



Pneumatic Cylinders I
Catalog No. CB-029SA

Round shaped cylinder Double acting/ Single rod

SCM Series

- Bore size: $\phi 20/\phi 25/\phi 32/\phi 40$
 $\phi 50/\phi 63/\phi 80/\phi 100$

JIS symbol



Specifications

Item		SCM							
Bore size mm		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				0.05			
Proof pressure MPa		1.6							
Ambient temperature °C		-10 to 60 (no freezing)							
Port size	With rubber cushion	Rc1/8				Rc1/4		Rc3/8	Rc1/2
	With air cushion	M5		Rc1/8		Rc1/4		Rc3/8	Rc1/2
Stroke tolerance mm	With rubber cushion	+1.4 0 (up to 1000)			+1.4 ₀ (up to 1500)	+2.3 (up to 1000), 0		+2.7 (up to 1500) 0	
	With air cushion	+1.4 0 (up to 1000)			+1.4 ₀ (up to 1500)	+1.4 (up to 1000), 0		+1.8 (up to 1500) 0	
Working piston speed mm/s		30 to 1000 (Operate within the allowable absorbed energy.)							
Cushion		Either rubber cushion or air cushion can be selected.							
Effective air cushion length mm		8.1	8.1	8.6	8.6	13.4	13.4	15.4	15.4
Lubrication		Not available							
Allowable absorbed energy J	With rubber cushion	0.1	0.2	0.5	0.9	1.6	1.6	3.3	5.8
	With air cushion	0.8	1.2	2.5	3.7	8.0	14.4	25.4	45.6
	Without cushion	-	-	-	-	0.057	0.057	0.112	0.153

*1: The values of "No cushion" of allowable absorbed energy are the allowable absorbed energy of either the head side for air cushion code "R" or the rod side for air cushion code "H".

*2: Without a cushion, large energy generated by the external load cannot be absorbed. Provide a shock absorber on the outside.

Stroke

Bore size (mm)	Standard Stroke (mm)	Max. Stroke(mm)	Min. Stroke (mm)
ø 20	25, 50, 75, 100, 125, 150, 200, 250, 300	1000	10
ø25			
ø32			
ø40		1500	
ø50			
ø63			
ø80			
ø100			

*1: The custom Stroke is available in 1 mm increments.

How to order switch mounting bracket

	[Rail] Mounting rail	[Band] Mounting bracket set + Band
P4	SCM-T-[Bore size]	SCM-Z-[Bore size]
P40	-[Stroke length]	SCM-Z-[Bore size]-P40

*1: Indicate X if the stroke length exceeds 300 mm. If exceeding 300 mm, a short rail (with 100 mm switch adjustment travel distance) will be included per switch.

*2: If indicating X when ordering mounting rails only, order the same number of rails as that of applicable switches.

How to order mounting bracket P4

Bore size (mm)	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$
Mounting bracket								
Foot (LB)	SCM-LB-20	SCM-LB-25	SCM-LB-32	SCM-LB-40	SCM-LB-50	SCM-LB-63	SCM-LB-80	SCM-LB-100
Flange (FA/FB)	SCM-FA-20	SCM-FA-25	SCM-FA-32	SCM-FA-40	SCM-FA-50	SCM-FA-63	SCM-FA-80	SCM-FA-100
Eye bracket (CA)	SCM-CA-20	SCM-CA-25	SCM-CA-32	SCM-CA-40	SCM-CA-50	SCM-CA-63	-	-
Clevis bracket (CB)	-	-	-	-	-	-	SCM-CB-80	SCM-CB-100
Trunnion (TA/TB)	SCM-TA-20	SCM-TA-25	SCM-TA-32	SCM-TA-40	SCM-TA-50	SCM-TA-63	-	-

How to order mounting bracket P40

Bore size (mm)	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$
Mounting bracket								
Foot (LB)	SCM-LB-20-P40	SCM-LB-25-P40	SCM-LB-32-P40	SCM-LB-40-P40	SCM-LB-50-P40	SCM-LB-63-P40	SCM-LB-80-P40	SCM-LB-100-P40
Flange (FA/FB)	SCM-FA-20-P40	SCM-FA-25-P40	SCM-FA-32-P40	SCM-FA-40-P40	SCM-FA-50-P40	SCM-FA-63-P40	SCM-FA-80-P40	SCM-FA-100-P40
Eye bracket (CA)	SCM-CA-20-P40	SCM-CA-25-P40	SCM-CA-32-P40	SCM-CA-40-P40	SCM-CA-50-P40	SCM-CA-63-P40	-	-
Clevis bracket (CB)	-	-	-	-	-	-	SCM-CB-80-P40	SCM-CB-100-P40
Trunnion (TA/TB)	SCM-TA-20-P40	SCM-TA-25-P40	SCM-TA-32-P40	SCM-TA-40-P40	SCM-TA-50-P40	SCM-TA-63-P40	-	-

*1: All mounting brackets have mounting bolts attached.

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

Compatibility table by variation

Applicable bore size		Double acting/ single rod	Double acting/ position locking	Single acting/ push	Single acting/ pull	Double acting/ double rod	Double acting/ back to back	Double acting/ two-stage	Stroke adjustable (push)	Stroke adjustable (pull)	Double acting/ low speed	Double acting/ low friction	Double acting/ heat resistance	Double acting/ rubber scraper	Double acting/ tandem	Double acting/ direct mounting foot	Double acting/ rotation-stop
			Q	X	Y	D	B	W	P	R	O	U	T	G	W 4	LD	M
ø20 to 100	P4	●	●	○	○	○	○	○	○	○				○ ø40 and over	○	○	▲
	P40	●*2	●*2	○	○	○*2	○	○	○	○*1				○ ø40 and over	○	○	▲
	P42	▲*2	▲*2			▲*2	▲	▲	▲	▲*1					▲	▲	

*1: Zinc plating is used for the sealing washer.

*2: Zinc plating is used for the cushion packing. (excluding ø50, ø63)

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

How to order

Without switch (built-in magnet for switch)

SCM - LB - 40 B - 100 - M P4 P40 I

With switch (built-in magnet for switch)

SCM - LB - 40 B - 100 - SW11 - D - M P4 P40 I

A Mounting
*1

B Bore size

C Cushion

D Stroke

E Switch model No.
*3

F Switch quantity

G Switch mounting

H Option
*4

I Accessory
*5

⚠ Precautions for model No. selection

*1: Mounting bracket will be shipped with the product.

*2: Refer to the previous page for the min. stroke length.

*3: When the bore size is ø20 to ø40 and switch mounting is the rail type, SW19, SWBW, SWCC, SWDK, SWDL, and SWDM cannot be mounted.

*4: "Q" (switch rail attached at shipment) is not available for "Z" switch mounting.

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

*6: Refer to "Pneumatic Cylinders I (Catalog No.CB-029SA)" for made-to-order specifications of rod end form.

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

*8: Speed controllers are available as a related product. Contact CKD for details.

Code	Description
A Mounting	
	Bore size (ø)
00	Basic
LB	Axial foot
FA	Rod side flange
FB	Head side flange
CA	Eye bracket
CB	Clevis bracket (pin and snap ring attached)
TA	Rod side trunnion
TB	Head side trunnion
B Bore size (mm)	
20	ø20
25	ø25
32	ø32
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100
C Cushion	
B	With two-sided air cushion
R	Rod side air cushioned
H	Head side air cushioned
D	With two-sided rubber cushion
D Stroke (mm)	
Bore size	Stroke *2
ø20 to ø32	10 to 1000
ø40 to ø100	10 to 1500
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
T	3
4	4 (when there are more than 4 switches, indicate switch quantity.)
G Switch mounting	
Blank	Rail method
Z	Band method
H Option	
Q	Switch rail attached at shipment
M	Piston rod, rod nut material (stainless steel)
I Accessory	
	Bore size (ø)
I	Rod eye
Y	Rod clevis (pin and snap ring attached)
B1	Eye bracket
B2	Clevis bracket

P4 Series

Pneumatic cylinders

Hand/Chuck

Related products

Cylinder

Switch

Vacuum components

Pneumatic valves

Clean air components

Speed controller

Pneumatic auxiliary components

Fitting

Auxiliary valve

Silencer

Tube

Gas generator

Fluid control components

Electric actuator

Motor specification

Motorless specifications