

Pneumatic Cylinders I
Catalog No. CB-029SA

Compact cylinder Double acting/ Single rod

SSD2 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 SSD2-L (with switch)									
	$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$
Bore size mm	$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$
Actuation	Double acting									
Working fluid	Compressed air									
Max. working pressure MPa	1.0									
Min. working pressure MPa	0.1					0.05				
Proof pressure MPa	1.6									
Ambient temperature $^{\circ}\text{C}$	-10 to 60 (no freezing)									
Port size	M5				Rc1/8 *1		Rc1/4		Rc3/8	
Stroke tolerance mm	With rubber cushion				+2.0 0					
	Without cushion				+1.0 0					
Working piston speed mm/s	50 to 500					50 to 300				
Cushion	With or without cushion can be selected									
Lubrication	Not available									
Allowable absorbed Energy J	With rubber cushion									
	Without cushion									
	0.03	0.05	0.10	0.16	0.16	0.44	0.75	0.78	2.51	3.92
	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)
$\phi 12$	5/10/15/20	30	1
$\phi 16$	25/30		
$\phi 20$	5/10/15/20/25	50	
$\phi 25$	30/35/40/45/50		
$\phi 32$	5/10/15/20/25/30/35/40/45/50/75/100	100	
$\phi 40$			
$\phi 50$	10/15/20/25		
$\phi 63$	30/35/40/45/50		
$\phi 80$	75/100		
$\phi 100$			

*1: If the stroke exceeds the max. Stroke, consult with CKD Sales.

[Stroke table]

Stroke (mm)	Applicable bore size									
	12	16	20	25	32	40	50	63	80	100
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 with 1-color display switch and less than 10 mm with the 2-color display, off-delay, AC magnetic field proof, T1 or T8* switch are not available. Refer to "Pneumatic Cylinders I (Catalog No. CB-029SA)" for the min. stroke length with switch.

*2: The dimensions of the total length with the custom stroke are handled the same as the next longer standard Stroke.

Compatibility table by variation

Applicable bore size		Double acting/ single rod	Double acting/ single rod High load	Double acting/ single rod long Stroke	Single acting/ push	Single acting/ pull	Double acting/ rubber-air cushioned High load	Double acting/ position locking	Double acting/ double rod	Double acting/ back to back	Double acting/ two-stage	Double acting/ fine speed	Double acting/ low speed	Double acting/ low friction High load	Double acting/ heat resistance	Double acting/ packing Fluoro rubber	Double acting/ rubber scraper	Double acting/ rotation-stop
			K		X	Y	KC	Q	D	B	W	F	0	KU	T1	T2	G	M
ø12 to 200	P4	●	●	○	○	○	○	○	○	○	○					○	○	▲
	P40	●	●	○	○	○	○	○	○	○	▲					○	○	▲
	P42	▲	▲	▲			▲	▲	▲	▲	▲					▲		

●: Applicable models
○: Semi-applicable models
▲: Contact CKD for details.
□: Not applicable

How to order

Without switch (without magnet for switch)

SSD2 - 12 - 5 - N P4 P40 - LB - I

With switch (built-in magnet for switch)

SSD2-L - 12 - 10 - SW11 - R - N P4 P40 - LB - I

A Model No.

B Bore size

C Cushion

D Stroke

E Switch model No.

*1
*2
*3
*8
*9

F Switch quantity

G Option*4

H Mounting bracket

*5

*6

I Accessory

*7

Code	Description										
A Model No.											
SSD2	Double acting/ Single rod										
SSD2-L	Double acting/ Single rod/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 Cushion											
Blank	Without cushion										
D	With rubber cushion										
D Stroke (mm)											
Refer to the Stroke table.											
E Switch model No.											
Refer to the compatibility table on Intro Pages 23 to 26 for switch model No.											
F Switch quantity											
R	1 on rod side										
H	1 on head side										
D	2										
G Option											
	Bore size (mm)	12	16	20	25	32	40	50	63	80	100
Blank	Rod end female thread	●	●	●	●	●	●	●	●	●	●
N	Rod end male thread	●	●	●	●	●	●	●	●	●	●
M *4	Piston rod material (stainless steel)	●	●	●	●	●	●	●	●	●	●
		●	●	●	●	●	●	●	●	●	●
		●	●	●	●	●	●	●	●	●	●
H Mounting bracket											
Blank	Without mounting bracket										
LB	Axial foot type										
CB	Clevis bracket (pin and snap ring attached)										
FA	Rod side flange										
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)										

⚠ Precautions for model No. selection

- *1: ø12, T2YD* switch cannot be installed on ø16.
- *2: T8* switch cannot be installed on ø12 to ø32.
- *3: The F type switch can only be mounted on the piping port surface with a bore size of ø20, 25.
- *4: Piston rod material of ø12 to ø25 is stainless steel as standard. C-snap ring will be stainless steel, not steel. The rod end male thread nut is stainless steel.
- *5: The mounting bracket is attached at shipment.
- *6: The projection dimension of piston rod WF when LB or FA is selected is different from that of the standard. Refer to "Pneumatic Cylinders I (Catalog No. CB-029SA)" for details. The number of the specified protruding dimension will be added at the end of the model No. printed on the metal plate on the body.
- *7: "I" and "Y" cannot be selected together.
- *8: The F switch with L lead wire on ø20 models cannot be selected on Strokes of 15 mm or under.
- *9: Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.
- *10: 5 m lead wire for the F switch is made to order.

Related products

		Speed controller								Page
Model No.	Appearance	Port size (Rc or R)			Compatible tube O.D.					
		M5	1/8	1/4	4 (ø4)	6 (ø6)	8 (ø8)	10 (ø10)		
SC3W-M5- *-P4		●			●	●			530	
SC3W-6- *-P4			●		●	●	●			
SC3W-8- *-P4					●	●	●	●		

Specify the compatible tube O.D. code for *.

P4 Series

Pneumatic cylinders

Hand/Chuck

Related products

Cylinder Switch

Vacuum components

Pneumatic valves

Clean air components

Speed controller

Fitting

Auxiliary valve

Stilencer

Tube

Pneumatic auxiliary components

Gas generator

Fluid control components

Motor specification

Motorless specifications

Electric actuator

P4
Series



Pneumatic Cylinders I
Catalog No. CB-029SA

Compact cylinder Double acting/ Single rod (large bore size)

SSD2 Series

● Bore size: $\phi 125/\phi 140/\phi 160/\phi 180/\phi 200$

JIS symbol



Specifications

Item	SSD2 SSD2-L (with switch)				
	$\phi 125$	$\phi 140$	$\phi 160$	$\phi 180$	$\phi 200$
Bore size mm	$\phi 125$	$\phi 140$	$\phi 160$	$\phi 180$	$\phi 200$
Actuation	Double acting				
Working fluid	Compressed air				
Max. working pressure MPa	1.0			0.7	
Min. working pressure MPa	0.05				
Proof pressure MPa	1.6			1.05	
Ambient temperature °C	-10 to 60 (no freezing)				
Port size	Rc3/8			Rc1/2	
Stroke tolerance mm	$+2.0$ 0				
Working piston speed mm/s	50 to 300			20 to 300	
Cushion	With rubber cushion (standard)				
Lubrication	Not available				
Allowable absorbed Energy J	With rubber cushion 6.52	6.52	7.78	12.4	
	Without cushion	-			

Stroke

Bore size (mm)	Standard Stroke (mm)	Max. Stroke (mm)	Min. Stroke (mm)
$\phi 125$	10, 20, 30, 40, 50 75, 100, 125, 150 175, 200, 250, 300	300	1
$\phi 140$			
$\phi 160$			
$\phi 180$			
$\phi 200$			

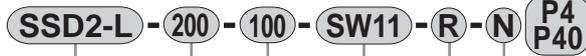
Pneumatic actuator
 Hand/Chuck
 Related products
 Cylinder/Switch
 Vacuum components
 Pneumatic valves
 Clean air components
 Speed controller
 Fitting
 Auxiliary valve
 Silencer
 Tube
 Gas generator
 Fluid control components
 Motor specifications
 Motor specification

How to order

Without switch



With switch



A Model No.

B Bore size

C Stroke

D Switch model No.
*3

E Switch quantity

F Option

⚠ Precautions for model No. selection

1: Less than 5 mm for 1-color display switch, less than 10mm for the 2-color display, off-delay, AC magnetic field proof, T1, T8* switches are not available. Refer to "Pneumatic Cylinders I (Catalog N o.C B-029SA)" for the switch quantity and the min. stroke length.

*2: Total length dimension with custom Stroke is handled as the custom stroke dedicated length.

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

Related products

Speed controller										
Model No.	Appearance	Port size (Rc or R)				Compatible tube O.D.				Page
		1/8	1/4	3/8	1/2	4 (ø4)	6 (ø6)	8 (ø8)	10 (ø10)	
SC3W-10- *P4				●			●	●	●	530
SC3W-15- *P4				●			●	●		

Specify the compatible tube O.D. code for *.

Code	Description
A Model No.	
SSD2	Double acting/ Single rod
SSD2-L	Double acting/ Single rod/with switch

B Bore size (mm)	
125	ø125
140	ø140
160	ø160
180	ø180
200	ø200

C Stroke (mm)	Applicable bore size					
	ø125	ø140	ø160	ø180	ø200	
Standard Stroke	10	●	●	●	●	●
	20	●	●	●	●	●
	30	●	●	●	●	●
	40	●	●	●	●	●
	50	●	●	●	●	●
	75	●	●	●	●	●
	100	●	●	●	●	●
	125	●	●	●	●	●
	150	●	●	●	●	●
	175	●	●	●	●	●
	200	●	●	●	●	●
	250	●	●	●	●	●
	300	●	●	●	●	●
Min. Stroke (mm) *1	1					
Max. Stroke (mm)	300					
Custom Stroke *2	In 1 mm increments					

D Switch model No.
Refer to the compatibility table on Intro Pages 23 to 26 for switch model No.

E Switch quantity	
R	1 on rod side
H	1 on head side
D	2

F Option	
Blank	Rod end female thread
N	Rod end male thread

P4 Series

Pneumatic cylinders
Hand/ Chuck
Related products
Pneumatic actuator

Vacuum components
Pneumatic valves

Clean air components
Speed controller
Pneumatic auxiliary components

Fitting
Auxiliary valve
Silencer
Tube

Gas generator
Fluid control components

Motor specification
Electric actuator
Motorless specifications