



Compact cylinder
Double acting/Single rod/rubber scraper

Environment-resistant cylinder

SSD2-G-HP1 Series

● Bore size: $\phi 12/\phi 16/\phi 20/\phi 25/\phi 32/\phi 40/\phi 50/\phi 63/\phi 80/\phi 100$

JIS symbol



Specifications

Item	SSD2-G-HP1 SSD2-GL-HP1 (with switch)									
Bore size mm	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
Actuation	Double acting									
Working fluid	Compressed air									
Max. working pressure MPa	1.0									
Min. working pressure MPa	0.1	0.2						0.15		
Proof pressure MPa	1.6									
Ambient temperature °C	-10 to 60 (no freezing)									
Port size	M5				Rc1/8 *1		Rc1/4		Rc3/8	
Stroke tolerance mm	+1.0 0									
Working piston speed mm/s	50 to 500							50 to 300		
Cushion	No									
Lubrication	Not required									
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: The $\phi 32$ bore size with a 5 mm stroke and without a switch has a port size of M5.

Stroke

Bore size (mm)	Standard stroke (mm)	Max. stroke (mm)	Min. stroke (mm)
ø12	5/10/15/20	30	1
ø16	25/30		
ø20	5/10/15/20/25	50	
ø25	30/35/40/45/50		
ø32	5/10/15/20/25/30/	100	
ø40	35/40/45/50/75/100		
ø50	10/15/20/25 30/35/40/45/50 75/100		
ø63			
ø80			
ø100			

*1: When using the type with switch, refer to the table of the min. stroke with switch.

Min. stroke with switch (2 switches)

Bore size (mm)	T0H/V / T5H/V	T2H/V / T3H/V
$\phi 12$	10 (5)	10 (5)
$\phi 16$		
$\phi 20$	5	5
$\phi 25$		
$\phi 32$		
$\phi 40$		
$\phi 50$		
$\phi 63$		
$\phi 80$		
$\phi 100$		

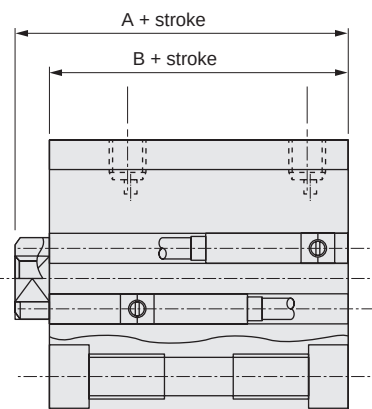
1: Less than 10mm with 2-color LED, off-delay, AC magnetic field proof, T1, T8* switches is not available.

*2: Values in () are for the type with 1 on rod side.

Custom stroke

● SSD2 Series

Item	Standard stroke body with spacer	
Model No.	Refer to How to order.	
Product Item	A spacer is added to the standard stroke body to adjust the stroke in 1 mm increments.	
Stroke range	Bore size	Stroke range
	12 to 16	1 to 29
	20 to 25	1 to 49
	32 to 100	1 to 99
Example of model No.	Model No.: SSD2-G-32-38-HP1 Add a +2 mm spacer to standard cylinder SSD2-G-32-40-HP1 to make it 38 mm.B + stroke is 73 mm.	



How to order

Without switch (without magnet for switch)

SSD2-G-32-5-N-LB-I-HP1

With switch (built-in magnet for switch)

SSD2-GL-32-10-T0H-R-N-LB-I-HP1

A Model No.

B Bore size

C Port thread

D Stroke

E Switch model No.

*1

*2

*3

*6

*7

F Switch quantity

G Option

H Mounting bracket
*4 *9

⚠ Precautions for model No. selection

1: The T2YD switch cannot be mounted on the ø12 and ø16 bore sizes.

2: T8 switch cannot be installed on ø12 to ø32.

*3: The F type switch can only be mounted on the piping port surface of bore sizes ø20 and ø25.

*4: The mounting bracket is attached at shipment.

*5: "I" and "Y" cannot be selected together.

*6: The F type switch with L type lead wire on ø20 models cannot be selected on strokes 15 mm or under.

*7: Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.

*8: F type switch cannot be selected.

*9: The ø12 to ø32 structure does not permit retrofitting of the foot bracket (LB) or flange bracket (FA) on the rod side. Assembly before shipment is available as made to order.

[Example of model No.]

SSD2-GL-20-10-T0H-R-N-LB-I-HP1

Model: Compact cylinder double acting

B Bore size : ø20 mm

C Port thread : M5

D Stroke : 10 mm

E Switch model No. : Reed switch T0H*
Lead wire length 1 m

F Switch quantity : 1 on rod side

G Option : Rod end male thread

H Mounting bracket: Axial foot

I Accessory : Rod eye

I Accessory *5

Code		Description													
A Model No.															
SSD2-G	Double acting/Single rod/rubber scraper														
SSD2-GL	Double acting/Single rod/rubber scraper with switch														
B Bore size (mm)															
12	ø12														
16	ø16														
20	ø20														
25	ø25														
32	ø32														
40	ø40														
50	ø50														
63	ø63														
80	ø80														
100	ø100														
C Port thread															
Blank	M5 (ø12 to ø25)														
	Rc thread (ø32 to ø100)														
NN	NPT thread (ø32 and over) (made to order)														
GN	G thread (ø32 and over) (made-to-order product)														
D Stroke (mm)															
Refer to the stroke table on the following page.															
E Switch model No.															
Lead wire Straight	Lead wire L-shaped	Contact	Voltage AC DC	Indicator	Lead wire	Bore size									
F2S*		Proximity	●	1-color LED	2-wire	12	16	20	25	32	40	50	63	80	100
F3S*			●		3-wire			●	●						
F2H*	F2V*		●		2-wire			●	●						
F3H*	F3V*		●		3-wire			●	●						
F3PH*	F3PV*	Proximity	●	1-color LED (PNP output) (made to order)	3-wire			●	●						
F2YH*	F2YV*		●		2-wire			●	●						
F3YH*	F3YV*		●		3-wire			●	●						
T0H*	T0V*		●		2-wire	●	●	●	●	●	●	●	●	●	●
T5H*	T5V*	Reed	●	No LED	2-wire	●	●			●	●	●	●	●	●
T8H*	T8V*		●		2-wire						●	●	●	●	●
T1H*	T1V*		●		2-wire						●	●	●	●	●
T2H*	T2V*		●		3-wire	●	●	●	●	●	●	●	●	●	●
T3H*	T3V*	Proximity	●	1-color LED	2-wire	●	●	●	●	●	●	●	●	●	●
T2HR3	T2VR3		●		2-wire	●	●	●	●	●	●	●	●	●	●
T3PH*	T3PV*		●		3-wire	●	●	●	●	●	●	●	●	●	●
T2WH*	T2WV*		●		2-wire	●	●	●	●	●	●	●	●	●	●
T3WH*	T3WV*	Proximity	●	2-color LED	3-wire	●	●	●	●	●	●	●	●	●	●
T2YD*	-		●		2-wire			●	●	●	●	●	●	●	●
T2YDT*	-		●		2-wire			●	●	●	●	●	●	●	●
T2JH*	T2JV*		●		2-wire			●	●	●	●	●	●	●	●
* Lead wire length															
Blank	1 m (standard)														
3	3 m (option)														
5	5 m (option)		*8												
F Switch quantity															
R	1 on rod side														
H	1 on head side														
D	2														
G Option															
Blank	Rod end female thread														
N	Rod end male thread														
H Mounting bracket															
Blank	Without mounting bracket														
LB	Axial foot (made to order)														
CB	Clevis bracket (pin and snap ring attached)														
FA	Rod side flange (made to order)														
FB	Head side flange														
I Accessory (available when rod end male thread "N" is selected)															
I	Rod eye														
Y	Rod clevis (pin and snap ring attached)														

SCP03	Long service life cylinder
CMK2	
SCM	
SSD2	
MDC2	
MSD	
MSDG-L	
SMG	
LCR	
LCG	
STM	
STG	
STR2	
SCP03	Environment-resistant cylinder
CMK2	
SCM	
SCG	
SSD2	
SMG	
LCR	
STG	
STS	Linear Slide Hand
STL	
LSH	
LSHL	
LSHM	
LST	Low-profile long stroke hand
LSTM	
HMC	Wide Parallel Hand
CKW	Chuck
ABP2	Air Booster
SCP03	Compatible with rechargeable batteries
CMK2	
SCM	
SSD2	
MSD	
MSDG-L	
SMG	
STG	
STM	
LCR	
LCG	
STR2	
LSH	
LSHL	
SCP03	Supports food mfg. processes
CMK2	
SCM	
SCG	
SSD2	
STG	

SSD2-G-HP1 Series

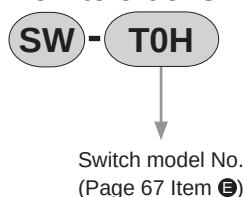
[Stroke table]

Stroke (mm)		Applicable bore size									
		12	16	20	25	32	40	50	63	80	100
Standard stroke	5	●	●	●	●	●	●				
	10	●	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	●	●	●
	20	●	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●	●	●	●
	30	●	●	●	●	●	●	●	●	●	●
	35			●	●	●	●	●	●	●	●
	40			●	●	●	●	●	●	●	●
	45			●	●	●	●	●	●	●	●
	50			●	●	●	●	●	●	●	●
	75					●	●	●	●	●	●
	100					●	●	●	●	●	●
Min. stroke (mm) *1		1									
Max. stroke (mm)		30		50		100					
Custom stroke *2		In 1 mm increments									

1: Less than 5 mm for 1-color LED switch, 2-color LED, off-delay, AC magnetic field proof, T1, T8* switches less than 10mm stroke is not available. Refer to page 66 for the min. stroke with switch.

*2: The total length when using a custom stroke is the same as that when using the next longer standard stroke.

How to order switch



How to order mounting brackets

Bore size (mm)	ø12	ø16	ø20	ø25	ø32	ø40	ø50
Mounting bracket							
Foot (LB)						SSD2-LB-40	SSD2-LB-50
Flange (FA/FB)						SSD2-FA-40	SSD2-FA-50
Clevis bracket (CB)	SSD2-CB-12	SSD2-CB-16	SSD2-CB-20	SSD2-CB-25	SSD2-CB-32	SSD2-CB-40	SSD2-CB-50
Bore size (mm)	ø63	ø80	ø100				
Mounting bracket							
Foot (LB)	SSD2-LB-63	SSD2-LB-80	SSD2-LB-100				
Flange (FA/FB)	SSD2-FA-63	SSD2-FA-80	SSD2-FA-100				
Clevis bracket (CB)	SSD2-CB-63	SSD2-CB-80	SSD2-CB-100				

*1: The foot mounting bracket is provided as 2 pcs./set.

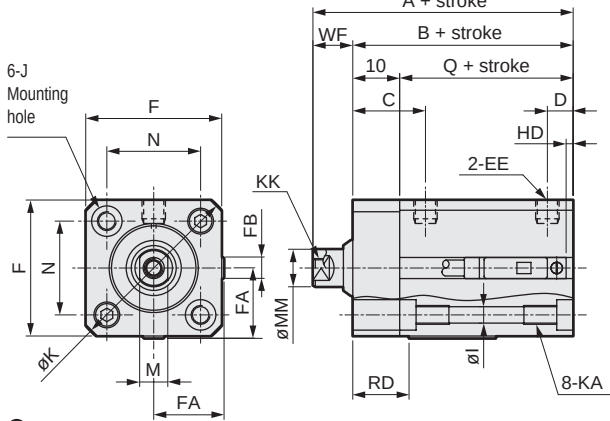
*2: The ø12 to ø32 structure does not permit retrofitting of the foot bracket (LB) or flange bracket (FA) on the rod side. Contact CKD for details.

Consumable parts list

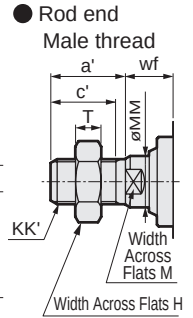
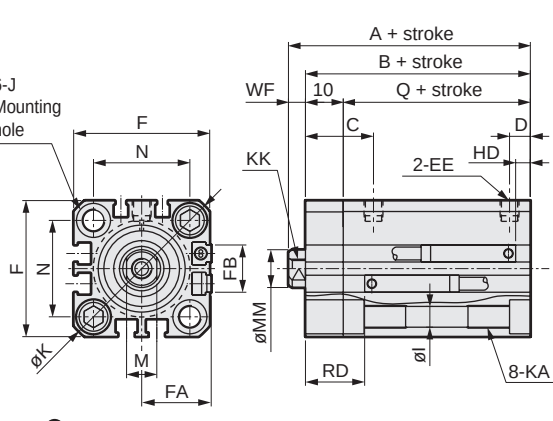
Part name	Kit No.	Part name
Bore size (mm)		
ø12	SSD2-G-12K-HP1	Scraper Rod packing Rod metal gasket Piston packing Lube keeping structure
ø16	SSD2-G-16K-HP1	
ø20	SSD2-G-20K-HP1	
ø25	SSD2-G-25K-HP1	
ø32	SSD2-G-32K-HP1	
ø40	SSD2-G-40K-HP1	
ø50	SSD2-G-50K-HP1	
ø63	SSD2-G-63K-HP1	
ø80	SSD2-G-80K-HP1	
ø100	SSD2-G-100K-HP1	

Dimensions

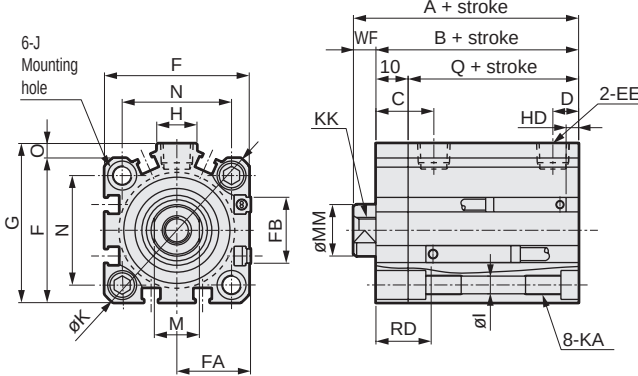
● $\phi 12/\phi 16$



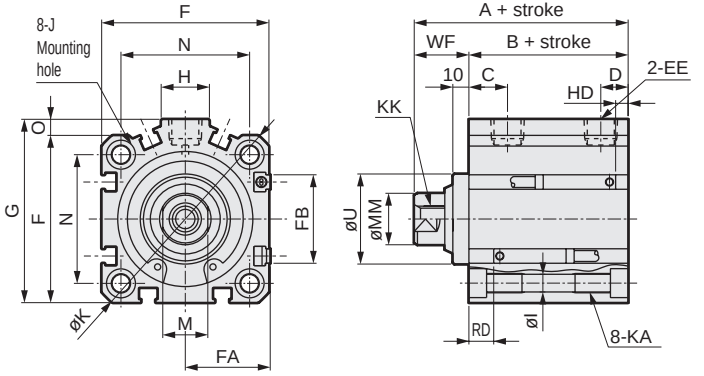
● $\phi 20/\phi 25$



● $\phi 32$



● $\phi 40$ to $\phi 100$



Code	Dimensions without switch			Common dimensions with switch															
Bore size (mm)	A ^{*1,7}	B ^{*1,7}	Q ^{*7}	A ^{*1}	B ^{*1}	Q	C	D	EE ^{*8}	F	FA ^{*4}	FB	G	H	I	J ^{*9}	K	KA	KK
$\phi 12$	35.5	27	17	40.5	32	22	15.5	5.5	M5	25	13 (16.5)	4.5	-	-	3.5	6.5 spot face depth 3.5 (13.5)	32	M4 depth 7	M3 depth 6
$\phi 16$	35.5	27	17	40.5	32	22	15.5	5.5	M5	29	15 (18.5)	4.5	-	-	3.5	6.5 spot face depth 3.5 (13.5)	38	M4 depth 7	M4 depth 8
$\phi 20$	39	29.5	19.5	49	39.5	29.5	18	5.5	M5	36	18.5 (22)	12.5	-	-	5.5	9 spot face depth 5.5 (15.5)	47	M6 depth 11	M5 depth 7
$\phi 25$	42.5	32.5	22.5	52.5	42.5	32.5	21	6	M5	40	20.5 (24)	13.5	-	-	5.5	9 spot face depth 5.5 (15.5)	51	M6 depth 11	M6 depth 12
$\phi 32$	45 (55)	33 (43)	23 (33)	55	43	33	18	8	Rc1/8	45	23 (26.5)	20.5	49.5	12.5	5.5	9 spot face depth 5.5 (15.5)	60	M6 depth 11	M8 depth 13
$\phi 40$	51.5 (61.5)	29.5 (39.5)	-	61.5	39.5	-	12	8.5	Rc1/8	52	26.5 (30)	27.5	57	15	5.5	9 spot face depth 5.5	69	M6 depth 11	M8 depth 13
$\phi 50$	53.5 (63.5)	30.5 (40.5)	-	63.5	40.5	-	10.5	10.5	Rc1/4	64	32.5 (36)	28.5	71	18	6.9	11 spot face depth 6.5	86	M8 depth 13	M10 depth 15
$\phi 63$	59 (69)	36 (46)	-	69	46	-	13	11	Rc1/4	77	39 (42.5)	28.5	84	23	8.7	14 spot face depth 9	103	M10 depth 25	M10 depth 15
$\phi 80$	68.5 (78.5)	43.5 (53.5)	-	78.5	53.5	-	16	13	Rc3/8	98	49.5 (53)	28.5	104	31	10.5	17.5 spot face depth 11	132	M12 depth 28	M16 depth 21
$\phi 100$	80 (90)	53 (63)	-	90	63	-	23	15	Rc3/8	117	59 (62.5)	28.5	123.5	38	10.5	17.5 spot face depth 11	156	M12 depth 28	M20 depth 27

Code	Common dimensions with switch						Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH/T3WV		Proximity F2H/F2V, F3H/F3V, F2YH/F2YV, F3YH/F3YV		Proximity F2S/F2S, F3S/F3S		Dimensions of rod end male thread part							
Bore size (mm)	M	MM	N	O	U	WF	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD	a'	c'	H	KK'	M	MM	T	wf
$\phi 12$	5	6	15.5	-	-	8.5	1.5	11.5	1.5	11.5	3.5	13.5					10.5	9	8	M5	5	6	3.2	8.5
$\phi 16$	6	8	20	-	-	8.5	0	14	0	14.5	1	16					12	10	10	M6	6	8	3.6	8.5
$\phi 20$	8	10	25.5	-	-	9.5	3	17.5	3	17.5	5	19.5	7.5	22	6.5	21	14	12	13	M8	8	10	5	9.5
$\phi 25$	10	12	28	-	-	10	4	19.5	4	19.5	6	21.5	8.5	24	7.5	23	17.5	15	17	M 10 x 1.25	10	12	6	10
$\phi 32$	14	16	34	4.5	-	12	4	19.5	4	19.5	6	21.5					23.5	20.5	22	M 14 x 1.5	14	16	8	10
$\phi 40$	14	16	40	5	28	22	7	12	7	12	8.5	13.5					23.5	20.5	22	M 14 x 1.5	14	16	8	20
$\phi 50$	17	20	50	7	35	23	7.5	12.5	7.5	12.5	9	14					28.5	26	27	M 18 x 1.5	17	20	11	20
$\phi 63$	17	20	60	7	35	23	12.5	13	12.5	13	14	14.5					28.5	26	27	M 18 x 1.5	17	20	1	20
$\phi 80$	22	25	77	5	43	25	17.5	15.5	17.5	15.5	19	17					35.5	32.5	32	M 22 x 1.5	22	25	13	23
$\phi 100$	27	30	94	6.5	59	27	23	19.5	23	19.5	24.5	21					35.5	32.5	41	M 26 x 1.5	27	30	16	23

*1: To calculate A + stroke or B + stroke when using custom stroke, apply the next longer standard stroke (instead of the custom stroke) to the stroke value. (Example) If the custom stroke is 7 mm, apply the standard stroke of 10 mm.

*2: HD and RD dimensions for 5 mm stroke differ from these dimensions according to the setting.

3: Refer to "Pneumatic Cylinders I (Catalog No. CB-029SA)" for HD, RD, and protruding dimensions of the 2-color LED, off-delay, AC magnetic field proof, T1, T8: switches.

*4: Dimensions in () of FA are for the radial lead wire type.

*5: Refer to "Pneumatic Cylinders I (No. CB-029SA)" for dimensions of individual accessories.

*6: Only F switch is available for the piping port surface of bore size $\phi 20$, 25.

*7: Dimensions in () of codes A, B and Q are for strokes of more than 50 mm.

*8: The 5 mm stroke of the $\phi 32$ without switch has a port size of M5.

*9: Dimensions in () of code J are for the rod side mounting hole.

*10: The $\phi 12$, $\phi 16$ has no switch groove on the rod end surface. Switches can be mounted only on the head side.

* Refer to Double acting/Single rod in "Pneumatic Cylinders I" (No. CB-029SA) for dimensions of each mounting type.