore size (mm)	Operating Direction	Operating Pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø25	Push	–	73.6	98.2	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2	3.93×10^2	4.42×10^2	4.91×10^2
	Pull	–	56.7	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
ø32	Push	–	1.21×10^2	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2	6.43×10^2	7.24×10^2	8.04×10^2
	Pull	–	90.5	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
ø40	Push	–	1.88×10^2	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	–	1.58×10^2	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push	–	2.95×10^2	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	–	2.47×10^2	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Push	3.12×10^2	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	2.80×10^2	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
ø80	Push	5.03×10^2	7.54×10^2	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3	4.02×10^3	4.52×10^3	5.03×10^3
	Pull	4.54×10^2	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
ø100	Push	7.85×10^2	1.18×10^3	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3	6.28×10^3	7.07×10^3	7.85×10^3
	Pull	7.15×10^2	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3

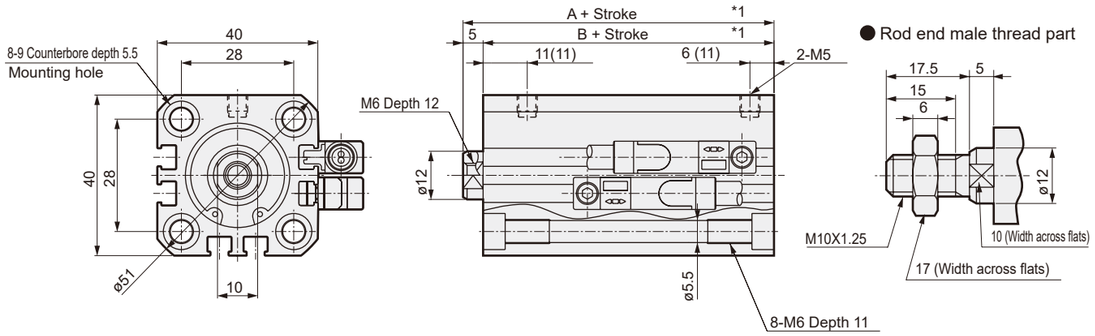
Mounting Bracket Model No. Notation Method

Bore Size (mm) / Mounting bracket	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Foot (LB)	SSD-LB-25	SSD-LB-32	SSD-LB-40	SSD-LB-50	SSD-LB-63	SSD-LB-80	SSD-LB-100
Foot (LB2)	SSD-LB2-25	SSD-LB2-32	SSD-LB2-40	SSD-LB2-50	SSD-LB2-63	SSD-LB2-80	SSD-LB2-100
Flange (FA/FB)	SSD-FA-25	SSD-FA-32	SSD-FA-40	SSD-FA-50	SSD-FA-63	SSD-FA-80	SSD-FA-100
Double Clevis (CB)	SSD-CB-25	SSD-CB-32	SSD-CB-40	SSD-CB-50	SSD-CB-63	SSD-CB-80	SSD-CB-100
Double knuckle clevis (CB2)	SSD-CB2-25	SSD-CB2-32	SSD-CB2-40	SSD-CB2-50	SSD-CB2-63	SSD-CB2-80	SSD-CB2-100

*1: Foot type mounting brackets are 2 pcs/set.
*2: When mounting with through-bolts, refer to the mounting bolt model No. notation method (P. 682).

Outline Dimension Drawing (Bore size: ø25)

● SSD-KG1 (L)/KG4 (L)-25



Code / Bore Size (mm)	Dimension without switch A *1	Dimension without switch B *1	Dimension with switch A *1	Dimension with switch B *1
ø25	42.5	37.5	52.5	47.5

● Table 2 *2

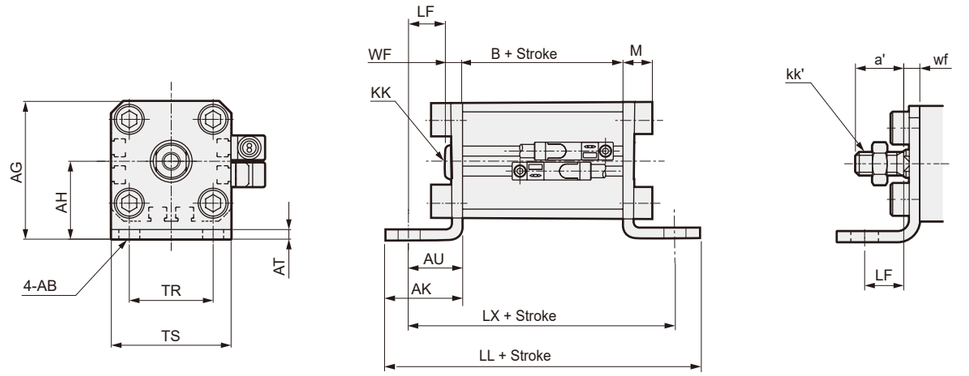
Code / Bore Size (mm)	Dimension without switch A *1	Dimension without switch B *1	Dimension with switch A *1	Dimension with switch B *1
ø25	56	51	66	61

*1: When calculating A + stroke and B + stroke dimensions for intermediate strokes, do not use the intermediate stroke value for the stroke; instead, use the value of the standard stroke above it.
(Example) For an intermediate stroke of 17 mm, use the standard stroke of 20 mm for calculation.
*2: When the stroke exceeds 150, the A and B dimensions are the values in Table 2. Also, there is no 9 counterbore.
***3: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**
***4: For dimensions with each switch, refer to P. 674 to 681.**

Outline Dimension Drawing (Bore size: ø25)

● Axial Foot Type (LB)

● For rod end male thread



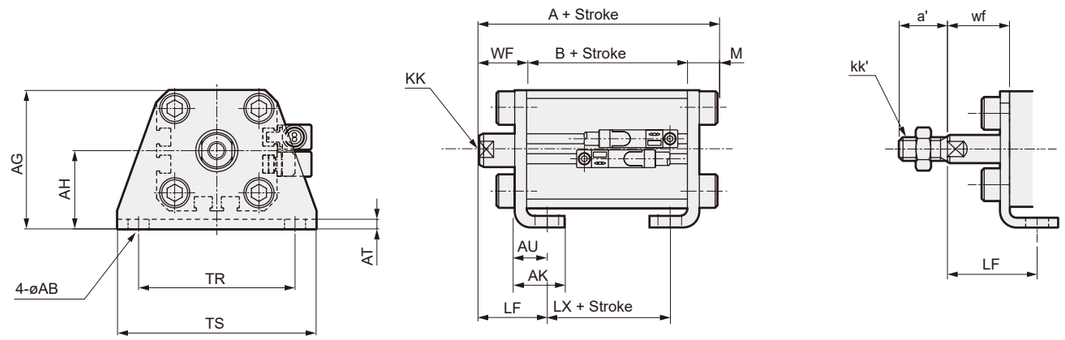
Code / Bore size (mm)	Common dimension AB	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch B	With Switch LL	With Switch LX	Without Switch B	Without Switch LL	Without Switch LX	For male thread a'	kk'	wf	LF
ø25	7	46	26	24	3.2	16	28	40	9.2	M6 Depth 12	5	11	47.5	95.5	79.5	37.5	85.5	69.5	17.5	M10×1.25	5	11

*1: If the stroke exceeds 150, the dimensions will be as follows.

Code / Bore size (mm)	For female thread With Switch B	With Switch LL	With Switch LX	Without Switch B	Without Switch LL	Without Switch LX
ø25	61	109	93	51	99	83

● Axial Foot Type (Compact Type) (LB2)

● For rod end male thread



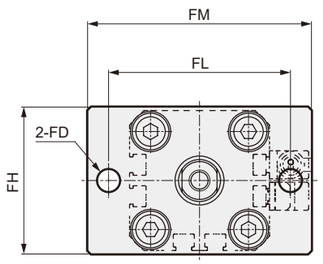
Code / Bore size (mm)	Common dimension AB	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch A	With Switch B	With Switch LX	Without Switch A	Without Switch B	Without Switch LX	For male thread a'	kk'	wf	LF
ø25	7	46	26	16.5	3.2	10.7	52	66	9.2	M6 Depth 12	15	22.5	71.7	47.5	32.5	61.7	37.5	22.5	17.5	M10×1.25	15	22.5

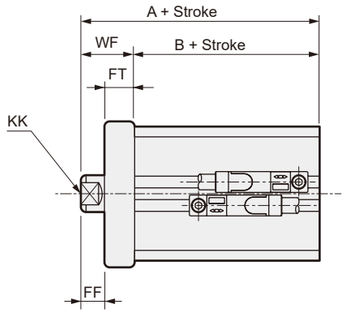
*1: If the stroke exceeds 150, the dimensions will be as follows.

Code / Bore size (mm)	For female thread With Switch A	With Switch B	With Switch LX	Without Switch A	Without Switch B	Without Switch LX
ø25	85.2	61	46	75.2	51	36

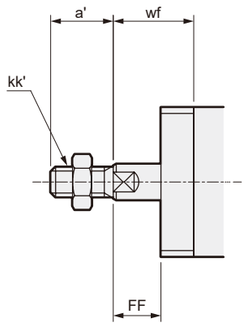
Outline Dimension Drawing (Bore size: ø25)

● Rod Side Flange Type (FA)





● For rod end male thread

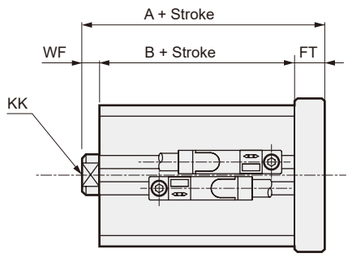


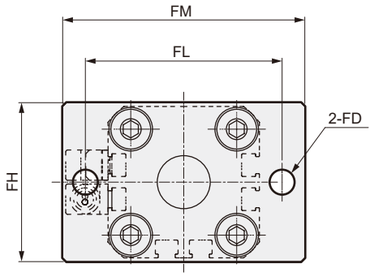
Code / Bore size (mm)	Common dimension					For female thread							For male thread			
	FD	FH	FL	FM	FT	FF	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	FF	a'	kk'	wf
ø25	6.6	42	52	64	8	7	M6 Depth 12	15	62.5	47.5	52.5	37.5	7	17.5	M10×1.25	15

*1: If the stroke exceeds 150, the dimensions will be as follows.

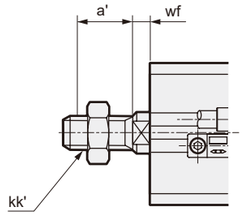
Code / Bore size (mm)	For female thread			
	With Switch A	With Switch B	Without Switch A	Without Switch B
ø25	76	61	66	51

● Head Side Flange Type (FB)





● For rod end male thread



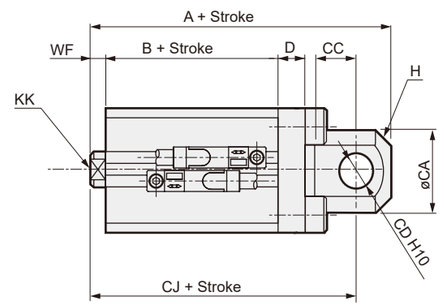
Code / Bore size (mm)	Common dimension					For female thread							For male thread			
	FD	FH	FL	FM	FT	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B		a'	kk'	wf	
ø25	6.6	42	52	64	8	M6 Depth 12	5	60.5	47.5	50.5	37.5		17.5	M10×1.25	5	

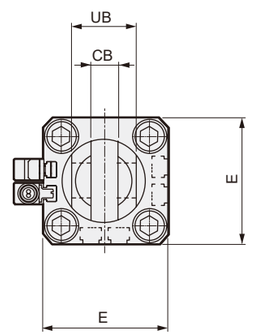
*1: If the stroke exceeds 150, the dimensions will be as follows.

Code / Bore size (mm)	For female thread			
	With Switch A	With Switch B	Without Switch A	Without Switch B
ø25	74	61	64	51

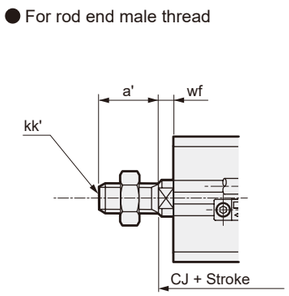
Outline Dimension Drawing (Bore size: ø25)

● Double Knuckle Clevis Type (CB)





● For rod end male thread

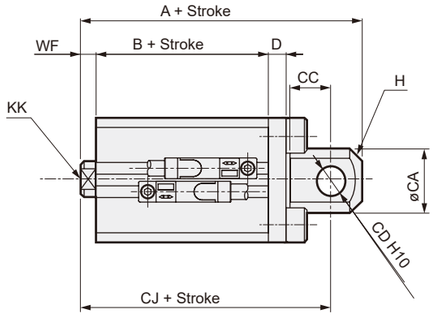


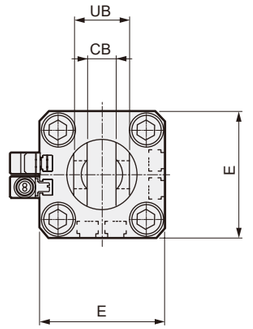
Code / Bore size (mm)	Common dimension								For female thread								For male thread				
	CA	CB	CC	CD	D	E	H	UB	KK	WF	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	a'	kk'	wf	With Switch CJ	Without Switch CJ
ø25	27.5	$10^{+0.4}_{+0.1}$	16	12	8	40	C5	$21^{-0.1}_{-0.4}$	M6 Depth 12	5	91.5	47.5	79.5	81.5	37.5	69.5	17.5	M10×1.25	5	79.5	69.5

*1: If the stroke exceeds 150, the dimensions will be as follows.

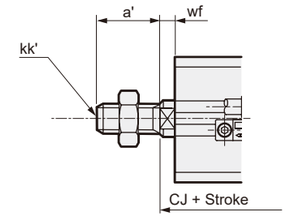
Code / Bore size (mm)	For female thread						For male thread	
	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	With Switch CJ	Without Switch CJ
ø25	105	61	93	95	51	83	93	83

● Double clevis type (Compact type) (CB2)





● For rod end male thread



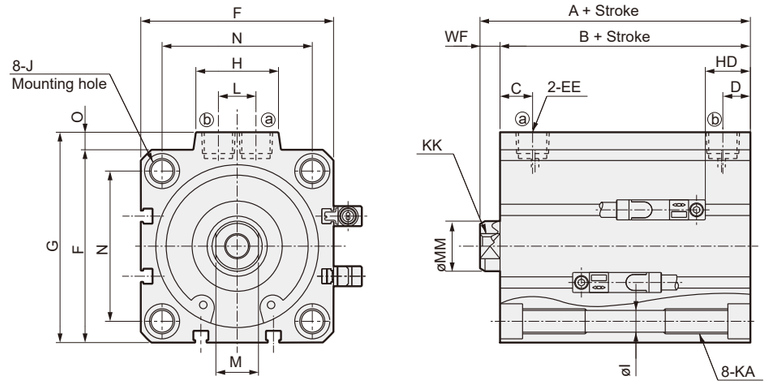
Code / Bore size (mm)	Common dimension								For female thread								For male thread				
	CA	CB	CC	CD	D	E	H	UB	KK	WF	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	a'	kk'	wf	With Switch CJ	Without Switch CJ
ø25	24	$10^{+0.4}_{+0.1}$	14	10	5	40	C5	$20^{-0.1}_{-0.3}$	M6 Depth 12	5	82.5	47.5	72.5	72.5	37.5	62.5	17.5	M10×1.25	5	72.5	62.5

*1: If the stroke exceeds 150, the dimensions will be as follows.

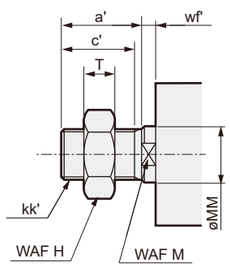
Code / Bore size (mm)	For female thread						For male thread	
	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	With Switch CJ	Without Switch CJ
ø25	96	61	86	86	51	76	86	76

Outline Dimension Drawing (Bore size: ø32 to ø100)

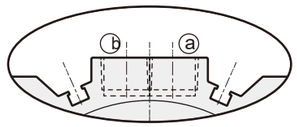
● SSD-KG1 (L)/KG4 (L)-32 to 100



● Rod end male thread part



[Bore size ø100]



*Only ø100 has a switch groove on the port surface

Code / Bore Size (mm)	Dimension with switch A *1	Dimension with switch B *1	Dimension without switch A *1	Dimension without switch B *1	Common dimension C	D *2	EE	F	G	H	I	J	KA	KK
ø32	60	53	50	43	8	8 (8)	Rc1/8	45	49.5	24	5.5	9 Counterbore depth 5.5	M6 depth 11	M8 depth 13
ø40	66.5	59.5	56.5	49.5	12	8.5 (12)	Rc1/8	52	57	24	5.5	9 Counterbore depth 5.5	M6 depth 11	M8 depth 13
ø50	68.5	60.5	58.5	50.5	10.5	10.5 (10.5)	Rc1/4	64	71	33	6.9	11 Counterbore Depth 6.5	M8 depth 13	M10 depth 15
ø63	74	66	64	56	13	11 (13)	Rc1/4	77	84	33	8.7	14 Counterbore depth 9	M10 depth 25	M10 depth 15
ø80	83.5	73.5	73.5	63.5	16	13 (16)	Rc3/8	98	104	38	10.5	17.5 Counterbore depth 11	M12 depth 28	M16 depth 21
ø100	95	83	85	73	23	15 (23)	Rc3/8	117	123.5	38	10.5	17.5 Counterbore depth 11	M12 depth 28	M20 depth 27

Code / Bore Size (mm)	Common dimension L	M	MM	N	O	WF
ø32	10	14	16	34	4.5	7
ø40	10	14	16	40	5	7
ø50	15	17	20	50	7	8
ø63	15	17	20	60	7	8
ø80	15	22	25	77	6	10
ø100	15	27	30	94	6.5	12

*1: When calculating A + stroke and B + stroke dimensions for intermediate strokes, do not use the intermediate stroke value for the stroke; instead, use the value of the standard stroke above it.
(Example) For an intermediate stroke of 17 mm, use the standard stroke of 20 mm for calculation.

*2: For ø32 to ø50: 150 strokes, ø63 to ø100: When exceeding 200 strokes A. The B dimension is the value in Table 1. There is no counterbore J.

***3: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**

***4: For dimensions with each switch, refer to P. 674 to 681.**

Table 1 *2

Code / Bore Size (mm)	Dimension with switch A *1	Dimension with switch B *1
ø32	67.5	60.5
ø40	76	69
ø50	82	74
ø63	84	76
ø80	93.5	83.5
ø100	105	93

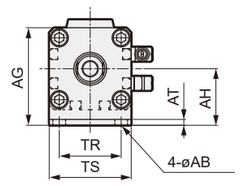
● Rod end male thread part dimension table

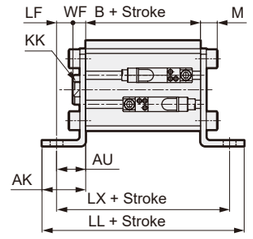
Code / Bore Size (mm)	a'	C'	H	kk'	M	MM	T	wf'
ø32	23.5	20.5	22	M14×1.5	14	16	8	5
ø40	23.5	20.5	22	M14×1.5	14	16	8	5
ø50	28.5	26	27	M18×1.5	17	20	11	5
ø63	28.5	26	27	M18×1.5	17	20	11	5
ø80	35.5	32.5	32	M22×1.5	22	25	13	8
ø100	35.5	32.5	41	M26×1.5	27	30	16	8

Outline Dimension Drawing (Bore size: ø32 to ø100)

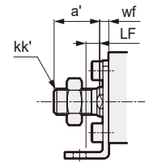
● Axial Foot Type (LB)

· ø32

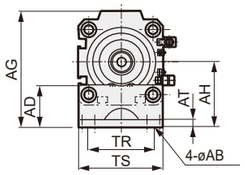


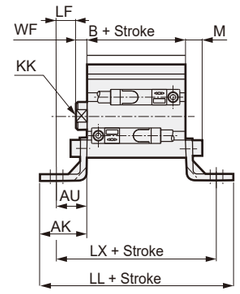


● For rod end male thread

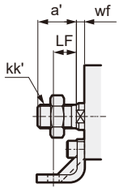


· ø40 to ø100





● For rod end male thread



Code / Bore size (mm)	Common dimension AB	AD	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch B	With Switch LL	With Switch LX	Without Switch B	Without Switch LL	Without Switch LX	For male thread a'	kk'	wf	LF
ø32	7	–	53.5	31	24	3.2	16	34	45	9.2	M8 depth 13	7	9	53	101	85	43	91	75	23.5	M14×1.5	5	11
ø40	7	26	71	40	29	4.5	19	40	52	10	M8 depth 13	7	12	59.5	117.5	97.5	49.5	107.5	87.5	23.5	M14×1.5	5	14
ø50	9	23	79	40	34	4.5	22	46	64	13	M10 depth 15	8	14	60.5	128.5	104.5	50.5	118.5	94.5	28.5	M18×1.5	5	17
ø63	11	33	96.5	51	40	4.5	25	60	77	15	M10 depth 15	8	17	66	146	116	56	136	106	28.5	M18×1.5	5	20
ø80	13	42	117	61.5	50	6	35	77	98	18	M16 depth 21	10	25	73.5	173.5	143.5	63.5	163.5	133.5	35.5	M22×1.5	8	27
ø100	13	48	134	69	50	6	35	94	117	18	M20 depth 27	12	23	83	183	153	73	173	143	35.5	M26×1.5	8	27

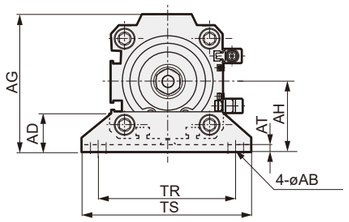
*1: For ø32 to ø50 exceeding 150 strokes, ø63 to ø100 exceeding 200 strokes, the dimensions are as follows.

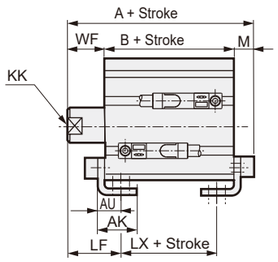
Code / Bore size (mm)	For female thread With Switch B	With Switch LL	With Switch LX	Without Switch B	Without Switch LL	Without Switch LX
ø32	60.5	108.5	92.5	50.5	98.5	82.5
ø40	69	127	107	59	117	97
ø50	74	142	118	64	132	108
ø63	76	156	126	66	146	116
ø80	83.5	183.5	153.5	73.5	173.5	143.5
ø100	93	193	163	83	183	153

*2: If B + stroke is less than or equal to the value below, LB cannot be selected. ø80: 69 or less

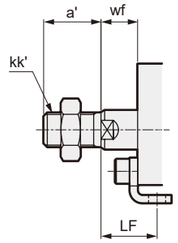
Outline Dimension Drawing (Bore size: ø32 to ø100)

● Axial Foot Type (Compact Type) (LB2)





● For rod end male thread



Code / Bore size (mm)	Common dimension										For female thread									For male thread			
	AB	AD	AG	AH	AK	AT	AU	TR	TS	M	KK	WF	LF	With Switch A	With Switch B	With Switch LX	Without Switch A	Without Switch B	Without Switch LX	a'	kk'	wf	LF
ø32	7	18.5	57	30	17	3.2	11.2	57	71	9.2	M8 depth 13	17	25	79.2	53	37	69.2	43	27	23.5	M14×1.5	15	23
ø40	7	18	64	33	18.2	3.2	11.2	64	78	9.2	M8 depth 13	17	25	85.7	59.5	43.5	75.7	49.5	33.5	23.5	M14×1.5	15	23
ø50	9	22	78	39	22.7	3.2	14.7	79	95	11.2	M10 depth 15	18	29.5	89.7	60.5	37.5	79.7	50.5	27.5	28.5	M18×1.5	15	26.5
ø63	11	26	91.5	46	25.2	3.2	16.2	95	113	13.2	M10 depth 15	18	31	97.2	66	40	87.2	56	30	28.5	M18×1.5	15	28
ø80	13	39.5	114	59	30.5	4.5	19.5	118	140	16.5	M16 depth 21	20	35	110	73.5	43.5	100	63.5	33.5	35.5	M22×1.5	18	33
ø100	13	50	136	71	35.5	6	23	137	162	18	M20 depth 27	22	39	123	83	49	113	73	39	35.5	M26×1.5	18	35

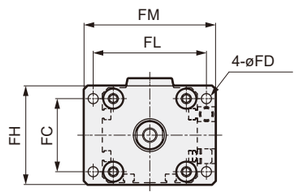
*1: For ø32 to ø50 exceeding 150 strokes, ø63 to ø100 exceeding 200 strokes, the dimensions are as follows.

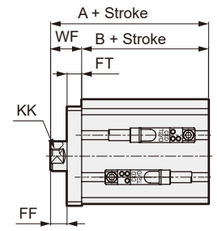
Code / Bore size (mm)	For female thread					
	With Switch			Without Switch		
	A	B	LX	A	B	LX
ø32	86.7	60.5	44.5	76.7	50.5	34.5
ø40	95.2	69	53	85.2	59	43
ø50	103.2	74	51	93.2	64	41
ø63	107.2	76	50	97.2	66	40
ø80	120	83.5	53.5	110	73.5	43.5
ø100	133	93	59	123	83	49

*2: If B + Stroke is less than or equal to the values below, LB2 cannot be selected. ø80: 72 or less

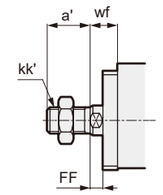
Outline Dimension Drawing (Bore size: ø32 to ø100)

● Rod Side Flange Type (FA)





● For rod end male thread



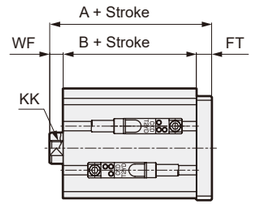
Code / Bore size (mm)	Common dimension						For female thread						For male thread			
	FC	FD	FH	FL	FM	FT	FF	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	FF	a'	kk'	wf
ø32	34	5.5	48	56	65	8	9	M8 depth 13	17	70	53	60	43	7	23.5	M14×1.5	15
ø40	40	5.5	54	62	72	8	9	M8 depth 13	17	76.5	59.5	66.5	49.5	7	23.5	M14×1.5	15
ø50	50	6.6	67	76	89	9	9	M10 depth 15	18	78.5	60.5	68.5	50.5	6	28.5	M18×1.5	15
ø63	60	9	80	92	108	9	9	M10 depth 15	18	84	66	74	56	6	28.5	M18×1.5	15
ø80	77	11	99	116	134	11	9	M16 depth 21	20	93.5	73.5	83.5	63.5	7	35.5	M22×1.5	18
ø100	94	11	117	136	154	11	11	M20 depth 27	22	105	83	95	73	7	35.5	M26×1.5	18

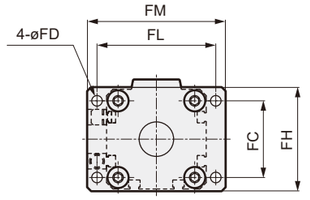
*1: For ø32 to ø50 exceeding 150 strokes, ø63 to ø100 exceeding 200 strokes, the dimensions are as follows.

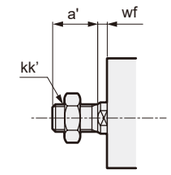
Code / Bore size (mm)	For female thread			
	With Switch		Without Switch	
	A	B	A	B
ø32	77.5	60.5	67.5	50.5
ø40	86	69	76	59
ø50	92	74	82	64
ø63	94	76	84	66
ø80	103.5	83.5	93.5	73.5
ø100	115	93	105	83

● Head Side Flange Type (FB)

● For rod end male thread







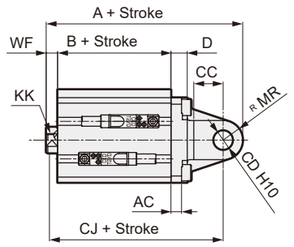
Code / Bore size (mm)	Common dimension						For female thread						For male thread			
	FC	FD	FH	FL	FM	FT	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	a'	kk'	wf
ø32	34	5.5	48	56	65	8	M8 depth 13	7	68	53	58	43	23.5	M14×1.5	5
ø40	40	5.5	54	62	72	8	M8 depth 13	7	74.5	59.5	64.5	49.5	23.5	M14×1.5	5
ø50	50	6.6	67	76	89	9	M10 depth 15	8	77.5	60.5	67.5	50.5	28.5	M18×1.5	5
ø63	60	9	80	92	108	9	M10 depth 15	8	83	66	73	56	28.5	M18×1.5	5
ø80	77	11	99	116	134	11	M16 depth 21	10	94.5	73.5	84.5	63.5	35.5	M22×1.5	8
ø100	94	11	117	136	154	11	M20 depth 27	12	106	83	96	73	35.5	M26×1.5	8

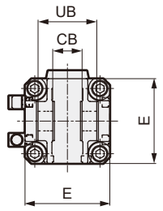
*1: For ø32 to ø50 exceeding 150 strokes, ø63 to ø100 exceeding 200 strokes, the dimensions are as follows.

Code / Bore size (mm)	For female thread			
	With Switch		Without Switch	
	A	B	A	B
ø32	75.5	60.5	65.5	50.5
ø40	84	69	74	59
ø50	91	74	81	64
ø63	93	76	83	66
ø80	104.5	83.5	94.5	73.5
ø100	116	93	106	83

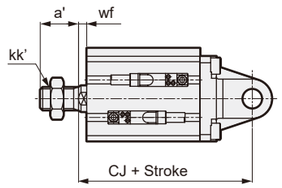
Outline Dimension Drawing (Bore size: ø32 to ø100)

● Double Knuckle Clevis Type (CB)





● For rod end male thread

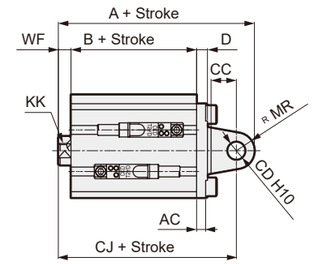


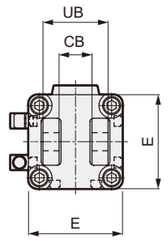
Code / Bore size (mm)	Common dimension								For female thread								For male thread				
	AC	CB	CC	CD	D	E	MR	UB	KK	WF	With Switch			Without Switch			a'	kk'	wf	With Switch	Without Switch
											A	B	CJ	A	B	CJ				CJ	CJ
ø32	9.5	$10^{+0.4}_{+0.1}$	16	12	10	45	12	$21^{-0.1}_{-0.4}$	M8 depth 13	7	102	53	90	92	43	80	23.5	M14×1.5	5	88	78
ø40	6.5	$18^{+0.4}_{+0.1}$	18	12	10	52	12	$36^{-0.1}_{-0.4}$	M8 depth 13	7	110.5	59.5	98.5	100.5	49.5	88.5	23.5	M14×1.5	5	96.5	86.5
ø50	6.5	$18^{+0.4}_{+0.1}$	18	12	10	64	12	$36^{-0.1}_{-0.4}$	M10 depth 15	8	112.5	60.5	100.5	102.5	50.5	90.5	28.5	M18×1.5	5	97.5	87.5
ø63	7.5	$20^{+0.4}_{+0.1}$	24	14	10	77	16	$40^{-0.1}_{-0.4}$	M10 depth 15	8	127	66	111	117	56	101	28.5	M18×1.5	5	108	98
ø80	10.5	$28^{+0.4}_{+0.1}$	30	20	14	98	20	$56^{-0.1}_{-0.4}$	M16 depth 21	10	155.5	73.5	135.5	145.5	63.5	125.5	35.5	M22×1.5	8	133.5	123.5
ø100	10.5	$28^{+0.4}_{+0.1}$	30	20	16	117	20	$56^{-0.1}_{-0.4}$	M20 depth 27	12	167	83	147	157	73	137	35.5	M26×1.5	8	143	133

*1: For ø32 to ø50 exceeding 150 strokes, ø63 to ø100 exceeding 200 strokes, the dimensions are as follows.

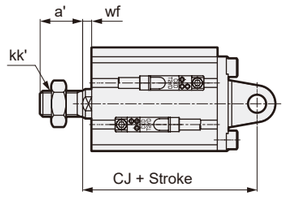
Code / Bore size (mm)	For female thread						For male thread	
	With Switch			Without Switch			With Switch	Without Switch
	A	B	CJ	A	B	CJ	CJ	CJ
ø32	109.5	60.5	97.5	99.5	50.5	87.5	95.5	85.5
ø40	120	69	108	110	59	98	106	96
ø50	126	74	114	116	64	104	111	101
ø63	137	76	121	127	66	111	118	108
ø80	165.5	83.5	145.5	155.5	73.5	135.5	143.5	133.5
ø100	177	93	157	167	83	147	153	143

● Double clevis type (Compact type) (CB2)





● For rod end male thread



Code / Bore size (mm)	Common dimension								For female thread								For male thread				
	AC	CB	CC	CD	D	E	MR	UB	KK	WF	With Switch			Without Switch			a'	kk'	wf	With Switch	Without Switch
											A	B	CJ	A	B	CJ				CJ	CJ
ø32	4.5	$18^{+0.4}_{+0.1}$	14	10	5	45	10	$36^{-0.1}_{-0.3}$	M8 depth 13	7	90	53	80	80	43	70	23.5	M14×1.5	5	78	68
ø40	5	$18^{+0.4}_{+0.1}$	14	10	6	52	10	$36^{-0.1}_{-0.3}$	M8 depth 13	7	98.5	59.5	88.5	88.5	49.5	78.5	23.5	M14×1.5	5	86.5	76.5
ø50	6	$22^{+0.4}_{+0.1}$	20	14	7	64	14	$44^{-0.1}_{-0.3}$	M10 depth 15	8	110.5	60.5	96.5	100.5	50.5	86.5	28.5	M18×1.5	5	93.5	83.5
ø63	7	$22^{+0.4}_{+0.1}$	20	14	8	77	14	$44^{-0.1}_{-0.3}$	M10 depth 15	8	118	66	104	108	56	94	28.5	M18×1.5	5	101	91
ø80	9	$28^{+0.4}_{+0.1}$	27	18	10	98	18	$56^{-0.1}_{-0.3}$	M16 depth 21	10	139.5	73.5	121.5	129.5	63.5	111.5	35.5	M22×1.5	8	119.5	109.5
ø100	12	$32^{+0.4}_{+0.1}$	31	22	13	117	22	$64^{-0.1}_{-0.3}$	M20 depth 27	12	162	83	140	152	73	130	35.5	M26×1.5	8	136	126

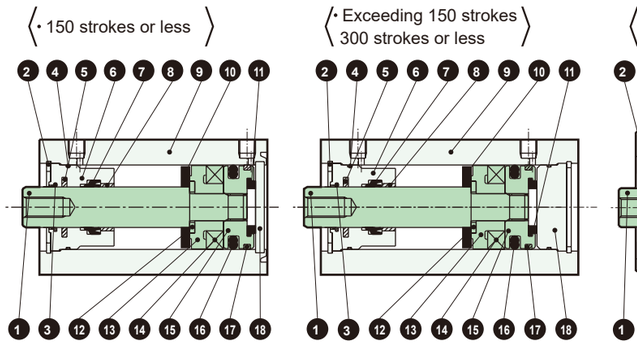
*1: For ø32 to ø50 exceeding 150 strokes, ø63 to ø100 exceeding 200 strokes, the dimensions are as follows.

Code / Bore size (mm)	For female thread						For male thread	
	With Switch			Without Switch			With Switch	Without Switch
	A	B	CJ	A	B	CJ	CJ	CJ
ø32	97.5	60.5	87.5	87.5	50.5	77.5	85.5	75.5
ø40	108	69	98	98	59	88	96	86
ø50	124	74	110	114	64	100	107	97
ø63	128	76	114	118	66	104	111	101
ø80	149.5	83.5	131.5	139.5	73.5	121.5	129.5	119.5
ø100	172	93	150	162	83	140	146	136

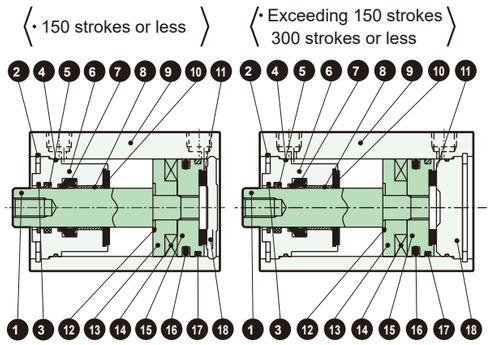
MEMO

Internal Structure Diagram/Material

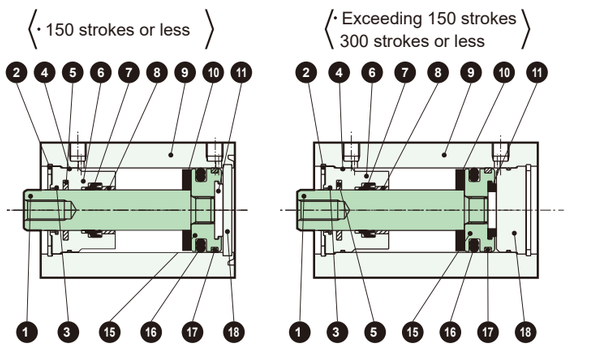
- SSD-KG1L-25 (Double acting, High load type with coil scraper with switch)
- SSD-KG4L-25 (Double acting, High load type, Spatter adhesion prevention type with switch)



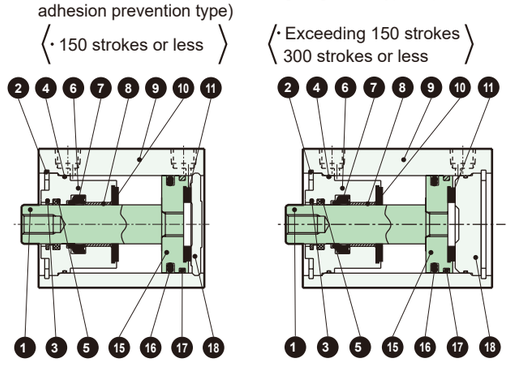
- SSD-KG1L-32 to 50 (Double acting, High load type with coil scraper with switch)
- SSD-KG4L-32 to 50 (Double acting, High load type, Spatter adhesion prevention type with switch)



- SSD-KG1-25 (Double acting, High load type with coil scraper)
- SSD-KG4-25 (Double acting, High load type, Spatter adhesion prevention type)



- SSD-KG1-32 to 50 (Double acting, High load type with coil scraper)
- SSD-KG4-32 to 50 (Double acting, High load type, Spatter adhesion prevention type)



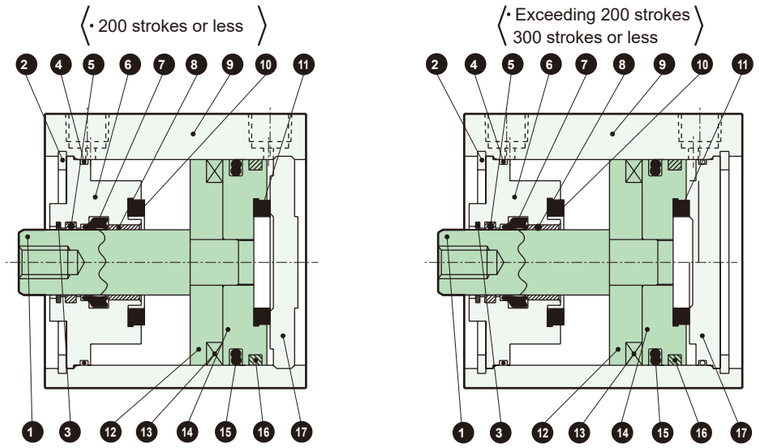
Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Piston Rod	ø25: Stainless steel ø32 to ø50: Steel	Industrial Hard Chrome Plating	10	Cushion rubber R	Urethane Rubber	
				11	Cushion rubber H	Urethane Rubber	
2	C-type retaining ring for bore	Steel	Zinc phosphate	12	Spacer washer	Stainless Steel	
3	Coil scraper	Phosphor bronze		13	Spacer	Special Resin	
4	Rod metal gasket	Nitrile Rubber		14	Magnet	Plastic	
5	Lube keeper	Special rubber	G4 only	15	Piston	Aluminum Alloy	Chromate
6	Rod Metal	Special aluminum	Alumite	16	Piston Packing	Nitrile Rubber	
7	Rod Packing	Nitrile Rubber		17	Wear Ring	Polyacetal	
8	Bushing	Bearing Alloy		18	Cover	ø25: Stainless steel (*1) ø32 to ø50: Aluminum alloy	ø32 to ø50: Chromate
9	Cylinder Body	Aluminum Alloy	Hard Anodized				

Note: For cover of ø25 long stroke type (150 mm and over stroke), Aluminum Alloy, Remarks Chromate-treated.

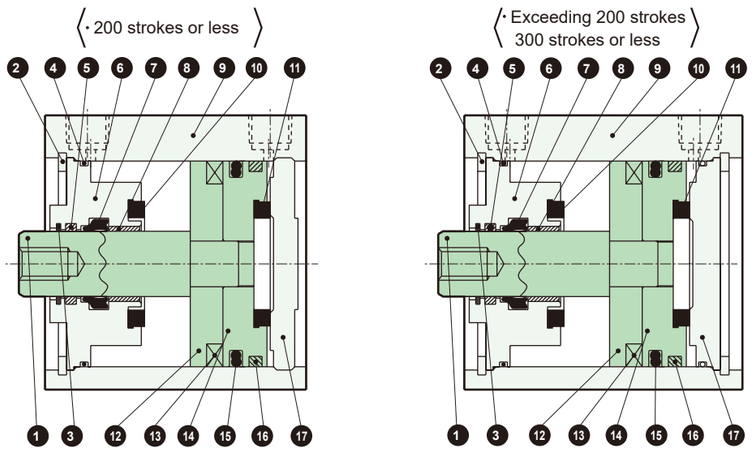
For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Internal Structure Diagram/Material

- SSD-KG1L-63 to 100 (Double acting, High load type with coil scraper with switch)
- SSD-KG4L-63 to 100 (Double acting, High load type, Spatter adhesion prevention type with switch)

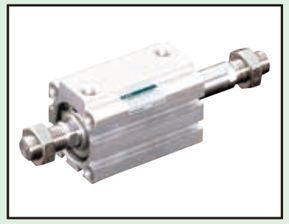


- SSD-KG1-63 to 100 (Double acting, High load type with coil scraper)
- SSD-KG4-63 to 100 (Double acting, High load type, Spatter adhesion prevention type)



Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Piston Rod	Steel	Industrial Hard Chrome Plating	10	Cushion rubber R	Urethane Rubber	
2	C-type retaining ring for bore	Steel	Zinc phosphate	11	Cushion rubber H	Urethane Rubber	
3	Coil scraper	Phosphor bronze		12	Spacer	Aluminum Alloy	Chromate
4	Rod metal gasket	Nitrile Rubber		13	Magnet	Plastic	
5	Lube keeper	Special rubber	KG4, KG4L only	14	Piston	Aluminum Alloy	Chromate
6	Rod Metal	Aluminum Alloy	Chromate	15	Piston Packing	Nitrile Rubber	
7	Rod Packing	Nitrile Rubber		16	Wear Ring	Polyacetal	
8	Bushing	Bearing Alloy		17	Cover	Aluminum Alloy	Chromate
9	Cylinder Body	Aluminum Alloy	Hard Anodized				

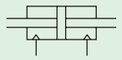
For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.



Compact Cylinder
Double Acting, Double Rod, Coil Scraper Type
SSD-DG1 Series

Compact Cylinder
Double Acting, Double Rod, Spatter Adhesion Prevention
SSD-DG4 Series

● Bore size: ø25, ø32, ø40, ø50, ø63, ø80, ø100

Circuit Diagram Symbol 

RoHS

Model No. Notation Method

Without Switch
(Without magnet for switch)

SSD-DG4 - 32 - 10 ——— N - LB - I
1 2 3 6 7 8

With Switch
(Built-in magnet for switch)

SSD-DG4L - 32 - 10 - T2YD - R - N - LB - I
1 2 3 4 5 6 7 8

1 Model No. | 2 Bore size | 3 Stroke | 4 Switch Model No. | 5 Number of Switches | 6 Option | 7 Mounting bracket | 8 Accessories

1 Model No.

Code	Content
SSD-DG1	Double Acting, Double Rod, Coil Scraper Type
SSD-DG1L	Double Acting, Double Rod, Coil Scraper Type with Switch
SSD-DG4	Double Acting, Double Rod, Spatter Adhesion Prevention Type
SSD-DG4L	Double Acting, Double Rod, Spatter Adhesion Prevention Type with Switch

2 Bore Size (mm)

Code	Content
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

3 Stroke (mm)

Bore size	Stroke	Intermediate Stroke
ø25 to ø50	1 to 50	Every 1 mm
ø63 to ø100	1 to 50	

Note: For details on stroke, please refer to P. 592.

4 Switch Model No.

For switch details, please refer to P. 869. Switches are included to the product and shipped.

	LED Indicator Special Function	Wiring (Output)	Load Voltage (V) AC	Load Voltage (V) DC	Load Current (mA) AC	Load Current (mA) DC	Lead Wire *1 Straight	Lead Wire *1 L-shape	
Contact	2-Color for AC Magnetic Field	2-wire	—	24 ± 10%	—	5 to 20	T2YD□	–	
Solid State			—		—		T2YDT□	–	

*1: For "□" in the switch model No., enter the code selected from the "*Lead wire length" table.
*2: Switches other than the above switch model No.s are also available. (Custom products) For details, refer to P. 869.

***Lead wire length**

Code	Content
Blank	1 m (Standard)
3	3 m (Option)
5	5 m (Option)

Example) Lead wire length
1 m T2YD
3 m T2YD3
5 m T2YD5

5 Number of Switches

Code	Content
R	With 1 pc on rod side
H	With 1 pc on head side
D	With 2 pcs

6 Option

Code	Content	
Blank	Rod end female thread	
N	Rod end male thread	

7 Mounting type

Mounting brackets are shipped included to the product.

	Code	Content	
	LB	Axial Foot Type	
*1	LB2	Axial foot type (Compact type)	
*1	FA	Rod Side Flange Type	

*1: When LB2 or FA is selected, the piston rod protrusion dimension WF differs from the standard. See P. 595, 596, 598, and 599 for outline dimension drawings. Also, the model No. specifying the protrusion length will be printed at the end of the model No. on the nameplate included to the main body. For cylinder model No.s when ordering cylinders and LB2/FA brackets separately, please contact us.

8 Accessories

Code	Content	
I	Single Knuckle	
I2	Single Knuckle (compact)	
Y	Double Knuckle (pin and retaining ring included)	
Y2	Double knuckle (compact) (pin and snap ring included)	

*1: Selectable when rod end male thread "N" is selected.
*2: "I", "I2", "Y", "Y2" cannot be selected at the same time.

About Custom Product Specifications

For details, refer to P. 690 to 694.

Code	Content
-XP5	Knuckle Pin/Clevis Pin Split Pin
-XP7	Knuckle fixed by pin driving
-XP8	Knuckle pin/clevis pin split pin specification, knuckle fixed by pin driving
-A2	With 2 Rod Nuts
-R1	With spigot joint
Rod End Shape Modification	Refer to Ending 11.

Model No. Example)
SSD-DG1 - ..... - XP5
SSD-DG4 - ..... - XP5

Switch Single Unit Model No. Notation Method

SW - T2YD
4

4 Switch Model No.

Specifications

Item	SSD-DG1/DG4 SSD-DG1L/DG4L (with switch)						
Bore size mm	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation method	Double Acting Type						
Operating Fluid	Compressed Air						
Max. Operating Pressure MPa	1.0						
Min. Operating Pressure MPa	0.2				0.15		
Proof pressure MPa	1.6						
Ambient Temperature °C	-10 to 60 (However, no freezing)						
Port Size	Rc1/8			Rc1/4		Rc3/8	
Stroke tolerance mm	+1.0 0						
Operating Piston Speed mm/s	50 to 500					50 to 300	
Cushion	None						
Lubrication	Not Required (When lubricating, use Turbine Oil ISO VG32)						
Allowable absorbed energy J	0.021	0.025	0.092	0.1	0.12	0.27	0.56

Stroke

	Stroke (mm)	Applicable Bore						
		ø25	ø32	ø40	ø50	ø63	ø80	ø100
Standard Stroke	5	●	●	●	●	●	●	●
	10	●	●	●	●	●	●	●
	15	●	●	●	●			
	20	●	●	●	●	●	●	●
	25	●	●	●	●			
	30	●	●	●	●	●	●	●
	40	●	●	●	●	●	●	●
	50	●	●	●	●	●	●	●
Minimum Stroke (mm) *1		1						
Maximum Stroke (mm)		50						
Intermediate Stroke *2		Every 1 mm						

*1: Products less than 10 mm with an AC magnetic field switch cannot be manufactured.
*2: The overall length dimension for intermediate stroke is the same as the standard stroke above it.

Cylinder Weight Table (Weight with switch is when 2 cylinder switches are included)

(Unit: g)

Stroke (mm)	5		10		15		20		25		30		40		50	
Bore Size (mm)	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch
ø25	234	325	249	340	265	356	281	372	297	388	313	403	344	435	375	466
ø32	308	423	354	468	399	514	446	560	490	605	537	651	631	741	725	831
ø40	446	589	473	616	499	642	526	669	553	696	579	732	632	775	685	828
ø50	696	890	746	940	796	989	846	1041	896	1089	946	1139	1046	1239	1149	1343
ø63	1128	1254	1203	1567	-	-	1353	1717	-	-	1503	1867	1654	2018	1804	2168
ø80	1995	1925	2112	2042	-	-	2345	2798	-	-	2578	3031	2812	3275	3045	3508
ø100	2984	3611	3153	3775	-	-	3490	4072	-	-	3828	4440	4165	4767	4503	5095

Theoretical Thrust Table

(Unit: N)

Bore size (mm)	Operating Direction	Operating Pressure MPa									
		0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø25	Push	-	98.2	1.47×10^{2}	1.96×10^{2}	2.45×10^{2}	2.95×10^{2}	3.44×10^{2}	3.93×10^{2}	4.42×10^{2}	4.91×10^{2}
	Pull	-	75.6	1.13×10^{2}	1.51×10^{2}	1.89×10^{2}	2.27×10^{2}	2.64×10^{2}	3.02×10^{2}	3.40×10^{2}	3.78×10^{2}
ø32	Push	-	1.61×10^{2}	2.41×10^{2}	3.22×10^{2}	4.02×10^{2}	4.83×10^{2}	5.63×10^{2}	6.43×10^{2}	7.24×10^{2}	8.04×10^{2}
	Pull	-	1.21×10^{2}	1.81×10^{2}	2.41×10^{2}	3.02×10^{2}	3.62×10^{2}	4.22×10^{2}	4.83×10^{2}	5.43×10^{2}	6.03×10^{2}
ø40	Push	-	2.51×10^{2}	3.77×10^{2}	5.03×10^{2}	6.28×10^{2}	7.54×10^{2}	8.80×10^{2}	1.01×10^{3}	1.13×10^{3}	1.26×10^{3}
	Pull	-	2.11×10^{2}	3.17×10^{2}	4.22×10^{2}	5.28×10^{2}	6.33×10^{2}	7.39×10^{2}	8.44×10^{2}	9.50×10^{2}	1.06×10^{3}
ø50	Push	-	3.93×10^{2}	5.89×10^{2}	7.85×10^{2}	9.82×10^{2}	1.18×10^{3}	1.37×10^{3}	1.57×10^{3}	1.77×10^{3}	1.96×10^{3}
	Pull	-	3.30×10^{2}	4.95×10^{2}	6.60×10^{2}	8.25×10^{2}	9.90×10^{2}	1.15×10^{3}	1.32×10^{3}	1.48×10^{3}	1.65×10^{3}
ø63	Push	4.68×10^{2}	6.23×10^{2}	9.35×10^{2}	1.25×10^{3}	1.56×10^{3}	1.87×10^{3}	2.18×10^{3}	2.49×10^{3}	2.81×10^{3}	3.12×10^{3}
	Pull	4.20×10^{2}	5.61×10^{2}	8.41×10^{2}	1.12×10^{3}	1.40×10^{3}	1.68×10^{3}	1.96×10^{3}	2.24×10^{3}	2.52×10^{3}	2.80×10^{3}
ø80	Push	7.54×10^{2}	1.01×10^{3}	1.51×10^{3}	2.01×10^{3}	2.51×10^{3}	3.02×10^{3}	3.52×10^{3}	4.02×10^{3}	4.52×10^{3}	5.03×10^{3}
	Pull	6.80×10^{2}	9.07×10^{2}	1.36×10^{3}	1.81×10^{3}	2.27×10^{3}	2.72×10^{3}	3.17×10^{3}	3.63×10^{3}	4.08×10^{3}	4.54×10^{3}
ø100	Push	1.18×10^{3}	1.57×10^{3}	2.36×10^{3}	3.14×10^{3}	3.93×10^{3}	4.71×10^{3}	5.50×10^{3}	6.28×10^{3}	7.07×10^{3}	7.85×10^{3}
	Pull	1.07×10^{3}	1.43×10^{3}	2.14×10^{3}	2.86×10^{3}	3.57×10^{3}	4.29×10^{3}	5.00×10^{3}	5.72×10^{3}	6.43×10^{3}	7.15×10^{3}

Mounting Bracket Model No. Notation Method

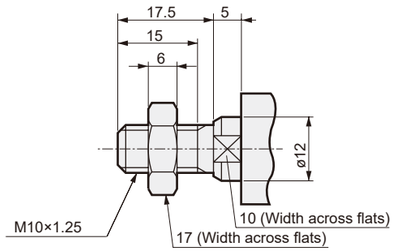
Bore Size (mm) / Mounting bracket	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Foot (LB)	SSD-LB-25	SSD-LB-32	SSD-LB-40	SSD-LB-50	SSD-LB-63	SSD-LB-80	SSD-LB-100
Foot (LB2)	SSD-LB2-25	SSD-LB2-32	SSD-LB2-40	SSD-LB2-50	SSD-LB2-63	SSD-LB2-80	SSD-LB2-100
Flange (FA)	SSD-FA-25	SSD-FA-32	SSD-FA-40	SSD-FA-50	SSD-FA-63	SSD-FA-80	SSD-FA-100
Double Clevis (CB)	SSD-CB-25	SSD-CB-32	SSD-CB-40	SSD-CB-50	SSD-CB-63	SSD-CB-80	SSD-CB-100
Double knuckle clevis (CB2)	SSD-CB2-25	SSD-CB2-32	SSD-CB2-40	SSD-CB2-50	SSD-CB2-63	SSD-CB2-80	SSD-CB2-100

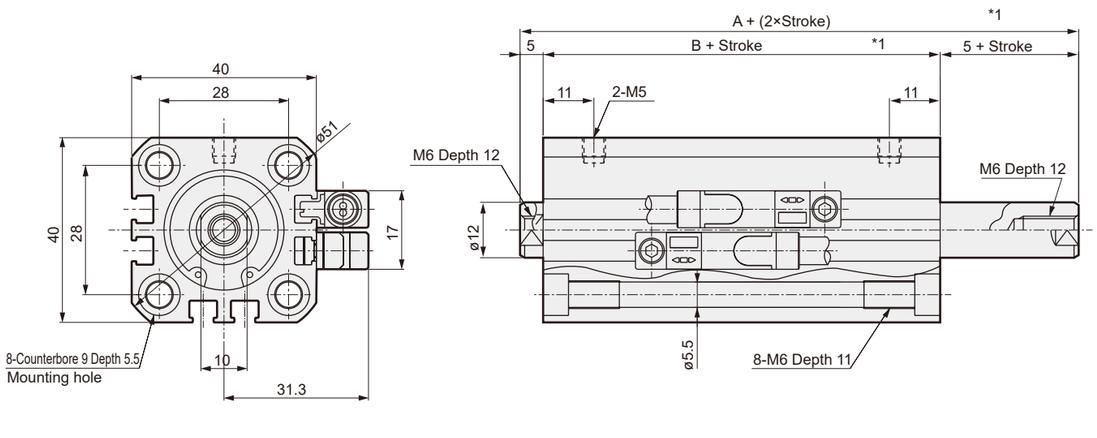
*1: Foot type mounting brackets are 2 pcs/set.
*2: When mounting with through-bolts, refer to the mounting bolt model No. notation method (P. 682).

Outline Dimension Drawing (Bore size: ø25)

● SSD-DG1 (L)/DG4 (L)-25

● Rod end male thread part



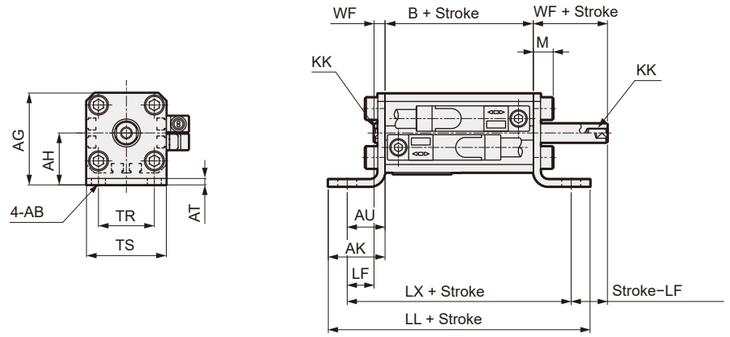


Code / Bore Size (mm)	Dimension without switch A *1	Dimension without switch B *1	Dimension with switch A *1	Dimension with switch B *1
ø25	61	51	71	61

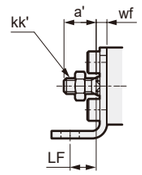
*1: When calculating A + (2 x stroke), B + stroke, and 5 + stroke dimensions for intermediate strokes, do not use the intermediate stroke value for the stroke; instead, use the value of the standard stroke above it. Rod protrusion dimensions differ on the left and right.
(Example) For an intermediate stroke of 17 mm, use the standard stroke of 20 mm for calculation.
*2: The positions of the flats for wrenches on the left and right sides are not fixed.
***3: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**
***4: For dimensions with each switch, refer to P. 674 to 681.**

Outline Dimension Drawing (Bore size: ø25)

● Axial Foot Type (LB)

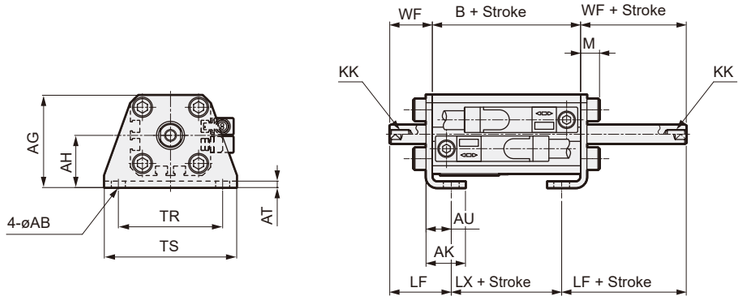


● For rod end male thread

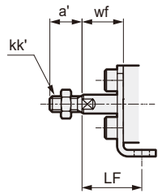


Code / Bore size (mm)	Common dimension AB	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch B	With Switch LL	With Switch LX	Without Switch B	Without Switch LL	Without Switch LX	For male thread a'	kk'	wf	LF
ø25	7	46	26	24	3.2	16	28	40	9.2	M6 Depth 12	5	11	61	109	93	51	99	83	17.5	M10×1.25	5	11

● Axial Foot Type (Compact Type) (LB2)



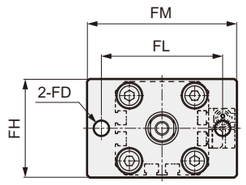
● For rod end male thread

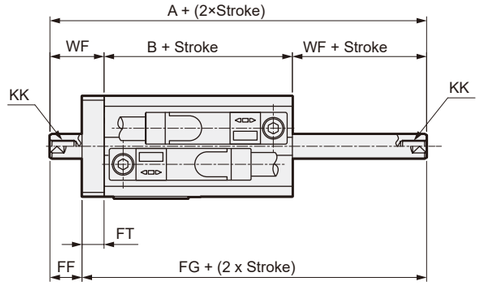


Code / Bore size (mm)	Common dimension AB	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch B	With Switch LX	Without Switch B	Without Switch LX	For male thread a'	kk'	wf	LF
ø25	7	46	26	16.5	3.2	10.7	52	66	9.2	M6 Depth 12	15	22.5	61	46	51	36	17.5	M10×1.25	15	22.5

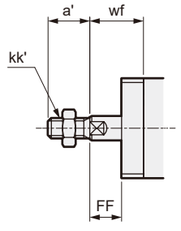
Outline Dimension Drawing (Bore size: ø25)

● Rod Side Flange Type (FA)





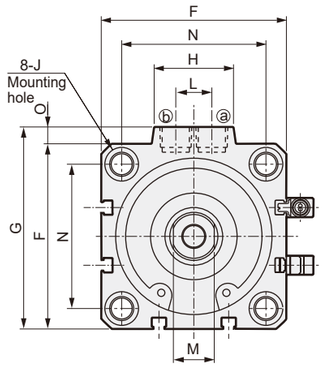
For rod end male thread

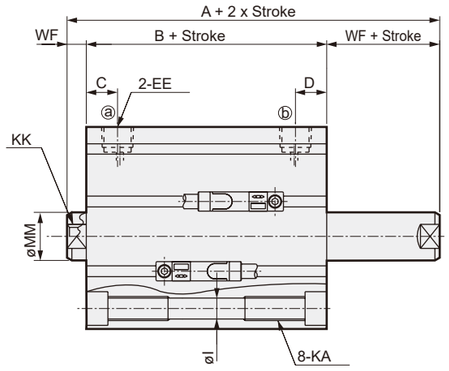


Code / Bore size (mm)	Common dimension FD	FH	FL	FM	FT	For female thread FF	KK	WF	With Switch A	With Switch B	With Switch FG	Without Switch A	Without Switch B	Without Switch FG	For male thread FF	a'	kk'	wf
ø25	6.6	42	52	64	8	7	M6 Depth 12	15	91	61	84	81	51	74	7	17.5	M10×1.25	15

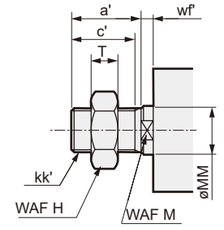
Outline Dimension Drawing (Bore size: ø32 to ø100)

● SSD-DG1 (L)/DG4 (L)-32 to 100

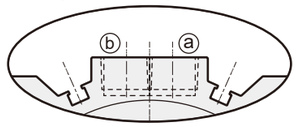




● Rod end male thread part



[Bore size ø100]



*Only ø100 has a switch groove on the port surface

Code / Bore Size (mm)	Dimension with switch A *1	Dimension with switch B *1	Dimension without switch A *1	Dimension without switch B *1	Common dimension C	D	EE	F	G	H	I
ø32	74.5	60.5	64.5	50.5	8	8	Rc1/8	45	49.5	24	5.5
ø40	83	69	73	59	12	12	Rc1/8	52	57	24	5.5
ø50	85	69	75	59	10.5	10.5	Rc1/4	64	71	33	6.9
ø63	87	71	77	61	13	13	Rc1/4	77	84	33	8.7
ø80	98.5	78.5	88.5	68.5	16	16	Rc3/8	98	104	38	10.5
ø100	112	88	102	78	23	23	Rc3/8	117	123.5	38	10.5

Code / Bore Size (mm)	Common dimension J	KA	KK	L	M	MM	N	O	WF
ø32	9 Counterbore depth 5.5	M6 depth 11	M8 depth 13	10	14	16	34	4.5	7
ø40	9 Counterbore depth 5.5	M6 depth 11	M8 depth 13	10	14	16	40	5	7
ø50	11 Counterbore Depth 6.5	M8 depth 13	M10 depth 15	15	17	20	50	7	8
ø63	14 Counterbore depth 9	M10 depth 25	M10 depth 15	15	17	20	60	7	8
ø80	17 Counterbore depth 11	M12 depth 28	M16 depth 21	15	22	25	77	6	10
ø100	17.5 Counterbore depth 11	M12 depth 28	M20 depth 27	15	27	30	94	6.5	12

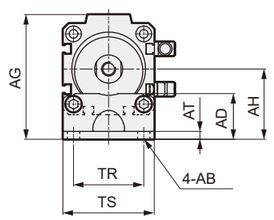
*1: When calculating A + (2 x stroke), B + stroke, and WF + stroke dimensions for intermediate strokes, do not use the intermediate stroke value for the stroke; instead, use the value of the standard stroke above it. Rod protrusion dimensions differ on the left and right.
(Example) For an intermediate stroke of 17 mm, use the standard stroke of 20 mm for calculation.
***2: For dimensions with each switch, refer to P. 674 to 681.**
*3: The position of the width across flats for spanner engagement on the left and right is not fixed.
***4: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**

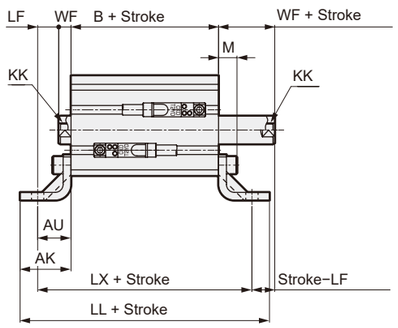
● Rod end male thread part dimension table

Code / Bore Size (mm)	a'	C'	H	kk'	M	MM	T	wf'
ø32	23.5	20.5	22	M14×1.5	14	16	8	5
ø40	23.5	20.5	22	M14×1.5	14	16	8	5
ø50	28.5	26	27	M18×1.5	17	20	11	5
ø63	28.5	26	27	M18×1.5	17	20	11	5
ø80	35.5	32.5	32	M22×1.5	22	25	13	8
ø100	35.5	32.5	41	M26×1.5	27	30	16	8

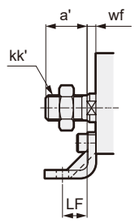
Outline Dimension Drawing (Bore size: ø32 to ø100)

● Axial Foot Type (LB)



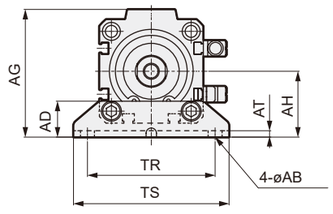


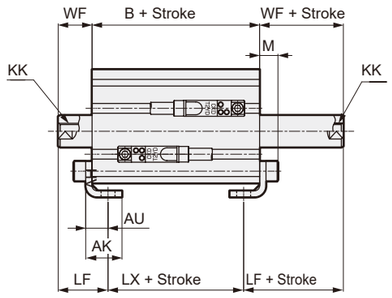
● Rod end male thread part



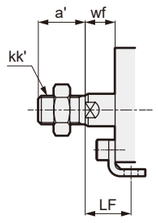
Code / Bore Size (mm)	Common dimension										For female thread									For male thread			
	AB	AD	AG	AH	AK	AT	AU	TR	TS	M	KK	WF	LF	With Switch B	With Switch LL	With Switch LX	Without Switch B	Without Switch LL	Without Switch LX	a'	kk'	wf	LF
ø32	7	–	53.5	31	24	3.2	16	34	45	9.2	M8 depth 13	7	9	60.5	108.5	92.5	50.5	98.5	82.5	23.5	M14×1.5	5	11
ø40	7	26	71	40	29	4.5	19	40	52	10	M8 depth 13	7	12	69	127	107	59	117	97	23.5	M14×1.5	5	14
ø50	9	23	79	40	34	4.5	22	46	64	13	M10 depth 15	8	14	69	137	113	59	127	103	28.5	M18×1.5	5	17
ø63	11	33	96.5	51	40	4.5	25	60	77	15	M10 depth 15	8	17	71	151	121	61	141	111	28.5	M18×1.5	5	20
ø80	13	42	116.5	61.5	50	6	35	77	98	18	M16 depth 21	10	25	78.5	178.5	148.5	68.5	168.5	138.5	35.5	M22×1.5	8	27
ø100	13	48	134	69	50	6	35	94	117	18	M20 depth 27	12	23	88	188	158	78	178	148	35.5	M26×1.5	8	27

● Axial Foot Type (Compact Type) (LB2)





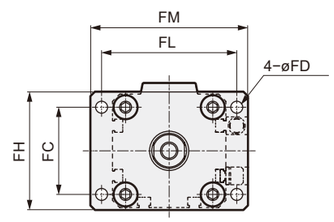
● Rod end male thread part

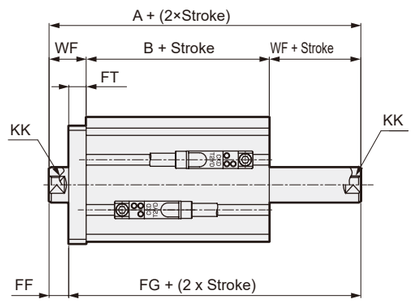


Code / Bore Size (mm)	Common dimension										For female thread							For male thread			
	AB	AD	AG	AH	AK	AT	AU	TR	TS	M	KK	WF	LF	With Switch B	With Switch LX	Without Switch B	Without Switch LX	a'	kk'	wf	LF
ø32	7	18.5	57	30	17	3.2	11.2	57	71	9.2	M8 depth 13	17	25	60.5	44.5	50.5	34.5	23.5	M14×1.5	15	23
ø40	7	18	64	33	18.2	3.2	11.2	64	78	9.2	M8 depth 13	17	25	69	53	59	43	23.5	M14×1.5	15	23
ø50	9	22	78	39	22.7	3.2	14.7	79	95	11.2	M10 depth 15	18	29.5	69	46	59	36	28.5	M18×1.5	15	26.5
ø63	11	26	91.5	46	25.2	3.2	16.2	95	113	13.2	M10 depth 15	18	31	71	45	61	35	28.5	M18×1.5	15	28
ø80	13	39.5	114	59	30.5	4.5	19.5	118	140	16.5	M16 depth 21	20	35	78.5	48.5	68.5	38.5	35.5	M22×1.5	18	33
ø100	13	50	136	71	35.5	6	23	137	162	18	M20 depth 27	22	39	88	54	78	44	35.5	M26×1.5	18	35

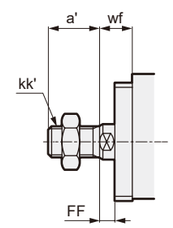
Outline Dimension Drawing (Bore size: ø32 to ø100)

● Rod Side Flange Type (FA)





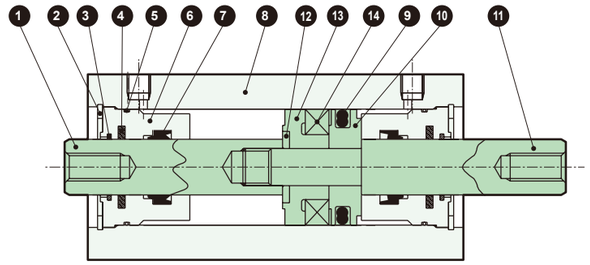
● Rod end male thread part



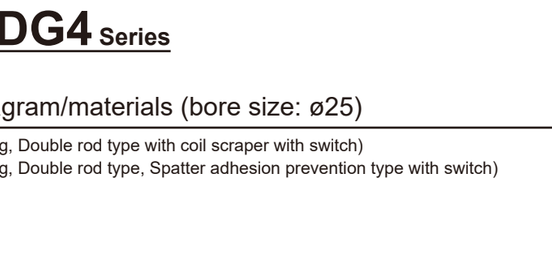
Code / Bore Size (mm)	Common dimension						For female thread										For male thread			
	FC	FD	FH	FL	FM	FT	FF	KK	WF	With Switch A	With Switch B	With Switch FG	Without Switch A	Without Switch B	Without Switch FG	FF	a'	kk'	wf
ø32	34	5.5	48	56	65	8	9	M8 depth 13	17	94.5	60.5	85.5	84.5	50.5	75.5	7	23.5	M14×1.5	15
ø40	40	5.5	54	62	72	8	9	M8 depth 13	17	103	69	94	93	59	84	7	23.5	M14×1.5	15
ø50	50	6.6	67	76	89	9	9	M10 depth 15	18	105	69	96	95	59	86	6	28.5	M18×1.5	15
ø63	60	9	80	92	108	9	9	M10 depth 15	18	107	71	98	97	61	88	6	28.5	M18×1.5	15
ø80	77	11	99	116	134	11	9	M16 depth 21	20	118.5	78.5	109.5	108.5	68.5	99.5	7	35.5	M22×1.5	18
ø100	94	11	117	136	154	11	11	M20 depth 27	22	132	88	121	122	78	111	7	35.5	M26×1.5	18

Internal structure diagram/materials (bore size: ø25)

●SSD-DG1L-25 (Double acting, Double rod type with coil scraper with switch)
●SSD-DG4L-25 (Double acting, Double rod type, Spatter adhesion prevention type with switch)



●SSD-DG1-25 (Double acting, Double rod type with coil scraper)
●SSD-DG4-25 (Double acting, Double rod type, Spatter adhesion prevention type)

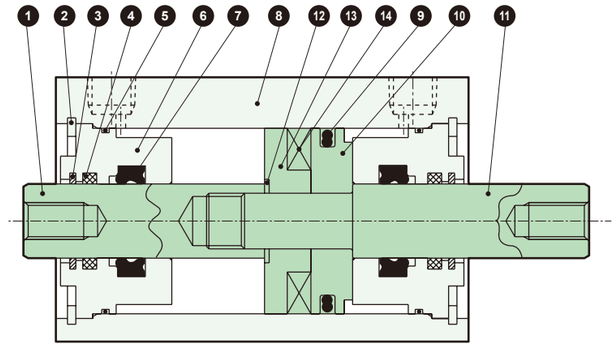


Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Piston Rod A	Stainless Steel	Industrial Hard Chrome Plating	8	Cylinder Body	Aluminum Alloy	Hard Anodized
2	C-type retaining ring for bore	Steel	Zinc phosphate	9	Piston Packing	Nitrile Rubber	
3	Coil scraper	Phosphor bronze		10	Piston	Aluminum Alloy	Chromate
4	Lube keeper	Special rubber	DG4, DG4L only	11	Piston Rod B	Stainless Steel	Industrial Hard Chrome Plating
5	Rod metal gasket	Nitrile Rubber		12	Spacer washer	Stainless Steel	
6	Rod Metal	Aluminum Alloy	Alumite	13	Spacer	Special Resin	
7	Rod Packing	Nitrile Rubber		14	Magnet	Plastic	

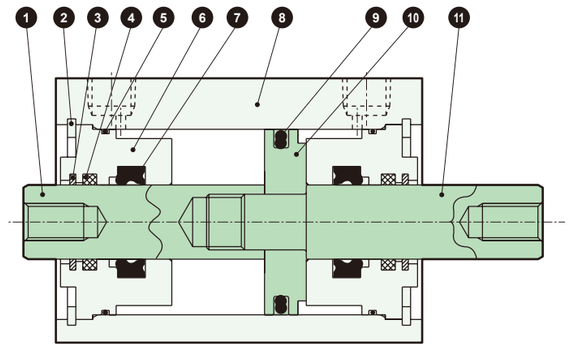
For maintenance parts, please visit the CKD Component Product Site
(https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Internal Structure Diagram/Material (Bore size: ø32 to ø50)

●SSD-DG1L-32 to 50 (Double acting, Double rod type with coil scraper with switch)
●SSD-DG4L-32 to 50 (Double acting, Double rod type, Spatter adhesion prevention type with switch)



●SSD-DG1-32 to 50 (Double acting, Double rod type with coil scraper)
●SSD-DG4-32 to 50 (Double acting, Double rod type, Spatter adhesion prevention type)

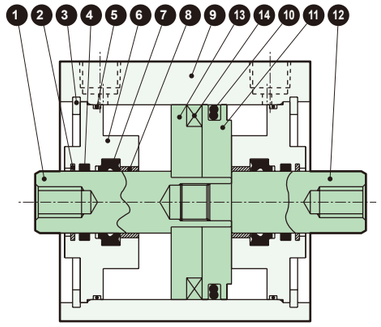


Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Piston Rod A	Steel	Industrial Hard Chrome Plating	9	Piston Packing	Nitrile Rubber	
2	C-type retaining ring for bore	Steel	Zinc phosphate	10	Piston	Aluminum Alloy	Chromate
3	Coil scraper	Phosphor bronze		11	Piston Rod B	Steel	Industrial Hard Chrome Plating
4	Lube keeper	Special rubber	DG4, DG4L only	12	Spacer washer	Stainless Steel	ø50
5	Rod metal gasket	Nitrile Rubber		13	Spacer	ø32, ø40: Aluminum alloy ø50: Special resin	ø32, ø40: Chromate
6	Rod Metal	Aluminum Alloy	Alumite				
7	Rod Packing	Nitrile Rubber		14	Magnet	Plastic	
8	Cylinder Body	Aluminum Alloy	Hard Anodized				

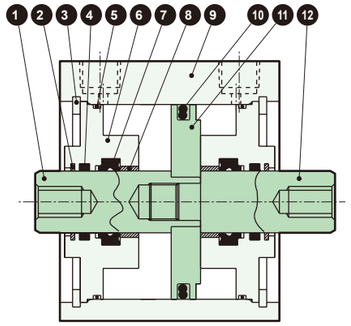
For maintenance parts, please visit the CKD Component Product Site
(https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Internal Structure Diagram/Material (Bore size: ø63 to ø100)

●SSD-DG1L-63 to 100 (Double acting, Double rod type with coil scraper with switch)
●SSD-DG4L-63 to 100 (Double acting, Double rod type, Spatter adhesion prevention type with switch)



●SSD-DG1-63 to 100 (Double acting, Double rod type with coil scraper)
●SSD-DG4-63 to 100 (Double acting, Double rod type, Spatter adhesion prevention type)



Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Piston Rod A	Steel	Industrial Hard Chrome Plating	8	Bushing	Bearing Alloy	
2	Coil scraper	Phosphor bronze		9	Cylinder Body	Aluminum Alloy	Hard Anodized
3	C-type retaining ring for bore	Steel	Zinc phosphate	10	Piston Packing	Nitrile Rubber	Chromate
4	Lube keeper	Special rubber	DG4, DG4L only	11	Piston	Aluminum Alloy	Chromate
5	Rod metal gasket	Nitrile Rubber		12	Piston Rod B	Steel	Industrial Hard Chrome Plating
6	Rod Metal	Aluminum Alloy	Chromate	13	Spacer	Aluminum Alloy	Chromate
7	Rod Packing	Nitrile Rubber		14	Magnet	Plastic	

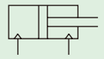
For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

MEMO

Compact Cylinder
Double Acting, Single Rod, Environmental Resistant Scraper Type

SSD-G5 Series

● Bore size: ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100

Circuit Diagram Symbol 

Custom Products RoHS

Model No. Notation Method

Without Switch
(Without magnet for switch)

SSD-G5 - 20 - [ ] - 5 ——— N - LB - I
1 2 3 4 7 8 9

With Switch
(Built-in magnet for switch)

SSD-G5L - 20 - [ ] - 5 - T0H - R - N - LB - I
1 2 3 4 5 6 7 8 9

1	2	3	4	5	6	7	8	9
Model No.	Bore size	Piping thread type	Stroke	Switch Model No.	Number of Switches	Option	Mounting bracket	Accessories

1 Model No.

Code	Content
SSD-G5	Double Acting, Single Rod, Environmentally Resistant Scraper Type
SSD-G5L	Double Acting, Single Rod, Environmentally Resistant Scraper Type with Switch

2 Bore Size (mm)

Code	Content
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

3 Piping thread type

Code	Content
Blank	M5 thread (ø20 to ø25)
	Rc thread (ø32 to ø100)
NN	NPT thread (Custom product) (ø32 to ø100)
GN	G thread (Custom product) (ø32 to ø100)

4 Stroke (mm)

Bore size	Stroke	Intermediate Stroke
ø20 to ø50	1 to 50	Every 1 mm
ø63 to ø100	1 to 50	

Note: For details on stroke, please refer to P. 606.

5 Switch Model No.

For switch details, please refer to P. 869. Switches are included to the product and shipped.

Contact	LED Indicator Special Function	Wiring (Output)	Load Voltage (V) AC	Load Voltage (V) DC	Load Current (mA) AC	Load Current (mA) DC	Lead Wire *1 Straight	Lead Wire *1 L-shape	
Solid State	1-Color	2-wire	85 to 265	—	5 to 100	—	T1H□	T1V□	
			—	10 to 30	—	5 to 20 *2	T2H□	T2V□	
		3-wire (NPN)	—	30 or less	—	100 or less	T3H□	T3V□	
		3-wire (PNP)	—		—		T3PH□	T3PV□	
	2-Color	2-wire	—	24 ± 10%	—	5 to 20	T2WH□	T2WV□	
		3-wire (NPN)	—	30 or less	—	50 or less	T3WH□	T3WV□	
	2-Color Improved Water Resistance	2-wire	—	24 ± 10%	—	5 to 20	T2WLH□	T2WLV□	*3
	2-Color for AC Magnetic Field		—		—		T2YD□	–	
			—		—		T2YDT□	–	
	1-Color Off-Delay Type		—	10 to 30	—	5 to 20 *2	T2JH□	T2JV□	
	1-Color Flexible Lead Wire Type		—		—		T2HR3□	T2VR3□	
Reed	1-Color	2-wire	110	12/24	7 to 20	5 to 50	T0H□	T0V□	
	No LED Indicator		110	5/12/24	20 or less	50 or less	T5H□	T5V□	
	1-Color		110/220	12/24	7 to 20 / 7 to 10	5 to 50	T8H□	T8V□	*4

*1: For "□" in the switch model No., enter the code selected from the "*Lead wire length, connector specification" table.
*2: The maximum load current value above, 20 mA, is at 25°C. If the switch operating ambient temperature is higher than 25°C, it will be lower than 20 mA. (At 60°C, it will be 5 to 10 mA.)
*3: This does not guarantee the water resistance of the cylinder. When using in a water-resistant environment, use of an improved water resistance cylinder is recommended.
*4: T8□ switches cannot be mounted on ø20 to ø32.
*5: Switches other than the model No.s listed above are also available. (Custom products) For details, refer to P. 869.

*6

*Lead wire length, connector specification

Code	Content
Blank	1 m (Standard)
3	3 m (Option)
5	5 m (Option)
W	M8 Connector, 1PIN (+) 4PIN (-) Lead Wire 0.3 m

*6: Only T2WLH and T2WLV can be selected.

Example) Lead wire length
1 m T0H
3 m T0H3
5 m T0H5

6 Number of Switches

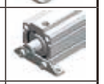
Code	Content
R	With 1 pc on rod side
H	With 1 pc on head side
D	With 2 pcs

7 Option

Code	Content	
Blank	Rod end female thread	
N	Rod end male thread	

8 Mounting type

Mounting brackets are shipped included to the product.

	Code	Content	
	LB	Axial Foot Type	
*1	LB2	Axial foot type (Compact type)	
*1	FA	Rod Side Flange Type	
	FB	Head Side Flange Type	
	CB	Double Clevis Type (pin and retaining ring included)	
	CB2	Clevis bracket (compact) (pin and snap ring included)	

*1: The WF and wf dimensions of cylinders for "LB2" and "FA" are set 10 mm longer than standard products. For cylinder model No.s when ordering cylinders and LB2/FA brackets separately, please contact us.

9 Accessories

Code	Content	
I	Single Knuckle	
I2	Single Knuckle (compact)	
Y	Double Knuckle (pin and retaining ring included)	
Y2	Double knuckle (compact) (pin and snap ring included)	

*1: Selectable when rod end male thread "N" is selected.
*2: "I", "I2", "Y", "Y2" cannot be selected at the same time.

About Custom Product Specifications

For details, refer to P. 690 to 694.

Code	Content
-XP5	Knuckle Pin/Clevis Pin Split Pin
-XP7	Knuckle fixed by pin driving
-XP8	Knuckle pin/clevis pin split pin specification, knuckle fixed by pin driving
-A2	With 2 Rod Nuts
-R1, R2	With spigot joint
Rod End Shape Modification	Refer to Ending 11.

Model No. Example)

SSD-G5 - ..... - XP5

Switch Single Unit Model No. Notation Method

SW - T0H
5
Switch Model No.

Specifications

Item		SSD-G5 / SSD-G5L (with switch)							
Bore size	mm	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation method		Double Acting Type							
Operating Fluid		Compressed Air							
Max. Operating Pressure	MPa	1.0							
Min. Operating Pressure	MPa	0.2					0.15		
Proof Pressure	MPa	1.6							
Ambient Temperature	°C	-10 to 60 (However, no freezing)							
Port Size		M5		Rc1/8		Rc1/4		Rc3/8	
Stroke tolerance	mm	+1.0 0							
Operating piston speed	mm/s	50 to 500					50 to 300		
Cushion		None							
Lubrication		Not required (When lubricating, use turbine oil class 1 ISO VG32)							
Allowable Absorbed Energy	J	0.016	0.021	0.025	0.092	0.1	0.12	0.27	0.56

Stroke

Stroke (mm)		Applicable Bore							
		ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Standard Stroke	5	●	●	●	●	●	●	●	●
	10	●	●	●	●	●	●	●	●
	15	●	●	●	●	●			
	20	●	●	●	●	●	●	●	●
	25	●	●	●	●	●			
	30	●	●	●	●	●	●	●	●
	40	●	●	●	●	●	●	●	●
	50	●	●	●	●	●	●	●	●
Minimum stroke (mm) *2		1							
Maximum Stroke (mm)		50							
Intermediate stroke *3		Every 1 mm							

***1: If the standard stroke is exceeded, it will be a high load type (K). For specifications, see P. 390, and for outline dimensions, see P. 392 to 400.**

***2: Products less than 5 mm with a 1-color indicator switch, and products less than 10 mm with a 2-color indicator type, off-delay type, for AC magnetic field, or with T1□ or T8□ switches cannot be manufactured. For the number of switches that can be mounted and the minimum stroke, refer to the table below.**

*3: The overall length dimension for intermediate stroke is the same as the standard stroke above it.

***4: For the minimum stroke when using mounting brackets LB and LB2, see P. 609 and 613.**

Number of switches mountable and minimum stroke (mm)

Switch Model No.	T□		T2WL	
Number of Switches / Bore Size (mm)	1	2	1	2
ø20	5	5	20	20
ø25	5	5	15	15
ø32	5	5	20	20
ø40	5	5	15	15
ø50	5	5	15	15
ø63	5	5	10	15
ø80	5	5	10	15
ø100	5	5	10	15

Note: Less than 10 mm with the 2-color LED, off-delay, AC magnetic field proof, T1□ or T8□ switch is not available.

Cylinder Weight Table (Weight with switch is when 2 cylinder switches are included)

(Unit: g)

Stroke (mm) / Bore Size (mm)	5		10		15		20		25		30		40		50	
	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch	Without Switch	With Switch
ø20	95	150	107	182	120	195	133	208	145	220	158	233	183	258	208	283
ø25	131	222	146	237	162	253	178	269	194	285	209	300	241	332	272	363
ø32	185	299	207	321	229	343	251	365	272	386	294	408	338	452	381	495
ø40	269	412	296	439	322	465	349	492	376	519	402	545	455	598	508	651
ø50	434	628	476	670	518	712	560	754	602	796	645	839	729	923	813	1007
ø63	648	927	703	982	-	-	813	1092	-	-	923	1202	1074	1313	1144	1423
ø80	1153	1566	1240	1653	-	-	1413	1826	-	-	1586	1990	1760	2173	1933	2346
ø100	1765	2332	1879	2446	-	-	2106	2673	-	-	2334	2901	2561	3128	2789	3356

Theoretical Thrust Table

(Unit: N)

Bore size (mm)	Operating Direction	Operating Pressure MPa									
		0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø20	Push	-	62.8	94.2	1.26×10^2	1.57×10^2	1.88×10^2	2.20×10^2	2.51×10^2	2.83×10^2	3.14×10^2
	Pull	-	47.1	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2	1.88×10^2	2.12×10^2	2.36×10^2
ø25	Push	-	98.2	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2	3.93×10^2	4.42×10^2	4.91×10^2
	Pull	-	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
ø32	Push	-	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2	6.43×10^2	7.24×10^2	8.04×10^2
	Pull	-	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
ø40	Push	-	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	-	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push	-	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	-	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Push	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
ø80	Push	7.54×10^2	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3	4.02×10^3	4.52×10^3	5.03×10^3
	Pull	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
ø100	Push	1.18×10^3	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3	6.28×10^3	7.07×10^3	7.85×10^3
	Pull	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3

Mounting Bracket Model No. Notation Method

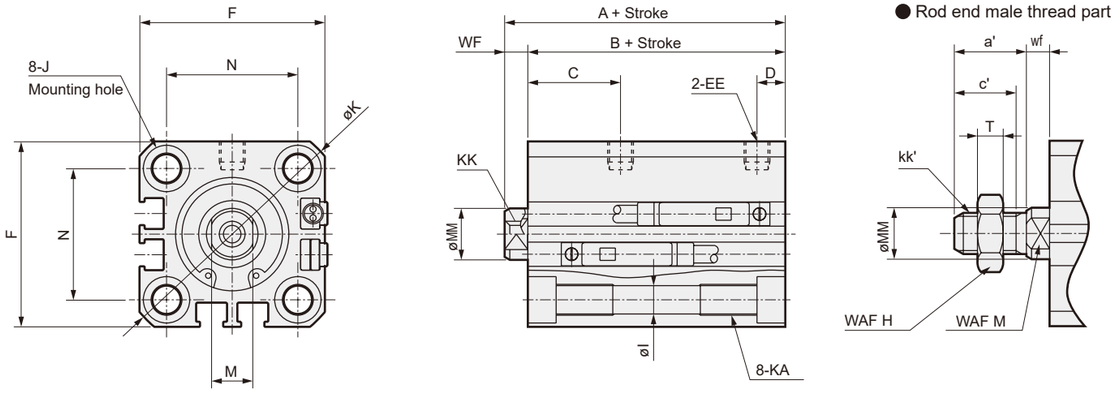
Bore Size (mm) / Mounting bracket	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Foot (LB)	SSD-LB-20	SSD-LB-25	SSD-LB-32	SSD-LB-40	SSD-LB-50	SSD-LB-63	SSD-LB-80	SSD-LB-100
Foot (LB2)	SSD-LB2-20	SSD-LB2-25	SSD-LB2-32	SSD-LB2-40	SSD-LB2-50	SSD-LB2-63	SSD-LB2-80	SSD-LB2-100
Flange (FA/FB)	SSD-FA-20	SSD-FA-25	SSD-FA-32	SSD-FA-40	SSD-FA-50	SSD-FA-63	SSD-FA-80	SSD-FA-100
Double Clevis (CB)	SSD-CB-20	SSD-CB-25	SSD-CB-32	SSD-CB-40	SSD-CB-50	SSD-CB-63	SSD-CB-80	SSD-CB-100
Double knuckle clevis (CB2)	SSD-CB2-20	SSD-CB2-25	SSD-CB2-32	SSD-CB2-40	SSD-CB2-50	SSD-CB2-63	SSD-CB2-80	SSD-CB2-100

*1: Foot type mounting brackets are 2 pcs/set.

*2: When mounting with through-bolts, refer to the mounting bolt model No. notation method (P. 682).

Outline Dimension Drawing (Bore size: ø20, ø25)

● SSD-G5 (L)-20, 25



Code / Bore Size (mm)	Dimension with switch A *1	Dimension with switch B *1	Dimension without switch A *1	Dimension without switch B *1	Common dimension C	D	EE	F
ø20	44	39.5	34	29.5	18	5.5	M5	36
ø25	47.5	42.5	37.5	32.5	21	6	M5	40

Code / Bore Size (mm)	Common dimension I	J	K	KA	KK	M	MM	N	WF
ø20	5.5	9 Counterbore depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
ø25	5.5	9 Counterbore depth 5.5	51	M6 depth 11	M6 depth 11	10	12	28	5

*1: When calculating A + Stroke and B + Stroke dimensions for intermediate strokes, do not enter the intermediate stroke value for the stroke; instead, enter the value of the standard stroke above it. (Example) For an intermediate stroke of 7 mm, enter the standard stroke of 10 mm for calculation.

***2: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**

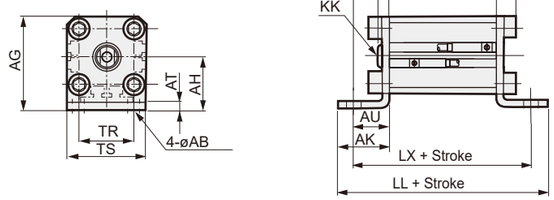
***3: For dimensions with each switch, refer to P. 674 to 681.**

● Rod end male thread part dimension table

Code / Bore Size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5

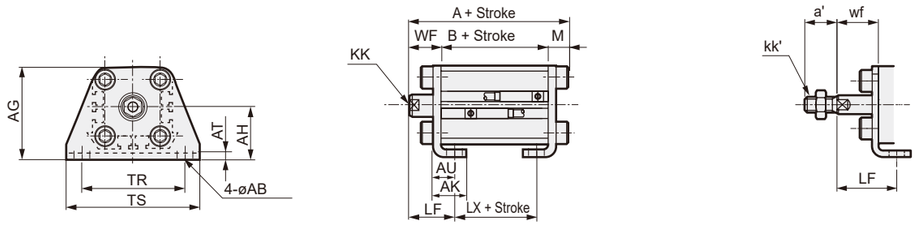
Outline Dimension Drawing (Bore size: ø20, ø25)

● Axial Foot Type (LB)



Code / Bore Size (mm)	Common dimension AB	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch B	With Switch LL	With Switch LX	Without Switch B	Without Switch LL	Without Switch LX	For male thread a'	kk'	wf	LF
ø20	7	42	24	24	3.2	16	24	36	9.2	M5 depth 7	4.5	11.5	39.5	87.5	71.5	29.5	77.5	61.5	14	M8	4.5	11.5
ø25	7	46	26	24	3.2	16	28	40	9.2	M6 Depth 12	5	11	42.5	90.5	74.5	32.5	80.5	64.5	17.5	M10×1.25	5	11

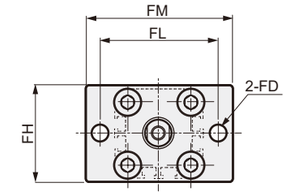
● Axial Foot Type (Compact Type) (LB2)

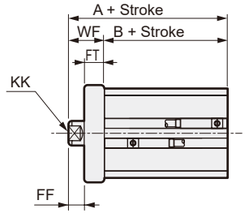


Code / Bore Size (mm)	Common dimension AB	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch A	With Switch B	With Switch LX	Without Switch A	Without Switch B	Without Switch LX	For male thread a'	kk'	wf	LF
ø20	7	42	24	15	3.2	9.2	48	62	9.2	M5 depth 7	14.5	20.5	63.2	39.5	27.5	53.2	29.5	17.5	14	M8	14.5	20.5
ø25	7	46	26	16.5	3.2	10.7	52	66	9.2	M6 Depth 12	15	22.5	66.7	42.5	27.5	56.7	32.5	17.5	17.5	M10×1.25	15	22.5

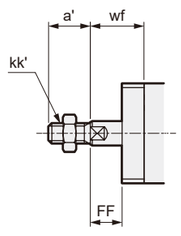
Outline Dimension Drawing (Bore size: ø20, ø25)

● Rod Side Flange Type (FA)



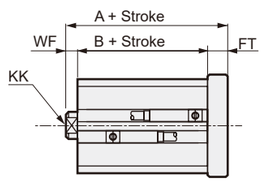


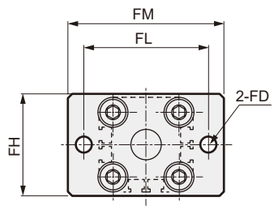
● For rod end male thread



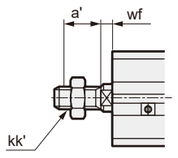
Code / Bore Size (mm)	Common dimension					For female thread							For male thread			
	FD	FH	FL	FM	FT	FF	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	FF	a'	kk'	wf
ø20	6.6	39	48	60	8	6.5	M5 depth 7	14.5	54	39.5	44	29.5	6.5	14	M8	14.5
ø25	6.6	42	52	64	8	7	M6 Depth 12	15	57.5	42.5	47.5	32.5	7	17.5	M10×1.25	15

● Head Side Flange Type (FB)





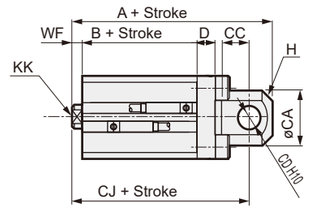
● For rod end male thread

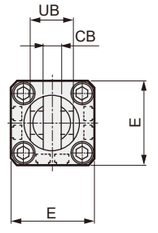


Code / Bore Size (mm)	Common dimension					For female thread						For male thread				
	FD	FH	FL	FM	FT	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	a'	kk'	wf	With Switch CJ	Without Switch CJ
ø20	6.6	39	48	60	8	M5 depth 7	4.5	52	39.5	42	29.5	14	M8	4.5	62	52
ø25	6.6	42	52	64	8	M6 Depth 12	5	55.5	42.5	45.5	32.5	17.5	M10×1.25	5	67.5	57.5

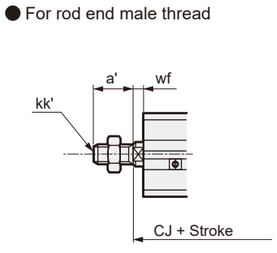
Outline Dimension Drawing (Bore size: ø20, ø25)

● Double Knuckle Clevis Type (CB)



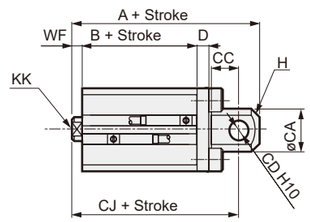


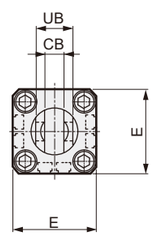
● For rod end male thread



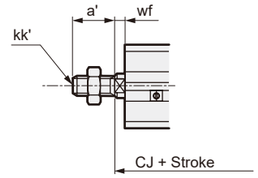
Code / Bore Size (mm)	CA	CB	CC	CD	D	E	H	UB	For female thread KK	WF	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	For male thread a'	kk'	wf	With Switch CJ	Without Switch CJ
ø20	24	8 +0.4 +0.1	12	10	8	36	C4	19 -0.1 -0.4	M5 depth 7	4.5	77	39.5	67	67	29.5	57	14	M8	4.5	67	57
ø25	27.5	10 +0.4 +0.1	16	12	8	40	C5	21 -0.1 -0.4	M6 Depth 12	5	86.5	42.5	74.5	76.5	32.5	64.5	17.5	M10×1.25	5	74.5	64.5

● Double clevis type (Compact type) (CB2)





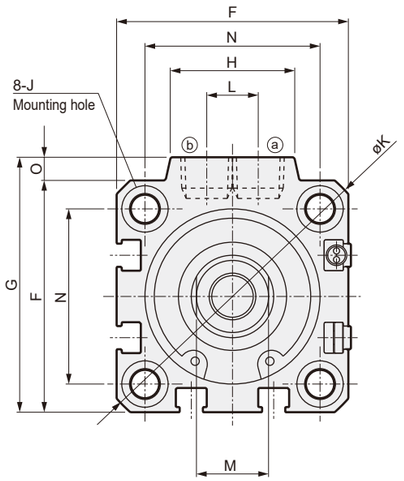
● For rod end male thread

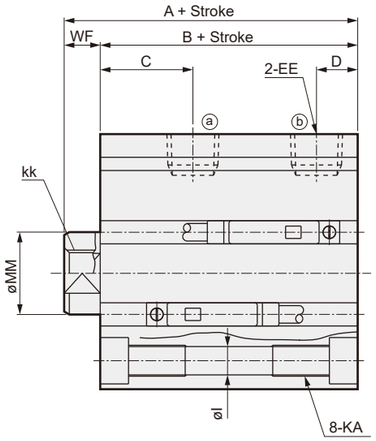


Code / Bore Size (mm)	CA	CB	CC	CD	D	E	H	UB	For female thread KK	WF	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	For male thread a'	kk'	wf	With Switch CJ	Without Switch CJ
ø20	20	8 +0.4 +0.1	12	8	5	36	C4	16 -0.1 -0.3	M5 depth 7	4.5	71	39.5	62	61	29.5	52	14	M8	4.5	62	52
ø25	24	10 +0.4 +0.1	14	10	5	40	C5	20 -0.1 -0.3	M6 Depth 12	5	77.5	42.5	67.5	67.5	32.5	57.5	17.5	M10×1.25	5	67.5	57.5

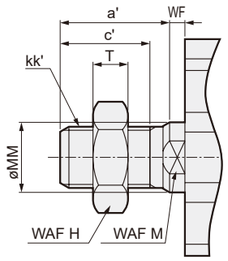
Outline Dimension Drawing (Bore size: ø32 to ø100)

● SSD-G5 (L)-32 to 100

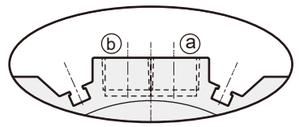




● Rod end male thread part



[Bore size ø100]



*Only ø100 has a switch groove on the port surface

Code / Bore Size (mm)	Dimension with switch A *1	Dimension with switch B *1	Dimension without switch A *1	Dimension without switch B *1	Common dimension C	D	EE	F	G	H
ø32	50	43	40	33	18	8	Rc1/8	45	49.5	24
ø40	56.5	49.5	46.5	39.5	22	8.5	Rc1/8	52	57	24
ø50	58.5	50.5	48.5	40.5	20.5	10.5	Rc1/4	64	71	33
ø63	64	56	54	46	23	11	Rc1/4	77	84	33
ø80	73.5	63.5	63.5	53.5	26	13	Rc3/8	98	104	38
ø100	85	73	75	63	33	15	Rc3/8	117	123.5	38

Code / Bore Size (mm)	Common dimension I	J	K	KA	KK	L	M	MM	N	O	WF
ø32	5.5	9 Counterbore depth 5.5	60	M6 depth 11	M8 depth 13	10	14	16	34	4.5	7
ø40	5.5	9 Counterbore depth 5.5	69	M6 depth 11	M8 depth 13	10	14	16	40	5	7
ø50	6.9	11 Counterbore Depth 6.5	86	M8 depth 13	M10 depth 15	15	17	20	50	7	8
ø63	8.7	14 Counterbore depth 9	103	M10 depth 25	M10 depth 15	15	17	20	60	7	8
ø80	10.5	17.5 Counterbore depth 11	132	M12 depth 28	M16 depth 21	15	22	25	77	6	10
ø100	10.5	17.5 Counterbore depth 11	156	M12 Depth 29	M20 depth 27	15	27	30	94	6.5	12

*1: When calculating A + Stroke and B + Stroke dimensions for intermediate strokes, do not enter the intermediate stroke value for the stroke; instead, enter the value of the standard stroke above it. (Example) For an intermediate stroke of 7 mm, enter the standard stroke of 10 mm for calculation.

***2: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**

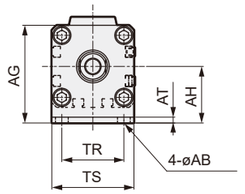
● Rod end male thread part dimension table

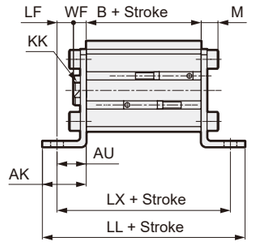
Code / Bore Size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14×1.5	14	16	8	5
ø40	23.5	20.5	22	M14×1.5	14	16	8	5
ø50	28.5	26	27	M18×1.5	17	20	11	5
ø63	28.5	26	27	M18×1.5	17	20	11	5
ø80	35.5	32.5	32	M22×1.5	22	25	13	8
ø100	35.5	32.5	41	M26×1.5	27	30	16	8

Outline Dimension Drawing (Bore size: ø32 to ø100)

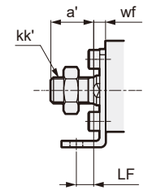
● Axial Foot Type (LB)

· ø32

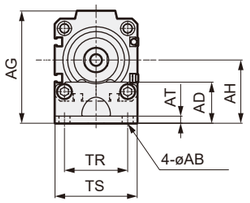


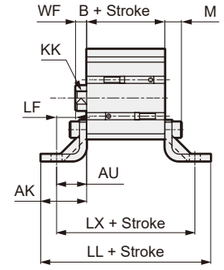


● For rod end male thread

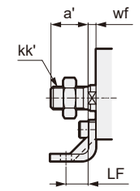


· ø40 to ø100





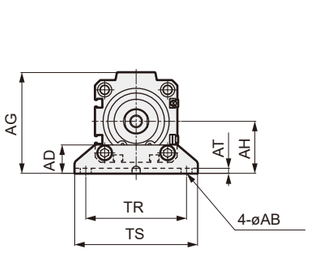
● For rod end male thread

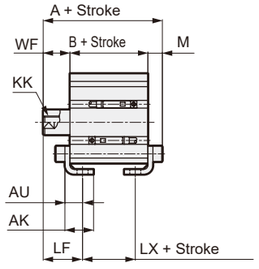


Code / Bore Size (mm)	Common dimension AB	AD	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch B	With Switch LL	With Switch LX	Without Switch B	Without Switch LL	Without Switch LX	For male thread a'	kk'	wf	LF
ø32	7	–	53.5	31	24	3.2	16	34	45	9.2	M8 depth 13	7	9	43	91	75	33	81	65	23.5	M14×1.5	5	11
ø40	7	26	71	40	29	4.5	19	40	52	10	M8 depth 13	7	12	49.5	107.5	87.5	39.5	97.5	77.5	23.5	M14×1.5	5	14
ø50	9	23	79	40	34	4.5	22	46	64	13	M10 depth 15	8	14	50.5	118.5	94.5	40.5	108.5	84.5	28.5	M18×1.5	5	17
ø63	11	33	96.5	51	40	4.5	25	60	77	15	M10 depth 15	8	17	56	136	106	46	126	96	28.5	M18×1.5	5	20
ø80	13	42	116.5	61.5	50	6	35	77	98	18	M16 depth 21	10	25	63.5	163.5	133.5	53.5	153.5	123.5	35.5	M22×1.5	8	27
ø100	13	48	134	69	50	6	35	94	117	18	M20 depth 27	12	23	73	173	143	63	163	133	35.5	M26×1.5	8	27

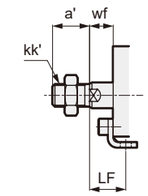
*1: If B + stroke is less than or equal to the value below, LB cannot be selected.
ø80, ø100: 69 or less

● Axial Foot Type (Compact Type) (LB2)





● For rod end male thread

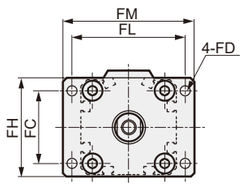


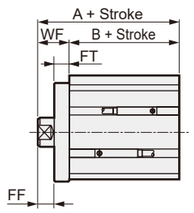
Code / Bore Size (mm)	Common dimension AB	AD	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch A	With Switch B	With Switch LX	Without Switch A	Without Switch B	Without Switch LX	For male thread a'	kk'	wf	LF
ø32	7	18.5	57	30	17	3.2	11.2	57	71	9.2	M8 depth 13	17	25	69.2	43	27	59.2	33	17	23.5	M14×1.5	15	23
ø40	7	18	64	33	18.2	3.2	11.2	64	78	9.2	M8 depth 13	17	25	75.7	49.5	33.5	65.7	39.5	23.5	23.5	M14×1.5	15	23
ø50	9	22	78	39	22.7	3.2	14.7	79	95	11.2	M10 depth 15	18	29.5	79.7	50.5	27.5	69.7	40.5	17.5	28.5	M18×1.5	15	26.5
ø63	11	26	91.5	46	25.2	3.2	16.2	95	113	13.2	M10 depth 15	18	31	87.2	56	30	77.2	46	20	28.5	M18×1.5	15	28
ø80	13	39.5	114	59	30.5	4.5	19.5	118	140	16.5	M16 depth 21	20	35	100	63.5	33.5	90	53.5	23.5	35.5	M22×1.5	18	33
ø100	13	50	136	71	35.5	6	23	137	162	18	M20 depth 27	22	39	113	73	39	103	63	29	35.5	M26×1.5	18	35

*1: If B + stroke is less than or equal to the value below, LB2 cannot be selected.
ø80: 72 or less ø100: 69 or less

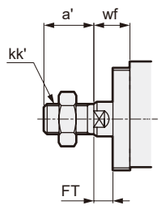
Outline Dimension Drawing (Bore size: ø32 to ø100)

● Rod Side Flange Type (FA)



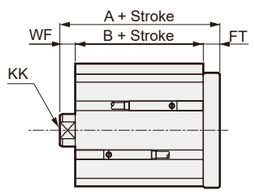


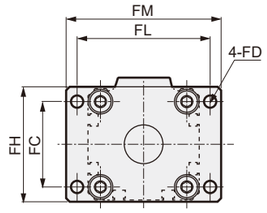
● For rod end male thread



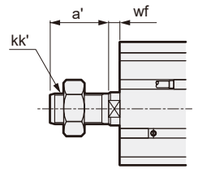
Code / Bore Size (mm)	Common dimension						For female thread							For male thread			
	FC	FD	FH	FL	FM	FT	FF	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	FF	a'	kk'	wf
ø32	34	5.5	48	56	65	8	9	M8 depth 13	17	60	43	50	33	7	23.5	M14×1.5	15
ø40	40	5.5	54	62	72	8	9	M8 depth 13	17	66.5	49.5	56.5	39.5	7	23.5	M14×1.5	15
ø50	50	6.6	67	76	89	9	9	M10 depth 15	18	68.5	50.5	58.5	40.5	6	28.5	M18×1.5	15
ø63	60	9	80	92	108	9	9	M10 depth 15	18	74	56	64	46	6	28.5	M18×1.5	15
ø80	77	11	99	116	134	11	9	M16 depth 21	20	83.5	63.5	73.5	53.5	7	35.5	M22×1.5	18
ø100	94	11	117	136	154	11	11	M20 depth 27	22	95	73	85	63	7	35.5	M26×1.5	18

● Head Side Flange Type (FB)





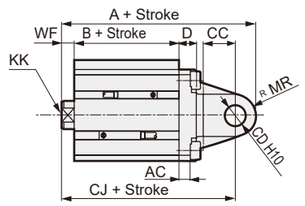
● For rod end male thread

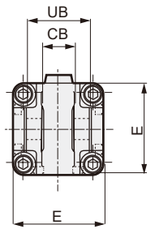


Code / Bore Size (mm)	Common dimension						For female thread						For male thread			
	FC	FD	FH	FL	FM	FT	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	a'	kk'	wf	With Switch CJ / Without Switch CJ
ø32	34	5.5	48	56	65	8	M8 depth 13	7	58	43	48	33	23.5	M14×1.5	5	78 / 68
ø40	40	5.5	54	62	72	8	M8 depth 13	7	64.5	49.5	54.5	39.5	23.5	M14×1.5	5	76.5 / 66.5
ø50	50	6.6	67	76	89	9	M10 depth 15	8	67.5	50.5	57.5	40.5	28.5	M18×1.5	5	83.5 / 73.5
ø63	60	9	80	92	108	9	M10 depth 15	8	73	56	63	46	28.5	M18×1.5	5	91 / 81
ø80	77	11	99	116	134	11	M16 depth 21	10	84.5	63.5	74.5	53.5	35.5	M22×1.5	8	109.5 / 99.5
ø100	94	11	117	136	154	11	M20 depth 27	12	96	73	86	63	35.5	M26×1.5	8	126 / 116

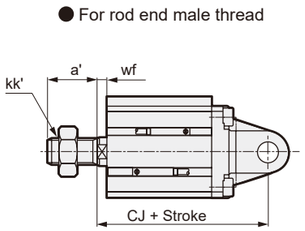
Outline Dimension Drawing (Bore size: ø32 to ø100)

● Double Knuckle Clevis Type (CB)



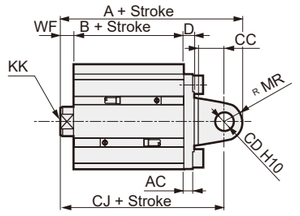


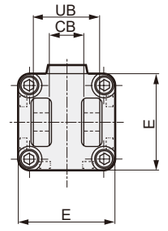
● For rod end male thread



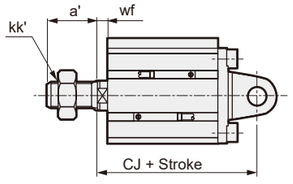
Code / Bore Size (mm)	Common dimension								For female thread		With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	For male thread				
	AC	CB	CC	CD	D	E	MR	UB	KK	WF							a'	kk'	wf	With Switch CJ	Without Switch CJ
ø32	9.5	10 +0.4 +0.1	16	12	10	45	12	21 -0.1 -0.4	M8 depth 13	7	92	43	80	82	33	70	23.5	M14×1.5	5	78	68
ø40	6.5	18 +0.4 +0.1	18	12	10	52	12	36 -0.1 -0.4	M8 depth 13	7	100.5	49.5	88.5	90.5	39.5	78.5	23.5	M14×1.5	5	86.5	76.5
ø50	6.5	18 +0.4 +0.1	18	12	10	64	12	36 -0.1 -0.4	M10 depth 15	8	102.5	50.5	90.5	92.5	40.5	80.5	28.5	M18×1.5	5	87.5	77.5
ø63	7.5	20 +0.4 +0.1	24	14	10	77	16	40 -0.1 -0.4	M10 depth 15	8	117	56	101	107	46	91	28.5	M18×1.5	5	98	88
ø80	10.5	28 +0.4 +0.1	30	20	14	98	20	56 -0.1 -0.4	M16 depth 21	10	145.5	63.5	125.5	135.5	53.5	115.5	35.5	M22×1.5	8	123.5	113.5
ø100	10.5	28 +0.4 +0.1	30	20	16	117	20	56 -0.1 -0.4	M20 depth 27	12	157	73	137	147	63	127	35.5	M26×1.5	8	133	123

● Double clevis type (Compact type) (CB2)





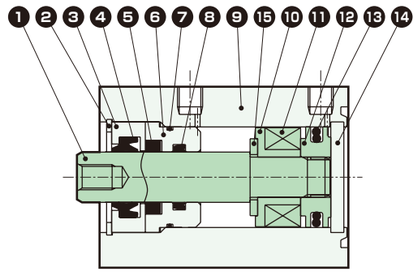
● For rod end male thread



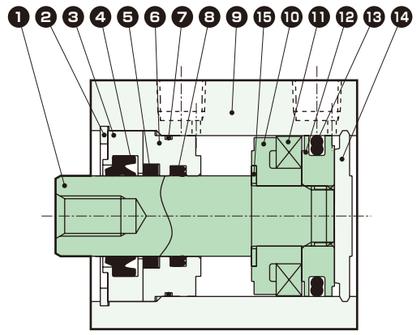
Code / Bore Size (mm)	Common dimension								For female thread		With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	For male thread				
	AC	CB	CC	CD	D	E	MR	UB	KK	WF							a'	kk'	wf	With Switch CJ	Without Switch CJ
ø32	4.5	18 +0.4 +0.1	14	10	5	45	10	36 -0.1 -0.3	M8 depth 13	7	80	43	70	70	33	60	23.5	M14×1.5	5	68	58
ø40	5	18 +0.4 +0.1	14	10	6	52	10	36 -0.1 -0.3	M8 depth 13	7	88.5	49.5	78.5	78.5	39.5	68.5	23.5	M14×1.5	5	76.5	66.5
ø50	6	22 +0.4 +0.1	20	14	7	64	14	44 -0.1 -0.3	M10 depth 15	8	100.5	50.5	86.5	90.5	40.5	76.5	28.5	M18×1.5	5	83.5	73.5
ø63	7	22 +0.4 +0.1	20	14	8	77	14	44 -0.1 -0.3	M10 depth 15	8	108	56	94	98	46	84	28.5	M18×1.5	5	91	81
ø80	9	28 +0.4 +0.1	27	18	10	98	18	56 -0.1 -0.3	M16 depth 21	10	129.5	63.5	111.5	119.5	53.5	101.5	35.5	M22×1.5	8	109.5	99.5
ø100	12	32 +0.4 +0.1	31	22	13	117	22	64 -0.1 -0.3	M20 depth 27	12	152	73	130	142	63	120	35.5	M26×1.5	8	126	116

Internal structure diagram/materials (bore size: ø20/ø25)

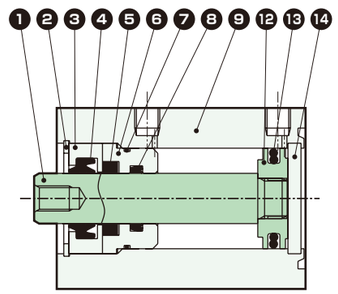
●SSD-G5L-20, 25
(Double Acting, Environmentally Resistant Scraper Type with Switch)



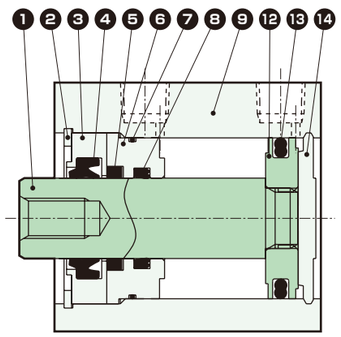
●SSD-G5L-32 to 50
(Double Acting, Environmentally Resistant Scraper Type with Switch)



●SSD-G5-20□25
(Double Acting, Environmentally Resistant Scraper Type)



●SSD-G5-32 to 50
(Double Acting, Environmentally Resistant Scraper Type)

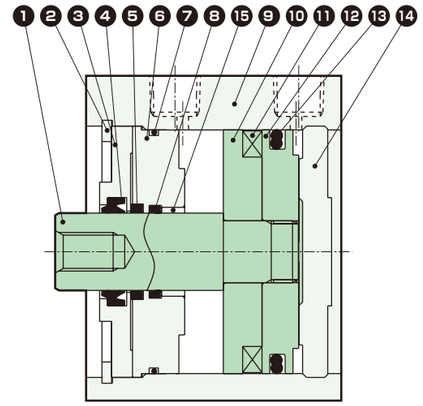


Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Piston Rod	ø20, ø25: Stainless steel ø32 to ø50: Steel	Industrial Hard Chrome Plating	9	Cylinder Body	Aluminum Alloy	Hard Anodized
2	C-type retaining ring	Steel	Zinc phosphate	10	Spacer	Special Resin	
3	Rod metal 1	Aluminum Alloy	Chromate	11	Magnet	Plastic	
4	Scraper	Nitrile Rubber		12	Piston	Aluminum Alloy	Chromate
5	Lube keeper	Special rubber		13	Piston Packing	Nitrile Rubber	
6	Rod metal 2	Aluminum Alloy	Alumite	14	Cover	ø20, ø25: Stainless steel ø32 to ø50: Aluminum alloy	ø32 to ø50: Alumite
7	Rod metal gasket	Nitrile Rubber		15	Spacer washer	Stainless Steel	
8	Rod Packing	Nitrile Rubber					

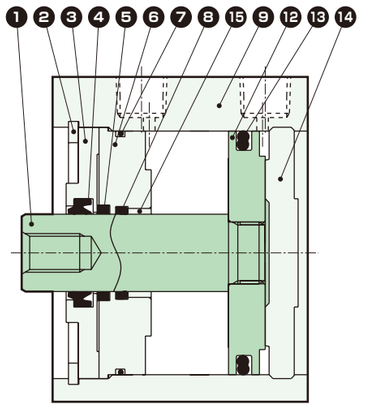
For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Internal Structure Diagram/Material (Bore size: ø63 to ø100)

●SSD-G5L-63 to 100 (Double acting, Environmental resistant scraper type with switch)



●SSD-G5-63 to 100 (Double acting, Environmental resistant scraper type)



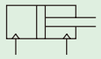
Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Piston Rod	Steel	Industrial Hard Chrome Plating	9	Cylinder Body	Aluminum Alloy	Hard Anodized
2	C-type retaining ring	Steel	Zinc phosphate	10	Spacer	Aluminum Alloy	Chromate
3	Rod metal 1	Aluminum Alloy	Chromate	11	Magnet	Plastic	
4	Scraper	Nitrile Rubber		12	Piston	Aluminum Alloy	Chromate
5	Lube keeper	Special rubber		13	Piston Packing	Nitrile Rubber	
6	Rod metal 2	Aluminum Alloy	Chromate	14	Cover	Aluminum Alloy	Alumite
7	Rod metal gasket	Nitrile Rubber		15	Bushing	Bearing Alloy	
8	Rod Packing	Nitrile Rubber					

For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Compact Cylinder
Double Acting, Single Rod, High Load, Environmental Resistant Scraper Type

SSD-KG5 Series

● Bore size: ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100

Circuit Diagram Symbol 

Custom Products

RoHS

Model No. Notation Method

Without Switch
(Without magnet for switch)

SSD-KG5 - 20 - [ ] - 5 ——— N - LB - I
1 2 3 4 7 8 9

With Switch
(Built-in magnet for switch)

SSD-KG5L - 20 - [ ] - 5 - T0H - R - N - LB - I
1 2 3 4 5 6 7 8 9

1 Model No. | 2 Bore size | 3 Piping thread type | 4 Stroke | 5 Switch Model No. | 6 Number of Switches | 7 Option | 8 Mounting bracket | 9 Accessories

1 Model No.

Code	Content
SSD-KG5	Double Acting, Single Rod, High Load, Environmentally Resistant Scraper Type
SSD-KG5L	Double acting, Single rod, High load, Environmental resistant scraper type with switch

2 Bore Size (mm)

Code	Content
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

3 Port Thread Type

Code	Content
Blank	M5 thread (ø20 to ø25)
	Rc thread (ø32 to ø100)
NN	NPT thread (Custom product) (ø32 to ø100)
GN	G thread (Custom product) (ø32 to ø100)

4 Stroke (mm)

Bore size	Stroke	Intermediate Stroke
ø20	1 to 200	Every 1 mm
ø25 to ø50	1 to 300	
ø63 to ø100	1 to 300	

Note: For details on stroke, please refer to P. 620.

5 Switch Model No.

For switch details, please refer to P. 869. Switches are included to the product and shipped.

Contact	LED Indicator Special Function	Wiring (Output)	Load Voltage (V) AC	Load Voltage (V) DC	Load Current (mA) AC	Load Current (mA) DC	Lead Wire *1 Straight	Lead Wire *1 L-shape	
Solid State	1-Color	2-wire	85 to 265	—	5 to 100	—	T1H□	T1V□	
			—	10 to 30	—	5 to 20 *2	T2H□	T2V□	
		3-wire (NPN)	—	30 or less	—	100 or less	T3H□	T3V□	
		3-wire (PNP)	—		—		T3PH□	T3PV□	
	2-Color	2-wire	—	24 ± 10%	—	5 to 20	T2WH□	T2WV□	
		3-wire (NPN)	—	30 or less	—	50 or less	T3WH□	T3WV□	
	2-Color Improved Water Resistance	2-wire	—	24 ± 10%	—	5 to 20	T2WLH□	T2WLV□	*3
	2-Color for AC Magnetic Field		—		—		T2YD□	–	
			—		—		T2YDT□	–	
	1-Color Off-Delay Type		—	10 to 30	—	5 to 20 *2	T2JH□	T2JV□	
	1-Color Flexible Lead Wire Type		—		—		T2HR3□	T2VR3□	
Reed	1-Color	2-wire	110	12/24	7 to 20	5 to 50	T0H□	T0V□	
	No LED Indicator		110	5/12/24	20 or less	50 or less	T5H□	T5V□	
	1-Color		110/220	12/24	7 to 20 / 7 to 10	5 to 50	T8H□	T8V□	*4

*1: For "□" in the switch model No., enter the code selected from the "*Lead wire length, connector specification" table.
*2: The maximum load current value above, 20 mA, is at 25°C. If the switch operating ambient temperature is higher than 25°C, it will be lower than 20 mA. (At 60°C, it will be 5 to 10 mA.)
*3: This does not guarantee the water resistance of the cylinder. When using in a water-resistant environment, use of an improved water resistance cylinder is recommended.
*4: T8□ switches cannot be mounted on ø20 to ø32.
*5: Switches other than the model No.s listed above are also available. (Custom products) For details, refer to P. 869.

***Lead wire length, connector specification**

Code	Content
Blank	1 m (Standard)
3	3 m (Option)
5	5 m (Option)
*6 W	M8 Connector, 1PIN (+) 4PIN (-) Lead Wire 0.3 m

*6: Only T2WLH and T2WLV can be selected.

Example) Lead wire length
1 m T0H
3 m T0H3
5 m T0H5

6 Number of Switches

Code	Content
R	With 1 pc on rod side
H	With 1 pc on head side
D	With 2 pcs

7 Option

Code	Content	
Blank	Rod end female thread	
N	Rod end male thread	

8 Mounting type

Mounting brackets are shipped included to the product.

Code	Content	
LB	Axial Foot Type	
*1 LB2	Axial foot type (Compact type)	
*1 FA	Rod Side Flange Type	
FB	Head Side Flange Type	
CB	Double Clevis Type (pin and retaining ring included)	
CB2	Double knuckle clevis type (Compact type) (Pin and retaining ring included)	

*1: The WF and wf dimensions of cylinders for "LB2" and "FA" are set 10 mm longer than standard products. Please contact us for the cylinder model No. when ordering the cylinder, LB2 bracket, and FA bracket separately.

9 Accessories

Code	Content	
I	Single Knuckle	
I2	Single Knuckle (compact)	
Y	Double Knuckle (pin and retaining ring included)	
Y2	Double knuckle (compact) (pin and snap ring included)	

*1: Selectable when rod end male thread "N" is selected.
*2: "I", "I2", "Y", "Y2" cannot be selected at the same time.

About Custom Product Specifications

For details, refer to P. 690 to 694.

Code	Content
-XP5	Knuckle Pin/Clevis Pin Split Pin
-XP7	Knuckle fixed by pin driving
-XP8	Knuckle pin/clevis pin split pin specification, knuckle fixed by pin driving
-A2	With 2 Rod Nuts
-R1, R2	With spigot joint
Rod End Shape Modification	Refer to Ending 11.

Model No. Example)
SSD-KG5 - ..... - XP5

Switch Single Unit Model No. Notation Method

SW - T0H
5
Switch Model No.

Specifications

Item		SSD-KG5 SSD-KG5L (with switch)							
Bore size	mm	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation method		Double Acting Type							
Operating Fluid		Compressed Air							
Maximum Operating Pressure	MPa	1.0							
Min. operating pressure	MPa	0.2					0.15		
Proof Pressure	MPa	1.6							
Ambient Temperature	°C	-10 to 60 (However, no freezing)							
Port Size		M5		Rc1/8		Rc1/4		Rc3/8	
Stroke tolerance	mm	+2.0 0							
Operating piston speed	mm/s	50 to 500					50 to 300		
Cushion		Rubber Cushion							
Lubrication		Not required (When lubricating, use turbine oil class 1 ISO VG32)							
Allowable absorbed energy	J	0.16	0.16	0.40	0.63	0.98	1.56	2.51	3.92

Stroke

Stroke (mm)		Applicable Bore							
		ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Standard Stroke	5	●							
	10	●	●	●	●	●	●	●	●
	15	●	●	●	●	●			
	20	●	●	●	●	●	●	●	●
	25	●	●	●	●	●			
	30	●	●	●	●	●	●	●	●
	40	●	●	●	●	●	●	●	●
	50	●	●	●	●	●	●	●	●
	60		●	●	●	●	●	●	●
	70		●	●	●	●	●	●	●
	80		●	●	●	●	●	●	●
	90		●	●	●	●	●	●	●
	100		●	●	●	●	●	●	●
Minimum Stroke (mm) *1		1							
Maximum Stroke (mm)		200	300						
Intermediate Stroke *2		Every 1 mm							

***1: Products less than 5 mm with a 1-color indicator switch, and products less than 10 mm with a 2-color indicator type, off-delay type, for AC magnetic field, or with T1□ or T8□ switches cannot be manufactured. For the number of switches that can be mounted and the minimum stroke, refer to the table below.**

*2: The overall length dimension for intermediate stroke is the same as the standard stroke above it.

Number of switches mountable and minimum stroke (mm)

Switch Model No.	T□		T2WL	
Number of Switches / Bore Size (mm)	1	2	1	2
ø20	5	5	20	20
ø25	5	5	20	20
ø32	5	5	15	15
ø40	5	5	10	15
ø50	5	5	10	15
ø63	5	5	10	15
ø80	5	5	10	15
ø100	5	5	10	15

Note: Products less than 10 mm with 2-color indication type, off-delay type, for AC magnetic field, or with T1□ or T8□ switches cannot be manufactured.

Cylinder Weight Table (Weight with switch is when 2 cylinder switches are included)

(Unit: g)

Stroke (mm) / Bore Size (mm)	5		10		15		20		25		30		40		50		60		70		80		90		100	
	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW
ø20	107	182	120	195	133	208	145	220	158	233	170	245	195	270	220	295	245	320	270	345	295	370	320	395	345	420
ø25	-	-	162	253	178	269	194	285	209	300	226	317	258	349	290	381	322	413	354	445	386	477	418	509	450	541
ø32	-	-	251	365	272	386	294	408	316	430	338	452	381	495	424	538	467	581	510	624	553	667	596	710	639	753
ø40	-	-	349	492	376	519	402	545	428	571	455	598	508	651	561	704	614	757	667	810	720	863	773	916	826	969
ø50	-	-	560	754	602	796	645	839	688	882	729	923	813	1007	897	1091	981	1175	1065	1259	1149	1343	1233	1427	1317	1481
ø63	-	-	813	1092	-	-	923	1202	-	-	1034	1313	1144	1423	1254	1533	1364	1643	1474	1753	1584	1863	1694	1973	1804	2083
ø80	-	-	1413	1826	-	-	1586	1999	-	-	1760	2173	1933	2346	2106	2519	2279	2692	2452	2865	2625	3038	2798	3211	2971	3384
ø100	-	-	2106	2673	-	-	2334	2901	-	-	2561	3128	2789	3356	3017	3584	3245	3812	3473	4040	3701	4268	3929	4496	4157	4724

Stroke (mm) / Bore Size (mm)	110		120		130		140		150		160		170		180		190		200	
	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW
ø20	370	445	395	470	420	495	445	520	470	545	495	570	520	595	545	620	570	645	595	670
ø25	482	573	514	605	546	637	581	669	610	701	642	733	674	765	706	797	738	829	770	861
ø32	682	796	725	839	768	882	811	925	854	968	896	1010	939	1053	982	1096	1025	1139	1068	1182
ø40	879	1022	932	1075	985	1128	1038	1181	1091	1234	1144	1287	1197	1340	1250	1393	1303	1446	1356	1499
ø50	1401	1595	1485	1679	1569	1763	1653	1847	1737	1931	1835	2029	1920	2114	2005	2199	2090	2284	2175	2369
ø63	1914	2193	2024	2303	2134	2413	2244	2523	2354	2633	2464	2743	2574	2853	2684	2963	2794	3073	2904	3183
ø80	3144	3557	3317	3730	3490	3903	3663	4076	3836	4249	4009	4422	4182	4595	4355	4768	4528	4941	4701	5112
ø100	4385	4952	4613	5180	4841	5408	5069	5636	5297	5864	5525	6092	5753	6320	5981	6548	6209	6776	6437	7004

Stroke (mm) / Bore Size (mm)	210		220		230		240		250		260		270		280		290		300	
	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW	Without SW	With SW
ø20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ø25	813	893	845	925	877	957	909	989	941	1021	973	1053	1005	1085	1037	1117	1069	1149	1101	1181
ø32	1111	1225	1154	1268	1197	1311	1240	1354	1283	1397	1326	1440	1369	1483	1412	1526	1455	1569	1498	1612
ø40	1409	1552	1462	1605	1515	1658	1568	1711	1621	1764	1674	1817	1727	1870	1780	1923	1833	1976	1886	2029
ø50	2260	2454	2345	2539	2430	2624	2515	2709	2600	2794	2685	2879	2770	2964	2855	3049	2940	3134	3025	3219
ø63	3013	3292	3123	3402	3233	3512	3343	3622	3453	3732	3563	3842	3673	3952	3783	4062	3893	4172	4003	4282
ø80	4873	5286	5046	5459	5219	5632	5392	5805	5565	5978	5738	6151	5911	6324	6084	6497	6257	6670	6430	6843
ø100	6666	7233	6894	7461	7122	7689	7350	7917	7578	8145	7806	8373	8034	8601	8262	8829	8490	9057	8718	9285

Theoretical Thrust Table

(Unit: N)

Bore Size (mm)	Operating Direction	Operating Pressure MPa									
		0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø20	Push	-	62.8	94.2	1.26×10^2	1.57×10^2	1.88×10^2	2.20×10^2	2.51×10^2	2.83×10^2	3.14×10^2
	Pull	-	47.1	70.7	94.2	1.18×10^2	1.41×10^2	1.65×10^2	1.88×10^2	2.12×10^2	2.36×10^2
ø25	Push	-	98.2	1.47×10^2	1.96×10^2	2.45×10^2	2.95×10^2	3.44×10^2	3.93×10^2	4.42×10^2	4.91×10^2
	Pull	-	75.6	1.13×10^2	1.51×10^2	1.89×10^2	2.27×10^2	2.64×10^2	3.02×10^2	3.40×10^2	3.78×10^2
ø32	Push	-	1.61×10^2	2.41×10^2	3.22×10^2	4.02×10^2	4.83×10^2	5.63×10^2	6.43×10^2	7.24×10^2	8.04×10^2
	Pull	-	1.21×10^2	1.81×10^2	2.41×10^2	3.02×10^2	3.62×10^2	4.22×10^2	4.83×10^2	5.43×10^2	6.03×10^2
ø40	Push	-	2.51×10^2	3.77×10^2	5.03×10^2	6.28×10^2	7.54×10^2	8.80×10^2	1.01×10^3	1.13×10^3	1.26×10^3
	Pull	-	2.11×10^2	3.17×10^2	4.22×10^2	5.28×10^2	6.33×10^2	7.39×10^2	8.44×10^2	9.50×10^2	1.06×10^3
ø50	Push	-	3.93×10^2	5.89×10^2	7.85×10^2	9.82×10^2	1.18×10^3	1.37×10^3	1.57×10^3	1.77×10^3	1.96×10^3
	Pull	-	3.30×10^2	4.95×10^2	6.60×10^2	8.25×10^2	9.90×10^2	1.15×10^3	1.32×10^3	1.48×10^3	1.65×10^3
ø63	Push	4.68×10^2	6.23×10^2	9.35×10^2	1.25×10^3	1.56×10^3	1.87×10^3	2.18×10^3	2.49×10^3	2.81×10^3	3.12×10^3
	Pull	4.20×10^2	5.61×10^2	8.41×10^2	1.12×10^3	1.40×10^3	1.68×10^3	1.96×10^3	2.24×10^3	2.52×10^3	2.80×10^3
ø80	Push	7.54×10^2	1.01×10^3	1.51×10^3	2.01×10^3	2.51×10^3	3.02×10^3	3.52×10^3	4.02×10^3	4.52×10^3	5.03×10^3
	Pull	6.80×10^2	9.07×10^2	1.36×10^3	1.81×10^3	2.27×10^3	2.72×10^3	3.17×10^3	3.63×10^3	4.08×10^3	4.54×10^3
ø100	Push	1.18×10^3	1.57×10^3	2.36×10^3	3.14×10^3	3.93×10^3	4.71×10^3	5.50×10^3	6.28×10^3	7.07×10^3	7.85×10^3
	Pull	1.07×10^3	1.43×10^3	2.14×10^3	2.86×10^3	3.57×10^3	4.29×10^3	5.00×10^3	5.72×10^3	6.43×10^3	7.15×10^3

Mounting Bracket Model No. Notation Method

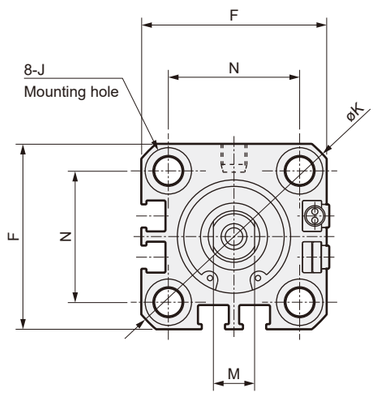
Bore Size (mm) / Mounting bracket	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Foot (LB)	SSD-LB-20	SSD-LB-25	SSD-LB-32	SSD-LB-40	SSD-LB-50	SSD-LB-63	SSD-LB-80	SSD-LB-100
Foot (LB2)	SSD-LB2-20	SSD-LB2-25	SSD-LB2-32	SSD-LB2-40	SSD-LB2-50	SSD-LB2-63	SSD-LB2-80	SSD-LB2-100
Flange (FA/FB)	SSD-FA-20	SSD-FA-25	SSD-FA-32	SSD-FA-40	SSD-FA-50	SSD-FA-63	SSD-FA-80	SSD-FA-100
Double Clevis (CB)	SSD-CB-20	SSD-CB-25	SSD-CB-32	SSD-CB-40	SSD-CB-50	SSD-CB-63	SSD-CB-80	SSD-CB-100
Double knuckle clevis (CB2)	SSD-CB2-20	SSD-CB2-25	SSD-CB2-32	SSD-CB2-40	SSD-CB2-50	SSD-CB2-63	SSD-CB2-80	SSD-CB2-100

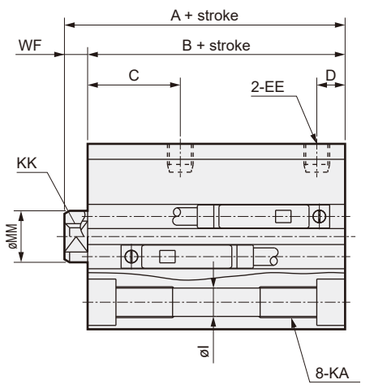
*1: Foot type mounting brackets come in a set of 2.

*2: When mounting with through-bolts, refer to the mounting bolt model No. notation method (P. 682).

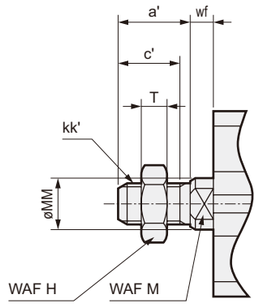
Outline Dimension Drawing (Bore size: ø20, ø25)

● SSD-KG5 (L)-20, 25





● Rod end male thread part



Code / Bore Size (mm)	Dimension with switch A *1	Dimension with switch B *1	Dimension without switch A *1	Dimension without switch B *1	Common dimension C	D	EE	F
ø20	49	44.5	39	34.5	18	5.5	M5	36
ø25	52.5	47.5	42.5	37.5	21	6	M5	40

Code / Bore Size (mm)	Common dimension I	J	K	KA	KK	M	MM	N	WF
ø20	5.5	9 Counterbore depth 5.5	47	M6 depth 11	M5 depth 7	8	10	25.5	4.5
ø25	5.5	9 Counterbore depth 5.5	51	M6 depth 11	M6 depth 11	10	12	28	5

*1: When calculating A + Stroke and B + Stroke dimensions for intermediate strokes, do not enter the intermediate stroke value for the stroke; instead, enter the value of the standard stroke above it. (Example) For an intermediate stroke of 7 mm, enter the standard stroke of 10 mm for calculation.

***2: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**

*3: For ø20: strokes exceeding 100, ø25: strokes exceeding 150, the A and B dimensions are the values in Table 1, and there is no counterbore J.

***4: For dimensions with each switch, refer to P. 674 to 681.**

Table 1 *3

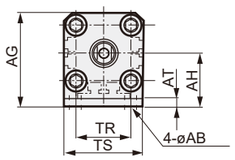
Code / Bore Size (mm)	Dimension with switch A *1	Dimension with switch B *1	Dimension without switch A *1	Dimension without switch B *1
ø20	60.5	56	50.5	46
ø25	66	61	56	51

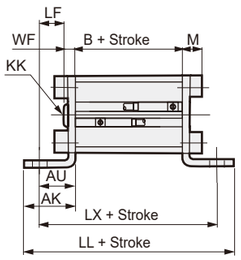
● Rod end male thread part

Code / Bore Size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10×1.25	10	12	6	5

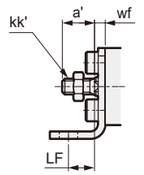
Outline Dimension Drawing (Bore size: ø20, ø25)

● Axial Foot Type (LB)





● For rod end male thread

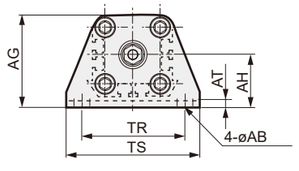


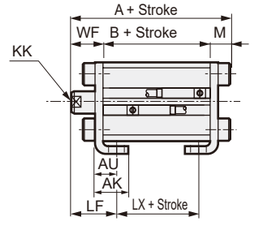
Code / Bore Size (mm)	Common dimension AB	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch B	With Switch LL	With Switch LX	Without Switch B	Without Switch LL	Without Switch LX	For male thread a'	kk'	wf	LF
ø20	7	42	24	24	3.2	16	24	36	9.2	M5 depth 7	4.5	11.5	44.5	92.5	76.5	34.5	82.5	66.5	14	M8	4.5	11.5
ø25	7	46	26	24	3.2	16	28	40	9.2	M6 Depth 12	5	11	47.5	95.5	79.5	37.5	85.5	69.5	17.5	M10×1.25	5	11

*1: For ø20 exceeding 100 strokes, ø25 exceeding 150 strokes, the dimensions are as follows.

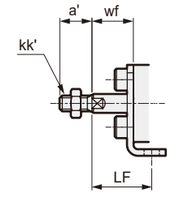
Code / Bore Size (mm)	For female thread With Switch B	With Switch LL	With Switch LX	Without Switch B	Without Switch LL	Without Switch LX
ø20	56	104	88	46	94	78
ø25	61	109	93	51	99	83

● Axial Foot Type (Compact Type) (LB2)





● For rod end male thread



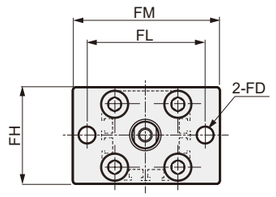
Code / Bore Size (mm)	Common dimension AB	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch A	With Switch B	With Switch LX	Without Switch A	Without Switch B	Without Switch LX	For male thread a'	kk'	wf	LF
ø20	7	42	24	15	3.2	9.2	48	62	9.2	M5 depth 7	14.5	20.5	68.2	44.5	32.5	58.2	34.5	22.5	14	M8	14.5	20.5
ø25	7	46	26	16.5	3.2	10.7	52	66	9.2	M6 Depth 12	15	22.5	71.7	47.5	32.5	61.7	37.5	22.5	17.5	M10×1.25	15	22.5

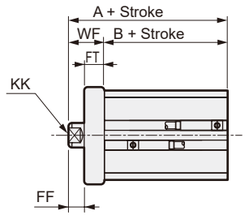
*1: For ø20 exceeding 100 strokes, ø25 exceeding 150 strokes, the dimensions are as follows.

Code / Bore Size (mm)	For female thread With Switch A	With Switch B	With Switch LX	Without Switch A	Without Switch B	Without Switch LX
ø20	79.7	56	44	69.7	46	34
ø25	85.2	61	46	75.2	51	36

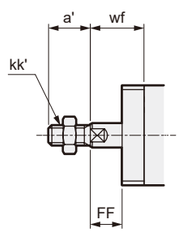
Outline Dimension Drawing (Bore size: ø20, ø25)

● Rod Side Flange Type (FA)





● For rod end male thread

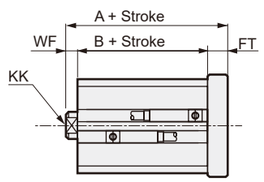


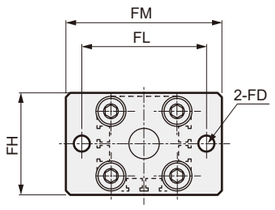
Code / Bore Size (mm)	Common dimension					For female thread							For male thread			
	FD	FH	FL	FM	FT	FF	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	FF	a'	kk'	wf
ø20	6.6	39	48	60	8	6.5	M5 depth 7	14.5	59	44.5	49	34.5	6.5	14	M8	14.5
ø25	6.6	42	52	64	8	7	M6 Depth 12	15	62.5	47.5	52.5	37.5	7	17.5	M10×1.25	15

*1: For ø20 exceeding 100 strokes, ø25 exceeding 150 strokes, the dimensions are as follows.

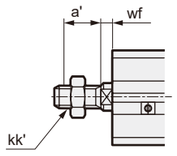
Code / Bore Size (mm)	For female thread			
	With Switch A	With Switch B	Without Switch A	Without Switch B
ø20	70.5	56	60.5	46
ø25	76	61	66	51

● Head Side Flange Type (FB)





● For rod end male thread



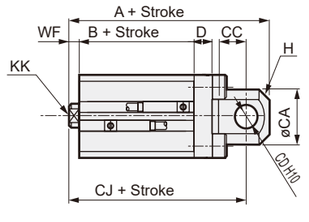
Code / Bore Size (mm)	Common dimension					For female thread						For male thread				
	FD	FH	FL	FM	FT	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	a'	kk'	wf	With Switch CJ	Without Switch CJ
ø20	6.6	39	48	60	8	M5 depth 7	4.5	57	44.5	47	34.5	14	M8	4.5	67	57
ø25	6.6	42	52	64	8	M6 Depth 12	5	60.5	47.5	50.5	37.5	17.5	M10×1.25	5	72.5	62.5

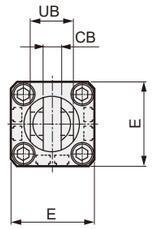
*1: For ø20 exceeding 100 strokes, ø25 exceeding 150 strokes, the dimensions are as follows.

Code / Bore Size (mm)	For female thread				For male thread	
	With Switch A	With Switch B	Without Switch A	Without Switch B	With Switch CJ	Without Switch CJ
ø20	68.5	56	58.5	46	78.5	68.5
ø25	74	61	64	51	86	76

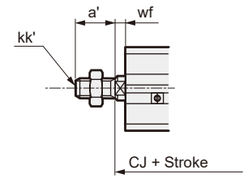
Outline Dimension Drawing (Bore size: ø20, ø25)

● Double Knuckle Clevis Type (CB)





● For rod end male thread

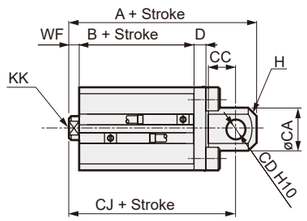


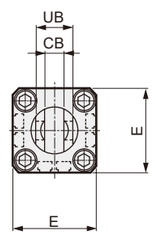
Code / Bore Size (mm)	Common dimension								For female thread								For male thread				
	CA	CB	CC	CD	D	E	H	UB	KK	WF	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	a'	kk'	wf	With Switch CJ	Without Switch CJ
ø20	24	$8^{+0.4}_{+0.1}$	12	10	8	36	C4	$19^{0.1}_{0.4}$	M5 depth 7	4.5	82	44.5	72	72	34.5	62	14	M8	4.5	72	62
ø25	27.5	$10^{+0.4}_{+0.1}$	16	12	8	40	C5	$21^{0.1}_{0.4}$	M6 Depth 12	5	91.5	47.5	79.5	81.5	37.5	69.5	17.5	M10×1.25	5	79.5	69.5

*1: For ø20 exceeding 100 strokes, ø25 exceeding 150 strokes, the dimensions are as follows.

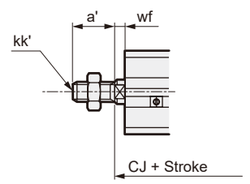
Code / Bore Size (mm)	For female thread						For male thread	
	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	With Switch CJ	Without Switch CJ
ø20	93.5	56	83.5	83.5	46	73.5	83.5	73.5
ø25	105	61	93	95	51	83	93	83

● Double clevis type (Compact type) (CB2)





● For rod end male thread



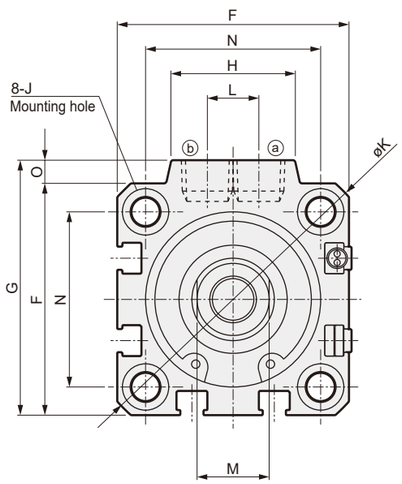
Code / Bore Size (mm)	Common dimension								For female thread								For male thread				
	CA	CB	CC	CD	D	E	H	UB	KK	WF	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	a'	kk'	wf	With Switch CJ	Without Switch CJ
ø20	20	$8^{+0.4}_{+0.1}$	12	8	5	36	C4	$16^{0.1}_{0.3}$	M5 depth 7	4.5	76	44.5	67	66	34.5	57	14	M8	4.5	67	57
ø25	24	$10^{+0.4}_{+0.1}$	14	10	5	40	C5	$20^{0.1}_{0.3}$	M6 Depth 12	5	82.5	47.5	72.5	72.5	37.5	62.5	17.5	M10×1.25	5	72.5	62.5

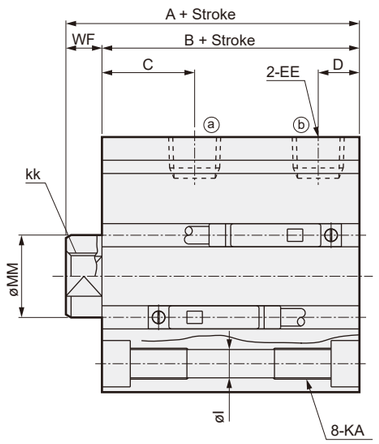
*1: For ø20 exceeding 100 strokes, ø25 exceeding 150 strokes, the dimensions are as follows.

Code / Bore Size (mm)	For female thread						For male thread	
	With Switch A	With Switch B	With Switch CJ	Without Switch A	Without Switch B	Without Switch CJ	With Switch CJ	Without Switch CJ
ø20	87.5	56	78.5	77.5	46	68.5	78.5	68.5
ø25	96	61	86	86	51	76	86	76

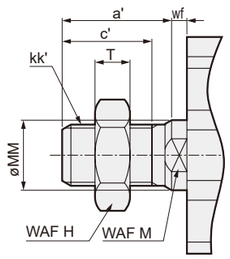
Outline Dimension Drawing (Bore size: ø32 to ø100)

● SSD-KG5 (L)-32 to 100

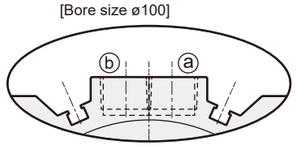




● Rod end male thread part



[Bore size ø100]



*Only ø100 has a switch groove on the port surface

Code / Bore Size (mm)	Dimension with switch A *1	Dimension with switch B *1	Dimension without switch A *1	Dimension without switch B *1	Common dimension C	D	EE	F	G	H
ø32	60	53	50	43	18	8	Rc1/8	45	49.5	24
ø40	66.5	59.5	56.5	49.5	22	8.5	Rc1/8	52	57	24
ø50	68.5	60.5	58.5	50.5	20.5	10.5	Rc1/4	64	71	33
ø63	74	66	64	56	23	11	Rc1/4	77	84	33
ø80	83.5	73.5	73.5	63.5	26	13	Rc3/8	98	104	38
ø100	95	83	85	73	33	15	Rc3/8	117	123.5	38

Code / Bore Size (mm)	Common dimension I	J	K	KA	KK	L	M	MM	N	O	WF
ø32	5.5	9 Counterbore depth 5.5	60	M6 depth 11	M8 depth 13	10	14	16	34	4.5	7
ø40	5.5	9 Counterbore depth 5.5	69	M6 depth 11	M8 depth 13	10	14	16	40	5	7
ø50	6.9	11 Counterbore Depth 6.5	86	M8 depth 13	M10 depth 15	15	17	20	50	7	8
ø63	8.7	14 Counterbore depth 9	103	M10 depth 25	M10 depth 15	15	17	20	60	7	8
ø80	10.5	17.5 Counterbore depth 11	132	M12 depth 28	M16 depth 21	15	22	25	77	6	10
ø100	10.5	17.5 Counterbore depth 11	156	M12 Depth 29	M20 depth 27	15	27	30	94	6.5	12

*1: When calculating A + Stroke and B + Stroke dimensions for intermediate strokes, do not enter the intermediate stroke value for the stroke; instead, enter the value of the standard stroke above it. (Example) For an intermediate stroke of 7 mm, enter the standard stroke of 10 mm for calculation.
*2: For ø32 to ø50: strokes exceeding 150, ø63 to ø100: strokes exceeding 200, the A and B dimensions are the values in Table 1, and there is no counterbore J.
***3: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**

● Rod end male thread part

Code / Bore Size (mm)	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14 X 1.5	14	16	8	5
ø40	23.5	20.5	22	M14 X 1.5	14	16	8	5
ø50	28.5	26	27	M18×1.5	17	20	11	5
ø63	28.5	26	27	M18×1.5	17	20	11	5
ø80	35.5	32.5	32	M22x1.5	22	25	13	8
ø100	35.5	32.5	41	M26x1.5	27	30	16	8

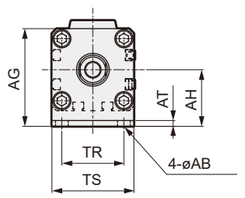
Table 1

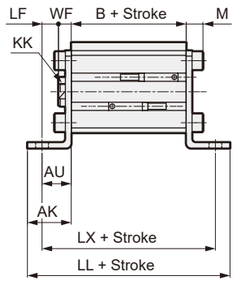
Bore size	Dimension with switch A *1	Dimension with switch B *1	Dimension without switch A *1	Dimension without switch B *1
ø32	67.5	60.5	57.5	50.5
ø40	76	69	66	59
ø50	82	74	72	64
ø63	84	76	74	66
ø80	93.5	83.5	83.5	73.5
ø100	105	93	95	83

Outline Dimension Drawing (Bore size: ø32 to ø100)

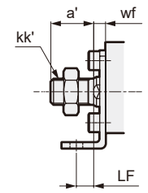
● Axial Foot Type (LB)

· ø32

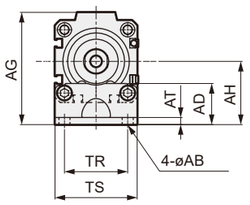


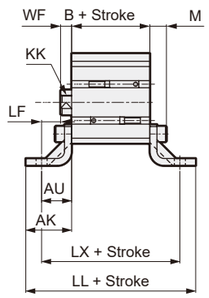


● For rod end male thread

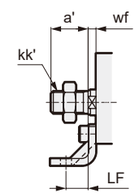


· ø40 to ø100





● For rod end male thread



Code / Bore Size (mm)	Common dimension AB	AD	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	With Switch B	With Switch LL	With Switch LX	Without Switch B	Without Switch LL	Without Switch LX	For male thread a'	kk'	wf	LF
ø32	7	–	53.5	31	24	3.2	16	34	45	9.2	M8 depth 13	7	9	53	101	85	43	91	75	23.5	M14×1.5	5	11
ø40	7	26	71	40	29	4.5	19	40	52	10	M8 depth 13	7	12	59.5	117.5	97.5	49.5	107.5	87.5	23.5	M14×1.5	5	14
ø50	9	23	79	40	34	4.5	22	46	64	13	M10 depth 15	8	14	60.5	128.5	104.5	50.5	118.5	94.5	28.5	M18×1.5	5	17
ø63	11	33	96.5	51	40	4.5	25	60	77	15	M10 depth 15	8	17	66	146	116	56	136	106	28.5	M18×1.5	5	20
ø80	13	42	116.5	61.5	50	6	35	77	98	18	M16 depth 21	10	25	73.5	173.5	143.5	63.5	163.5	133.5	35.5	M22×1.5	8	27
ø100	13	48	134	69	50	6	35	94	117	18	M20 depth 27	12	23	83	183	153	73	173	143	35.5	M26×1.5	8	27

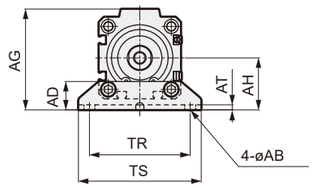
*1: For ø32 to ø50 exceeding 150 strokes, ø63 to ø100 exceeding 200 strokes, the dimensions are as follows.

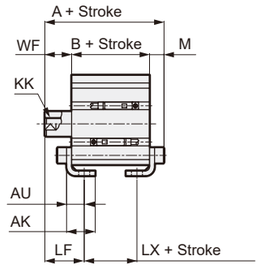
Code / Bore Size (mm)	For female thread With Switch B	With Switch LL	With Switch LX	Without Switch B	Without Switch LL	Without Switch LX
ø32	60.5	108.5	92.5	50.5	98.5	82.5
ø40	69	127	107	59	117	97
ø50	74	142	118	64	132	108
ø63	76	156	126	66	146	116
ø80	83.5	183.5	153.5	73.5	173.5	143.5
ø100	93	193	163	83	183	153

*2: If B + stroke is less than or equal to the value below, LB cannot be selected. ø80: 69 or less

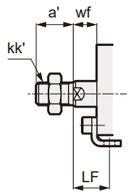
Outline Dimension Drawing (Bore size: ø32 to ø100)

● Axial Foot Type (Compact Type) (LB2)





● For rod end male thread



Code / Bore Size (mm)	Common dimension										For female thread									For male thread			
	AB	AD	AG	AH	AK	AT	AU	TR	TS	M	KK	WF	LF	With Switch A	With Switch B	With Switch LX	Without Switch A	Without Switch B	Without Switch LX	a'	kk'	wf	LF
ø32	7	18.5	57	30	17	3.2	11.2	57	71	9.2	M8 depth 13	17	25	79.2	53	37	69.2	43	27	23.5	M14×1.5	15	23
ø40	7	18	64	33	18.2	3.2	11.2	64	78	9.2	M8 depth 13	17	25	85.7	59.5	43.5	75.7	49.5	33.5	23.5	M14×1.5	15	23
ø50	9	22	78	39	22.7	3.2	14.7	79	95	11.2	M10 depth 15	18	29.5	89.7	60.5	37.5	79.7	50.5	27.5	28.5	M18×1.5	15	26.5
ø63	11	26	91.5	46	25.2	3.2	16.2	95	113	13.2	M10 depth 15	18	31	97.2	66	40	87.2	56	30	28.5	M18×1.5	15	28
ø80	13	39.5	114	59	30.5	4.5	19.5	118	140	16.5	M16 depth 21	20	35	110	73.5	43.5	100	63.5	33.5	35.5	M22×1.5	18	33
ø100	13	50	136	71	35.5	6	23	137	162	18	M20 depth 27	22	39	123	83	49	113	73	39	35.5	M26×1.5	18	35

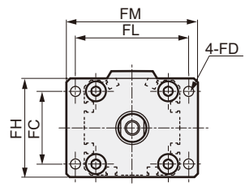
*1: For ø32 to ø50 exceeding 150 strokes, ø63 to ø100 exceeding 200 strokes, the dimensions are as follows.

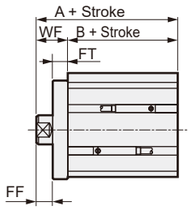
*2: LB2 cannot be selected when B + stroke is at or less than the value below.ø80:72 or less

Code / Bore Size (mm)	For female thread					
	With Switch			Without Switch		
	A	B	LX	A	B	LX
ø32	86.7	60.5	44.5	76.7	50.5	34.5
ø40	95.2	69	53	85.2	59	43
ø50	103.2	74	51	93.2	64	41
ø63	107.2	76	50	97.2	66	40
ø80	120	83.5	53.5	110	73.5	43.5
ø100	133	93	59	123	83	49

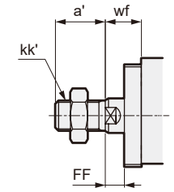
Outline Dimension Drawing (Bore size: ø32 to ø100)

● Rod Side Flange Type (FA)





● For rod end male thread

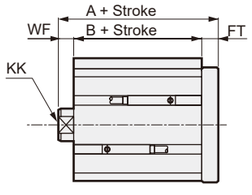


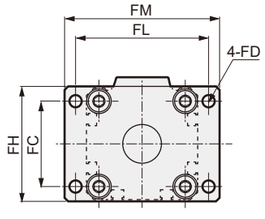
Code / Bore Size (mm)	Common dimension						For female thread						For male thread			
	FC	FD	FH	FL	FM	FT	FF	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	FF	a'	kk'	wf
ø32	34	5.5	48	56	65	8	9	M8 depth 13	17	70	53	60	43	7	23.5	M14×1.5	15
ø40	40	5.5	54	62	72	8	9	M8 depth 13	17	76.5	59.5	66.5	49.5	7	23.5	M14×1.5	15
ø50	50	6.6	67	76	89	9	9	M10 depth 15	18	78.5	60.5	68.5	50.5	6	28.5	M18×1.5	15
ø63	60	9	80	92	108	9	9	M10 depth 15	18	84	66	74	56	6	28.5	M18×1.5	15
ø80	77	11	99	116	134	11	9	M16 depth 21	20	93.5	73.5	83.5	63.5	7	35.5	M22×1.5	18
ø100	94	11	117	136	154	11	11	M20 depth 27	22	105	83	95	73	7	35.5	M26×1.5	18

*1: For ø32 to ø50 exceeding 150 strokes, ø63 to ø100 exceeding 200 strokes, the dimensions are as follows.

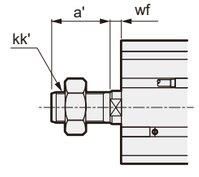
Code / Bore Size (mm)	For female thread			
	With Switch		Without Switch	
	A	B	A	B
ø32	77.5	60.5	67.5	50.5
ø40	86	69	76	59
ø50	92	74	82	64
ø63	94	76	84	66
ø80	103.5	83.5	93.5	73.5
ø100	115	93	105	83

● Head Side Flange Type (FB)





● For rod end male thread



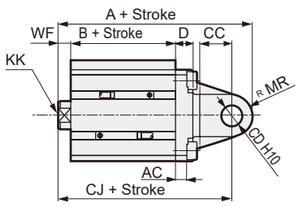
Code / Bore Size (mm)	Common dimension						For female thread						For male thread			
	FC	FD	FH	FL	FM	FT	KK	WF	With Switch A	With Switch B	Without Switch A	Without Switch B	a'	kk'	wf
ø32	34	5.5	48	56	65	8	M8 depth 13	7	68	53	58	43	23.5	M14×1.5	5
ø40	40	5.5	54	62	72	8	M8 depth 13	7	74.5	59.5	64.5	49.5	23.5	M14×1.5	5
ø50	50	6.6	67	76	89	9	M10 depth 15	8	77.5	60.5	67.5	50.5	28.5	M18×1.5	5
ø63	60	9	80	92	108	9	M10 depth 15	8	83	66	73	56	28.5	M18×1.5	5
ø80	77	11	99	116	134	11	M16 depth 21	10	94.5	73.5	84.5	63.5	35.5	M22×1.5	8
ø100	94	11	117	136	154	11	M20 depth 27	12	106	83	96	73	35.5	M26×1.5	8

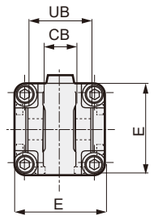
*1: For ø32 to ø50 exceeding 150 strokes, ø63 to ø100 exceeding 200 strokes, the dimensions are as follows.

Code / Bore Size (mm)	For female thread			
	With Switch		Without Switch	
	A	B	A	B
ø32	75.5	60.5	65.5	50.5
ø40	84	69	74	59
ø50	91	74	81	64
ø63	93	76	83	66
ø80	104.5	83.5	94.5	73.5
ø100	116	93	106	83

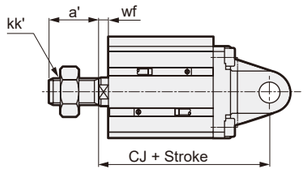
Outline Dimension Drawing (Bore size: ø32 to ø100)

● Double Knuckle Clevis Type (CB)





● For rod end male thread

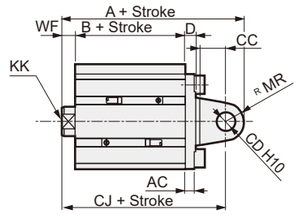


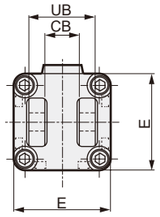
Code / Bore Size (mm)	Common dimension								For female thread								For male thread				
	AC	CB	CC	CD	D	E	MR	UB	KK	WF	With Switch			Without Switch			a'	kk'	wf	With Switch	Without Switch
											A	B	CJ	A	B	CJ				CJ	CJ
ø32	9.5	10$^{+0.4}_{+0.1}$	16	12	10	45	12	21$^{-0.1}_{-0.4}$	M8 depth 13	7	102	53	90	92	43	80	23.5	M14×1.5	5	88	78
ø40	6.5	18$^{+0.4}_{+0.1}$	18	12	10	52	12	36$^{-0.1}_{-0.4}$	M8 depth 13	7	110.5	59.5	98.5	100.5	49.5	88.5	23.5	M14×1.5	5	96.5	86.5
ø50	6.5	18$^{+0.4}_{+0.1}$	18	12	10	64	12	36$^{-0.1}_{-0.4}$	M10 depth 15	8	112.5	60.5	100.5	102.5	50.5	90.5	28.5	M18×1.5	5	97.5	87.5
ø63	7.5	20$^{+0.4}_{+0.1}$	24	14	10	77	16	40$^{-0.1}_{-0.4}$	M10 depth 15	8	127	66	111	117	56	101	28.5	M18×1.5	5	108	98
ø80	10.5	28$^{+0.4}_{+0.1}$	30	20	14	98	20	56$^{-0.1}_{-0.4}$	M16 depth 21	10	155.5	73.5	135.5	145.5	63.5	125.5	35.5	M22×1.5	8	133.5	123.5
ø100	10.5	28$^{+0.4}_{+0.1}$	30	20	16	117	20	56$^{-0.1}_{-0.4}$	M20 depth 27	12	167	83	147	157	73	137	35.5	M26×1.5	8	143	133

*1: For ø32 to ø50 exceeding 150 strokes, ø63 to ø100 exceeding 200 strokes, the dimensions are as follows.

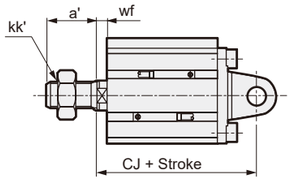
Code / Bore Size (mm)	For female thread						For male thread	
	With Switch			Without Switch			With Switch	Without Switch
	A	B	CJ	A	B	CJ	CJ	CJ
ø32	109.5	60.5	97.5	99.5	50.5	87.5	95.5	85.5
ø40	120	69	108	110	59	98	106	96
ø50	126	74	114	116	64	104	111	101
ø63	137	76	121	127	66	111	118	108
ø80	165.5	83.5	145.5	155.5	73.5	135.5	143.5	133.5
ø100	177	93	157	167	83	147	153	143

● Double clevis type (Compact type) (CB2)





● For rod end male thread



Code / Bore Size (mm)	Common dimension								For female thread								For male thread				
	AC	CB	CC	CD	D	E	MR	UB	KK	WF	With Switch			Without Switch			a'	kk'	wf	With Switch	Without Switch
											A	B	CJ	A	B	CJ				CJ	CJ
ø32	4.5	18$^{+0.4}_{+0.1}$	14	10	5	45	10	36$^{-0.1}_{-0.3}$	M8 depth 13	7	90	53	80	80	43	70	23.5	M14×1.5	5	78	68
ø40	5	18$^{+0.4}_{+0.1}$	14	10	6	52	10	36$^{-0.1}_{-0.3}$	M8 depth 13	7	98.5	59.5	88.5	88.5	49.5	78.5	23.5	M14×1.5	5	86.5	76.5
ø50	6	22$^{+0.4}_{+0.1}$	20	14	7	64	14	44$^{-0.1}_{-0.3}$	M10 depth 15	8	110.5	60.5	96.5	100.5	50.5	86.5	28.5	M18×1.5	5	93.5	83.5
ø63	7	22$^{+0.4}_{+0.1}$	20	14	8	77	14	44$^{-0.1}_{-0.3}$	M10 depth 15	8	118	66	104	108	56	94	28.5	M18×1.5	5	101	91
ø80	9	28$^{+0.4}_{+0.1}$	27	18	10	98	18	56$^{-0.1}_{-0.3}$	M16 depth 21	10	139.5	73.5	121.5	129.5	63.5	111.5	35.5	M22×1.5	8	119.5	109.5
ø100	12	32$^{+0.4}_{+0.1}$	31	22	13	117	22	64$^{-0.1}_{-0.3}$	M20 depth 27	12	162	83	140	152	73	130	35.5	M26×1.5	8	136	126

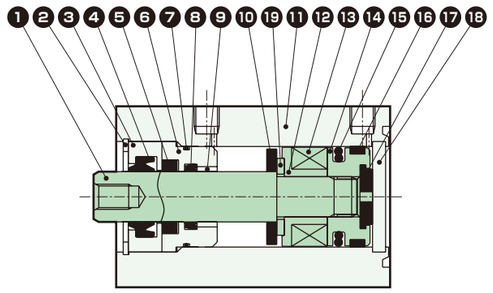
*1: For ø32 to ø50 exceeding 150 strokes, ø63 to ø100 exceeding 200 strokes, the dimensions are as follows.

Code / Bore Size (mm)	For female thread						For male thread	
	With Switch			Without Switch			With Switch	Without Switch
	A	B	CJ	A	B	CJ	CJ	CJ
ø32	97.5	60.5	87.5	87.5	50.5	77.5	85.5	75.5
ø40	108	69	98	98	59	88	96	86
ø50	124	74	110	114	64	100	107	97
ø63	128	76	114	118	66	104	111	101
ø80	149.5	83.5	131.5	139.5	73.5	121.5	129.5	119.5
ø100	172	93	150	162	83	140	146	136

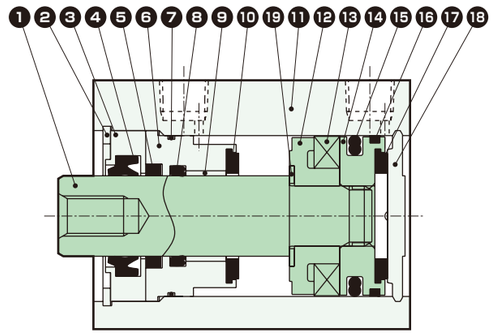
MEMO

Internal Structure Diagram/Material (Bore size: ø20, ø25)

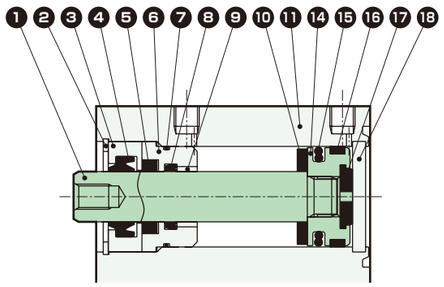
●SSD-KG5L-20, 25
(Double Acting, High Load, Environmentally Resistant Scraper Type with Switch)



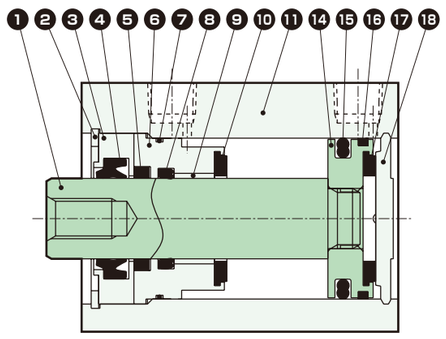
●SSD-KG5L-32 to 50
(Double Acting, High Load, Environmentally Resistant Scraper Type with Switch)



●SSD-KG5-20, 25
(Double Acting, High Load, Environmentally Resistant Scraper Type)



●SSD-KG5-32 to 50
(Double Acting, High Load, Environmentally Resistant Scraper Type)



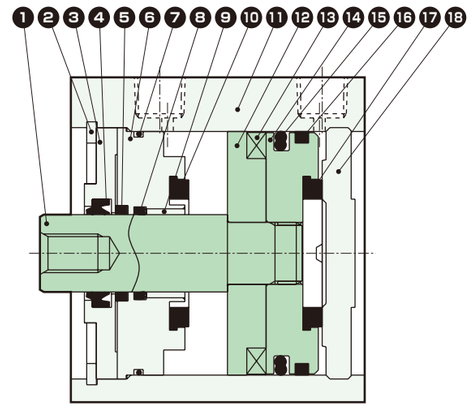
Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Piston Rod	ø20, ø25: Stainless steel ø32 to ø50: Steel	Industrial Hard Chrome Plating	11	Cylinder Body	Aluminum Alloy	Hard Anodized
2	C-type retaining ring	Steel	Zinc phosphate	12	Spacer	Special Resin	
3	Rod metal 1	Aluminum Alloy	Chromate	13	Magnet	Plastic	
4	Scraper	Nitrile Rubber		14	Piston	Aluminum Alloy	Chromate
5	Lube keeper	Special rubber		15	Piston Packing	Nitrile Rubber	
6	Rod metal 2	Aluminum Alloy	Alumite	16	Wear Ring	Polyacetal	
7	Rod metal gasket	Nitrile Rubber		17	Cushion rubber H	Urethane Rubber	
8	Rod Packing	Nitrile Rubber		18	Cover	ø20, ø25: Stainless steel ø32 to ø50: Aluminum alloy	(*1) ø32 to ø50: Alumite
9	Bushing	Bearing Alloy		19	Spacer washer	Stainless Steel	
10	Cushion rubber R	Urethane Rubber					

*1: For cover of long stroke type (ø20 with 100 mm stroke and over, ø25, ø32 with 150 mm stroke and over), material: Aluminum alloy, remarks: This will be alumite treatment.

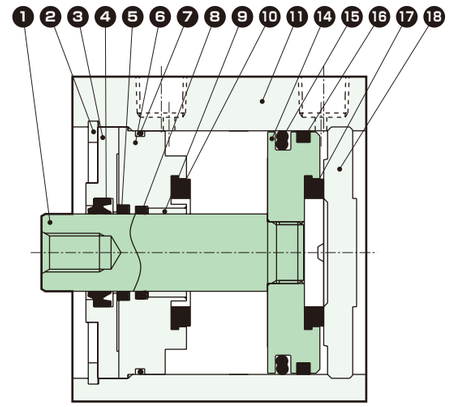
For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Internal Structure Diagram/Material (Bore size: ø63 to ø100)

●SSD-KG5L-63 to 100 (Double acting, High load, Environmental resistant scraper type with switch)



●SSD-KG5-63 to 100 (Double acting, High load, Environmental resistant scraper type)



Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Piston Rod	Steel	Industrial Hard Chrome Plating	10	Cushion rubber R	Urethane Rubber	
2	C-type retaining ring	Steel	Zinc phosphate	11	Cylinder Body	Aluminum Alloy	Hard Anodized
3	Rod metal 1	Aluminum Alloy	Chromate	12	Spacer	Aluminum Alloy	Chromate
4	Scraper	Nitrile Rubber		13	Magnet	Plastic	
5	Lube keeper	Special rubber		14	Piston	Aluminum Alloy	Chromate
6	Rod metal 2	Aluminum Alloy	Chromate	15	Piston Packing	Nitrile Rubber	
7	Rod metal gasket	Nitrile Rubber		16	Wear Ring	Polyacetal	
8	Rod Packing	Nitrile Rubber		17	Cushion rubber H	Urethane Rubber	
9	Bushing	Bearing Alloy		18	Cover	Aluminum Alloy	Alumite

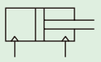
For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

Compact Cylinder
Double Acting, Single Rod Type with Strong Magnetic Field Resistant Switch

SSD-L4 Series

● Bore size: ø40, ø50, ø63, ø83, ø100

Circuit Diagram Symbol



RoHS

Model No. Notation Method

SSD-L4 - 50 - 40 - V0 - D - N - LB - I

SSD-L4	50	40	V0	D	N	LB	I
Model No.	❶ Bore size	❷ Stroke	❸ Switch Model No.	❹ Number of Switches	❺ Option	❻ Mounting bracket	❼ Accessories

❶Bore Size (mm)

Code	Content
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

❷Stroke (mm)

Bore size	Stroke	Intermediate Stroke
ø40 to ø100	20 to 50	Every 1 mm

Note: For details on stroke, please refer to P. 636.

❸Switch Model No.

For switch details, please refer to P. 869. Switches are included to the product and shipped.

	LED Indicator Special Function	Wiring (Output)	Load Voltage (V)		Load Current (mA)		Lead Wire *1		
			AC	DC	AC	DC	Straight	L-shape	
Contact	1-Color For Compact Strong Magnetic Field	2-wire	110	24	7 to 20	5 to 50	V0□	-	
Reed									

*1: For "□" in the switch model No., enter the code selected from the "*Lead wire length" table.
*2: Switches other than the above switch model No.s are also available. (Custom products) For details, refer to P. 869.

❹Number of Switches

Code	Content
R	With 1 pc on rod side
H	With 1 pc on head side
D	With 2 pcs

❺Option

Code	Content	
Blank	Rod end female thread	
N	Rod end male thread	

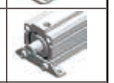
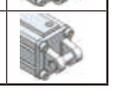
*Lead wire length

Code	Content
Blank	1 m (Standard)
3	3 m (Option)
5	5 m (Option)

Example) Lead wire length
1 m V0
3 m V0 3
5 m V0 5

❻Mounting type

Mounting brackets are shipped included to the product.

	Code	Content	
	LB	Axial Foot Type	
*1	LB2	Axial foot type (Compact type)	
*1	FA	Rod Side Flange Type	
	FB	Head Side Flange Type	
	CB	Double Clevis Type (pin and retaining ring included)	
	CB2	Clevis bracket (compact) (pin and snap ring included)	

*1: When LB2 or FA is selected, the piston rod protrusion dimension WF differs from the standard. See P. 639 and 640 for outline dimension drawings. Also, the model No. specifying the protrusion length will be printed at the end of the model No. on the nameplate included to the main body. For cylinder model No.s when ordering cylinders and LB2/FA brackets separately, please contact us.

❼Accessories

Code	Content	
I	Single Knuckle	
I2	Single Knuckle (compact)	
Y	Double Knuckle (pin and retaining ring included)	
Y2	Double knuckle (compact) (pin and snap ring included)	

*1: Selectable when rod end male thread "N" is selected.
*2: "I", "I2", "Y", "Y2" cannot be selected at the same time.

About Custom Product Specifications

For details, refer to P. 690 to 694.

Code	Content
-XP5	Knuckle Pin/Clevis Pin Split Pin
-XP7	Knuckle fixed by pin driving
-XP8	Knuckle pin/clevis pin split pin specification, knuckle fixed by pin driving
-A2	With 2 Rod Nuts
-R1, R2	With spigot joint
Rod End Shape Modification	Refer to Ending 11.

Model No. Example)

SSD-L4 -..... - XP5

Switch Single Unit Model No. Notation Method

SW - V0

❸ Switch Model No.

Specifications

Item	SSD-L4				
Bore size mm	ø40	ø50	ø63	ø80	ø100
Actuation method	Double Acting Type				
Operating Fluid	Compressed Air				
Max. Operating Pressure MPa	1.0				
Min. Operating Pressure MPa	0.1		0.05		
Proof pressure MPa	1.6				
Ambient Temperature °C	-10 to 60 (No freezing)				
Port Size	Rc1/8	Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+1.0}_{0}$				
Operating Piston Speed mm/s	50 to 500		50 to 300		
Cushion	None				
Lubrication	Not required (When lubricating, use turbine oil Class 1 ISO VG32)				
Allowable absorbed energy J	0.092	0.1	0.12	0.27	0.56

Stroke

Stroke (mm)		Applicable Bore				
		ø40	ø50	ø63	ø80	ø100
Standard Stroke	20	●	●	●	●	●
	30	●	●	●	●	●
	40	●	●	●	●	●
	50	●	●	●	●	●
Minimum Stroke (mm) *1		20				
Maximum Stroke (mm)		50				
Intermediate Stroke *2		1				

*1: For the number of switches that can be mounted and the minimum stroke, refer to the table below.
*2: The overall length dimension for intermediate stroke is the same as the standard stroke above it.

Number of Switches Mounted and Min. Stroke (mm)

Switch Model No.	V0	
Number of Switches / Bore Size (mm)	1	2
ø40	20	20
ø50	20	20
ø63	20	20
ø80	20	20
ø100	20	20

Cylinder Weight Table (Weight with switch is when 2 cylinder switches are included)

(Unit: g)

Stroke (mm) / Bore Size (mm)	20	30	40	50
ø40	493	546	599	652
ø50	757	841	925	1009
ø63	1089	1200	1311	1422
ø80	1822	1996	2170	2344
φ100	2665	2892	3119	3346

Theoretical Thrust Table

(Unit: N)

Bore Size (mm)	Operating Direction	Operating Pressure MPa											
		0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø40	Push	-	1.26×10^{2}	1.88×10^{2}	2.51×10^{2}	3.77×10^{2}	5.03×10^{2}	6.28×10^{2}	7.54×10^{2}	8.80×10^{2}	1.01×10^{3}	1.13×10^{3}	1.26×10^{3}
	Pull	-	1.06×10^{2}	1.58×10^{2}	2.11×10^{2}	3.17×10^{2}	4.22×10^{2}	5.28×10^{2}	6.33×10^{2}	7.39×10^{2}	8.44×10^{2}	9.50×10^{2}	1.06×10^{3}
ø50	Push	-	1.96×10^{2}	2.95×10^{2}	3.93×10^{2}	5.89×10^{2}	7.85×10^{2}	9.82×10^{2}	1.18×10^{3}	1.37×10^{3}	1.57×10^{3}	1.77×10^{3}	1.96×10^{3}
	Pull	-	1.65×10^{2}	2.47×10^{2}	3.30×10^{2}	4.95×10^{2}	6.60×10^{2}	8.25×10^{2}	9.90×10^{2}	1.15×10^{3}	1.32×10^{3}	1.48×10^{3}	1.65×10^{3}
ø63	Push	1.56×10^{2}	3.12×10^{2}	4.68×10^{2}	6.23×10^{2}	9.35×10^{2}	1.25×10^{3}	1.56×10^{3}	1.87×10^{3}	2.18×10^{3}	2.49×10^{3}	2.81×10^{3}	3.12×10^{3}
	Pull	1.40×10^{2}	2.80×10^{2}	4.20×10^{2}	5.61×10^{2}	8.41×10^{2}	1.12×10^{3}	1.40×10^{3}	1.68×10^{3}	1.96×10^{3}	2.24×10^{3}	2.52×10^{3}	2.80×10^{3}
ø80	Push	2.51×10^{2}	5.03×10^{2}	7.54×10^{2}	1.01×10^{3}	1.51×10^{3}	2.01×10^{3}	2.51×10^{3}	3.02×10^{3}	3.52×10^{3}	4.02×10^{3}	4.52×10^{3}	5.03×10^{3}
	Pull	2.27×10^{2}	4.54×10^{2}	6.80×10^{2}	9.07×10^{2}	1.36×10^{3}	1.81×10^{3}	2.27×10^{3}	2.72×10^{3}	3.17×10^{3}	3.63×10^{3}	4.08×10^{3}	4.54×10^{3}
ø100	Push	3.93×10^{2}	7.85×10^{2}	1.18×10^{3}	1.57×10^{3}	2.36×10^{3}	3.14×10^{3}	3.93×10^{3}	4.71×10^{3}	5.50×10^{3}	6.28×10^{3}	7.07×10^{3}	7.85×10^{3}
	Pull	3.57×10^{2}	7.15×10^{2}	1.07×10^{3}	1.43×10^{3}	2.14×10^{3}	2.86×10^{3}	3.57×10^{3}	4.29×10^{3}	5.00×10^{3}	5.72×10^{3}	6.43×10^{3}	7.15×10^{3}

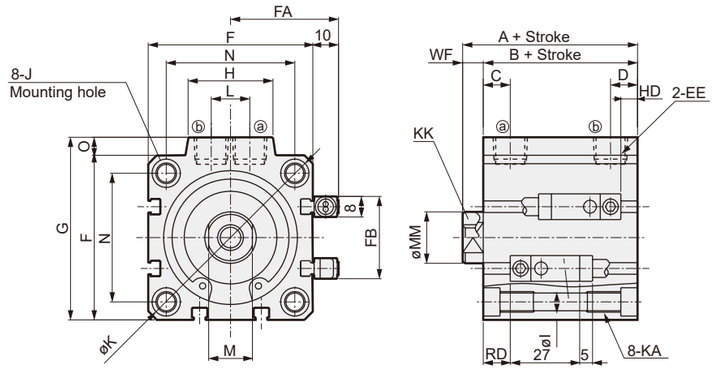
Mounting Bracket Model No. Notation Method

Bore Size (mm) / Mounting bracket	ø40	ø50	ø63	ø80	ø100
Foot (LB)	SSD-LB-40	SSD-LB-50	SSD-LB-63	SSD-LB-80	SSD-LB-100
Foot (LB2)	SSD-LB2-40	SSD-LB2-50	SSD-LB2-63	SSD-LB2-80	SSD-LB2-100
Flange (FA/FB)	SSD-FA-40	SSD-FA-50	SSD-FA-63	SSD-FA-80	SSD-FA-100
Double Clevis (CB)	SSD-CB-40	SSD-CB-50	SSD-CB-63	SSD-CB-80	SSD-CB-100
Double knuckle clevis (CB2)	SSD-CB2-40	SSD-CB2-50	SSD-CB2-63	SSD-CB2-80	SSD-CB2-100

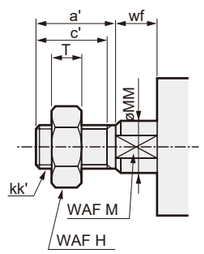
*1: Foot type mounting brackets are 2 pcs/set.
*2: When mounting with through-bolts, refer to the mounting bolt model No. notation method (P. 682).

Outline Dimension Drawing

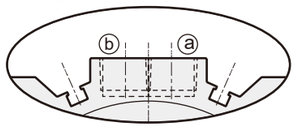
●SSD-L4-40 to 100



● Rod end male thread part



[Bore size ø100]



*Only ø100 has a switch groove on the port surface

Code / Bore size (mm)	A	B	C	D	EE	F	FA	FB	G	H	I	J
ø40	56.5	49.5	12	8.5	Rc1/8	52	36	31	57	24	5.5	Counterbore ø9 depth 5.5 ø5.5 through hole
ø50	58.5	50.5	10.5	10.5	Rc1/4	64	42	32	71	33	6.9	Counterbore ø11 depth 6.5 ø6.9 through hole
ø63	64	56	13	11	Rc1/4	77	48.5	32	84	33	8.7	Counterbore ø14 depth 9 ø8.7 through hole
ø80	73.5	63.5	16	13	Rc3/8	98	59	32	104	38	10.5	Counterbore ø17.5 depth 11 ø10.5 through hole
ø100	85	73	23	15	Rc3/8	117	68.5	32	123.5	38	10.5	Counterbore ø17.5 depth 11 ø10.5 through hole

Code / Bore size (mm)	K	KA	KK	M	MM	N	O	WF	RD	HD
ø40	69	M6 depth 11	M8 depth 13	14	16	40	5	7	13	7.5
ø50	86	M8 depth 13	M10 depth 15	17	20	50	7	8	13	8.5
ø63	103	M10 depth 25	M10 depth 15	17	20	60	7	8	13.5	13.5
ø80	132	M12 depth 28	M16 depth 21	22	25	77	6	10	16	18.5
ø100	156	M12 depth 28	M20 depth 27	27	30	94	6.5	12	20	24

*1: The A and B dimensions for intermediate strokes are the same as the standard stroke above them.

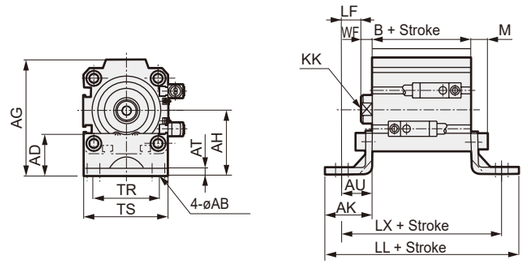
***2: For outline dimension drawings of individual accessories, see P. 379 to 381.**

● Rod end male thread part dimension table

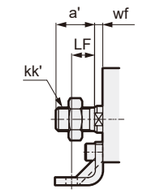
Code / Bore Size (mm)	a'	C'	H	kk'	M	MM	T	wf'
ø40	23.5	20.5	22	M14×1.5	14	16	8	5
ø50	28.5	26	27	M18×1.5	17	20	11	5
ø63	28.5	26	27	M18×1.5	17	20	11	5
ø80	35.5	32.5	32	M22×1.5	22	25	13	8
ø100	35.5	32.5	41	M26×1.5	27	30	16	8

Outline Dimension Drawing

● Axial Foot Type (LB)



● For rod end male thread

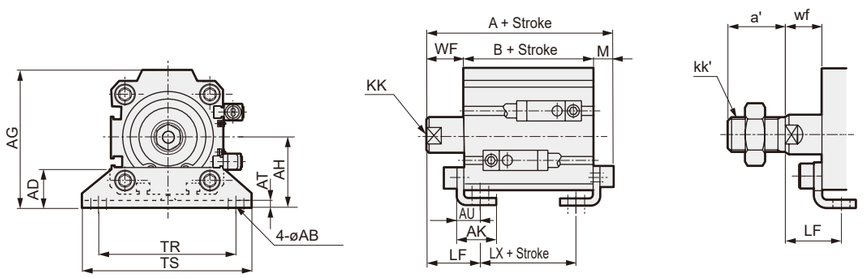


Code / Bore Size (mm)	AB	AD	AG	AH	AK	AT	AU	TR	TS	M	KK	WF	LF	B	LL	LX	a'	kk'	wf	LF
ø40	7	26	71	40	29	4.5	19	40	52	10	M8 depth 13	7	12	49.5	107.5	87.5	23.5	M14×1.5	5	14
ø50	9	23	79	40	34	4.5	22	46	64	13	M10 depth 15	8	14	50.5	118.5	94.5	28.5	M18×1.5	5	17
ø63	11	33	96.5	51	40	4.5	25	60	77	15	M10 depth 15	8	17	56	136	106	28.5	M18×1.5	5	20
ø80	13	42	116.5	61.5	50	6	35	77	98	18	M16 depth 21	10	25	63.5	163.5	133.5	35.5	M22×1.5	8	27
ø100	13	48	134	69	50	6	35	94	117	18	M20 depth 27	12	23	73	173	143	35.5	M26×1.5	8	27

*1: If B + stroke is less than or equal to the value below, LB cannot be selected.
ø80: 69 or less

● Axial Foot Type (Compact Type) (LB2)

● For rod end male thread

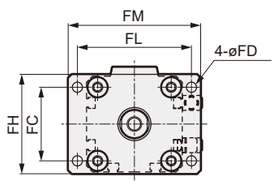


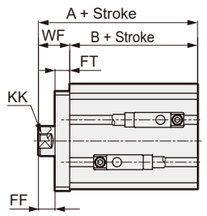
Code / Bore Size (mm)	AB	AD	AG	AH	AK	AT	AU	TR	TS	M	KK	WF	LF	A	B	LX	a'	kk'	wf	LF
ø40	7	18	64	33	18.2	3.2	11.2	64	78	9.2	M8 depth 13	17	25	75.7	49.5	33.5	23.5	M14×1.5	15	23
ø50	9	22	78	39	22.7	3.2	14.7	79	95	11.2	M10 depth 15	18	29.5	79.7	50.5	27.5	28.5	M18×1.5	15	26.5
ø63	11	26	91.5	46	25.2	3.2	16.2	95	113	13.2	M10 depth 15	18	31	87.2	56	30	28.5	M18×1.5	15	28
ø80	13	39.5	114	59	30.5	4.5	19.5	118	140	16.5	M16 depth 21	20	35	100	63.5	33.5	35.5	M22×1.5	18	33
ø100	13	50	136	71	35.5	6	23	137	162	18	M20 depth 27	22	39	113	73	39	35.5	M26×1.5	18	35

*1: If B + stroke is less than or equal to the value below, LB2 cannot be selected.
ø80: 72 or less

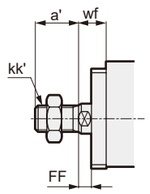
Outline Dimension Drawing

● Rod Side Flange Type (FA)



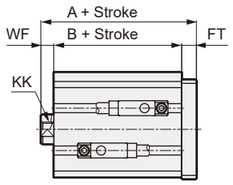


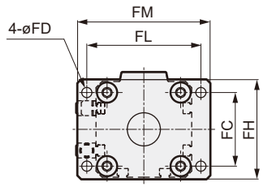
● For rod end male thread



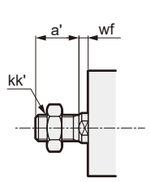
Code	Common dimension						For female thread					For male thread			
Bore Size (mm)	FC	FD	FH	FL	FM	FT	FF	KK	WF	A	B	FF	a'	kk'	wf
ø40	40	5.5	54	62	72	8	9	M8 depth 13	17	66.5	49.5	7	23.5	M14×1.5	15
ø50	50	6.6	67	76	89	9	9	M10 depth 15	18	68.5	50.5	6	28.5	M18×1.5	15
ø63	60	9	80	92	108	9	9	M10 depth 15	18	74	56	6	28.5	M18×1.5	15
ø80	77	11	99	116	134	11	9	M16 depth 21	20	83.5	63.5	7	35.5	M22×1.5	18
ø100	94	11	117	136	154	11	11	M20 depth 27	22	95	73	7	35.5	M26×1.5	18

● Head Side Flange Type (FB)





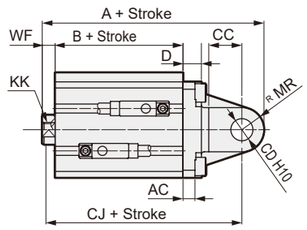
● For rod end male thread

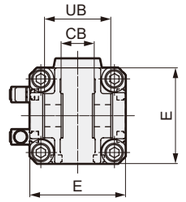


Code	Common dimension						For female thread				For male thread			
Bore Size (mm)	FC	FD	FH	FL	FM	FT	KK	WF	A	B	a'	kk'	wf	With Switch CJ
ø40	40	5.5	54	62	72	8	M8 depth 13	7	64.5	49.5	23.5	M14×1.5	15	76.5
ø50	50	6.6	67	76	89	9	M10 depth 15	8	67.5	50.5	28.5	M18×1.5	15	83.5
ø63	60	9	80	92	108	9	M10 depth 15	8	73	56	28.5	M18×1.5	15	91
ø80	77	11	99	116	134	11	M16 depth 21	10	84.5	63.5	35.5	M22×1.5	18	109.5
ø100	94	11	117	136	154	11	M20 depth 27	12	96	73	35.5	M26×1.5	18	126

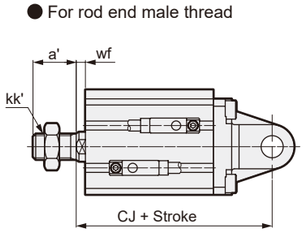
Outline Dimension Drawing

● Double Knuckle Clevis Type (CB)



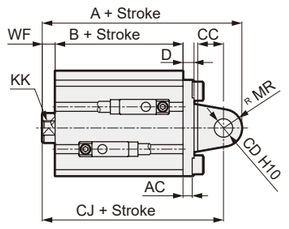


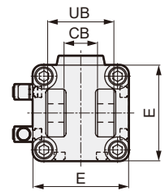
● For rod end male thread



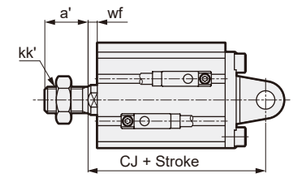
Code	Common dimension								For female thread					For male thread			
Bore Size (mm)	AC	CB	CC	CD	D	E	MR	UB	KK	WF	A	B	CJ	a'	kk'	wf	With Switch CJ
ø40	6.5	18 +0.4 +0.1	18	12	10	52	12	36 -0.1 -0.4	M8 depth 13	7	100.5	49.5	88.5	23.5	M14×1.5	5	86.5
ø50	6.5	18 +0.4 +0.1	18	12	10	64	12	36 -0.1 -0.4	M10 depth 15	8	102.5	50.5	90.5	28.5	M18×1.5	5	87.5
ø63	7.5	20 +0.4 +0.1	24	14	10	77	16	40 -0.1 -0.4	M10 depth 15	8	117	56	101	28.5	M18×1.5	5	98
ø80	10.5	28 +0.4 +0.1	30	20	14	98	20	56 -0.1 -0.4	M16 depth 21	10	145.5	63.5	125.5	35.5	M22×1.5	8	123.5
ø100	10.5	28 +0.4 +0.1	30	20	16	117	20	56 -0.1 -0.4	M20 depth 27	12	157	73	137	35.5	M26×1.5	8	133

● Double clevis type (Compact type) (CB2)





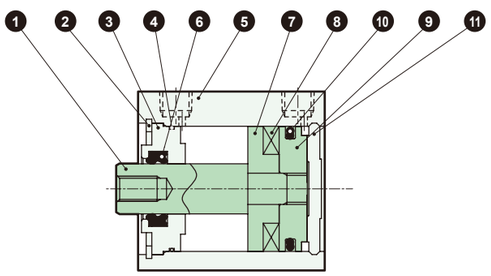
● For rod end male thread



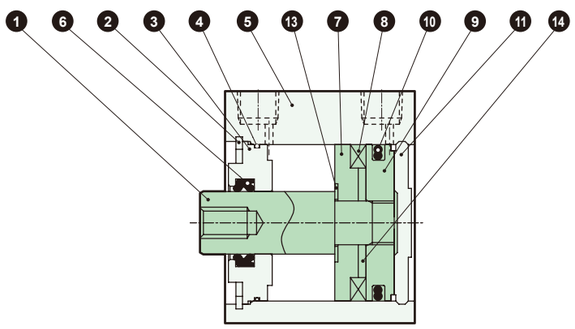
Code	Common dimension								For female thread					For male thread			
Bore Size (mm)	AC	CB	CC	CD	D	E	MR	UB	KK	WF	A	B	CJ	a'	kk'	wf	With Switch CJ
ø40	5	18 +0.4 +0.1	14	10	6	52	10	36 -0.1 -0.3	M8 depth 13	7	88.5	49.5	78.5	23.5	M14×1.5	5	76.5
ø50	6	22 +0.4 +0.1	20	14	7	64	14	44 -0.1 -0.3	M10 depth 15	8	100.5	50.5	86.5	28.5	M18×1.5	5	83.5
ø63	7	22 +0.4 +0.1	20	14	8	77	14	44 -0.1 -0.3	M10 depth 15	8	108	56	94	28.5	M18×1.5	5	91
ø80	9	28 +0.4 +0.1	27	18	10	98	18	56 -0.1 -0.3	M16 depth 21	10	129.5	63.5	111.5	35.5	M22×1.5	8	109.5
ø100	12	32 +0.4 +0.1	31	22	13	117	22	64 -0.1 -0.3	M20 depth 27	12	152	73	130	35.5	M26×1.5	8	126

Internal Structure Diagram/Material

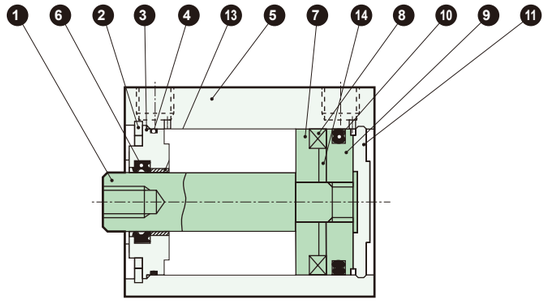
●SSD-L4-40 (Double acting with switch for strong magnetic field)



●SSD-L4-50 (Double acting with switch for strong magnetic field)



●SSD-L4-63 to 100 (Double acting with switch for strong magnetic field)



Part No.	Part Name	Material	Remarks
1	Piston Rod	Steel	Industrial Hard Chrome Plating
2	C-type retaining ring	Steel	Zinc phosphate
3	Rod Metal	ø40, ø50: Special aluminum ø63 to ø100: Aluminum alloy	Alumite
4	Rod metal gasket	Nitrile Rubber	
5	Cylinder Body	Aluminum Alloy	Hard Anodized
6	Rod Packing	Nitrile Rubber	
7	Spacer	ø40, ø63 to ø100: Aluminum alloy ø50: Resin	ø40, ø63 to ø100: Chromate

Part No.	Part Name	Material	Remarks
8	Magnet	Plastic	
9	Piston	Aluminum Alloy	Chromate
10	Piston Packing	Nitrile Rubber	
11	Cover	Aluminum Alloy	Alumite
12	Bushing	Bearing Alloy	
13	Spacer washer	Stainless Steel	
14	Collar	Aluminum Alloy	

For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

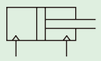
MEMO

Space-Saving Type
SSD2
SSG
SSD
CAT
MDC2
SMG
MSD
FC□
Cylinder Switch
Ending

Compact Cylinder Double Acting, High Load Type with Switch for Strong Magnetic Field

SSD-KL4 Series

● Bore size: ø40, ø50, ø63, ø83, ø100

Circuit Diagram Symbol 

RoHS

Model No. Notation Method

SSD-KL4 - 50 - 40 - V0 - D - N - LB - I

SSD-KL4	50	40	V0	D	N	LB	I
Model No.	❶ Bore size	❷ Stroke	❸ Switch Model No.	❹ Number of Switches	❺ Option	❻ Mounting bracket	❼ Accessories

❶Bore Size (mm)

Code	Contents
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

❷Stroke (mm)

Bore size	Stroke	Intermediate Stroke
ø40, ø50	20 to 150	Every 1 mm
ø63 to ø100	20 to 200	

Note: For details on stroke, please refer to P. 646.

❸Switch Model No.

For switch details, please refer to P. 869. Switches are included to the product and shipped.

Contact	LED Indicator Special Function	Wiring (Output)	Load Voltage (V)		Load Current (mA)		Lead Wire *1		
			AC	DC	AC	DC	Straight	L-shape	
Reed	1-Color For Compact Strong Magnetic Field	2-wire	110	24	7 to 20	5 to 50	V0□	-	

*1: For "□" in the switch model No., enter the code selected from the "*Lead wire length" table.
*2: Switches other than the above switch model No.s are also available. (Custom products) For details, refer to P. 869.

***Lead wire length**

Code	Content
Blank	1 m (Standard)
3	3 m (Option)
5	5 m (Option)

Example) Lead wire length
1 m V0
3 m V0 3
5 m V0 5

❹Number of Switches

Code	Content
R	With 1 pc on rod side
H	With 1 pc on head side
D	With 2 pcs

❺Option

Code	Content	
Blank	Rod end female thread	
N	Rod end male thread	

❻Mounting type

Mounting brackets are shipped included to the product.

	Code	Content	
	LB	Axial Foot Type	
*1	LB2	Axial foot type (Compact type)	
*1	FA	Rod Side Flange Type	
	FB	Head Side Flange Type	
	CB	Double Clevis Type (pin and retaining ring included)	
	CB2	Clevis bracket (compact) (pin and snap ring included)	

*1: When LB2 or FA is selected, the piston rod protrusion dimension WF differs from the standard. See P. 649 and 650 for outline dimension drawings. Also, the model No. specifying the protrusion length will be printed at the end of the model No. on the nameplate included to the main body. For cylinder model No.s when ordering cylinders and LB2/FA brackets separately, please contact us.

❼Accessories

Code	Content	
I	Single Knuckle	
I2	Single Knuckle (compact)	
Y	Double Knuckle (pin and retaining ring included)	
Y2	Double knuckle (compact) (pin and snap ring included)	

*1: Selectable when rod end male thread "N" is selected.
*2: "I", "I2", "Y", "Y2" cannot be selected at the same time.

About Custom Product Specifications

For details, refer to P. 690 to 694.

Code	Content
-XP5	Knuckle Pin/Clevis Pin Split Pin
-XP7	Knuckle fixed by pin driving
-XP8	Knuckle pin/clevis pin split pin specification, knuckle fixed by pin driving
-A2	With 2 Rod Nuts
-R1, R2	With spigot joint
Rod End Shape Modification	Refer to Ending 11.

Model No. Example)

SSD-KL4 - ..... - XP5

Switch Single Unit Model No. Notation Method

SW - V0

❸ Switch Model No.

Specifications

Item	SSD-KL4				
Bore size mm	ø40	ø50	ø63	ø80	ø100
Actuation method	Double Acting Type				
Operating Fluid	Compressed Air				
Max. Operating Pressure MPa	1.0				
Min. Operating Pressure MPa	0.1		0.05		
Proof pressure MPa	1.6				
Ambient Temperature °C	-10 to 60 (No freezing)				
Port Size	Rc1/8	Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+2.0}_{0}$				
Operating Piston Speed mm/s	50 to 500		50 to 300		
Cushion	Rubber Cushion				
Lubrication	Not required (When lubricating, use turbine oil Class 1 ISO VG32)				
Allowable absorbed energy J	0.63	0.98	1.56	2.51	3.92

Stroke

	Stroke (mm)	Applicable Bore				
		ø40	ø50	ø63	ø80	ø100
Standard Stroke	20	●	●	●	●	●
	30	●	●	●	●	●
	40	●	●	●	●	●
	50	●	●	●	●	●
	60	●	●	●	●	●
	70	●	●	●	●	●
	80	●	●	●	●	●
	90	●	●	●	●	●
	100	●	●	●	●	●
Minimum Stroke (mm) *1		20				
Maximum Stroke (mm)		150		200		
Intermediate Stroke *2		Every 1 mm				

***1: For the number of switches attachable and minimum stroke, refer to the table below.**
*2: The overall length dimension for intermediate stroke is the same as the standard stroke above it.

Number of Switches Mounted and Min. Stroke (mm)

Switch Model No.	V0	
Number of Switches / Bore Size (mm)	1	2
ø40	20	20
ø50	20	20
ø63	20	20
ø80	20	20
ø100	20	20

Cylinder Weight Table (Weight with switch is when 2 cylinder switches are included)

(Unit: g)

Stroke (mm) / Bore Size (mm)	20	30	40	50	60	70	80	90	100
ø40	546	599	652	705	758	811	864	917	970
ø50	841	925	1009	1093	1177	1261	1345	1429	1513
ø63	1199	1309	1419	1529	1639	1749	1859	1969	2079
ø80	1995	2169	2343	2517	2691	2865	3039	3213	3387
ø100	2893	3120	3347	3574	3801	4028	4255	4482	4709

Theoretical Thrust Table

(Unit: N)

Bore Size (mm)	Operating Direction	Operating pressure MPa											
		0.05	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø40	Push	-	1.26×10^{2}	1.88×10^{2}	2.51×10^{2}	3.77×10^{2}	5.03×10^{2}	6.28×10^{2}	7.54×10^{2}	8.80×10^{2}	1.01×10^{3}	1.13×10^{3}	1.26×10^{3}
	Pull	-	1.06×10^{2}	1.58×10^{2}	2.11×10^{2}	3.17×10^{2}	4.22×10^{2}	5.28×10^{2}	6.33×10^{2}	7.39×10^{2}	8.44×10^{2}	9.50×10^{2}	1.06×10^{3}
ø50	Push	-	1.96×10^{2}	2.95×10^{2}	3.93×10^{2}	5.89×10^{2}	7.85×10^{2}	9.82×10^{2}	1.18×10^{3}	1.37×10^{3}	1.57×10^{3}	1.77×10^{3}	1.96×10^{3}
	Pull	-	1.65×10^{2}	2.47×10^{2}	3.30×10^{2}	4.95×10^{2}	6.60×10^{2}	8.25×10^{2}	9.90×10^{2}	1.15×10^{3}	1.32×10^{3}	1.48×10^{3}	1.65×10^{3}
ø63	Push	1.56×10^{2}	3.12×10^{2}	4.68×10^{2}	6.23×10^{2}	9.35×10^{2}	1.25×10^{3}	1.56×10^{3}	1.87×10^{3}	2.18×10^{3}	2.49×10^{3}	2.81×10^{3}	3.12×10^{3}
	Pull	1.40×10^{2}	2.80×10^{2}	4.20×10^{2}	5.61×10^{2}	8.41×10^{2}	1.12×10^{3}	1.40×10^{3}	1.68×10^{3}	1.96×10^{3}	2.24×10^{3}	2.52×10^{3}	2.80×10^{3}
ø80	Push	2.51×10^{2}	5.03×10^{2}	7.54×10^{2}	1.01×10^{3}	1.51×10^{3}	2.01×10^{3}	2.51×10^{3}	3.02×10^{3}	3.52×10^{3}	4.02×10^{3}	4.52×10^{3}	5.03×10^{3}
	Pull	2.27×10^{2}	4.54×10^{2}	6.80×10^{2}	9.07×10^{2}	1.36×10^{3}	1.81×10^{3}	2.27×10^{3}	2.72×10^{3}	3.17×10^{3}	3.63×10^{3}	4.08×10^{3}	4.54×10^{3}
ø100	Push	3.93×10^{2}	7.85×10^{2}	1.18×10^{3}	1.57×10^{3}	2.36×10^{3}	3.14×10^{3}	3.93×10^{3}	4.71×10^{3}	5.50×10^{3}	6.28×10^{3}	7.07×10^{3}	7.85×10^{3}
	Pull	3.57×10^{2}	7.15×10^{2}	1.07×10^{3}	1.43×10^{3}	2.14×10^{3}	2.86×10^{3}	3.57×10^{3}	4.29×10^{3}	5.00×10^{3}	5.72×10^{3}	6.43×10^{3}	7.15×10^{3}

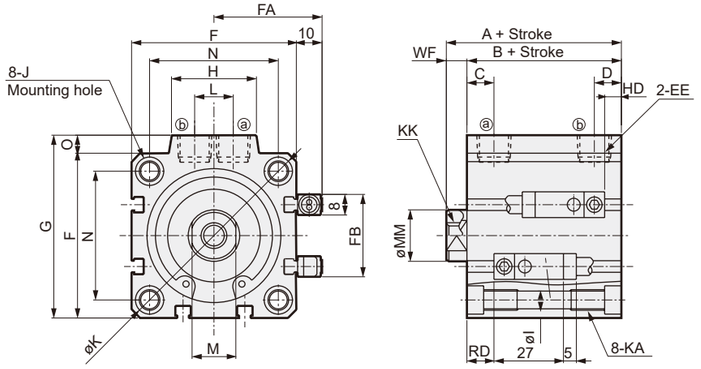
Mounting Bracket Model No. Notation Method

Bore Size (mm) / Mounting bracket	ø40	ø50	ø63	ø80	ø100
Foot (LB)	SSD-LB-40	SSD-LB-50	SSD-LB-63	SSD-LB-80	SSD-LB-100
Foot (LB2)	SSD-LB2-40	SSD-LB2-50	SSD-LB2-63	SSD-LB2-80	SSD-LB2-100
Flange (FA/FB)	SSD-FA-40	SSD-FA-50	SSD-FA-63	SSD-FA-80	SSD-FA-100
Double Clevis (CB)	SSD-CB-40	SSD-CB-50	SSD-CB-63	SSD-CB-80	SSD-CB-100
Double knuckle clevis (CB2)	SSD-CB2-40	SSD-CB2-50	SSD-CB2-63	SSD-CB2-80	SSD-CB2-100

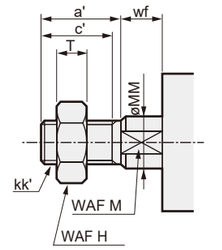
*1: Foot type mounting brackets are 2 pcs/set.
*2: When mounting with through-bolts, refer to the mounting bolt model No. notation method (P. 682).

Outline Dimension Drawing

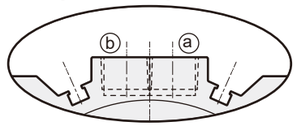
●SSD-KL4-40 to 100



● Rod end male thread part



[Bore size ø100]



*Only ø100 has a switch groove on the port surface

Code / Bore size (mm)	A	B	C	D	EE	F	FA	FB	G	H	I	J
ø40	66.5	59.5	12	8.5	Rc1/8	52	36	31	57	24	5.5	Counterbore ø9 depth 5.5 ø5.5 through hole
ø50	68.5	60.5	10.5	10.5	Rc1/4	64	42	32	71	33	6.9	Counterbore ø11 depth 6.5 ø6.9 through hole
ø63	74	66	13	11	Rc1/4	77	48.5	32	84	33	8.7	Counterbore ø14 depth 9 ø8.7 through hole
ø80	83.5	73.5	16	13	Rc3/8	98	59	32	104	38	10.5	Counterbore ø17.5 depth 11 ø10.5 through hole
ø100	95	83	23	15	Rc3/8	117	68.5	32	123.5	38	10.5	Counterbore ø17.5 depth 11 ø10.5 through hole

Code / Bore size (mm)	K	KA	KK	L	M	MM	N	O	WF	RD	HD
ø40	69	M6 depth 11	M8 depth 13	10	14	16	40	5	7	20.5	10
φ50	86	M8 depth 13	M10 depth 15	15	17	20	50	7	8	20.5	11
ø63	103	M10 depth 25	M10 depth 15	15	17	20	60	7	8	18.5	18.5
ø80	132	M12 depth 28	M16 depth 21	15	22	25	77	6	10	21	23.5
ø100	156	M12 depth 28	M20 depth 27	15	27	30	94	6.5	12	25	29

*1: The A and B dimensions for intermediate strokes are the same as the standard stroke above them.

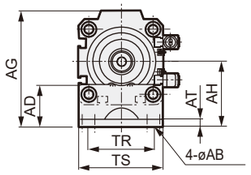
***2: For outline dimension drawings of individual accessories, refer to P. 379 to 381.**

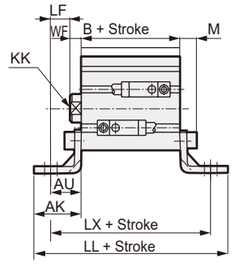
● Rod end male thread part dimension table

Code / Bore Size (mm)	a'	C'	H	kk'	M	MM	T	wf'
ø40	23.5	20.5	22	M14×1.5	14	16	8	5
φ50	28.5	26	27	M18×1.5	17	20	11	5
ø63	28.5	26	27	M18×1.5	17	20	11	5
ø80	35.5	32.5	32	M22×1.5	22	25	13	8
ø100	35.5	32.5	41	M26×1.5	27	30	16	8

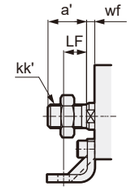
Outline Dimension Drawing

● Axial Foot Type (LB)



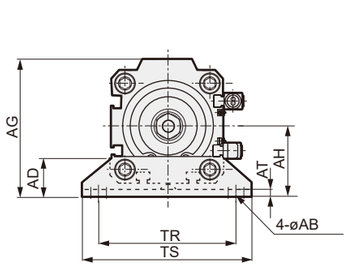


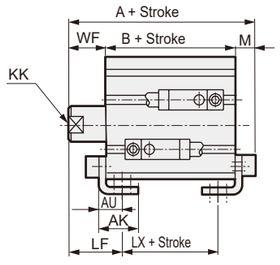
● For rod end male thread



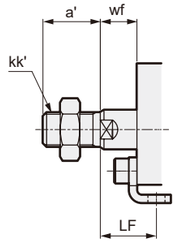
Code / Bore Size (mm)	Common dimension AB	AD	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	B	LL	LX	For male thread a'	kk'	wf	LF
ø40	7	26	71	40	29	4.5	19	40	52	10	M8 depth 13	7	12	59.5	117.5	97.5	23.5	M14×1.5	5	14
φ50	9	23	79	40	34	4.5	22	46	64	13	M10 depth 15	8	14	60.5	128.5	104.5	28.5	M18×1.5	5	17
ø63	11	33	96.5	51	40	4.5	25	60	77	15	M10 depth 15	8	17	66	146	116	28.5	M18×1.5	5	20
ø80	13	42	116.5	61.5	50	6	35	77	98	18	M16 depth 21	10	25	73.5	173.5	143.5	35.5	M22×1.5	8	27
ø100	13	48	134	69	50	6	35	94	117	18	M20 depth 27	12	23	83	183	153	35.5	M26×1.5	8	27

● Axial Foot Type (Compact Type) (LB2)





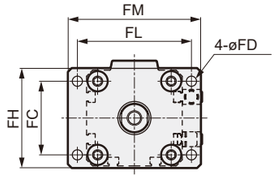
● For rod end male thread

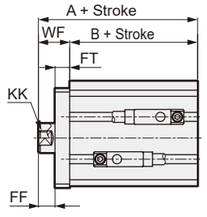


Code / Bore Size (mm)	Common dimension AB	AD	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	A	B	LX	For male thread a'	kk'	wf	LF
ø40	7	18	64	33	18.2	3.2	11.2	64	78	9.2	M8 depth 13	17	25	85.7	59.5	43.5	23.5	M14×1.5	15	23
φ50	9	22	78	39	22.7	3.2	14.7	79	95	11.2	M10 depth 15	18	29.5	89.7	60.5	37.5	28.5	M18×1.5	15	26.5
ø63	11	26	91.5	46	25.2	3.2	16.2	95	113	13.2	M10 depth 15	18	31	97.2	66	40	28.5	M18×1.5	15	28
ø80	13	39.5	114	59	30.5	4.5	19.5	118	140	16.5	M16 depth 21	20	35	110	73.5	43.5	35.5	M22×1.5	18	33
ø100	13	50	136	71	35.5	6	23	137	162	18	M20 depth 27	22	39	123	83	49	35.5	M26×1.5	18	35

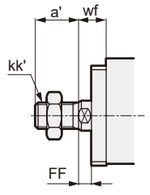
Outline Dimension Drawing

● Rod Side Flange Type (FA)



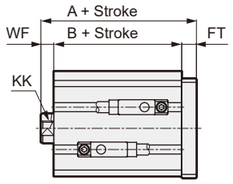


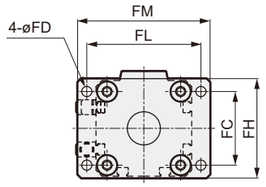
● For rod end male thread



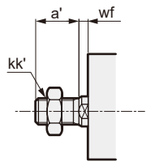
Code / Bore Size (mm)	Common dimension						For female thread					For male thread			
	FC	FD	FH	FL	FM	FT	FF	KK	WF	A	B	FF	a'	kk'	wf
ø40	40	5.5	54	62	72	8	9	M8 depth 13	17	76.5	59.5	7	23.5	M14×1.5	15
ø50	50	6.6	67	76	89	9	9	M10 depth 15	18	78.5	60.5	6	28.5	M18×1.5	15
ø63	60	9	80	92	108	9	9	M10 depth 15	18	84	66	6	28.5	M18×1.5	15
ø80	77	11	99	116	134	11	9	M16 depth 21	20	93.5	73.5	7	35.5	M22×1.5	18
ø100	94	11	117	136	154	11	11	M20 depth 27	22	105	83	7	35.5	M26×1.5	18

● Head Side Flange Type (FB)





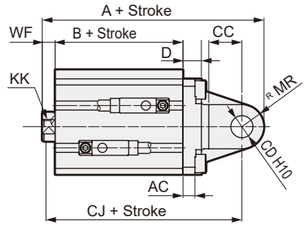
● For rod end male thread

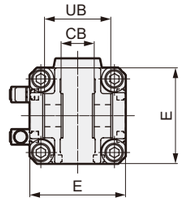


Code / Bore Size (mm)	Common dimension						For female thread				For male thread			
	FC	FD	FH	FL	FM	FT	KK	WF	A	B	a'	kk'	wf	
ø40	40	5.5	54	62	72	8	M8 depth 13	7	74.5	59.5	23.5	M14×1.5	5	
ø50	50	6.6	67	76	89	9	M10 depth 15	8	77.5	60.5	28.5	M18×1.5	5	
ø63	60	9	80	92	108	9	M10 depth 15	8	83	66	28.5	M18×1.5	5	
ø80	77	11	99	116	134	11	M16 depth 21	10	94.5	73.5	35.5	M22×1.5	8	
ø100	94	11	117	136	154	11	M20 depth 27	12	105	83	35.5	M26×1.5	8	

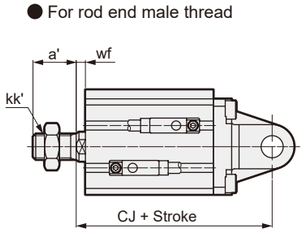
Outline Dimension Drawing

● Double Knuckle Clevis Type (CB)



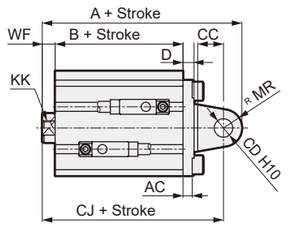


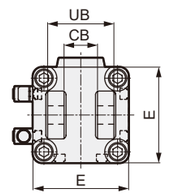
● For rod end male thread



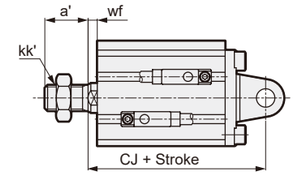
Code / Bore Size (mm)	Common dimension								For female thread					For male thread				
	AC	CB	CC	CD	D	E	MR	UB	KK	WF	A	B	CJ	a'	kk'	wf	With Switch CJ	
ø40	6.5	18 +0.4 +0.1	18	12	10	52	12	36 -0.1 -0.4	M8 depth 13	7	110.5	59.5	98.5	23.5	M14×1.5	5	96.5	
ø50	6.5	18 +0.4 +0.1	18	12	10	64	12	36 -0.1 -0.4	M10 depth 15	8	112.5	60.5	100.5	28.5	M18×1.5	5	97.5	
ø63	7.5	20 +0.4 +0.1	24	14	10	77	16	40 -0.1 -0.4	M10 depth 15	8	127	66	111	28.5	M18×1.5	5	108	
ø80	10.5	28 +0.4 +0.1	30	20	14	98	20	56 -0.1 -0.4	M16 depth 21	10	155.5	73.5	135.5	35.5	M22×1.5	8	133.5	
ø100	10.5	28 +0.4 +0.1	30	20	16	117	20	56 -0.1 -0.4	M20 depth 27	12	167	83	147	35.5	M26×1.5	8	143	

● Double clevis type (Compact type) (CB2)





● For rod end male thread

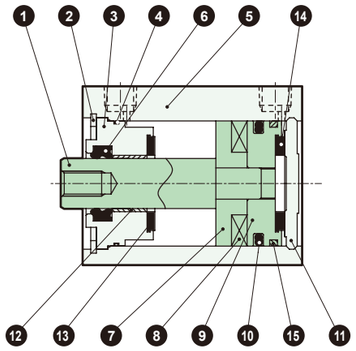


Code / Bore Size (mm)	Common dimension								For female thread					For male thread				
	AC	CB	CC	CD	D	E	MR	UB	KK	WF	A	B	CJ	a'	kk'	wf	With Switch CJ	
ø40	5	18 +0.4 +0.1	14	10	6	52	10	36 -0.1 -0.3	M8 depth 13	7	98.5	59.5	88.5	23.5	M14×1.5	5	86.5	
ø50	6	22 +0.4 +0.1	20	14	7	64	14	44 -0.1 -0.3	M10 depth 15	8	110.5	60.5	96.5	28.5	M18×1.5	5	93.5	
ø63	7	22 +0.4 +0.1	20	14	8	77	14	44 -0.1 -0.3	M10 depth 15	8	118	66	104	28.5	M18×1.5	5	101	
ø80	9	28 +0.4 +0.1	27	18	10	98	18	56 -0.1 -0.3	M16 depth 21	10	139.5	73.5	121.5	35.5	M22×1.5	8	119.5	
ø100	12	32 +0.4 +0.1	31	22	13	117	22	64 -0.1 -0.3	M20 depth 27	12	162	83	140	35.5	M26×1.5	8	136	

Internal Structure Diagram/Material

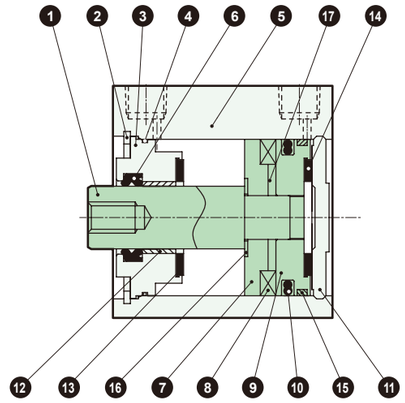
●SSD-KL4-40

(Double acting, High load with switch for strong magnetic field)



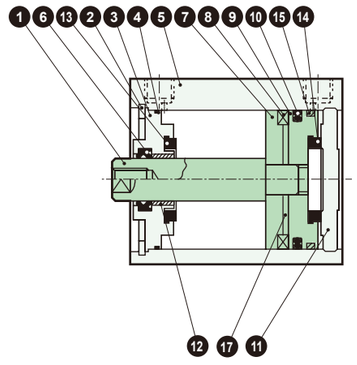
●SSD-KL4-50

(Double acting, High load with switch for strong magnetic field)



●SSD-KL4-63 to 100

(Double acting, High load with switch for strong magnetic field)



Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Piston Rod	Steel	Industrial Hard Chrome Plating	9	Piston	Aluminum Alloy	
2	C-type retaining ring	Steel	Zinc phosphate	10	Piston Packing	Nitrile Rubber	
3	Rod Metal	Aluminum Alloy	Alumite	11	Cover	Aluminum Alloy	Alumite
4	Rod metal gasket	Nitrile Rubber		12	Bushing	Bearing Alloy	
5	Cylinder Body	Aluminum Alloy	Hard Anodized	13	Cushion Rubber (R)	Urethane Rubber	
6	Rod Packing	Nitrile Rubber		14	Cushion rubber (H)	Urethane Rubber	
7	Spacer	ø40, ø63 to ø100: Aluminum alloy ø50: Resin	ø40, ø63 to ø100: Chromate	15	Wear Ring	Polyacetal	
				16	Spacer washer	Stainless Steel	
8	Magnet	Plastic		17	Collar	Aluminum Alloy	

For maintenance parts, please visit the CKD Component Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts.

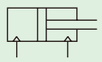
MEMO

Space-Saving Type
SSD2
SSG
SSD
CAT
MDC2
SMG
MSD
FC□
Cylinder Switch
Ending

Compact Cylinder Double Acting, Single Rod Type with Switch for Strong Magnetic Field with Coil Scraper

SSD-G1L4 Series

● Bore size: ø40, ø50, ø63, ø80, ø100

Circuit Diagram Symbol 

RoHS

Model No. Notation Method

SSD-G1L4 - 50 - 40 - V0 - D - N - LB - I

Model No.	❶	❷	❸	❹	❺	❻	❼
SSD-G1L4	50	40	V0	D	N	LB	I
Model No.	Bore size	Stroke	Switch Model No.	Number of Switches	Option	Mounting bracket	Accessories

❶Bore Size (mm)

Code	Content
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

❷Stroke (mm)

Bore size	Stroke	Intermediate Stroke
ø40 to ø100	20 to 50	Every 1 mm

*1: For the number of switches that can be mounted and the minimum stroke, see P. 656.
*2: The overall length dimension for intermediate stroke is the same as the standard stroke above it.

❸Switch Model No.

For switch details, please refer to P. 869.
Switches are included to the product and shipped.

	LED Indicator Special Function	Wiring (Output)	Load Voltage (V)		Load Current (mA)		Lead Wire *1		
			AC	DC	AC	DC	Straight	L-shape	
Contact		2-wire	110	24	7 to 20	5 to 50	V0□	-	
Reed	1-Color For Compact Strong Magnetic Field								

*1: For "□" in the switch model No., enter the code selected from the "*Lead wire length" table.
*2: Switches other than the above switch model No.s are also available. (Custom products) For details, refer to P. 869.

*** Lead wire length, connector specification**

Code	Content
Blank	1 m (Standard)
3	3 m (Option)
5	5 m (Option)

Example) Lead wire length
1 m V0
3 m V0[3]
5 m V0[5]

❹Number of Switches

Code	Content
R	With 1 pc on rod side
H	With 1 pc on head side
D	With 2 pcs

❺Option

Code	Content	
Blank	Rod end female thread	
N	Rod end male thread	

❻Mounting type Mounting brackets are shipped included to the product.

	Code	Content	
	LB	Axial Foot Type	
*1	LB2	Axial foot type (Compact type)	
*1	FA	Rod Side Flange Type	
	FB	Head Side Flange Type	
	CB	Double Clevis Type (pin and retaining ring included)	
	CB2	Clevis bracket (compact) (pin and snap ring included)	

*1: When LB2 or FA is selected, the piston rod protrusion dimension WF differs from the standard. See P. 659 and 660 for outline dimension drawings. Also, the model No. specifying the protrusion length will be printed at the end of the model No. on the nameplate included to the main body. For cylinder model No.s when ordering cylinders and LB2/FA brackets separately, please contact us.

❼Accessories

Code	Content	
I	Single Knuckle	
I2	Single Knuckle (compact)	
Y	Double Knuckle (pin and retaining ring included)	
Y2	Double knuckle (compact) (pin and snap ring included)	

*1: Selectable when rod end male thread "N" is selected.
*2: "I", "I2", "Y", "Y2" cannot be selected at the same time.

About Custom Product Specifications

For details, refer to P. 690 to 694.

Code	Content
-XP5	Knuckle Pin/Clevis Pin Split Pin
-XP7	Knuckle fixed by pin driving
-XP8	Knuckle pin/clevis pin split pin specification, knuckle fixed by pin driving
-A2	With 2 Rod Nuts
-R1, R2	With spigot joint
Rod End Shape Modification	Refer to Ending 11.

Model No. Example)

SSD-G1L4 - ..... - XP5

Switch Single Unit Model No. Notation Method

SW - V0

	❸
SW	V0
	Switch Model No.

Specifications

Item	SSD-G1L4				
Tube I.D. mm	ø40	ø50	ø63	ø80	ø100
Actuation method	Double Acting Type				
Operating Fluid	Compressed Air				
Max. working pressure MPa	1.0				
Min. Operating Pressure MPa	0.15		0.1		
Proof Pressure MPa	1.6				
Ambient Temperature °C	−10 to 60 (no freezing)				
Port Size	Rc1/8	Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+1.0}_{0}$				
Operating Piston Speed mm/s	50 to 500		50 to 300		
Cushion	None				
Lubrication	Not required (When lubricating, use turbine oil Class 1 ISO VG32)				
Allowable Absorbed Energy J	0.092	0.1	0.12	0.27	0.56

Stroke

Stroke (mm)		Applicable Bore				
		ø40	ø50	ø63	ø80	ø100
Standard Stroke	20	●	●	●	●	●
	30	●	●	●	●	●
	40	●	●	●	●	●
	50	●	●	●	●	●
Minimum Stroke (mm) *1		20				
Maximum Stroke (mm)		50				
Intermediate Stroke *2		1				

***1: For the number of switches attachable and minimum stroke, refer to the table below.**
*2: The overall length dimension for intermediate stroke is the same as the standard stroke above it.

Number of Switches Mounted and Min. Stroke (mm)

Switch Model No.	V0	
Number of Switches / Bore Size (mm)	1	2
ø40	20	20
ø50	20	20
ø63	20	20
ø80	20	20
ø100	20	20

Cylinder Weight Table (Weight with switch is when 2 cylinder switches are included)

(Unit: g)

Stroke (mm) / Bore Size (mm)	20	30	40	50
ø40	575	628	681	734
ø50	876	960	1044	1128
ø63	1240	1351	1462	1573
ø80	2074	2248	2422	2596
ø100	3000	3227	3454	3681

Theoretical Thrust Table

(Unit: N)

Bore size (mm)	Operating Direction	Operating Pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø40	Push	-	1.88×10^{2}	2.51×10^{2}	3.77×10^{2}	5.03×10^{2}	6.28×10^{2}	7.54×10^{2}	8.80×10^{2}	1.01×10^{3}	1.13×10^{3}	1.26×10^{3}
	Pull	-	1.58×10^{2}	2.11×10^{2}	3.17×10^{2}	4.22×10^{2}	5.28×10^{2}	6.33×10^{2}	7.39×10^{2}	8.44×10^{2}	9.50×10^{2}	1.06×10^{3}
ø50	Push	-	2.95×10^{2}	3.93×10^{2}	5.89×10^{2}	7.85×10^{2}	9.82×10^{2}	1.18×10^{3}	1.37×10^{3}	1.57×10^{3}	1.77×10^{3}	1.96×10^{3}
	Pull	-	2.47×10^{2}	3.30×10^{2}	4.95×10^{2}	6.60×10^{2}	8.25×10^{2}	9.90×10^{2}	1.15×10^{3}	1.32×10^{3}	1.48×10^{3}	1.65×10^{3}
ø63	Push	3.12×10^{2}	4.68×10^{2}	6.23×10^{2}	9.35×10^{2}	1.25×10^{3}	1.56×10^{3}	1.87×10^{3}	2.18×10^{3}	2.49×10^{3}	2.81×10^{3}	3.12×10^{3}
	Pull	2.80×10^{2}	4.20×10^{2}	5.61×10^{2}	8.41×10^{2}	1.12×10^{3}	1.40×10^{3}	1.68×10^{3}	1.96×10^{3}	2.24×10^{3}	2.52×10^{3}	2.80×10^{3}
ø80	Push	5.03×10^{2}	7.54×10^{2}	1.01×10^{3}	1.51×10^{3}	2.01×10^{3}	2.51×10^{3}	3.02×10^{3}	3.52×10^{3}	4.02×10^{3}	4.52×10^{3}	5.03×10^{3}
	Pull	4.54×10^{2}	6.80×10^{2}	9.07×10^{2}	1.36×10^{3}	1.81×10^{3}	2.27×10^{3}	2.72×10^{3}	3.17×10^{3}	3.63×10^{3}	4.08×10^{3}	4.54×10^{3}
ø100	Push	7.85×10^{2}	1.18×10^{3}	1.57×10^{3}	2.36×10^{3}	3.14×10^{3}	3.93×10^{3}	4.71×10^{3}	5.50×10^{3}	6.28×10^{3}	7.07×10^{3}	7.85×10^{3}
	Pull	7.15×10^{2}	1.07×10^{3}	1.43×10^{3}	2.14×10^{3}	2.86×10^{3}	3.57×10^{3}	4.29×10^{3}	5.00×10^{3}	5.72×10^{3}	6.43×10^{3}	7.15×10^{3}

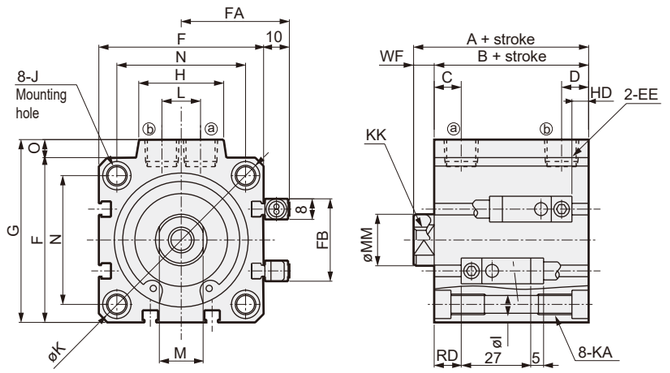
Mounting Bracket Model No. Display Method

Bore Size (mm) / Mounting bracket	ø40	ø50	ø63	ø80	ø100
Foot (LB)	SSD-LB-40	SSD-LB-50	SSD-LB-63	SSD-LB-80	SSD-LB-100
Foot (LB2)	SSD-LB2-40	SSD-LB2-50	SSD-LB2-63	SSD-LB2-80	SSD-LB2-100
Flange (FA/FB)	SSD-FA-40	SSD-FA-50	SSD-FA-63	SSD-FA-80	SSD-FA-100
Double Clevis (CB)	SSD-CB-40	SSD-CB-50	SSD-CB-63	SSD-CB-80	SSD-CB-100
Double knuckle clevis (CB2)	SSD-CB2-40	SSD-CB2-50	SSD-CB2-63	SSD-CB2-80	SSD-CB2-100

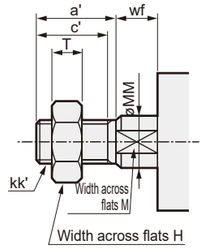
*1: Foot type mounting brackets come in sets of 2 pcs..
*2: When mounting with through-bolts, refer to the mounting bolt model number notation method (P. 682).

Outline Dimension Drawing

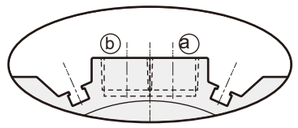
● SSD-G1L4-40 to 100



● Rod end male thread



[Bore size ø100]



* Only the ø100 port surface has switch grooves.

Code / Bore size (mm)	A	B	C	D	EE	F	FA	FB	G	H	I	J
ø40	66.5	59.5	12	8.5	Rc1/8	52	36	31	57	24	5.5	Counterbore ø9 depth 5.5 ø5.5 through hole
ø50	68.5	60.5	10.5	10.5	Rc1/4	64	42	32	71	33	6.9	Counterbore ø11 depth 6.5 ø6.9 through hole
ø63	74	66	13	11	Rc1/4	77	48.5	32	84	33	8.7	Counterbore ø14 depth 9 ø8.7 through hole
ø80	83.5	73.5	16	13	Rc3/8	98	59	32	104	38	10.5	Counterbore ø17.5 depth 11 ø10.5 through hole
ø100	95	83	23	15	Rc3/8	117	68.5	32	123.5	38	10.5	Counterbore ø17.5 depth 11 ø10.5 through hole

Code / Bore size (mm)	K	KA	KK	L	M	MM	N	O	WF	RD	HD	
ø40	69	M6 depth 11	M8 depth 13	10	14	16	40	5	7	23	7.5	
ø50	86	M8 depth 13	M10 depth 15	15	17	20	50	7	8	23	8.5	
ø63	103	M10 depth 25	M10 depth 15	15	17	20	60	7	8	23.5	13.5	
ø80	132	M12 depth 28	M16 depth 21	15	22	25	77	6	10	26	18.5	
ø100	156	M12 depth 28	M20 depth 27	15	27	30	94	6.5	12	30	24	

*1: The A and B dimensions for intermediate strokes are the same as the standard stroke above them.

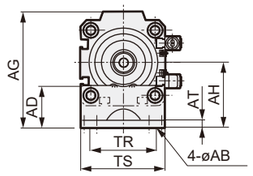
***2: For outline dimension drawings of individual accessories, see P. 379 to 381.**

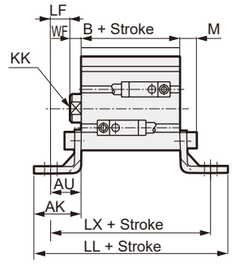
● Rod end male thread dimension table

Code / Bore Size (mm)	a'	c'	H	kk'	M	MM	T	wf'
ø40	23.5	20.5	22	M14 × 1.5	14	16	8	5
ø50	28.5	26	27	M18 × 1.5	17	20	11	5
ø63	28.5	26	27	M18 × 1.5	17	20	11	5
ø80	35.5	32.5	32	M22 × 1.5	22	25	13	8
ø100	35.5	32.5	41	M26 × 1.5	27	30	16	8

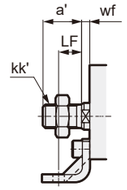
Outline Dimension Drawing

● Axial Foot Type (LB)



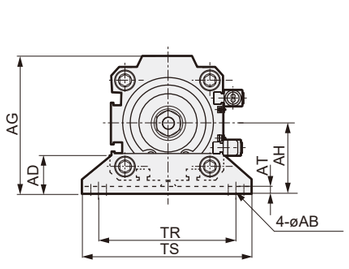


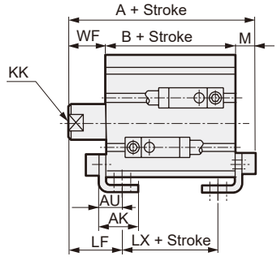
● In case of male thread at rod end



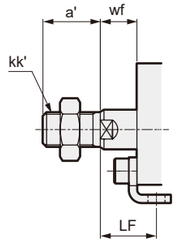
Code / Bore size (mm)	Common dimension AB	AD	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	B	LL	LX	For male thread a'	kk'	wf	LF
ø40	7	26	71	40	29	4.5	19	40	52	10	M8 depth 13	7	12	59.5	117.5	97.5	23.5	M14 × 1.5	5	14
ø50	9	23	79	40	34	4.5	22	46	64	13	M10 depth 15	8	14	60.5	128.5	104.5	28.5	M18 × 1.5	5	17
ø63	11	33	96.5	51	40	4.5	25	60	77	15	M10 depth 15	8	17	66	146	116	28.5	M18 × 1.5	5	20
ø80	13	42	116.5	61.5	50	6	35	77	98	18	M16 depth 21	10	25	73.5	173.5	143.5	35.5	M22 × 1.5	8	27
ø100	13	48	134	69	50	6	35	94	117	18	M20 depth 27	12	23	83	183	153	35.5	M26 × 1.5	8	27

● Axial foot (compact) (LB2)





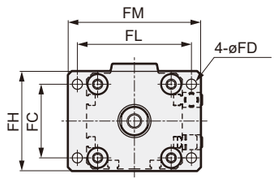
● In case of male thread at rod end

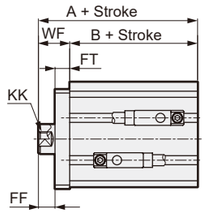


Code / Bore size (mm)	Common dimension AB	AD	AG	AH	AK	AT	AU	TR	TS	M	For female thread KK	WF	LF	A	B	LX	For male thread a'	kk'	wf	LF
ø40	7	18	64	33	18.2	3.2	11.2	64	78	9.2	M8 depth 13	17	25	85.7	59.5	43.5	23.5	M14 × 1.5	15	23
ø50	9	22	78	39	22.7	3.2	14.7	79	95	11.2	M10 depth 15	18	29.5	89.7	60.5	37.5	28.5	M18 × 1.5	15	26.5
ø63	11	26	91.5	46	25.2	3.2	16.2	95	113	13.2	M10 depth 15	18	31	97.2	66	40	28.5	M18 × 1.5	15	28
ø80	13	39.5	114	59	30.5	4.5	19.5	118	140	16.5	M16 depth 21	20	35	110	73.5	43.5	35.5	M22 × 1.5	18	33
ø100	13	50	136	71	35.5	6	23	137	162	18	M20 depth 27	22	39	123	83	49	35.5	M26 × 1.5	18	35

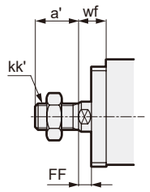
Outline Dimension Drawing

● Rod Side Flange Type (FA)



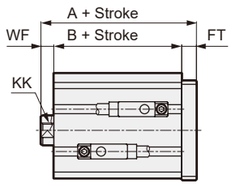


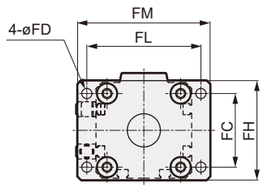
● For rod end male thread



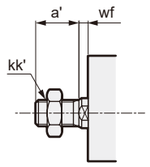
Code / Bore size (mm)	Common dimension						For female thread					For male thread			
	FC	FD	FH	FL	FM	FT	FF	KK	WF	A	B	FF	a'	kk'	wf
ø40	40	5.5	54	62	72	8	9	M8 depth 13	17	76.5	59.5	7	23.5	M14 × 1.5	15
ø50	50	6.6	67	76	89	9	9	M10 depth 15	18	78.5	60.5	6	28.5	M18 × 1.5	15
ø63	60	9	80	92	108	9	9	M10 depth 15	18	84	66	6	28.5	M18 × 1.5	15
ø80	77	11	99	116	134	11	9	M16 depth 21	20	93.5	73.5	7	35.5	M22 × 1.5	18
ø100	94	11	117	136	154	11	11	M20 depth 27	22	105	83	7	35.5	M26 × 1.5	18

● Head Side Flange Type (FB)





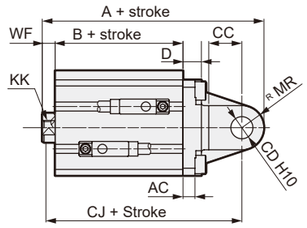
● For rod end male thread

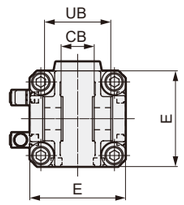


Code / Bore size (mm)	Common dimension						For female thread				For male thread			
	FC	FD	FH	FL	FM	FT	KK	WF	A	B	a'	kk'	wf	
ø40	40	5.5	54	62	72	8	M8 depth 13	7	74.5	59.5	23.5	M14 × 1.5	5	
ø50	50	6.6	67	76	89	9	M10 depth 15	8	77.5	60.5	28.5	M18 × 1.5	5	
ø63	60	9	80	92	108	9	M10 depth 15	8	83	66	28.5	M18 × 1.5	5	
ø80	77	11	99	116	134	11	M16 depth 21	10	94.5	73.5	35.5	M22 × 1.5	8	
ø100	94	11	117	136	154	11	M20 depth 27	12	106	83	35.5	M26 × 1.5	8	

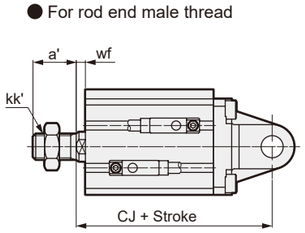
Outline Dimension Drawing

● Double Yoke Clevis Type (CB)



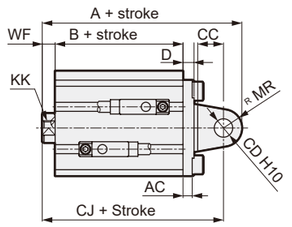


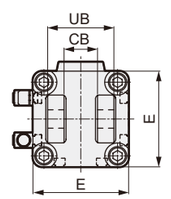
● For rod end male thread



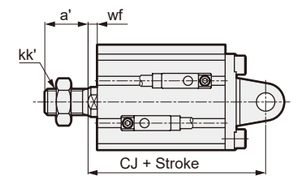
Code / Bore size (mm)	Common dimension								For female thread					For male thread				
	AC	CB	CC	CD	D	E	MR	UB	KK	WF	A	B	CJ	a'	kk'	wf	With Switch CJ	
ø40	6.5	18 +0.4 +0.1	18	12	10	52	12	36 -0.1 -0.4	M8 depth 13	7	110.5	59.5	98.5	23.5	M14 × 1.5	5	96.5	
ø50	6.5	18 +0.4 +0.1	18	12	10	64	12	36 -0.1 -0.4	M10 depth 15	8	112.5	60.5	100.5	28.5	M18 × 1.5	5	97.5	
ø63	7.5	20 +0.4 +0.1	24	14	10	77	16	40 -0.1 -0.3	M10 depth 15	8	127	66	111	28.5	M18 × 1.5	5	108	
ø80	10.5	28 +0.4 +0.1	30	20	14	98	20	56 -0.1 -0.4	M16 depth 21	10	155.5	73.5	135.5	35.5	M22 × 1.5	8	133.5	
ø100	10.5	28 +0.4 +0.1	30	20	16	117	20	56 -0.1 -0.4	M20 depth 27	12	167	83	147	35.5	M26 × 1.5	8	143	

● Double clevis type (Compact type)(CB2)





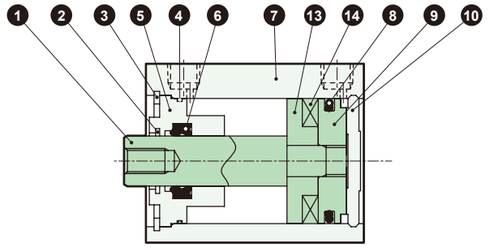
● For rod end male thread



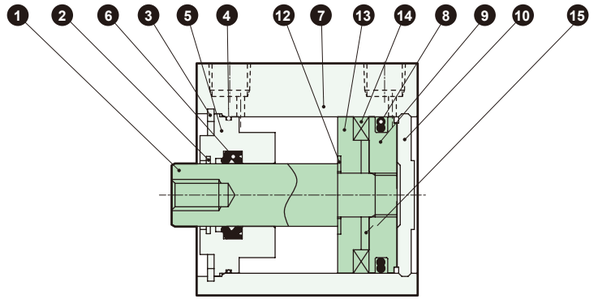
Code / Bore size (mm)	Common dimension								For female thread					For male thread				
	AC	CB	CC	CD	D	E	MR	UB	KK	WF	A	B	CJ	a'	kk'	wf	With Switch CJ	
ø40	5	18 +0.4 +0.1	14	10	6	52	10	36 -0.1 -0.3	M8 depth 13	7	98.5	59.5	88.5	23.5	M14 × 1.5	5	86.5	
ø50	6	22 +0.4 +0.1	20	14	7	64	14	44 -0.1 -0.3	M10 depth 15	8	110.5	60.5	96.5	28.5	M18 × 1.5	5	93.5	
ø63	7	22 +0.4 +0.1	20	14	8	77	14	44 -0.1 -0.3	M10 depth 15	8	118	66	104	28.5	M18 × 1.5	5	101	
ø80	9	28 +0.4 +0.1	27	18	10	98	18	56 -0.1 -0.3	M16 depth 21	10	139.5	73.5	121.5	35.5	M22 × 1.5	8	119.5	
ø100	12	32 +0.4 +0.1	31	22	13	117	22	64 -0.1 -0.3	M20 depth 27	12	162	83	140	35.5	M26 × 1.5	8	136	

Internal Structure Diagram/Material

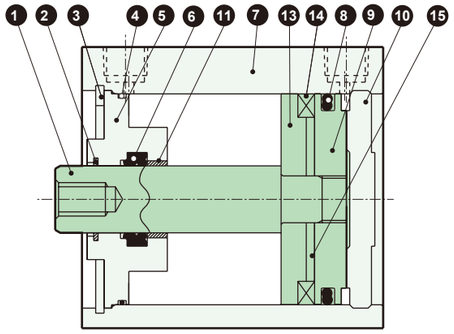
● SSD-G1L4-40
(double acting/with strong magnetic field proof switch/with coil scraper)



● SSD-G1L4-50
(double acting/with strong magnetic field proof switch/with coil scraper)



● SSD-G1L4-63 to 100
(double acting/with strong magnetic field proof switch/with coil scraper)



Part No.	Part Name	Material	Remarks	Part No.	Part Name	Material	Remarks
1	Piston Rod	Steel	Industrial Hard Chrome Plating	9	Piston	Aluminum Alloy	Chromate
2	Coil scraper	Phosphor bronze		10	Cover	Aluminum Alloy	Chromate
3	C-type retaining ring for bore	Steel	Zinc phosphate	11	Bushing	Bearing Alloy	
4	Rod metal gasket	Nitrile Rubber		12	Spacer washer	Stainless Steel	
5	Rod Metal	Aluminum Alloy		13	Spacer	ø40, ø63 to ø100: Aluminum alloy ø50: Resin	ø40, ø63 to ø100: Chromate
6	Rod Packing	Nitrile Rubber	Chromate				
7	Cylinder Body	Aluminum Alloy	Hard Anodized	14	Magnet	Plastic	
8	Piston Packing	Nitrile Rubber		15	Collar	Aluminum Alloy	

For maintenance parts, refer to the CKD component product site (https://www.ckd.co.jp/kiki/en/) -> "Model No." -> See "Maintenance Parts".

MEMO

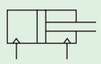
Space-Saving Type
SSD2
SSG
SSD
CAT
MDC2
SMG
MSD
FC□
Cylinder Switch
Ending

Compact Cylinder Double Acting, High Load Type, With Switch for Strong Magnetic Field, With Coil Scraper

SSD-KG1L4 Series

● Tube bore: ø40, ø50, ø63, ø83, ø100

Circuit Diagram Symbol



RoHS

Model No. Notation Method

SSD-KG1L4 - 50 - 40 - V0 - D - N - LB - I

Model No.	❶	❷	❸	❹	❺	❻	❼
	Bore size	Stroke	Switch Model No.	Number of Switches	Option	Mounting bracket	Accessories

❶Tube Inner Diameter (mm)

Code	Content
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

❷Stroke (mm)

Bore size	Stroke	Intermediate Stroke
ø40, ø50	20 to 150	Every 1 mm
ø63 to ø100	20 to 200	

*1: For the number of switches that can be mounted and the minimum stroke, see P. 666.
*2: The overall length dimension for intermediate stroke is the same as the standard stroke above it.

❸Switch Model No.

For switch details, please refer to P. 869. Switches are included to the product and shipped.

	Indicator LED Special Function	Wiring (Output)	Load Voltage (V)		Load Current (mA)		Lead Wire *1		
			AC	DC	AC	DC	Straight	L-shape	
Contact									
Reed	1-Color For Compact Strong Magnetic Field	2-wire	110	24	7 to 20	5 to 50	V0□	-	

*1: For "□" in the switch model number, enter the code selected from the "*Lead wire length" table.
*2: Switches other than the above switch model numbers are also available. (Custom products) For details, refer to P. 869.

***Lead wire length**

Code	Content
Blank	1 m (Standard)
3	3 m (Option)
5	5 m (Option)

Example) Lead wire length
1 m V0
3 m V0 3
5 m V0 5

❹Number of Switches

Code	Content
R	With 1 pc on rod side
H	With 1 pc on head side
D	With 2 pcs

❺Option

Code	Content	
Blank	Rod end female thread	
N	Rod end male thread	

❻Mounting type Mounting brackets are shipped included to the product.

	Code	Content	
	LB	Axial Foot Type	
*1	LB2	Axial foot type (Compact type)	
*1	FA	Rod Side Flange Type	
	FB	Head Side Flange Type	
	CB	Double Clevis Type (Pin and Retaining Ring Attached)	
	CB2	Clevis bracket (compact) (pin and snap ring attached)	

*1: When LB2 or FA is selected, the piston rod protrusion dimension WF differs from the standard. See P. 669 and 670 for outline dimension drawings. Also, the model number specifying the protrusion length will be printed at the end of the model number on the nameplate included to the main body. For cylinder model numbers when ordering cylinders and LB2/FA brackets separately, please contact us.

❼Accessories

Code	Content	
I	Single Knuckle	
I2	Single Knuckle (compact)	
Y	Double Knuckle (pin and retaining ring included)	
Y2	Double knuckle (compact) (pin and snap ring included)	

*1: Selectable when rod end male thread "N" is selected.
*2: "I", "I2", "Y", and "Y2" cannot be selected at the same time.

About Custom Product Specifications

For details, refer to P. 690 to P. 694.

Code	Content
-XP5	Knuckle Pin/Clevis Pin Split Pin
-XP7	Knuckle fixed by pin driving
-XP8	Knuckle pin/clevis pin split pin specification, knuckle fixed by pin driving
-A2	With 2 Rod Nuts
-R1, R2	With spigot joint
Rod End Shape Modification	Refer to Ending 11.

Model No. Example)
SSD-KG1L4 - ..... - XP5

Switch Single Unit Model No. Display Method

SW - V0

❸ Switch Model No.

Specifications

Item	SSD-KG1L4				
Bore size mm	ø40	ø50	ø63	ø80	ø100
Actuation method	Double Acting Type				
Operating Fluid	Compressed Air				
Maximum operating pressure MPa	1.0				
Min. Operating Pressure MPa	0.15		0.1		
Proof pressure MPa	1.6				
Ambient Temperature °C	-10 to 60 (No freezing)				
Port Size	Rc1/8	Rc1/4		Rc3/8	
Stroke tolerance mm	$^{+2.0}_{0}$				
Operating Piston Speed mm/s	50 to 500		50 to 300		
Cushion	Rubber Cushion				
Lubrication	Not required (When lubricating, use turbine oil Class 1 ISO VG32)				
Allowable absorbed energy J	0.63	0.98	1.56	2.51	3.92

Stroke

Stroke (mm)		Applicable Bore				
		ø40	ø50	ø63	ø80	ø100
Standard Stroke	20	●	●	●	●	●
	30	●	●	●	●	●
	40	●	●	●	●	●
	50	●	●	●	●	●
	60	●	●	●	●	●
	70	●	●	●	●	●
	80	●	●	●	●	●
	90	●	●	●	●	●
	100	●	●	●	●	●
Minimum Stroke (mm) *1		20				
Maximum Stroke (mm)		150		200		
Intermediate Stroke *2		Every 1 mm				

***1: For the number of switches attachable and minimum stroke, refer to the table below.**
*2: The overall length dimension for intermediate stroke is the same as the standard stroke above it.

Number of Switches Mounted and Min. Stroke (mm)

Switch Model No.	V0	
Number of Switches / Bore Size (mm)	1	2
ø40	20	20
ø50	20	20
ø63	20	20
ø80	20	20
ø100	20	20

Cylinder Weight Table (Weight with switch is when 2 cylinder switches are included)

(Unit: g)

Stroke (mm) / Bore Size (mm)	20	30	40	50	60	70	80	90	100
ø40	628	681	734	787	840	893	946	999	1052
ø50	960	1044	1128	1212	1296	1380	1464	1548	1632
ø63	1350	1461	1572	1683	1794	1905	2016	2127	2238
ø80	2247	2421	2595	2769	2943	3117	3291	3465	3639
φ100	3228	3455	3682	3909	4136	4363	4590	4817	5044

Theoretical Thrust Table

(Unit: N)

Bore size (mm)	Operating Direction	Operating Pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø40	Push	-	1.88×10^{2}	2.51×10^{2}	3.77×10^{2}	5.03×10^{2}	6.28×10^{2}	7.54×10^{2}	8.80×10^{2}	1.01×10^{3}	1.13×10^{3}	1.26×10^{3}
	Pull	-	1.58×10^{2}	2.11×10^{2}	3.17×10^{2}	4.22×10^{2}	5.28×10^{2}	6.33×10^{2}	7.39×10^{2}	8.44×10^{2}	9.50×10^{2}	1.06×10^{3}
ø50	Push	-	2.95×10^{2}	3.93×10^{2}	5.89×10^{2}	7.85×10^{2}	9.82×10^{2}	1.18×10^{3}	1.37×10^{3}	1.57×10^{3}	1.77×10^{3}	1.96×10^{3}
	Pull	-	2.47×10^{2}	3.30×10^{2}	4.95×10^{2}	6.60×10^{2}	8.25×10^{2}	9.90×10^{2}	1.15×10^{3}	1.32×10^{3}	1.48×10^{3}	1.65×10^{3}
ø63	Push	3.12×10^{2}	4.68×10^{2}	6.23×10^{2}	9.35×10^{2}	1.25×10^{3}	1.56×10^{3}	1.87×10^{3}	2.18×10^{3}	2.49×10^{3}	2.81×10^{3}	3.12×10^{3}
	Pull	2.80×10^{2}	4.20×10^{2}	5.61×10^{2}	8.41×10^{2}	1.12×10^{3}	1.40×10^{3}	1.68×10^{3}	1.96×10^{3}	2.24×10^{3}	2.52×10^{3}	2.80×10^{3}
ø80	Push	5.03×10^{2}	7.54×10^{2}	1.01×10^{3}	1.51×10^{3}	2.01×10^{3}	2.51×10^{3}	3.02×10^{3}	3.52×10^{3}	4.02×10^{3}	4.52×10^{3}	5.03×10^{3}
	Pull	4.54×10^{2}	6.80×10^{2}	9.07×10^{2}	1.36×10^{3}	1.81×10^{3}	2.27×10^{3}	2.72×10^{3}	3.17×10^{3}	3.63×10^{3}	4.08×10^{3}	4.54×10^{3}
ø100	Push	7.85×10^{2}	1.18×10^{3}	1.57×10^{3}	2.36×10^{3}	3.14×10^{3}	3.93×10^{3}	4.71×10^{3}	5.50×10^{3}	6.28×10^{3}	7.07×10^{3}	7.85×10^{3}
	Pull	7.15×10^{2}	1.07×10^{3}	1.43×10^{3}	2.14×10^{3}	2.86×10^{3}	3.57×10^{3}	4.29×10^{3}	5.00×10^{3}	5.72×10^{3}	6.43×10^{3}	7.15×10^{3}

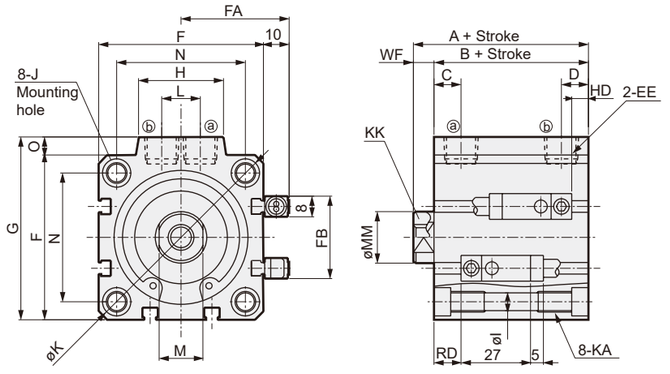
Mounting Bracket Model No. Display Method

Bore Size (mm) / Mounting bracket	ø40	ø50	ø63	ø80	ø100
Foot (LB)	SSD-LB-40	SSD-LB-50	SSD-LB-63	SSD-LB-80	SSD-LB-100
Foot (LB2)	SSD-LB2-40	SSD-LB2-50	SSD-LB2-63	SSD-LB2-80	SSD-LB2-100
Flange (FA/FB)	SSD-FA-40	SSD-FA-50	SSD-FA-63	SSD-FA-80	SSD-FA-100
Double Clevis (CB)	SSD-CB-40	SSD-CB-50	SSD-CB-63	SSD-CB-80	SSD-CB-100
Double knuckle clevis (CB2)	SSD-CB2-40	SSD-CB2-50	SSD-CB2-63	SSD-CB2-80	SSD-CB2-100

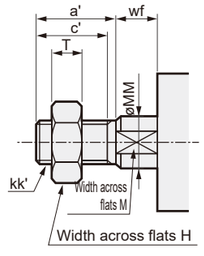
*1: Foot type mounting brackets are 2 pcs/set.
*2: When mounting with through-bolts, refer to the mounting bolt model number notation method (P. 682).

Outline Dimension Drawing

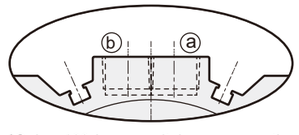
● SSD-KG1L4-40 to 100



● Rod end male thread part



[Bore size ø100]



*Only ø100 has a switch groove on the port surface

Code / Bore Size (mm)	A	B	C	D	EE	F	FA	FB	G	H	I	J
ø40	76.5	69.5	12	8.5	Rc1/8	52	36	31	57	24	5.5	Counterbore ø9 depth 5.5 ø5.5 through hole
ø50	78.5	70.5	10.5	10.5	Rc1/4	64	42	32	71	33	6.9	Counterbore ø11 depth 6.5 ø6.9 through hole
ø63	84	76	13	11	Rc1/4	77	48.5	32	84	33	8.7	Counterbore ø14 depth 9 ø8.7 through hole
ø80	93.5	83.5	16	13	Rc3/8	98	59	32	104	38	10.5	Counterbore ø17.5 depth 11 ø10.5 through hole
ø100	105	93	23	15	Rc3/8	117	68.5	32	123.5	38	10.5	Counterbore ø17.5 depth 11 ø10.5 through hole

Code / Bore Size (mm)	K	KA	KK	L	M	MM	N	O	WF	RD	HD
ø40	69	M6 depth 11	M8 depth 13	10	14	16	40	5	7	30.5	10
ø50	86	M8 depth 13	M10 depth 15	15	17	20	50	7	8	30.5	11
ø63	103	M10 depth 25	M10 depth 15	15	17	20	60	7	8	28.5	18.5
ø80	132	M12 depth 28	M16 depth 21	15	22	25	77	6	10	31	23.5
ø100	156	M12 depth 28	M20 depth 27	15	27	30	94	6.5	12	35	29

*1: The A and B dimensions for intermediate strokes are the same as the standard stroke above them.

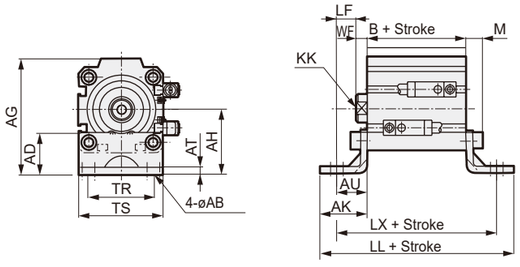
***2: For outline dimension drawings of individual accessories, see P. 379 to 381.**

● Rod end male thread part dimension table

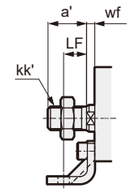
Code / Bore Size (mm)	a'	C'	H	kk'	M	MM	T	wf'
ø40	23.5	20.5	22	M14 × 1.5	14	16	8	5
ø50	28.5	26	27	M18 × 1.5	17	20	11	5
ø63	28.5	26	27	M18 × 1.5	17	20	11	5
ø80	35.5	32.5	32	M22 × 1.5	22	25	13	8
ø100	35.5	32.5	41	M26 × 1.5	27	30	16	8

Outline Dimension Drawing

● Axial Foot Type (LB)

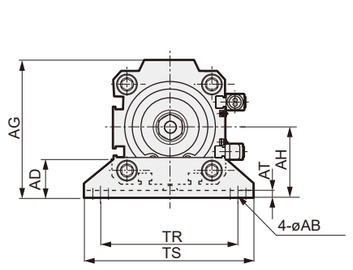


● For rod end male thread

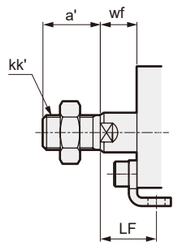


Code / Bore Size (mm)	AB	AD	AG	AH	AK	AT	AU	TR	TS	M	KK	WF	LF	With Switch B	With Switch LL	With Switch LX	For male thread a'	kk'	wf	LF
ø40	7	26	71	40	29	4.5	19	40	52	10	M8 depth 13	7	12	69.5	127.5	107.5	23.5	M14 × 1.5	5	14
ø50	9	23	79	40	34	4.5	22	46	64	13	M10 depth 15	8	14	70.5	138.5	114.5	28.5	M18 × 1.5	5	17
ø63	11	33	96.5	51	40	4.5	25	60	77	15	M10 depth 15	8	17	76	156	126	28.5	M18 × 1.5	5	20
ø80	13	42	116.5	61.5	50	6	35	77	98	18	M16 depth 21	10	25	83.5	183.5	153.5	35.5	M22 × 1.5	8	27
ø100	13	48	134	69	50	6	35	94	117	18	M20 depth 27	12	23	93	193	163	35.5	M26 × 1.5	8	27

● Axial Foot Type (Compact Type) (LB2)



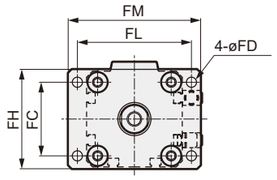
● For rod end male thread

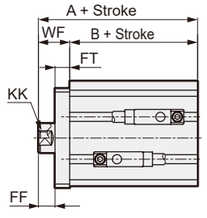


Code / Bore Size (mm)	AB	AD	AG	AH	AK	AT	AU	TR	TS	M	KK	WF	LF	With Switch A	With Switch B	With Switch LX	For male thread a'	kk'	wf	LF
ø40	7	18	64	33	18.2	3.2	11.2	64	78	9.2	M8 depth 13	17	25	95.7	69.5	53.5	23.5	M14 × 1.5	15	23
ø50	9	22	78	39	22.7	3.2	14.7	79	95	11.2	M10 depth 15	18	29.5	99.7	70.5	47.5	28.5	M18 × 1.5	15	26.5
ø63	11	26	91.5	46	25.2	3.2	16.2	95	113	13.2	M10 depth 15	18	31	107.2	76	50	28.5	M18 × 1.5	15	28
ø80	13	39.5	114	59	30.5	4.5	19.5	118	140	16.5	M16 depth 21	20	35	120	83.5	53.5	35.5	M22 × 1.5	18	33
ø100	13	50	136	71	35.5	6	23	137	162	18	M20 depth 27	22	39	133	93	59	35.5	M26 × 1.5	18	35

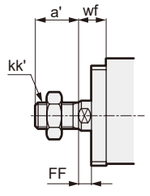
Outline Dimension Drawing

● Rod Side Flange Type (FA)



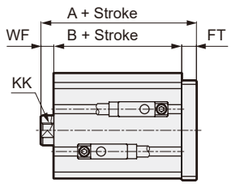


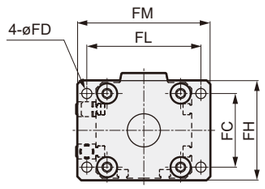
● For rod end male thread



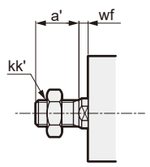
Code / Bore Size (mm)	Common dimension						For female thread					For male thread			
	FC	FD	FH	FL	FM	FT	FF	KK	WF	With Switch A	With Switch B	FF	a'	kk'	wf
ø40	40	5.5	54	62	72	8	9	M8 depth 13	17	86.5	69.5	7	23.5	M14 × 1.5	15
ø50	50	6.6	67	76	89	9	9	M10 depth 15	18	88.5	70.5	6	28.5	M18 × 1.5	15
ø63	60	9	80	92	108	9	9	M10 depth 15	18	94	76	6	28.5	M18 × 1.5	15
ø80	77	11	99	116	134	11	9	M16 depth 21	20	103.5	83.5	7	35.5	M22 × 1.5	18
ø100	94	11	117	136	154	11	11	M20 depth 27	22	115	93	7	35.5	M26 × 1.5	18

● Head Side Flange Type (FB)





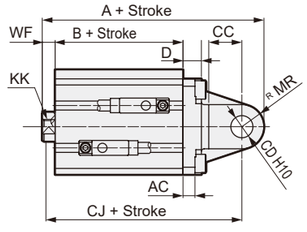
● For rod end male thread

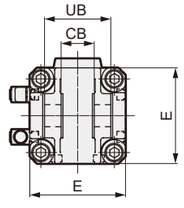


Code / Bore Size (mm)	Common dimension						For female thread					For male thread			
	FC	FD	FH	FL	FM	FT	KK	WF	With Switch A	With Switch B		a'	kk'	wf	With Switch CJ
ø40	40	5.5	54	62	72	8	M8 depth 13	7	84.5	69.5		23.5	M14 × 1.5	5	96.5
ø50	50	6.6	67	76	89	9	M10 depth 15	8	87.5	70.5		28.5	M18 × 1.5	5	103.5
ø63	60	9	80	92	108	9	M10 depth 15	8	93	76		28.5	M18 × 1.5	5	111
ø80	77	11	99	116	134	11	M16 depth 21	10	104.5	83.5		35.5	M22 × 1.5	8	129.5
ø100	94	11	117	136	154	11	M20 depth 27	12	116	93		35.5	M26 × 1.5	8	146

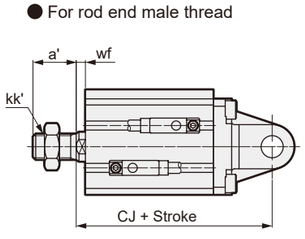
Outline Dimension Drawing

● Double Knuckle Clevis Type (CB)



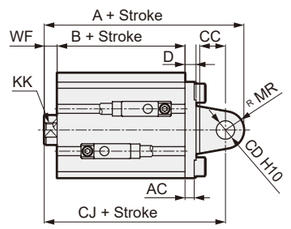


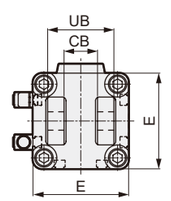
● For rod end male thread



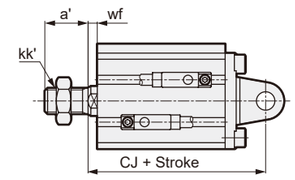
Code / Bore Size (mm)	Common dimension								For female thread					For male thread			
	AC	CB	CC	CD	D	E	MR	UB	KK	WF	With Switch A	With Switch B	With Switch CJ	a'	kk'	wf	With Switch CJ
ø40	6.5	$18^{+0.4}_{+0.1}$	18	12	10	52	12	$36^{-0.1}_{-0.4}$	M8 depth 13	7	120.5	69.5	108.5	23.5	M14 × 1.5	5	106.5
ø50	6.5	$18^{+0.4}_{+0.1}$	18	12	10	64	12	$36^{-0.1}_{-0.4}$	M10 depth 15	8	122.5	70.5	110.5	28.5	M18 × 1.5	5	107.5
ø63	7.5	$20^{+0.4}_{+0.1}$	24	14	10	77	16	$40^{-0.1}_{-0.4}$	M10 depth 15	8	137	76	121	28.5	M18 × 1.5	5	118
ø80	10.5	$28^{+0.4}_{+0.1}$	30	20	14	98	20	$56^{-0.1}_{-0.4}$	M16 depth 21	10	165.5	83.5	145.5	35.5	M22 × 1.5	8	143.5
ø100	10.5	$28^{+0.4}_{+0.1}$	30	20	16	117	20	$56^{-0.1}_{-0.4}$	M20 depth 27	12	177	93	157	35.5	M26 × 1.5	8	153

● Double clevis type (Compact type) (CB2)





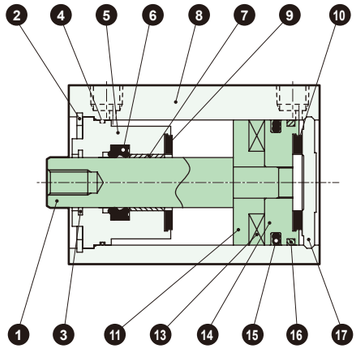
● For rod end male thread



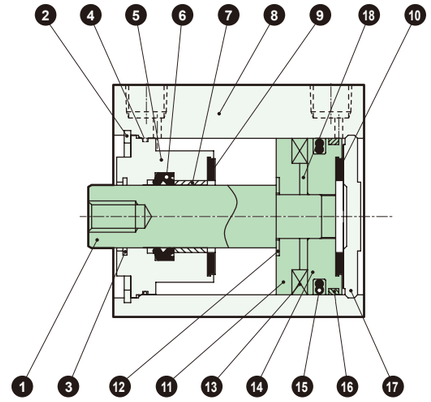
Code / Bore Size (mm)	Common dimension								For female thread					For male thread			
	AC	CB	CC	CD	D	E	MR	UB	KK	WF	With Switch A	With Switch B	With Switch CJ	a'	kk'	wf	With Switch CJ
ø40	5	$18^{+0.4}_{+0.1}$	14	10	6	52	10	$36^{-0.1}_{-0.3}$	M8 depth 13	7	108.5	69.5	98.5	23.5	M14 × 1.5	5	96.5
ø50	6	$22^{+0.4}_{+0.1}$	20	14	7	64	14	$44^{-0.1}_{-0.3}$	M10 depth 15	8	120.5	70.5	106.5	28.5	M18 × 1.5	5	103.5
ø63	7	$22^{+0.4}_{+0.1}$	20	14	8	77	14	$44^{-0.1}_{-0.3}$	M10 depth 15	8	128	76	114	28.5	M18 × 1.5	5	111
ø80	9	$28^{+0.4}_{+0.1}$	27	18	10	98	18	$56^{-0.1}_{-0.3}$	M16 depth 21	10	149.5	83.5	131.5	35.5	M22 × 1.5	8	129.5
ø100	12	$32^{+0.4}_{+0.1}$	31	22	13	117	22	$64^{-0.1}_{-0.3}$	M20 depth 27	12	172	93	150	35.5	M26 × 1.5	8	146

Internal Structure Diagram/Material

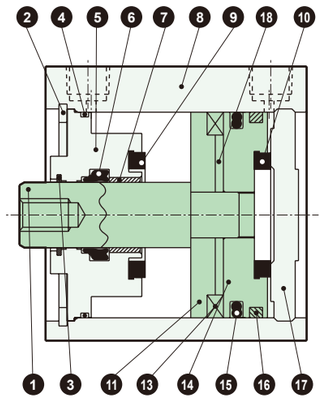
● SSD-KG1L4-40
(Double acting, High load type, With switch for strong magnetic field, With coil scraper)



● SSD-KG1L4-50
(Double acting, High load type, With switch for strong magnetic field, With coil scraper)



● SSD-KG1L4-63 to 100
(Double acting, High load type, With switch for strong magnetic field, With coil scraper)



Part No.	Part Name	Material	Remarks
1	Piston Rod	Steel	Industrial Hard Chrome Plating
2	C-type retaining ring for bore	Steel	Zinc phosphate
3	Coil scraper	Phosphor bronze	
4	Rod metal gasket	Nitrile Rubber	
5	Rod Metal	Aluminum Alloy	Chromate
6	Rod Packing	Nitrile Rubber	
7	Bushing	Bearing Alloy	
8	Cylinder Body	Aluminum Alloy	Hard Anodized
9	Cushion Rubber R	Urethane Rubber	
10	Cushion Rubber H	Urethane Rubber	

Part No.	Part Name	Material	Remarks
11	Spacer	ø40, ø63 to ø100: Aluminum alloy ø50: Resin	ø40, ø63 to ø100: Chromate
12	Spacer washer	Stainless Steel	
13	Magnet	Plastic	
14	Piston	Aluminum Alloy	Chromate
15	Piston Packing	Nitrile Rubber	
16	Wear Ring	Polyacetal	
17	Cover	Aluminum Alloy	Chromate
18	Collar	Aluminum Alloy	

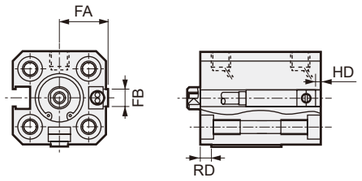
For maintenance parts, please visit the CKD Equipment Product Site (https: //www.ckd.co.jp/kiki/en/) → "model No." → Maintenance Parts .

MEMO

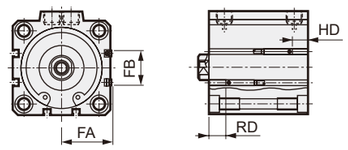
SSD-□L Outline Dimension Drawing with Switch

●SSD-L, SSD-XL, SSD-YL, SSD-OL, SSD-LF, SSD-ML
T0H/V, T5H/V, T2H/V, T3H/V, T3PH/V, T2□R3, T2WH/V, T3WH/V, T2WLH/V, T8H/V, T2JH/V, T1H/V, T2YD, T2YDT

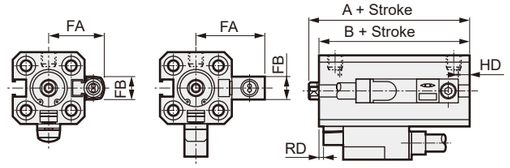
ø12, ø16



ø20 to ø160

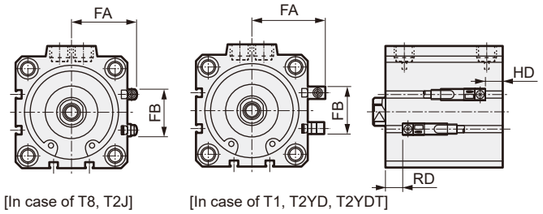


ø12, ø16



[In case of T8, T2J] [In case of T1, T2YD, T2YDT]

ø20 to ø160



[In case of T8, T2J] [In case of T1, T2YD, T2YDT]

Code	SSD-L, SSD-XL, SSD-YL, SSD-OL, SSD-LF				SSD-L (L1), SSD-XL (L1), SSD-YL (L1), SSD-OL (L1), SSD-(L1)F *5															
Tube I.D. (mm)	T0, T5, T2, T3, T3P, T2□R3				T2W, T3W, T2WL				T8				T2J				T1, T2YD, T2YDT			
	FA *4	FB	RD *3	HD	FA *4	FB	RD *3	HD *3	FA *4	FB	RD	HD	FA *4	FB	RD	HD	FA *4	FB	RD	HD
ø12	13	4.5	2.5	0	13	4.5	4	7.5	-	-	-	-	18.8	8	1	4.5	23.8	8	1	4.5
ø16	15	4.5	2 (3.5)	0	15	4.5	3.5 (5)	7.5 (6)	-	-	-	-	20.8	8	2.5 (2)	4.5 (3)	25.8	8	2.5 (2)	4.5 (3)
ø20	18.5	12.5	6.5	3	18.5	12.5	8	4.5	-	-	-	-	24.3	16	5	1.5	29.3	16	5	1.5
ø25	20.5	13.5	9.5	3	20.5	13.5	11	4.5	-	-	-	-	26.3	17	8	1.5	31.3	17	8	1.5
ø32	23	0.5	9	3.5	23	0.5	10.5	5	-	-	-	-	28.8	24	7.5	2	33.8	24	7.5	2
ø40	26.5	27.5	12	7	26.5	27.5	13.5	8.5	32.3	31	6	1	32.3	31	10.5	5.5	37.3	31	10.5	5.5
ø50	32.5	28.5	12.5	7.5	32.5	28.5	14	9	38.3	32	6.5	1.5	38.3	32	11	6	43.3	32	11	6
ø63	39	28.5	13	12.5	39	28.5	14.5	14	44.8	32	7	6.5	44.8	32	11.5	11	49.8	32	11.5	11
ø80	49.5	28.5	15.5	17.5	49.5	28.5	17	19	55.3	32	9.5	11.5	55.3	32	14	16	60.3	32	14	16
ø100	59	28.5	19.5	23	59	28.5	21	24.5	64.8	32	13.5	17	64.8	32	18	21.5	69.8	32	18	21.5
ø125	71.5	44.5	29.5	24.5	71.5	44.5	31	26	77.5	48	23.5	18.5	77.5	48	28	23	82.5	48	28	23
ø140	79.5	44.5	33	31	79.5	44.5	34.5	32.5	85.5	48	27	25	85.5	48	31.5	29.5	90.5	48	31.5	29.5
ø160	89.5	48.5	39	34	89.5	48.5	40.5	35.5	95.5	52	33	28	95.5	52	37.5	32.5	100.5	52	37.5	32.5

*1: For switch mountability, refer to the model number notation method for each variation.
*2: RD/HD dimensions for 5 strokes differ from these dimensions due to individual settings.
*3: () dimensions are for with rubber cushion.
*4: FA dimension is for straight type lead wire.
*5: Only for ø12 and 16, the model number will be L1.

Code	SSD-L1, SSD-XL1, SSD-OL1		SSD-YL1	
Bore Size (mm)	A	B	A	B
ø12	30.5	27	40.5	37
ø16	30.5	27	40.5	27

Code	SSD-ML				SSD-ML (L1) *4															
Bore Size (mm)	T0, T5, T2, T3, T3P, T2□R3				T2W, T3W, T2WL				T8				T2J				T1, T2YD, T2YDT			
	FA *3	FB	RD	HD	FA *3	FB	RD	HD	FA *3	FB	RD	HD	FA *3	FB	RD	HD	FA *3	FB	RD	HD
ø12	13	4.5	7.5	0	13	4.5	9	7.5	-	-	-	-	18.8	8	6	4.5	23.8	8	6	4.5
ø16	15	4.5	7	0	15	4.5	8.5	7.5	-	-	-	-	20.8	8	5.5	4.5	25.8	8	5.5	4.5
ø20	18.5	12.5	11.5	3	18.5	12.5	13	4.5	-	-	-	-	24.3	16	10	1.5	29.3	16	10	1.5
ø25	20.5	13.5	14.5	3	20.5	13.5	16	4.5	-	-	-	-	26.3	17	13	1.5	31.3	17	13	1.5
ø32	23	0.5	19	3.5	23	0.5	20.5	5	-	-	-	-	28.8	24	17.5	2	33.8	24	17.5	2
ø40	26.5	27.5	17	7	26.5	27.5	18.5	8.5	32.3	31	11	1	32.3	31	15.5	5.5	37.3	31	15.5	5.5
ø50	32.5	28.5	17.5	7.5	32.5	28.5	19	9	38.3	32	11.5	1.5	38.3	32	16	6	43.3	32	16	6
ø63	39	28.5	17.5	12.5	39	28.5	19	14	44.8	32	11.5	6.5	44.8	32	16	11	49.8	32	16	11

*1: For switch mountability, refer to the model number notation method for each variation.
*2: RD/HD dimensions for 5 strokes differ from these dimensions due to individual settings.
*3: FA dimension is for straight type lead wire.
*4: Only for ø12 and 16, the model number will be L1.

Code	SSD-ML1	
Bore Size (mm)	A	B
ø12	35.5	32
ø16	35.5	32

SSD-QL Outline Dimension Drawing with Switch

●SSD-QL-R, SSD-QL-H
T0H/V, T5H/V, T2H/V, T3H/V, T3PH/V, T2□R3, T2WH/V, T3WH/V, T2WLH/V, T8H/V, T2JH/V, T1H/V, T2YD, T2YDT

Code	SSD-QL-R																			
Bore Size (mm)	T0, T5, T2, T3, T3P, T2□R3				T2W, T3W, T2WL				T8				T2J				T1, T2YD, T2YDT			
	FA *3	FB	RD	HD	FA *3	FB	RD	HD	FA *3	FB	RD	HD	FA *3	FB	RD	HD	FA *3	FB	RD	HD
ø16	15	4.5	33	6.5	15	4.5	34.5	8	-	-	-	-	20.8	8	31.5	5	25.8	8	31.5	5
ø20	18.5	12.5	34.5	10	18.5	12.5	36	11.5	24.3	16	28.5	4	24.3	16	33	8.5	29.3	16	33	8.5
ø25	20.5	13.5	38	9.5	20.5	13.5	39.5	11	26.3	17	32	3.5	26.3	17	36.5	8	31.3	17	36.5	8
ø32	23	0.5	40.5	13	23	0.5	42	14.5	28.8	24	34.5	7	28.8	24	39	11.5	33.8	24	39	11.5
ø40	26.5	27.5	53	14	26.5	27.5	54.5	15.5	32.3	31	47	8	32.3	31	51.5	12.5	37.3	31	51.5	12.5
ø50	32.5	28.5	71	15	32.5	28.5	72.5	16.5	38.3	32	65	9	38.3	32	69.5	13.5	43.3	32	69.5	13.5
ø63	39	28.5	69	22.5	39	28.5	70.5	24	44.8	32	63	16.5	44.8	32	67.5	21	49.8	32	67.5	21
ø80	49.5	28.5	96	24	49.5	28.5	97.5	25.5	55.3	32	90	18	55.3	32	94.5	22.5	60.3	32	94.5	22.5
ø100	59	28.5	91	29.5	59	28.5	92.5	31	64.8	32	85	23.5	64.8	32	89.5	28	69.8	32	89.5	28

*1: For switch mountability, refer to the model number notation method for each variation.
*2: RD/HD dimensions for 5 strokes differ from these dimensions due to individual settings.
*3: FA dimension is for straight type lead wire.

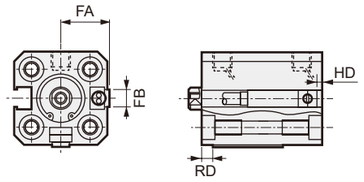
Code	SSD-QL-H																			
Bore Size (mm)	T0, T5, T2, T3, T3P, T2□R3				T2W, T3W, T2WL				T8				T2J				T1, T2YD, T2YDT			
	FA *3	FB	RD	HD	FA *3	FB	RD	HD	FA *3	FB	RD	HD	FA *3	FB	RD	HD	FA *3	FB	RD	HD
φ16	15	4.5	5	34.5	15	4.5	6.5	36	-	-	-	-	20.8	8	3.5	33	25.8	8	3.5	33
ø20	18.5	12.5	9.5	35	18.5	12.5	11	36.5	24.3	16	3.5	29	24.3	16	8	33.5	29.3	16	8	33.5
ø25	20.5	13.5	13	34.5	20.5	13.5	14.5	36	26.3	17	7	28.5	26.3	17	11.5	33	31.3	17	11.5	33
ø32	23	0.5	15.5	38	23	0.5	17	39.5	28.8	24	9.5	32	28.8	24	14	36.5	33.8	24	14	36.5
ø40	26.5	27.5	21.5	45.5	26.5	27.5	23	47	32.3	31	15.5	39.5	32.3	31	20	44	37.3	31	20	44
ø50	32.5	28.5	21	65	32.5	28.5	22.5	66.5	38.3	32	15	59	38.3	32	19.5	63.5	43.3	32	19.5	63.5
ø63	39	28.5	19	73	39	28.5	20.5	74.5	44.8	32	13	67	44.8	32	17.5	71.5	49.8	32	17.5	71.5
ø80	49.5	28.5	21.5	99	49.5	28.5	23	100.5	55.3	32	15.5	93	55.3	32	20	97.5	60.3	32	20	97.5
ø100	59	28.5	25.5	95	59	28.5	27	96.5	64.8	32	19.5	89	64.8	32	24	93.5	69.8	32	24	93.5

*1: For switch mountability, refer to the model number notation method for each variation.
*2: RD/HD dimensions for 5 strokes differ from these dimensions due to individual settings.
*3: FA dimension is for straight type lead wire.

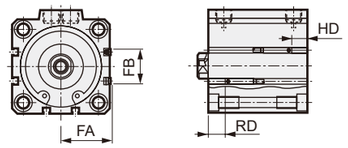
SSD-□L Outline Dimension Drawing with Switch

●SSD-G5L, SSD-KL, SSD-KL□C, SSD-KLF, SSD-KUL
T0H/V, T5H/V, T2H/V, T3H/V, T3PH/V, T2□R3, T2WH/V, T3WH/V, T2WLH/V

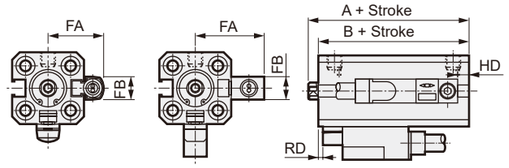
ø12, ø16



ø20 to ø160

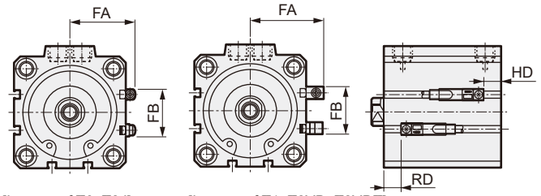


ø12, ø16



[In case of T8, T2J] [In case of T1, T2YD, T2YDT]

ø20 to ø160



[In case of T8, T2J] [In case of T1, T2YD, T2YDT]

Code	SSD-G5L																			
Bore Size (mm)	T0, T5, T2, T3, T3P, T2□R3				T2W, T3W, T2WL				T8				T2J				T1, T2YD, T2YDT			
	FA *3	FB	RD	HD	FA *3	FB	RD	HD	FA *3	FB	RD	HD	FA *3	FB	RD	HD	FA *3	FB	RD	HD
ø20	18.5	12.5	16.5	3	18.5	12.5	15	1.5	-	-	-	-	24.3	8	18	4.5	29.3	8	18	4.5
ø25	20.5	13.5	19.5	3	20.5	13.5	18	1.5	-	-	-	-	26.3	8	21	4.5	31.3	8	21	4.5
φ32	23	20.5	19	3.5	23	20.5	17.5	2	-	-	-	-	28.8	16	20.5	5	33.8	16	20.5	5
ø40	26.5	27.5	22	7	26.5	27.5	20.5	5.5	32.3	27.5	16	1	32.3	17	23.5	8.5	37.3	17	23.5	8.5
ø50	32.5	28.5	22.5	7.5	32.5	28.5	21	6	38.3	28.5	16.5	1.5	38.3	24	24	9	43.3	24	24	9
ø63	39	28.5	23	12.5	39	28.5	21.5	11	44.8	28.5	17	6.5	44.8	31	24.5	14	49.8	31	24.5	14
ø80	49.5	28.5	25.5	17.5	49.5	28.5	24	16	55.3	28.5	19.5	11.5	55.3	32	27	19	60.3	32	27	19
ø100	59	28.5	30.5	22	59	28.5	28	21.5	64.8	28.5	23.5	7	64.8	32	32	23.5	69.8	32	32	23.5

*1: For switch mountability, refer to the model number notation method for each variation.
*2: RD/HD dimensions for 5 strokes differ from these dimensions due to individual settings.
*3: FA dimension is for straight type lead wire.

Code	SSD-KL, SSD-KL-□C, SSD-KLF, SSD-KUL																			
Bore Size (mm)	T0, T5, T2, T3, T3P, T2□R3				T2W, T3W, T2WL				T8				T2J				T1, T2YD, T2YDT			
	FA *3	FB	RD *4	HD *4	FA *3	FB	RD *4	HD *4	FA *3	FB	RD *4	HD *4	FA *3	FB	RD *4	HD *4	FA *3	FB	RD *4	HD *4
ø12	13	4.5	4.5	2.5	13	4.5	4.5	2.5	-	-	-	-	18.8	8	4.5	1	23.8	8	4.5	1
ø16	15	4.5	4	3	15	4.5	4	3	-	-	-	-	20.8	8	4	1.5	25.8	8	4	1.5
ø20	18.5	12.5	8.5 (13.5)	6 (12.5)	18.5	12.5	8.5 (13.5)	6 (12.5)	24.3	16	2.5 (7.5)	0 (6.5)	24.3	16	8.5 (13.5)	4.5 (11)	29.3	16	8.5 (13.5)	4.5 (11)
ø25	20.5	13.5	12 (17)	5.5 (14)	20.5	13.5	12 (17)	5.5 (14)	26.3	17	6 (11)	0 (8)	26.3	17	12 (17)	4 (12.5)	31.3	17	12 (17)	4 (12.5)
ø32	23	20.5	14 (14)	8.5 (16)	23	20.5	14 (14)	8.5 (16)	28.8	24	8 (8)	3.5 (10)	28.8	24	12.5 (12.5)	7 (14.5)	33.8	24	12.5 (12.5)	7 (14.5)
ø40	26.5	27.5	19.5 (19.5)	9.5 (19)	26.5	27.5	19.5 (19.5)	9.5 (19)	32.3	31	13.5 (13.5)	3.5 (13)	32.3	31	18 (18)	8 (17.5)	37.3	31	18 (18)	8 (17.5)
ø50	32.5	28.5	20 (25)	10 (19)	32.5	28.5	20 (25)	10 (19)	38.3	32	14 (19)	4 (13)	38.3	32	18.5 (23.5)	8.5 (17.5)	43.3	32	18.5 (23.5)	8.5 (17.5)
ø63	39	28.5	18 (23)	17.5 (23)	39	28.5	18 (23)	17.5 (23)	44.8	32	12 (17)	11.5 (17)	44.8	32	16.5 (21.5)	16 (21.5)	49.8	32	16.5 (21.5)	16 (21.5)
ø80	49.5	28.5	20.5 (25.5)	22 (28)	49.5	28.5	20.5 (25.5)	22 (28)	55.3	32	14.5 (19.5)	16 (22)	55.3	32	19 (24)	20.5 (26.5)	60.3	32	19 (24)	20.5 (26.5)
ø100	59	28.5	24.5 (29.5)	28 (33.5)	59	28.5	24.5 (29.5)	28 (33.5)	64.8	32	18.5 (23.5)	22 (27.5)	64.8	32	23 (28)	26.5 (32)	69.8	32	23 (28)	26.5 (32)

*1: For switch mountability, refer to the model number notation method for each variation.
*2: RD/HD dimensions for 5 strokes differ from these dimensions due to individual settings.
*3: FA dimension is for straight type lead wire.
*4: Dimensions in ( ) are for strokes exceeding ø20:100, ø25 to ø50:150, ø63 to ø100:200.

SSD2-KG5L Outline Dimension Drawing with Switch

●SSD-KG5L

Code	SSD-KG5L											
Bore Size (mm)	T0, T5, T2, T3, T3P, T2□R3				T2W, T3W, T2WL				T8			
	FA *3	FB	RD *4	HD *4	FA *3	FB	RD *4	HD *4	FA *3	FB	RD *4	HD *4
ø20	18.5	12.5	18.5 (23.5)	6 (12.5)	18.5	12.5	18.5 (23.5)	4.5 (11)	24.3	12.5	12.5 (17.5)	0 (6.5)
ø25	20.5	13.5	22 (27)	5.5 (14)	20.5	13.5	22 (27)	4 (12.5)	26.3	13.5	16 (21)	0 (8)
ø32	23	20.5	24 (24)	8.5 (16)	23	20.5	22.5 (22.5)	7 (14.5)	28.8	20.5	18 (18)	2.5 (10)
ø40	26.5	27.5	29.5 (29.5)	9.5 (19)	26.5	27.5	28 (28)	8 (17.5)	32.3	27.5	23.5 (23.5)	3.5 (13)
ø50	32.5	28.5	30 (35)	10 (19)	32.5	28.5	28.5 (33.5)	8.5 (17.5)	38.3	28.5	24 (29)	4 (13)
ø63	39	28.5	28 (33)	17.5 (23)	39	28.5	26.5 (31.5)	16 (21.5)	44.8	28.5	22 (27)	11.5 (17)
ø80	49.5	28.5	30.5 (35.5)	22 (28)	49.5	28.5	29 (34)	20.5 (26.5)	55.3	28.5	24.5 (29.5)	16 (22)
ø100	59	28.5	34.5 (39.5)	28 (33.5)	59	28.5	33 (38)	26.5 (32)	64.8	28.5	28.5 (33.5)	22 (27.5)

Code	SSD-KG5L							
Bore Size (mm)	T2J				T1, T2YD, T2YDT			
	FA *3	FB	RD *4	HD *4	FA *3	FB	RD *4	HD *4
ø20	24.3	16	20 (25)	7.5 (14)	29.3	16	20 (25)	7.5 (14)
ø25	26.3	17	23.5 (28.5)	7 (15.5)	31.3	17	23.5 (28.5)	7 (15.5)
ø32	28.8	24	25.5 (25.5)	10 (17.5)	33.8	24	25.5 (25.5)	10 (17.5)
ø40	32.3	31	31 (31)	11 (20.5)	37.3	31	31 (31)	11 (20.5)
ø50	38.3	32	31.5 (36.5)	11.5 (20.5)	43.3	32	31.5 (36.5)	11.5 (20.5)
ø63	44.8	32	29.5 (34.5)	18.5 (24.5)	49.8	32	29.5 (34.5)	18.5 (24.5)
ø80	55.3	32	32 (37)	23.5 (29.5)	60.3	32	32 (37)	23.5 (29.5)
ø100	64.8	32	36 (41)	29.5 (35)	69.8	32	36 (41)	29.5 (35)

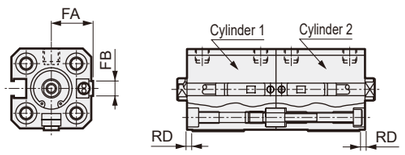
*1: For switch mountability, refer to the model number notation method for each variation.
*2: RD/HD dimensions for 5 strokes differ from these dimensions due to individual settings.
*3: FA dimension is for straight type lead wire.
*4: Dimensions in ( ) are for strokes exceeding ø20:100, ø25 to ø50:150, ø63 to ø100:200.

SSD-BL Outline Dimension Drawing with Switch

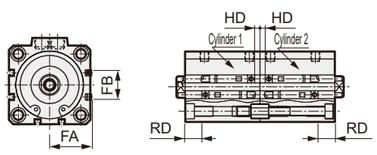
●SSD-BL

T0H/V, T5H/V, T2H/V, T3H/V, T3PH/V, T2□R3, T2WH/V, T3WH/V, T2WLH/V, T8H/V, T2JH/V, T1H/V, T2YD, T2YDT

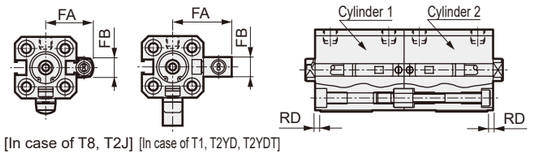
ø12 to ø16



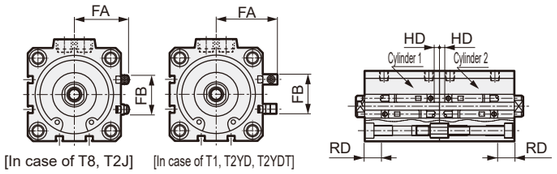
ø20 to ø100



ø12 to ø16



ø20 to ø100



Code	SSD-BL				SSD-BL (L1) *4															
Bore Size (mm)	T0, T5, T2, T3, T3P, T2□R3				T2W, T3W, T2WL				T8				T2J				T1, T2YD, T2YDT			
	FA *4	FB	RD *3	HD	FA *4	FB	RD *3	HD *3	FA *4	FB	RD	HD	FA *4	FB	RD	HD	FA *4	FB	RD	HD
ø12	13	4.5	2.5	0	13	4.5	4	7.5	-	-	-	-	18.8	8	1	4.5	23.8	8	1	4.5
ø16	15	4.5	2 (3.5)	0	15	4.5	3.5 (5)	7.5 (6)	-	-	-	-	20.8	8	2.5 (2)	4.5 (3)	25.8	8	2.5 (2)	4.5 (3)
ø20	18.5	12.5	6.5	3	18.5	12.5	8	4.5	-	-	-	-	24.3	16	5	1.5	29.3	16	5	1.5
ø25	20.5	13.5	9.5	3	20.5	13.5	11	4.5	-	-	-	-	26.3	17	8	1.5	31.3	17	8	1.5
ø32	23	0.5	9	3.5	23	0.5	10.5	5	-	-	-	-	28.8	24	7.5	2	33.8	24	7.5	2
ø40	26.5	27.5	12	7	26.5	27.5	13.5	8.5	32.3	31	6	1	32.3	31	10.5	5.5	37.3	31	10.5	5.5
ø50	32.5	28.5	12.5	7.5	32.5	28.5	14	9	38.3	32	6.5	1.5	38.3	32	11	6	43.3	32	11	6
ø63	39	28.5	13	12.5	39	28.5	14.5	14	44.8	32	7	6.5	44.8	32	11.5	11	49.8	32	11.5	11
ø80	49.5	28.5	15.5	17.5	49.5	28.5	17	19	55.3	32	9.5	11.5	55.3	32	14	16	60.3	32	14	16
ø100	59	28.5	19.5	23	59	28.5	21	24.5	64.8	32	13.5	17	64.8	32	18	21.5	69.8	32	18	21.5

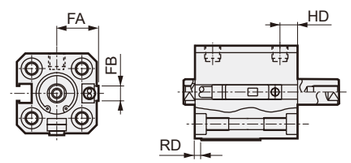
*1: For switch mountability, refer to the model number notation method for each variation.
*2: RD/HD dimensions for 5 strokes differ from these dimensions due to individual settings.
*3: FA dimension is for straight type lead wire.
*4: Only for ø12 and 16, the model number will be L1.

SSD-DL Outline Dimension Drawing with Switch

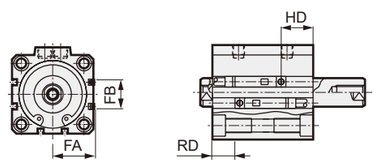
●SSD-DL

T0H/V, T5H/V, T2H/V, T3H/V, T3PH/V, T2□R3, T2WH/V, T3WH/V, T2WLH/V, T8H/V, T2JH/V, T1H/V, T2YD, T2YDT

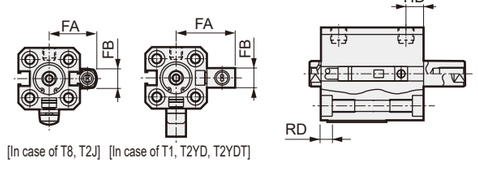
ø12 to ø16



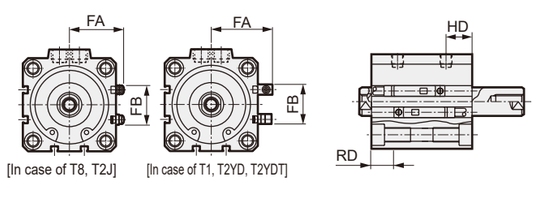
ø20 to ø160



ø12 to ø16



ø20 to ø160



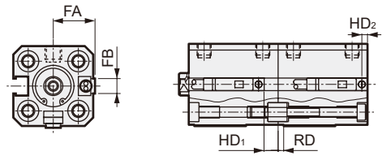
Code	SSD-DL																			
Bore Size (mm)	T0, T5, T2, T3, T3P, T2□R3				T2W, T3W, T2WL				T8				T2J				T1, T2YD, T2YDT			
	FA *3	FB	RD	HD	FA *3	FB	RD	HD	FA *3	FB	RD	HD	FA *3	FB	RD	HD	FA *3	FB	RD	HD
ø12	13	4.5	2.5	5	13	4.5	4	6.5	-	-	-	-	18.8	8	1	3.5	23.8	8	1	3.5
ø16	15	4.5	2	5	15	4.5	3.5	6.5	-	-	-	-	20.8	8	0.5	3.5	25.8	8	0.5	3.5
ø20	18.5	12.5	6.5	9.5	18.5	12.5	8	11	24.3	16	0.5	3.5	24.3	16	5	8	29.3	16	5	8
ø25	20.5	13.5	9.5	11.5	20.5	13.5	11	13	26.3	17	1.5	5.5	26.3	17	8	10	31.3	17	8	10
φ32	23	20.5	9	11	23	20.5	10.5	12.5	28.8	24	3	5	28.8	24	7.5	9.5	33.8	24	7.5	9.5
ø40	26.5	27.5	12	16.5	26.5	27.5	13.5	18	32.3	31	6	10.5	32.3	31	10.5	15	37.3	31	10.5	15
ø50	32.5	28.5	12.5	16.5	32.5	28.5	14	18	38.3	32	6.5	10.5	38.3	32	11	15	43.3	32	11	15
ø63	39	28.5	13	18	39	28.5	14.5	19.5	44.8	32	7	12	44.8	32	11.5	16.5	49.8	32	11.5	16.5
ø80	49.5	28.5	15.5	23	49.5	28.5	17	24.5	55.3	32	9.5	17	55.3	32	14	1.5	60.3	32	14	1.5
ø100	59	28.5	19.5	28.5	59	28.5	21	30	64.8	32	13.5	22.5	64.8	32	18	27	69.8	32	18	27
ø125	71.5	44.5	29.5	24.5	71.5	44.5	31	26	77.5	48	23.5	18.5	77.5	48	28	23	82.5	48	28	23
ø140	79.5	44.5	33	31	79.5	44.5	34.5	32.5	85.5	48	27	25	85.5	48	31.5	29.5	90.5	48	31.5	29.5
ø160	89.5	48.5	39	34	89.5	48.5	40.5	35.5	95.5	52	33	28	95.5	52	37.5	32.5	100.5	52	37.5	32.5

*1: For switch mountability, refer to the model number notation method for each variation.
*2: RD/HD dimensions for 5 strokes differ from these dimensions due to individual settings.
*3: FA dimension is for straight type lead wire.

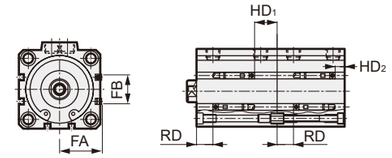
SSD-WL Outline Dimension Drawing with Switch

●SSD-WL
T0H/V, T5H/V, T2H/V, T3H/V, T3PH/V, T2□R3, T2WH/V, T3WH/V, T2WLH/V, T8H/V, T2JH/V, T1H/V, T2YD, T2YDT

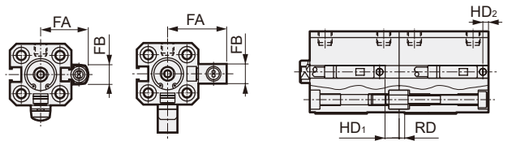
ø12 to ø16



ø20 to ø100

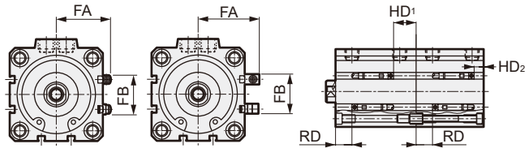


ø12 to ø16



[In case of T8, T2J] [In case of T1, T2YD, T2YDT]

ø20 to ø100



[In case of T8, T2J] [In case of T1, T2YD, T2YDT]

Code	SSD-WL				
Tube bore (mm)	T0, T5, T2, T3, T3P, T2□R3				
	FA *3	FB	RD	HD_1	HD_2
ø12	13	4.5	2.5	5	0
ø16	15	4.5	2	5	0
ø20	18.5	12.5	6.5	9.5	3
ø25	20.5	13.5	9.5	11.5	3
ø32	23	20.5	9	11	3.5
ø40	26.5	27.5	12	16.5	7
ø50	32.5	28.5	12.5	16.5	7.5
ø63	39	28.5	13	18	12.5
ø80	49.5	28.5	15.5	23	17.5
ø100	59	28.5	19.5	28.5	23

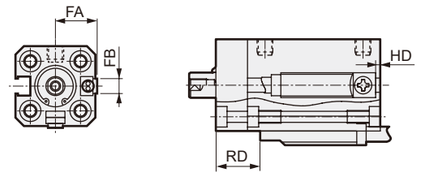
Code	SSD-WL(L1)																			
Bore Size (mm)	T2W, T3W, T2WL					T8					T2J					T1, T2YD, T2YDT				
	FA *3	FB	RD	HD_1	HD_2	FA *3	FB	RD	HD_1	HD_2	FA *3	FB	RD	HD_1	HD_2	FA *3	FB	RD	HD_1	HD_2
ø12	13	4.5	4	6.5	7.5	-	-	-	-	-	18.8	8	1	3.5	4.5	23.8	8	1	3.5	4.5
ø16	15	4.5	3.5	6.5	7.5	-	-	-	-	-	20.8	8	0.5	3.5	4.5	25.8	8	0.5	3.5	4.5
ø20	18.5	12.5	8	11	4.5	-	-	-	-	-	24.3	16	5	8	1.5	29.3	16	5	8	1.5
ø25	20.5	13.5	11	13	4.5	-	-	-	-	-	26.3	17	8	10	1.5	31.3	17	8	10	1.5
ø32	23	20.5	10.5	12.5	5	-	-	-	-	-	28.8	24	7.5	9.5	2	33.8	24	7.5	9.5	2
ø40	26.5	27.5	13.5	18	8.5	32.3	31	6	10.5	1	32.3	31	10.5	15	5.5	37.3	31	10.5	15	5.5
ø50	32.5	28.5	14	18	9	38.3	32	6.5	10.5	1.5	38.3	32	11	15	6	43.3	32	11	15	6
ø63	39	28.5	14.5	19.5	14	44.8	32	7	12	6.5	44.8	32	11.5	16.5	11	49.8	32	11.5	16.5	11
ø80	49.5	28.5	17	24.5	19	55.3	32	9.5	17	11.5	55.3	32	14	21.5	16	60.3	32	14	21.5	16
ø100	59	28.5	21	30	24.5	64.8	32	13.5	22.5	17	64.8	32	18	27	21.5	69.8	32	18	27	21.5

*1: For switch mountability, refer to the model number notation method for each variation.
*2: RD/HD dimensions for 5 strokes differ from these dimensions due to individual settings.
*3: FA dimension is for straight type lead wire.

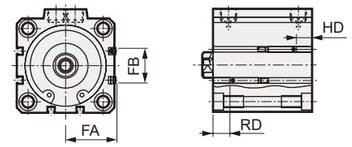
SSD-□L Outline Dimension Drawing with Switch

●SSD-G2L,G3L,KG2L,KG3L
T2WLH/V, T2YH/V

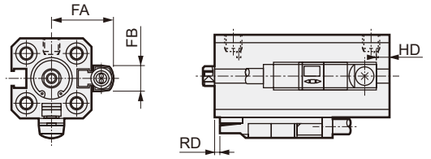
ø16



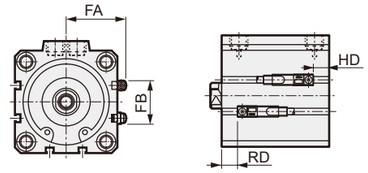
ø20 to ø100



ø16



ø20 to ø100

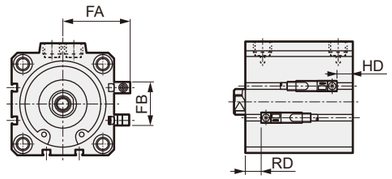


Code	SSD-G2L, G3L								SSD-KG2L, KG3L							
Bore Size (mm)	T2WL				T2YLH				T2WL				T2YLH			
	FA *3	FB	RD	HD	FA *3	FB	RD	HD	FA *3	FB	RD	HD	FA *3	FB	RD	HD
ø16	15	8	9.5	1.5	20.8	8	12.5	4.5	15	8	11.5	0	20.8	8	14.5	2.5
ø20	18.5	16	15	0	24.3	16	18	1.5	18.5	16	17	1.5	24.3	16	20	4.5
ø25	20.5	17	17	0	26.3	17	20	2	20.5	17	19.5	1.5	26.3	17	22.5	4.5
ø32	23	24	17.5	1.5	28.8	24	20.5	4.5	23	24	22.5	6.5	28.8	24	25.5	9.5
ø40	26.5	31	20.5	5	32.3	31	23.5	8	26.5	31	28	7.5	32.3	31	31	10.5
ø50	32.5	32	20.5	6	38.3	32	23.5	9	32.5	32	28	8.5	38.3	32	31	11.5
ø63	39	32	21	10	44.8	32	24	13	39	32	26	15	44.8	32	29	18
ø80	49.5	32	23.5	16	55.3	32	26.5	19	49.5	32	28.5	21	55.3	32	31.5	24
ø100	59	32	27.5	21.5	64.8	32	30.5	24.5	59	32	32.5	26.5	64.8	32	35.5	29.5

*1: For switch mountability, refer to the model number notation method for each variation.
*2: RD/HD dimensions for 5 strokes differ from these dimensions due to individual settings.
*3: FA dimension is for straight type lead wire.

●SSD-G1L, G4L, DG1L, DG4L, KG1L, KG4L
T2YD, T2YDT

ø25 to ø100



Code	SSD-G1L, G4L				SSD-DG1L, DG4L				SSD-KG1L, KG4L			
Bore Size (mm)	T2YD, T2YDT											
	FA	FB	RD	HD	FA	FB	RD	HD	FA	FB	RD *3	HD *3
ø25	31.3	17	20	2	31.3	17	20	21.5	31.3	17	22.5 (27.5)	4.5 (13)
ø32	33.8	24	17.5	2	33.8	20.5	20.5	22	33.8	24	25.5 (25.5)	9.5 (17)
ø40	37.3	31	20.5	5.5	37.3	27.5	23.5	27.5	37.3	31	31 (31)	10.5 (20)
ø50	43.3	32	21	6	43.3	28.5	23.5	27.5	43.3	32	31 (36)	11.5 (20.5)
ø63	49.8	32	21.5	11	49.8	28.5	24	28.5	49.8	32	29 (34)	18 (23.5)
ø80	60.3	32	24	16	60.3	28.5	26.5	35	60.3	32	31.5 (36.5)	24 (29.5)
ø100	69.8	32	28	21.5	69.8	28.5	30.5	40.5	69.8	32	35.5 (40.5)	29.5 (35)

*1: For switch mountability, refer to the model number notation method for each variation.
*2: RD/HD dimensions for 5 strokes differ from these dimensions due to individual settings.
*3: Dimensions in ( ) are for strokes exceeding ø25 to ø50:150, ø63 to ø100:200.

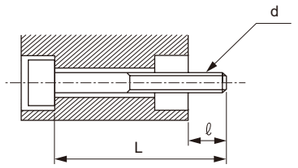
Mounting Bolt Model Number Notation Method

Bolts come in a set of 4.

SSD - BOLT - M5×30

1 Mounting Bolt d×L

How to Read the List



Material: Steel
Treatment: Black Oxide

d: Mounting bolt screw diameter
L: Mounting bolt length
ℓ: Mating side screw-in possible length
(Note) Mounting bolts are indicated by d × L.

For SSD-□

Model No.	ℓ	d×L
SSD-12- 5	6.5	M3×25
10		×30
15		×35
20		×40
25		×45
30		×50
SSD-16- 5		M3×25
10		×30
15		×35
20		×40
25		×45
30		×50
SSD-20- 5	6	M5×25
10		×30
15		×35
20		×40
25		×45
30		×50
SSD-25- 5	8	M5×30
10		×35
15		×40
20		×45
25		×50
30		×55
40		×65
50		×75
SSD-32- 5	7.5	M5×30
10		×35
15		×40
20		×45
25		×50
30		×55
40		×65
50		×75

Model No.	ℓ	d×L
SSD-40- 5	6	M5×35
10		×40
15		×45
20		×50
25		×55
30		×60
40		×70
50		×80
SSD-50- 5	11	M6×40
10		×45
15		×50
20		×55
25		×60
30		×65
40		×75
50		×85
SSD-63- 5	13	M8×45
10		×50
20		×60
30		×70
40		×80
50		×90
SSD-80- 5	17.5	M10×55
10		×60
20		×70
30		×80
40		×90
50		×100

Model No.	ℓ	d×L
SSD-100- 5	18	M10×65
10		×70
20		×80
30		×90
40		×100
50		×110
SSD-125- 10	21	M12×90
20		×100
30		×110
40		×120
50		×130
60		×140
70		×150
80		×160
90		×170
100		×180
SSD-140- 10	21	M12×100
20		×110
30		×120
40		×130
50		×140
60		×150
70		×160
80		×170
90		×180
100		×190
SSD-160- 10	24.2	M14×100
20		×110
30		×120
40		×130
50		×140
60		×150
70		×160
80		×170
90		×180
100		×190

For SSD-L-□

Model No.	ℓ	d×L
SSD-L-12- 5	6.5	M3×35
10		×35
15		×40
20		×45
25		×50
30		×55
SSD-L-16- 5		M3×35
10		×35
15		×40
20		×45
25		×50
30		×55
SSD-L-20- 5	6	M5×35
10		×40
15		×45
20		×50
25		×55
30		×60
SSD-L-25- 5	8	M5×40
10		×45
15		×50
20		×55
25		×60
30		×65
40		×75
50		×85
SSD-L-32- 5	7.5	M5×40
10		×45
15		×50
20		×55
25		×60
30		×65
40		×75
50		×85

Model No.	ℓ	d×L
SSD-L-40- 5	6	M5×45
10		×50
15		×55
20		×60
25		×65
30		×70
40		×80
50		×90
SSD-L-50- 5	11	M6×50
10		×55
15		×60
20		×65
25		×70
30		×75
40		×85
50		×95
SSD-L-63- 5	13	M8×55
10		×60
20		×70
30		×80
40		×90
50		×100
SSD-L-80- 5	17.5	M10×65
10		×70
20		×80
30		×90
40		×100
50		×110

Model No.	ℓ	d×L
SSD-L-100- 5	18	M10×75
10		×80
20		×90
30		×100
40		×110
50		×120
SSD-L-125- 10	21	M12×90
20		×100
30		×110
40		×120
50		×130
60		×140
70		×150
80		×160
90		×170
100		×180
SSD-L-140- 10	21	M12×100
20		×110
30		×120
40		×130
50		×140
60		×150
70		×160
80		×170
90		×180
100		×190
SSD-L-160- 10	24.2	M14×100
20		×110
30		×120
40		×130
50		×140
60		×150
70		×160
80		×170
90		×180
100		×190

For SSD-X-Y-□

Model No.	ℓ	d×L
SSD-X-Y-12- 5	6.5	M3×25
10		×30
-16- 5		M3×25
10		×30
-20- 5	6	M5×25
10		×30

Model No.	ℓ	d×L
SSD-X-Y-25- 5	8	M5×30
10		×35
-32- 5	7.5	M5×30
10		×35
-40-10	6	M5×40
20		×50

Model No.	ℓ	d×L
SSD-X-Y-50-10	11	M6×45
20		×55

For SSD-XL-YL-□

Model No.	ℓ	d×L
SSD-XL-YL-12- 5	6.5	M3×35
10		×35
-16- 5		M3×35
10		×35
-20- 5	6	M5×35
10		×40

Model No.	ℓ	d×L
SSD-XL-YL-25- 5	8	M5×40
10		×45
-32- 5	7.5	M5×40
10		×45
-40-10	6	M5×50
20		×60

Model No.	ℓ	d×L
SSD-XL-YL-50-10	11	M6×55
20		×65

For SSD-D-□

Model No.	ℓ	d×L
SSD-D-12- 5	6.5	M3 × 30
10		×35
15		×40
20		×45
25		×50
30		×55
SSD-D-16- 5		M3 × 30
10		×35
15		×40
20		×45
25		×50
30		×55
SSD-D-20- 5	9.5	M5×35
10		×40
15		×45
20		×50
25		×55
30		×60
SSD-D-25- 5		M5×40
10		×45
15		×50
20		×55
25		×60
30		×65
40		×75
50		×85
SSD-D-32- 5	10	M5×40
10		×45
15		×50
20		×55
25		×60
30		×65
40		×75
50		×85

Model No.	ℓ	d×L
SSD-D-40- 5	6.5	M5×45
10		×50
15		×55
20		×60
25		×65
30		×70
40		×80
50		×90
SSD-D-50- 5	7.5	M6×45
10		×50
15		×55
20		×60
25		×65
30		×70
40		×80
50		×90
SSD-D-63- 5	13	M8×50
10		×55
20		×65
30		×75
40		×85
50		×95
SSD-D-80- 5	12.5	M10×55
10		×60
20		×70
30		×80
40		×90
50		×100
SSD-D-100- 5	13	M10×65
10		×70
20		×80
30		×90
40		×100
50		×110

Model No.	ℓ	d×L
SSD-D-125- 10	21	M12×90
20		×100
30		×110
40		×120
50		×130
60		×140
70		×150
80		×160
90		×170
100		×180
SSD-D-140- 10	21	M12×100
20		×110
30		×120
40		×130
50		×140
60		×150
70		×160
80		×170
90		×180
100		×190
SSD-D-160- 10	24.2	M14×100
20		×110
30		×120
40		×130
50		×140
60		×150
70		×160
80		×170
90		×180
100		×190

For SSD-DL-□

Model No.	ℓ	d×L
SSD-DL-12- 5	6.5	M3×35
10		×40
15		×45
20		×50
25		×55
30		×60
SSD-DL-16- 5		M3×35
10		×40
15		×45
20		×50
25		×55
30		×60
SSD-DL-20- 5	9.5	M5×45
10		×50
15		×55
20		×60
25		×65
30		×70
SSD-DL-25- 5		M5×50
10		×55
15		×60
20		×65
25		×70
30		×75
40		×85
50	14.5	×100
SSD-DL-32- 5	10	M5×50
10		×55
15		×60
20		×65
25		×70
30		×75
40		×85
50	15	×100

Model No.	ℓ	d×L
SSD-DL-40- 5	6.5	M5×55
10		×60
15		×65
20		×70
25		×75
30		×80
40		×90
50		×100
SSD-DL-50- 5	7.5	M6×55
10		×60
15		×65
20		×70
25		×75
30		×80
40		×90
50		×100
SSD-DL-63- 5	13	M8×60
10		×65
20		×75
30		×85
40		×95
50	18	×110
SSD-DL-80- 5	12.5	M10×65
10		×70
20		×80
30		×90
40		×100
50		×110
SSD-DL-100- 5	13	M10×75
10		×80
20		×90
30		×100
40		×110
50		×120

Model No.	ℓ	d×L
SSD-DL-125- 10	21	M12×90
20		×100
30		×110
40		×120
50		×130
60		×140
70		×150
80		×160
90		×170
100		×180
SSD-DL-140- 10	21	M12×100
20		×110
30		×120
40		×130
50		×140
60		×150
70		×160
80		×170
90		×180
100		×190
SSD-DL-160- 10	24.2	M14×100
20		×110
30		×120
40		×130
50		×140
60		×150
70		×160
80		×170
90		×180
100		×190

For SSD-K-□

Model No.	ℓ	d×L
SSD-K-12- 5	6.5	M3 × 30
10		×35
15		×40
20		×45
25		×50
30		×55
40		×65
50		×75
SSD-K-16- 5	6.5	M3 × 30
10		×35
15		×40
20		×45
25		×50
30		×55
40		×65
50		×75
SSD-K-20- 5	6	M5×30
10		×35
15		×40
20		×45
25		×50
30		×55
40		×65
50		×75
SSD-K-25- 10	8	M5×40
15		×45
20		×50
25		×55
30		×60
40		×70
50		×80
60		×90
70		×100
80		×110
90		×120
100		×130

Model No.	ℓ	d×L
SSD-K-32- 10	12.5	M5×50
15		×55
20		×60
25		×65
30		×70
40		×80
50		×90
60		×100
70		×110
80		×120
90		×130
100		×140
SSD-K-40- 10	6	M5×50
15		×55
20		×60
25		×65
30		×70
40		×80
50		×90
60		×100
70		×110
80		×120
90		×130
100		×140
SSD-K-50- 10	11	M6×55
15		×60
20		×65
25		×70
30		×75
40		×85
50	16	×95
60		×110
70		×120
80		×130
90		×140
100		×150

Model No.	ℓ	d×L
SSD-K-63- 10	13	M8×60
20		×70
30		×80
40		×90
50		×100
60		×110
70		×120
80		×130
90		×140
100		×150
SSD-K-80- 10	17.5	M10×70
20		×80
30		×90
40		×100
50		×110
60		×120
70		×130
80		×140
90		×150
100		×160
SSD-K-100- 10	18	M10×80
20		×90
30		×100
40		×110
50		×120
60		×130
70		×140
80		×150
90		×160
100		×170

For SSD-KL-□

Model No.	ℓ	d×L
SSD-KL-12- 5	6.5	M3×35
10		×40
15		×45
20		×50
25		×55
30		×60
40		×70
50		×80
SSD-KL-16- 5	6.5	M3×35
10		×40
15		×45
20		×50
25		×55
30		×60
40		×70
50		×80
SSD-KL-20- 5	6	M5×40
10		×45
15		×50
20		×55
25		×60
30		×65
40		×75
50		×85
SSD-KL-25- 10	8	M5×50
15		×55
20		×60
25		×65
30		×70
40		×80
50		×90
60		×100
70		×110
80		×120
90		×130
100		×140

Model No.	ℓ	d×L
SSD-KL-32- 10	12.5	M5×60
15		×65
20		×70
25		×75
30		×80
40		×90
50		×100
60		×110
70		×120
80		×130
90		×140
100		×150
SSD-KL-40- 10	6	M5×60
15		×65
20		×70
25		×75
30		×80
40		×90
50		×100
60		×110
70		×120
80		×130
90		×140
100		×150
SSD-KL-50- 10	11	M6×65
15		×70
20		×75
25		×80
30		×85
40		×95
50	16	×110
60		×120
70		×130
80		×140
90		×150
100		×160

Model No.	ℓ	d×L
SSD-KL-63- 10	13	M8×70
20		×80
30		×90
40		×100
50		×110
60		×120
70		×130
80		×140
90		×150
100		×160
SSD-KL-80- 10	17.5	M10×80
20		×90
30		×100
40		×110
50		×120
60		×130
70		×140
80		×150
90		×160
100		×170
SSD-KL-100- 10	18	M10×90
20		×100
30		×110
40		×120
50		×130
60		×140
70		×150
80		×160
90		×170
100		×180

For SSD-M-□

Model No.	ℓ	d×L
SSD-M-12- 5	6.5	M3 × 30
10		×35
15		×40
20		×45
25		×50
30		×55
SSD-M-16- 5	6.5	M3 × 30
10		×35
15		×40
20		×45
25		×50
30		×55
SSD-M-20- 5	6	M5×30
10		×35
15		×40
20		×45
25		×50
30		×55
SSD-M-25- 5	8	M5×35
10		×40
15		×45
20		×50
25		×55
30		×60
40		×70
50		×80

Model No.	ℓ	d×L
SSD-M-32- 5	7.5	M5×40
10		×45
15		×50
20		×55
25		×60
30		×65
40		×75
50		×85
SSD-M-40- 5	6	M5×40
10		×45
15		×50
20		×55
25		×60
30		×65
40		×75
50		×85
SSD-M-50- 5	11	M6×45
10		×50
15		×55
20		×60
25		×65
30		×70
40		×80
50		×90

Model No.	ℓ	d×L
SSD-M-63- 5	13	M8×50
10		×55
20		×65
30		×75
40		×85
50		×95

For SSD-ML-□

Model No.	ℓ	d×L
SSD-ML-12- 5	6.5	M3×40
10		×40
15		×45
20		×50
25		×55
30		×60
SSD-ML-16- 5	6.5	M3×40
10		×40
15		×45
20		×50
25		×55
30		×60
SSD-ML-20- 5	6	M5×40
10		×45
15		×50
20		×55
25		×60
30		×65
SSD-ML-25- 5	8	M5×45
10		×50
15		×55
20		×60
25		×65
30		×70
40		×80
50		×90

Model No.	ℓ	d×L
SSD-ML-32- 5	7.5	M5×50
10		×55
15		×60
20		×65
25		×70
30		×75
40		×85
50	12.5	×100
SSD-ML-40- 5	6	M5×50
10		×55
15		×60
20		×65
25		×70
30		×75
40		×85
50	11	×100
SSD-ML-50- 5	11	M6×55
10		×60
15		×65
20		×70
25		×75
30		×80
40		×90
50		×100

Model No.	ℓ	d×L
SSD-ML-63- 5	13	M8×60
10		×65
20		×75
30		×85
40		×95
50	18	×110

For SSD-Q□H/R

Model No.	ℓ	d×L
SSD-Q-16- 5	5.5	M3×60
10		×65
15		×70
20		×75
25		×80
30	10.5	×90
40		×100
50	Bolts are unavailable, so please install by screwing into the main body.	
SSD-Q-20- 5	12.5	M5×65
10		×70
15		×75
20		×80
25		×85
30		×90
40		×100
50		×110

Model No.	ℓ	d×L
SSD-Q-25- 10	9.5	M5×70
15		×75
20		×80
25		×85
30		×90
40		×100
50		×110
60		×120
70		×130
80		×140
90		×150
100		×160
SSD-Q-32- 10	13.5	M5×80
15		×85
20		×90
25		×95
30		×100
40		×110
50		×120
60		×130
70		×140
80		×150
90		×160
100		×170

Model No.	ℓ	d×L
SSD-Q-40- 10	10	M5×90
15		×95
20		×100
25		×105
30		×110
40		×120
50		×130
60		×140
70		×150
80		×160
90		×170
100		×180
SSD-Q-50- 10	12	M6×110
15		×115
20		×120
25		×125
30		×130
40		×140
50		×150
60		×160
70		×170
80		×180
90		×190
100		×200

Model No.	ℓ	d×L
SSD-Q-63- 10	19	M8×120
20		×130
30		×140
40		×150
50		×160
60		×170
70		×180
80		×190
90		×200
100		×210
SSD-Q-80- 10	12	M10×140
20		×150
30		×160
40		×170
50		×180
60		×190
70		×200
80		×210
90		×220
100		×230
SSD-Q-100- 10	12	M10×140
20		×150
30		×160
40		×170
50		×180
60		×190
70		×200
80		×210
90		×220
100		×230

For SSD-QL□H/R

Model No.	ℓ	d×L
SSD-QL-16- 5	5.5	M3×65
10		×70
15		×75
20		×80
25	10.5	×90
30	5.5	×90
40		×100
50	Bolts are unavailable, so please install by screwing into the main body.	
SSD-QL-20- 5	12.5	M5×75
10		×80
15		×85
20		×90
25		×95
30		×100
40		×110
50		×120

Model No.	ℓ	d×L
SSD-QL-25- 10	9.5	M5×80
15		×85
20		×90
25		×95
30		×100
40		×110
50		×120
60		×130
70		×140
80		×150
90		×160
100		×170
SSD-QL-32- 10	13.5	M5×90
15		×95
20		×100
25		×105
30		×110
40		×120
50		×130
60		×140
70		×150
80		×160
90		×170
100		×180

Model No.	ℓ	d×L
SSD-QL-40- 10	10	M5×100
15		×105
20		×110
25		×115
30		×120
40		×130
50		×140
60		×150
70		×160
80		×170
90		×180
100		×190
SSD-QL-50- 10	12	M6×120
15		×125
20		×130
25		×135
30		×140
40		×150
50		×160
60		×170
70		×180
80		×190
90		×200
100		×210

Model No.	ℓ	d×L
SSD-QL-63- 10	19	M8×130
20		×140
30		×150
40		×160
50		×170
60		×180
70		×190
80		×200
90		×210
100		×220
SSD-QL-80- 10	12	M10×150
20		×160
30		×170
40		×180
50		×190
60		×200
70		×210
80		×220
90		×230
100		×240
SSD-QL-100- 10	12	M10×150
20		×160
30		×170
40		×180
50		×190
60		×200
70		×210
80		×220
90		×230
100		×240

MEMO

Space-Saving Type
SSD2
SSG
SSD
CAT
MDC2
SMG
MSD
FC□
Cylinder Switch
Ending

Knuckle pin/Clevis pin cotter pin (-XP5)

Content: The retaining rings for knuckle pins and clevis pins will be split pins.

Model No. Notation Method

SSD-40-100-N-Y-XP5

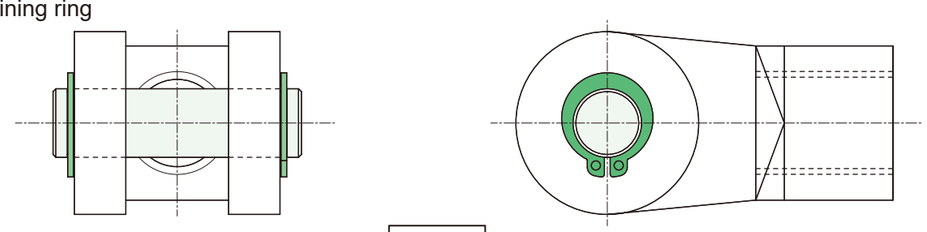
Model No.

Refer to the SSD Series Model Number Notation Method.

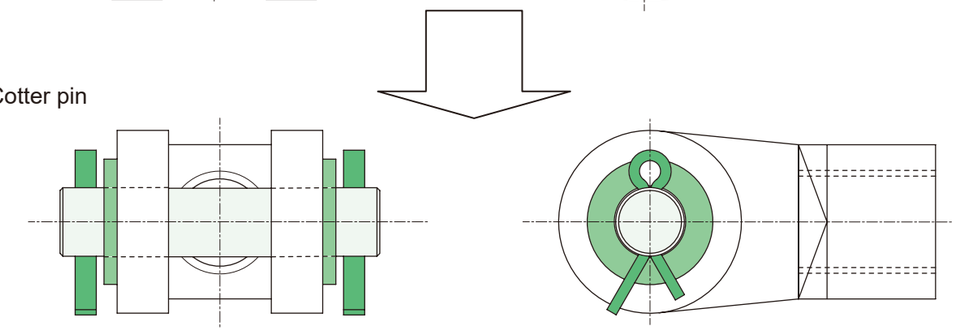
*Since the piston rod end shape is standard female thread, be sure to enter the "N" code.

Outer Dimensions Diagram

● Retaining ring



● Cotter pin



Pin Diameter	Split Pin Size
12	ø4 × 20
14	ø4 × 20
20	ø4 × 25
25	ø4 × 30
28	ø5 × 35
32	ø5 × 40
40	ø5 × 50
50	ø5 × 60

Knuckle fixed by pin driving (-XP7)

Content: Also, drive a spring pin into the knuckle to prevent loosening.

Model No. Notation Method

SSD-40-100-N-Y-XP7

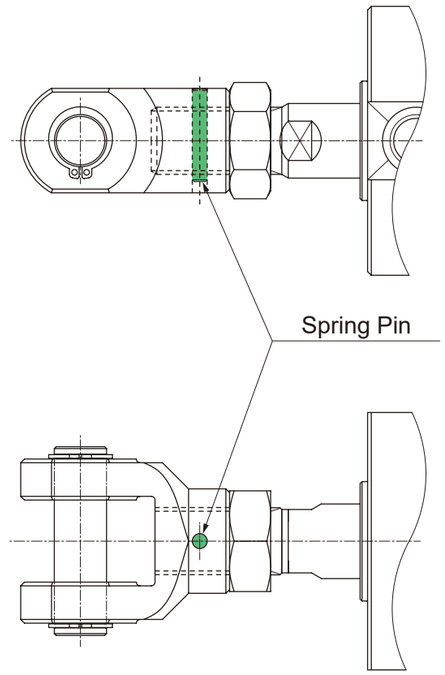
Model No.

Refer to the SSD Series Model Number Notation Method.

*Since the piston rod end shape is standard female thread, be sure to enter the "N" code.

Outer Dimensions Diagram

Same as with Knuckle specification.
(Spring pin driving direction varies depending on the model.)



Knuckle pin/Clevis pin cotter pin specification, Knuckle fixed by pin driving (-XP8)

Content: The retaining rings for knuckle pins and clevis pins will be split pins. Also, drive a spring pin into the knuckle to prevent loosening. (XP5 + XP7)

Model No. Notation Method

SSD - 40 - 100 - N - Y - XP8

Model No.

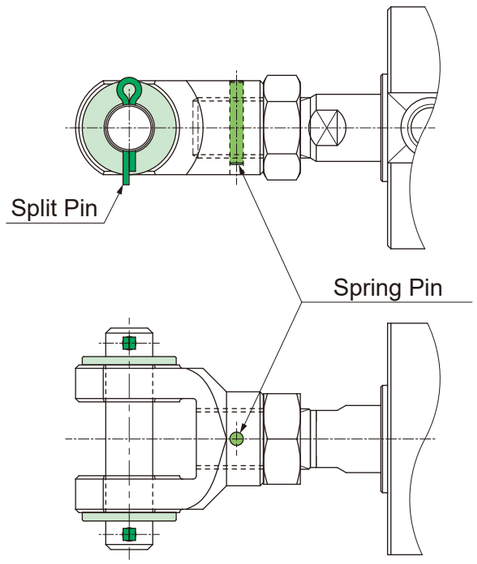
Refer to the SSD Series Model Number Notation Method.

*Since the piston rod end shape is standard female thread, be sure to enter the "N" code.

Outer Dimensions Diagram

Mounting dimensions are the same as with Knuckle specification.

This is a combination of XP5 (P. 690) and XP7 (P. 691).



Fluororubber packing type (-T2)

Content: Change the rod packing, piston packing and O-rings to FKM.

Model No. Notation Method

SSD - T2 - 40 - 100

Model No.

SSD - K T2 L - 40 - 100

Model No.

Refer to the SSD Series Model Number Notation Method.

Outer Dimensions Diagram

Same as standard type.

With 2 rod nuts (-A2)

Content: Shipped with 2 rod nuts, same as standard.

Model No. Notation Method

SSD - 50 - 50 - NA2

Model No.

Refer to the SSD Series Model Number Notation Method.

*Since the piston rod end shape is standard female thread, be sure to enter the "N" code.

Outer Dimensions Diagram

Same as standard type except that 2 rod nuts are included.

With spigot joint (-R1, R2)

Content: Provide a spigot at the cylinder shaft center.

Model No. Notation Method

*Indicated without a hyphen immediately after the option code.

SSD-L - 32 - 50 - N R1

Model No. ❶With spigot joint

Refer to the SSD Series Model Number Notation Method.

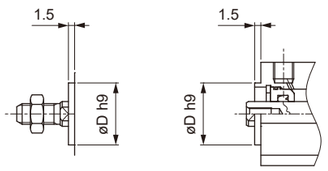
❶With spigot joint

Code	Content
R1	Rod side with spigot joint
R2	Head side with spigot joint

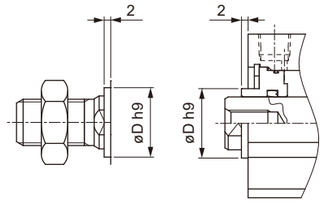
Outer Dimensions Diagram

●Rod side with spigot joint (R1)

• ø12, ø16



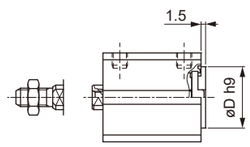
• Fø20 to ø100



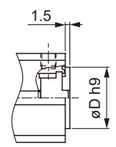
Bore	øD
ø12	15
ø16	20
ø20	13
ø25	15
ø32	21
ø40	28
ø50	35
ø63	35
ø80	43
ø100	59

●Head side with spigot joint (R2)

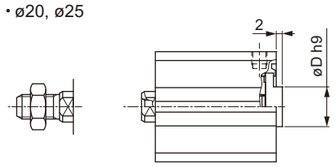
• ø12, ø16



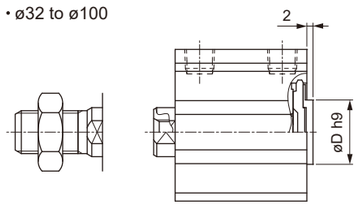
• SSD-L-12/16-5
For SSD-L1-12/16



• ø20, ø25



• ø32 to ø100



Bore	øD
ø12	15
ø16	20
ø20	13
ø25	15
ø32	21
ø40	28
ø50	35
ø63	35
ø80	43
ø100	59

MEMO

Pneumatic Components

To Use This Product Safely

Be sure to read this before use.
For general cylinder information, see Intro 41, and for cylinder switches, see P. 924.

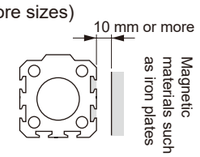
Individual Precautions: Compact Cylinder SSD Series

During Design/Selection

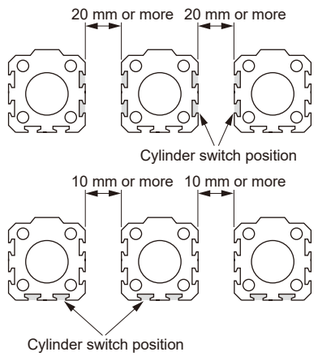
1. Common

Caution

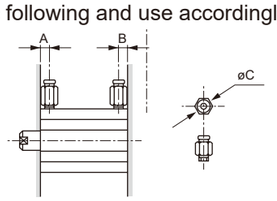
■ If there is a magnetic material such as an iron plate near the cylinder switch, it may cause malfunction. Maintain a distance of 10 mm or more from the cylinder surface.
(Common to all bore sizes)



■ If cylinders are adjacent, it may cause cylinder switch malfunction. Maintain the following distance from the cylinder surface. (Common to all bore sizes)



■ There are restrictions on usable piping fittings. Refer to the following and use accordingly.



Item / Bore size (mm)	Port Size	Port position dimension A	Port position dimension B	Usable Fittings	Fitting outer diameter øC	Unusable Fittings
ø12	M5	5.5	5.5	SC3W-M5-4 SC3W-M5-6 GWS4-M5-S GWS4-M5 GWL4-M5 GWL6-M5	ø11 or less	GWS6-M5
ø16						
ø20		8	5.5			
ø25		11	6			
ø32	Rc1/8	8	8	SC3W-6-4, 6, 8 GWS4-6 GWS6-6 GWS8-6 GWL4-6 GWL6-6	ø15 or less	GWS10-6 GWL8-6 GWL10-6
ø40		12	8.5			
ø50	Rc1/4	10.5	10.5	SC3W-8-6, 8, 10 GWS4-8 GWS6-8 GWS10-8 GWL4 to 12-8	ø21 or less	GWS12-8
ø63		13	11			
ø80	Rc3/8	16	13	SC3W-10-6, 8, 10 GWS6-10 GWS8-10 GWS10-10 GWL6 to 12-10	ø21 or less	-
ø100		23	15			

■ Install a speed controller on the cylinder.
● Install a speed controller on the cylinder. Use within the operating piston speed range of each cylinder.

2. High load type SSD-K, SSD-K□C, SSD-KF SSD-KU, SSD-KG1/KG2/KG3/KG4/KG5

■ Super compact cylinder high load type has a built-in rubber cushion. The table on P. 697 shows the kinetic energy that can be absorbed by the cushion. If the kinetic energy exceeds this value, consider a separate shock absorber.

Bore size (mm)	Allowable Absorption Energy (J)	
		SSD-KU
ø12	0.04	–
ø16	0.09	–
ø20	0.16	
ø25	0.16	
ø32	0.40	
ø40	0.63	
ø50	0.98	
ø63	1.56	
ø80	2.51	
ø100	3.92	

$$\text{Kinetic energy (J)} = \frac{1}{2} \times \text{Weight (kg)} \times [\text{Speed (m/s)}]^2$$

(Note) Regarding the calculation method of kinetic energy

The average speed of the cylinder is calculated by $Va = \frac{L}{T}$.

Va: Average speed (m/s)
L: Cylinder stroke (m)
T: Operating Time (s)

On the other hand, the cylinder speed just before the stroke end is calculated by the following simple formula.

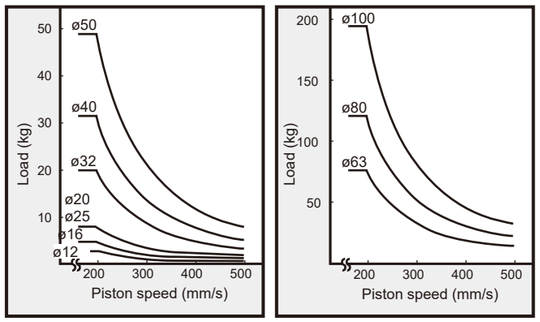
$$Vm = \frac{L}{T} \times (1 + 1.5 \times) \frac{\omega}{100}$$

Vm: Speed immediately prior to stroke end (m/s)
ω: Cylinder load factor (%)

For calculating kinetic energy, use this Vm value as the speed.

The following is a graph showing the relationship between piston speed and load for the allowable energy value of the Compact Cylinder High Load Type.

High Load Type Allowable Energy Value Graph



● Note: The range to the lower left of the curve is usable The upper right range requires an external cushion.

3. Single acting type SSD-X, SSD-Y

Caution

■ Do not leave single-acting cylinders pressurized.
If left pressurized, the piston rod may not return by spring load when the pressure is released. If it is necessary to use the product while pressurized, use a double-acting type.

4. Heat resistant cylinder with switch SSD-T1L

Warning

■ Cylinder
In an environment with an ambient temperature of 150°C, external leakage will gradually occur after about 500,000 cycles. Please be careful.

■ Heat Resistant Cylinder Switch
The indicator light uses an LED. Continuous use at high temperatures will gradually reduce visibility. Even if the LED goes out, the switch output has a separate circuit configuration from the LED, so the switch output will operate normally.

5. With rubber air cushion SSD-K-□C

Caution

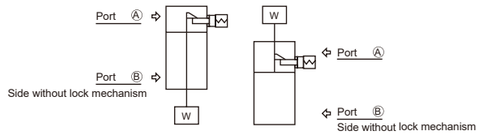
■ Please note that due to its structure, if the air supply is cut off, the stroke end position cannot be maintained. When detecting the stroke end with a switch, it may be outside the detection range, so set the switch position in an air-pressurized state.

■ Do not rapidly exhaust the air in the cylinder after operating at low speed outside the catalog specification range. (Example: Removing piping or coupler, etc.) The rubber-air cushion may become detached. Please be especially careful as this is more likely to occur when the air pressure is high.

6. Drop prevention type SSD-Q

Warning

■ In the locked state, if pressure is supplied to port Ⓐ when both side ports are unpressurized, the lock may not release, or the lock may suddenly release and the piston rod may fly out, which is very dangerous.
When releasing the lock mechanism, be sure to supply pressure to port F and release it from a state where no load is applied to the lock mechanism.



■ When using a quick exhaust valve to increase the lowering speed, the cylinder body may start moving before the lock pin operates, and normal release may not be possible. Do not use a quick exhaust valve with a drop prevention type cylinder.

■ Do not use 3-position valves.
Do not use in combination with 3-position valves (especially closed-center metal seal type). If pressure is sealed in the port on the side with the lock mechanism, the lock will not engage. Also, even if locked once, air leaking from the valve may enter the cylinder, and the lock may be released over time.

Caution

■ The cylinder load factor should be 50% or less.
If the load factor is high, the lock may not be released, or it may lead to damage to the lock part.

■ If back pressure is applied to the lock mechanism side, the lock may disengage. Use a single valve or an individual exhaust type manifold.

■ Do not use multiple cylinders synchronized.
Do not use a method where two or more fall prevention type cylinders are synchronized to move one workpiece. The lock of one of the cylinders may become unremovable.

■ Since the lock mechanism works at the stroke end, if an external stopper is applied in the middle of the stroke, the lock mechanism will not work and there is a risk of falling. When setting the load, always confirm that the lock mechanism works.

■ Supply pressure equal to or greater than the minimum operating pressure to the port on the side with the lock mechanism.

■ If the piping on the side with the lock mechanism is thin and long, or if the speed controller is far from the cylinder port, the exhaust speed may be slow, and it may take time for the lock to engage. Please be careful. Also, the valve EXH/ Clogging in the silencer mounted on the port may cause the same result.

■ Use the speed controller with meter-out.
Lock may not be released with meter-in control.

■ On the side with the lock, always use at the cylinder's stroke end.
If the cylinder piston has not reached the stroke end, the lock may not engage, or it may not be possible to release the lock.

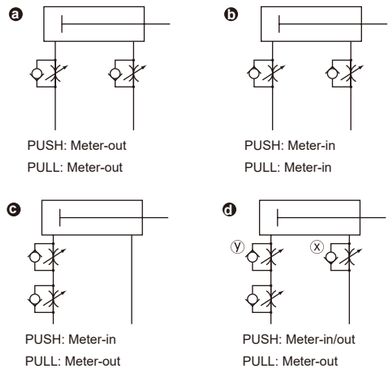
7. Low speed type SSD-F, SSD-KF

Caution

■ Install the speed controller near the cylinder.
If installed far from the cylinder, the speed will become unstable. Use SC-M3/M5, SC3W, SCD-M3/M5, SC3U series speed controllers.

■ Generally, the higher the air pressure and the lower the load factor, the more stable the speed.
Use with a load factor of 50% or less.

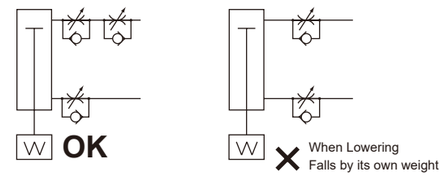
■ Speed control is stable with a meter-out circuit.
When driving a single-rod cylinder at creep speed in the PUSH direction, if the load resistance is small, a flying-out phenomenon may occur at the start of operation. As countermeasures, use circuits ⓑ, ⓒ or ⓓ. In addition, the ⓓ circuit is the most stable.



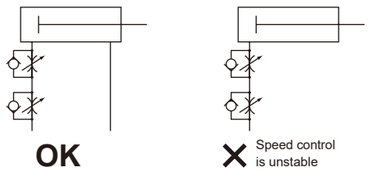
ⓓSpeed adjustment method for PUSH operation of the circuit:
1. Set the speed with the speed controller x.
2. Restrict the speed with the speed controller y until there is no popping out.
3. Reconfirmation of speed

(*1)When comparing ⓑ ⓒ ⓓ , peration is the most stable with the ⓓ circuit.

(*2) For vertical mounting, it will fall by its own weight in a meter-in circuit, so combine it with a meter-out circuit.



(*3) For series connection of speed controllers, use the circuit shown in the figure below.



(Guideline for lurching occurrence)
Lurching occurs in the following cases:
• Thrust > Resistance
*Resistance: *Resistance: Thrust due to residual pressure on exhaust side (For creep speed+ type, intake pressure = residual pressure) { For horizontal use: Frictional force due to load / For vertical use: Dead weight of the load

■ Do not apply lateral load to the cylinder.
Operation becomes unstable when lateral load is applied.

■ Avoid use in locations with vibration.
Operation becomes unstable due to the influence of vibration.

8. Low friction type SSD-KU

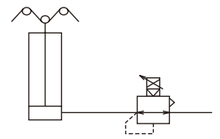
Warning

■ Durability varies depending on operating conditions and model characteristics.
Also, this cylinder is a cylinder with internal leakage. For the amount of leakage, please check the specifications (P. 488).

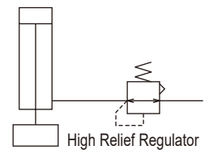
Caution

■ Install a speed controller on the cylinder.
Install a speed controller on the cylinder. Use within the operating piston speed range of each cylinder. When used with a balancer, etc., it may be better not to install a speed controller to improve supply/exhaust efficiency. The following circuits ⓐ to ⓒ are recommended depending on the application.

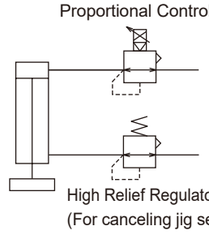
ⓐTension control (winding machines, etc.)



ⓑBalancer (machine tool Z-axis, etc.)



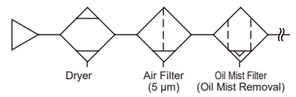
ⓒLoad control (polishing, etc.)



*To improve supply/exhaust characteristics, maximize piping volume as much as possible.

■ Do not lubricate. It will cause characteristics to fluctuate.

■ Poor quality air adversely affects characteristics and durability. Use clean air with the piping below.



■ Install the speed controller near the cylinder.
If installed far from the cylinder, the speed will become unstable.

■ Generally, the higher the air pressure and the lower the load factor, the more stable the speed.
Use with a load factor of 50% or less.

■ Do not disassemble this product. If disassembled, performance may no longer be maintained. Furthermore, only consumable parts are not provided for this product.

■ Avoid use in environments with steam, high humidity, or alkaline atmospheres.

9. Non-rotating type SSD-M

Caution

■ Do not use in a way that applies rotational torque to the piston rod.
The non-rotating bushing will deform and the service life will be significantly reduced.

10. Cutting oil resistant type SSD-G2, G3 / SSD-KG2, KG3

Caution

■ Do not apply eccentric load to the piston rod. This may reduce the life of scrapers and bearings.

■ If there is no splashing of cutting oil or water on the piston rod, use the G or G1 series. Please note that if there is no scattering of cutting oil or water with G2 and G3 series, the lubrication of the piston rod will be cut off and the service life will be reduced.

11. Spatter adhesion prevention type SSD-G4 / SSD-KG4 / SSD-DG4

Warning

■ This cylinder series has improved durability in spatter scattering atmospheres compared to general type cylinders. However, please note that durability may be inferior to general type cylinders when used in other atmospheres.

During Use

1. Common

⚠ Warning

■ Install and remove rod metal using appropriate pliers (C-type retaining ring installation tool).

■ Even when using appropriate pliers (C-type retaining ring installation tool), be careful as the retaining ring may come off the tip of the pliers (C-type retaining ring installation tool) and fly off, potentially causing injury to personnel and damage to surrounding equipment.
Also, when installing, confirm that it is securely in the retaining ring groove before supplying air.

2. Drop prevention type SSD-Q

⚠ Warning

■ During equipment maintenance, for safety, please take separate measures to prevent the load from falling due to its own weight.

■ When stopping with external shock absorbing equipment (shock absorber, etc.), adjust so that there is no bounce. If there is bounce, the sleeve and stopper piston will make impact contact, leading to damage of the lock mechanism. Also, please perform periodic inspections once or twice a year to check for damage to the holding part due to this phenomenon.

⚠ Caution

■ After manual operation of the lock mechanism, return the lock mechanism to its original state. Also, do not perform manual operations other than during adjustment, as it is dangerous.

■ Release the lock when mounting or adjusting the cylinder.
If installation work, etc. is performed while the lock is engaged, the lock part may be damaged.

3. Low speed type SSD-F/SSD-KF

⚠ Caution

■ Use without lubrication.
Lubrication may change characteristics.

■ Adjust alignment, etc., so that no lateral load is applied to the cylinder. Also, adjust and install so that there is no twisting with respect to the sliding guide.
- Fluctuations in load or resistance will make operation unstable.
- Guides with a large difference between static and dynamic friction will have unstable operation.

4. Low friction type SSD-ICU

⚠ Caution

■ Adjust alignment, etc., so that no lateral load is applied to the cylinder. Also, adjust and install so that there is no twisting with respect to the sliding guide.
- Fluctuations in load or resistance will make operation unstable.
- For long strokes, the speed becomes unstable due to the self-weight of the piston rod. Please install and use a guide.
- Guides with a large difference between static and dynamic friction will have unstable operation.

For precautions regarding mounting, installation, adjustment, use, and maintenance, please see "Precautions for Use" in this catalog and the CKD Components Product website (https://www.ckd.co.jp/kiki/en/) -> "Model No." -> Instruction Manual.

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