



Round shaped cylinder Double acting/Single rod

Long service life cylinder

# SCM-HP1 Series

● Bore size:  $\varnothing 20/\varnothing 25/\varnothing 32/\varnothing 40$ 

JIS symbol



## Specifications

Item		SCM-HP1				
Bore size		mm	ø20	ø25	ø32	ø40
Actuation			Double acting			
Working fluid			Compressed air			
Max. working pressure		MPa	1.0			
Min. working pressure		MPa	0.1			
Proof pressure		MPa	1.6			
Ambient temperature		°C	-10 to 60 (no freezing)			
Port size	With rubber cushion	Rc1/8				
	With air cushion	M5		Rc1/8		
Stroke tolerance		mm	+1.4 0 (up to 150)			
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
Lubrication			Not required			
Allowable absorbed energy J	With rubber cushion		0.1	0.2	0.5	0.9
	With air cushion		0.8	1.2	2.5	3.7

\*1: No cushion in the allowable absorption energy indicates the allowable absorption energy of the side that is not indicated ("R" → head side, "H" → rod side) when the one-side air cushion is selected.

\*2: Without a cushion, large energy generated by the external load cannot be absorbed. Please provide an external shock absorber.

## Stroke

Bore size (mm)	Standard stroke (mm)	Max. stroke (mm)	Min. stroke (mm)
$\varnothing 20$	25, 50, 75, 100, 125, 150	150	10
$\varnothing 25$			
$\varnothing 32$			
$\varnothing 40$			

\*1: The custom stroke is available in 1 mm increments.

## Number of installed switches and min. stroke (mm)

● Switch mounting: Rail

Switch quantity	1			2		3			4			5		
	Proximity		Reed	Proximity		Proximity		Reed	Proximity		Reed	Proximity		Reed
	T2,T3	T2W,T3W		T2,T3	Reed	T2,T3	T2W,T3W		T2,T3	T2W,T3W		T2,T3	T2W,T3W	
Bore size (mm)														
$\varnothing 20$	10			25		50	70	55	55	70	55	75	110	90
$\varnothing 25$	10			25		50	70	55	55	70	55	75	110	90
$\varnothing 32$	10			25		50	70	55	55	70	55	75	110	90
$\varnothing 40$	10			25		50	70	55	55	70	55	75	110	90

\*1: For types with one switch, when the stroke is between 10 and 24 mm, trunnion mounting is not available since the switch rail mounting position is different. Regarding the mounting position, "Pneumatic Cylinders I (No. CB-029SA)".

● Switch mounting: Band

Switch quantity	1			2			3			4			5		
	Proximity		Reed	Proximity		Reed	Proximity		Reed	Proximity		Reed	Proximity		Reed
	T2,T3	T2W,T3W		T0,T5 T2,T3	T2W,T3W		T0,T5 T2,T3	T2W,T3W		T0,T5 T2,T3	T2W,T3W		T0,T5 T2,T3	T2W,T3W	
Bore size (mm)															
$\varnothing 20$	10			25	30	25	50	55	50	70	75	70	95	100	95
$\varnothing 25$	10			25	30	25	50	55	50	70	75	70	95	100	95
$\varnothing 32$	10			25	30	25	50	55	50	70	75	70	95	100	95
$\varnothing 40$	10			25	30	25	50	55	50	70	75	70	95	100	95

For dimensions, refer to the SCM Series in "Pneumatic Cylinders I (CB-029SA)".

### How to order

Without switch(built-in magnet for switch)

SCM-LB-40-B-100-MI-HP1

With switch(built-in magnet for switch)

SCM-LB-40-B-100-T2H-D-MI-HP1

A Mounting  
\*1

B Bore size

C Port thread

D Cushion

E Stroke

F Switch model No.  
\*3

G Switch quantity

### ⚠ Precautions for model No. selection

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

\*2: Refer to page 6 for the number of installed switches and the min. stroke.

\*3: T8H/V switches cannot be mounted when the switch mounting type is the rail type.

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

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

\*6: Switches are shipped with the product. Contact CKD if assembling before shipment is necessary.

### [Example of model No.]

**SCM-LB-40B-100-T2H-D-MI-HP1**

Model: Round shaped cylinder, double acting

- A Mounting form : Axial foot
- B Bore size : ø40 mm
- C Port thread : Rc thread
- D Cushion : Both-sided air cushion
- E Stroke : 100 mm
- F Switch model No.: Proximity T2H switch, lead wire 1 m
- G Switch quantity : 2 pcs. included
- H Switch mounting : Rail
- I Option : Piston rod material (stainless steel)
- J Accessory : Rod eye

H Switch mounting

I Option  
\*4

J Accessory  
\*5

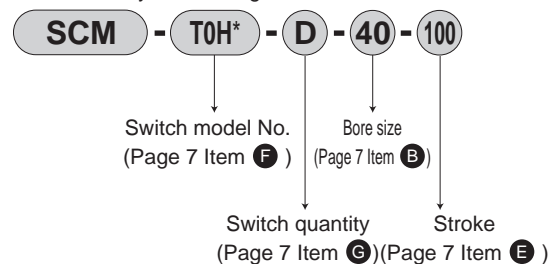
Code		Description				
A Mounting						
00	Basic					
LB	Axial foot					
FA	Rod side flange					
FB	Head side flange					
CA	Eye bracket					
TA	Rod side trunnion					
TB	Head side trunnion					
B Bore size (mm)						
20	ø20					
25	ø25					
32	ø32					
40	ø40					
C Port thread						
Blank	Rc thread					
N	NPT thread (made to order) With air cushion: ø32 and over					
G	G thread (made to order) With air cushion: ø32 and over					
D Cushion						
B	With two-sided air cushion					
R	Rod side air cushioned					
H	Head side air cushioned					
D	With two-sided rubber cushion					
E Stroke (mm)						
Bore size		Stroke *2	Custom stroke			
ø20 to ø40		10 to 150	In 1 mm increments			
F Switch model No.						
Lead wire Straight	Lead wire L-shaped	Contact	Voltage		Indicator	Lead wire
			AC	DC		
T0H*	T0V*	Reed	●	●	1-color LED	2-wire
T5H*	T5V*		●	●	No LED	
T8H*	T8V*		●	●	1-color LED	
T1H*	T1V*	Proximity	●		1-color LED	2-wire
T2H*	T2V*			●		
T3H*	T3V*			●	1-color LED bend resistant lead wire	3-wire
T2HR3	T2VR3			●		
T3PH*	T3PV*			●	1-color LED	3-wire
T2WH*	T2WV*			●	2-color LED	2-wire
T3WH*	T3WV*			●		3-wire
T2YD*	-			●	2-color LED	2-wire
T2YDT*	-			●	2-color LED	
T2JH*	T2JV*			●	1-color LED off-delay	2-wire
* Lead wire length						
Blank	1 m (standard)					
3	3 m (option)					
5	5 m (option)					
G Switch quantity						
R	1 on rod side					
H	1 on head side					
D	2					
T	3					
4	4 pcs. Included (when there are more than 4 switches, indicate switch quantity.)					
H Switch mounting						
Blank	Rail method					
Z	Band method					
I Option						
Q	Switch rail attached at shipment					
M	Piston rod material (stainless steel)					
J Accessory						
I	Rod eye					
Y	Rod clevis (pin and snap ring attached)					
B2	Clevis bracket					

SCPD3	Long service life cylinder
CMK2	
SCM	
SSD2	
MDC2	
MSD	
MSDG-L	
SMG	
LCR	
LCG	
STM	
STG	
STR2	
SCPD3	Environment-resistant cylinder
CMK2	
SCM	
SCG	
SSD2	
SMG	
LCR	
STG	
STS	
STL	
LSH	Linear Slide Hand
LSHL	
LSHM	
LST	Low-profile long stroke hand
LSTM	
HMC	Wide Parallel Hand
CKW	Chuck
ABP2	Air Booster
SCPD3	Compatible with rechargeable batteries
CMK2	
SCM	
SSD2	
MSD	
MSDG-L	
SMG	
STG	
STM	
LCR	
LCG	
STR2	
LSH	
LSHL	
SCPD3	Supports food mfg. processes
CMK2	
SCM	
SCG	
SSD2	
STG	

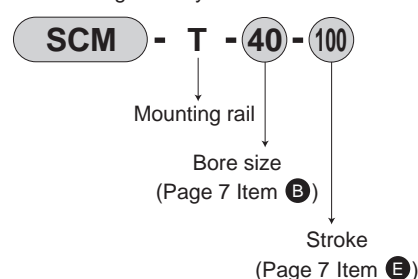
## How to order switch

### [Switch mounting: Rail]

- Switch body + mounting rail set

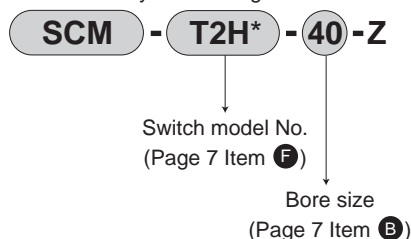


- Mounting rail only

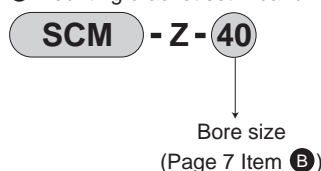


### [Switch mounting: Band]

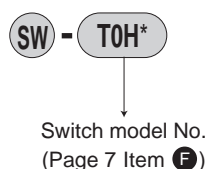
- Switch body + mounting bracket set + band



- Mounting bracket set + band



### [Switch body only]



## How to order mounting brackets

Bore size (mm)	ø20	ø25	ø32	ø40
Mounting bracket				
Foot (LB)	SCM-LB-20	SCM-LB-25	SCM-LB-32	SCM-LB-40
Flange (FA/FB)	SCM-FA-20	SCM-FA-25	SCM-FA-32	SCM-FA-40
Eye bracket (CA)	SCM-CA-20	SCM-CA-25	SCM-CA-32	SCM-CA-40
Trunnion (TA/TB)	SCM-TA-20	SCM-TA-25	SCM-TA-32	SCM-TA-40

\*1: All mounting brackets have mounting bolts attached.

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

## Material of mounting bracket

Mounting	Material
LB	Steel
FA/FB	Aluminum
TA/TB	Steel
CA	Steel

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

## Consumable parts list

### With rubber cushion

Bore size (mm)	Kit No.	Part name
ø20	SCM-20DK-HP1	Rod packing Cylinder gasket Cushion rubber Piston packing Wear ring
ø25	SCM-25DK-HP1	
ø32	SCM-32DK-HP1	
ø40	SCM-40DK-HP1	

### With air cushion

Bore size (mm)	Kit No.	Part name
ø20	SCM-20BK-HP1	Rod packing Cylinder gasket Cushion rubber Piston packing Wear ring Needle gasket Holder gasket Cushion packing
ø25	SCM-25BK-HP1	
ø32	SCM-32BK-HP1	
ø40	SCM-40BK-HP1	

\*1: Specify the kit No. when placing an order.