

cylinder

SCA2-FP1 Series

● Bore size: $\varnothing 40/\varnothing 50/\varnothing 63/\varnothing 80/\varnothing 100$



Specifications

Item	SCA2					
Tubel.D. mm	$\varnothing 40$	$\varnothing 50$	$\varnothing 63$	$\varnothing 80$	$\varnothing 100$	
Actuation	Double acting					
Working fluid	Compressed air					
Max. working pressure MPa	1.0					
Min. working pressure MPa	0.05					
Proof pressure MPa	1.6					
Ambient temperature °C	-10 to 60(whereland, no freezing)					
Port size	Rc 1/4	Rc 3/8		Rc 1/2		
Stroke tolerance mm	$^{+0.9}_0$ (to 360), $^{+1.4}_0$ (to 800)					
Working piston speed mm/s	50 to 1000 (Use within the allowable absorbed energy.)					
Cushion	Air cushion					
Effective air cushion length mm	14.6	16.6	16.6	20.6	23.6	
Lubrication	Not required					
Allowable absorbed energy J	Cushioned	4.29	8.37	15.8	27.9	49.8
	Without cushion	0.067	0.079	0.079	0.201	0.301
		Without a cushion, this product cannot absorb large energy generated by an external load. We recommend using an external shock absorber.				

*1: The specifications above are for double acting/ single rod. Each item differs depending on variation. For details, refer to Pneumatic Cylinders I (CB-029SA).

Stroke

● Variation: blank, G, G2, G3

Bore size (mm)	Standard stroke (mm)	Max. stroke length (mm)	Available stroke length (mm)	Min. Stroke length (mm)
$\varnothing 40$	25/50/75/100/150/200/	600	1600	1
$\varnothing 50$			2000	
$\varnothing 63$	250/300/350/	700	2500	
$\varnothing 80$	400/450/500			
$\varnothing 100$				

*1: Intermediate Stroke with regard to, 1 mm Peris available.
*2: If the max. stroke length is exceeded, product specifications may not be met, depending on operating conditions. Refer to Pneumatic Cylinders I (CB-029SA).
*3: The max. stroke length available for $\varnothing 63$ to $\varnothing 100$ bore size models with bellows is 2000mm.

● Variation: P, R

Bore size (mm)	Standard stroke (mm)	Max. stroke length (mm)	Min. Stroke length (mm)
$\varnothing 40$	25/50/75/100/150/200/250/300/350/400/450/500	600	25
$\varnothing 50$			
$\varnothing 63$			
$\varnothing 80$		700	
$\varnothing 100$		800	

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

● Variation: D

Bore size (mm)	Standard stroke (mm)	Max. stroke length (mm)	Available stroke length (mm)	Min. Stroke length (mm)
$\varnothing 40$	25/50/75/100/150/200/250/300/350/400/450/500	600	800	1
$\varnothing 50$				
$\varnothing 63$		700		
$\varnothing 80$				

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

*2: If the max. stroke length is exceeded, product specifications may not be met, depending on operating conditions. Refer to Pneumatic Cylinders I (CB-029SA).

● Variation: B

Bore size (mm)	Standard stroke (mm)	Max. stroke length (mm)	Min. Stroke length (mm)
$\varnothing 40$	25/50/75/100/150/200/250/300/350/400/450/500	600	1 (Cylinder 1, and cylinder 2)
$\varnothing 50$			
$\varnothing 63$			
$\varnothing 80$		800	
$\varnothing 100$			

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

● Variation: W

Bore size (mm)	Standard stroke (mm)	Max. stroke length (mm)	Min. Stroke length (mm)
$\varnothing 40$	25/50/75/100/150/200/250/300/350/400/450/500	600	2 (Total Stroke length)
$\varnothing 50$			
$\varnothing 63$			
$\varnothing 80$		800	
$\varnothing 100$			

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

● Variation: K

Bore size (mm)	Standard stroke (mm)	Max. stroke length (mm)	Available stroke length (mm)	Min. Stroke length (mm)
$\varnothing 40$	25/50/75/100/150/200/250/300/350/400/450/500	600	1600	1
$\varnothing 50$				
$\varnothing 63$		700	1900	
$\varnothing 80$				
$\varnothing 100$				

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

*2: If the max. stroke length is exceeded, product specifications may not be met, depending on operating conditions. Refer to Pneumatic Cylinders I (CB-029SA).

How to order (Variation: blank, D, K, G, G2, G3)

Without switch

SCA2 - D - LB - 40 - B - 100 - S FP1 I

With switch

SCA2 - D - LB - 40 - B - 100 - T0H - R - S FP1 I

B Mounting
*1, *2

G Switch Model No.
*5

F Stroke
*3
*4

E Cushion

C Tube Bore size

D Port thread

H Switch Quantity
*7

I Option
*9
*10

J Accessory
*11

⚠ Precautions for model No. selection

- *1: CA and CB are unavailable for the variation D.
- *2: Mounting bracket will be shipped with the product. (Trunnion types are assembled at shipment.)
- *3: Refer to Pneumatic Cylinders I (CB-029SA) when max. stroke length is exceeded.
- *4: The max. stroke length available for the ø63 to ø100 bore size models with bellows is 2000mm.
- *5: Switches are shipped with the product.
- *6: Refer to Pneumatic Cylinders I (CB-029SA) for the min. stroke length with switch.
- *7: When selecting TA or TB mounting, the switch quantity is limited to "H" (1 on head side) for TA, and "R" (1 on rod side) for TB.
- *8: For the variation K, no switch can be built-in.
- *9: The instantaneous max. temperature is the temperature when sparks and cutting chips, etc., instantaneously contact the bellows.
- *10: When selecting TA, TB or TD or TE mounting form, the cushion needle position cannot be changed. (With blank, the cushion needle position will be "S".)
- *11: "I" and "Y" cannot be selected together.
- *12: Refer to Pneumatic Cylinders I (CB-029SA) for custom specifications of rod end form.
- *13: Refer to Pneumatic Cylinders I (CB-029SA) for combinations of variations and options.

[Example of model No.]

SCA2-D-LB-40B-100-T0H-R-SFP1I

Model: Selex cylinder Food-grade grease specifications

- A Variation : Double acting/double rod
- B Mounting : Axial foot
- C Bore size : ø40 mm
- D Port thread : Rc thread
- E Cushion : Both sides cushioned
- F Stroke : 100 mm
- G Switch Model No. : Reed T0H switch, lead wire length 1m
- H Switch quantity : 1 on rod side
- I Option : Cushion needle position S
- J Accessory : Rod eye

Code	Description
A Variation	
Blank	Double acting/single rod
D	Double acting/double rod
K	Double acting/steel tube
G	Double acting/heavy duty scraper
G2	Double acting/coolant proof (packing NBR)
G3	Double acting/coolant proof (packing FKM)

B Mounting	
00	Basic
LB	Axial foot
FA	Rod side flange
FB	Head side flange
FC	Head side special flange
CA	Eye bracket
CB	Clevis bracket (pin and snap ring attached)
TC	Intermediate trunnion
TA	Rod side trunnion
TB	Head side trunnion
TF	Intermediate hole trunnion(ø40 is Selection not possible)
TD	Rod side hole trunnion(ø40 is Selection not possible)
TE	Head side hole trunnion(ø40 is Selection not possible)

C Bore size (mm)	
40	ø40
50	ø50
63	ø63
80	ø80
100	ø100

D Port thread	
Blank	RcNe#
N	NPTNe(Made to order)
G	GNe(Made to order)

E Cushion	
B	Both sides cushioned
R	Rod side cushioned
H	Head side cushioned
N	Without cushion

F Stroke length (mm)	
Refer to the stroke length table on page 49.	

G Switch model No.	
Refer to the switch model No. table on page 53.	

H Switch quantity	
R	1 on rod side
H	1 on head side
D	2
T	3

I Option			
		Max. ambient temp	Instantaneous max. temp
J	Bellows	100°C	200°C
L	Bellows	250°C	400°C
M	Piston rod material (stainless steel)		
Blank	Cushion needle position R (standard)		
S	Cushion needle position S		
T	Cushion needle position T		

J Accessory	
I	Rod eye
Y	Rod clevis (pin and snap ring attached)
B1	Eye bracket
B2	Clevis bracket (pin and snap ring attached)
B3	Eye bracket
B4	Trunnion No. 2 bracket (2 pcs./set)

Electric actuator	Pneumatic cylinders	Assistive device	Pneumatic valves	FR/L Auxiliary Components Electronic Component	Vacuum components	Main line components	Fluid control valves	Main line components	Anti-bacterial/bacteria-removing filter	Vacuum components	Fluid control valves
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SCA2-FP1 Series

How to order (Variation: P, R)

Without switch

SCA2 - P - LB - 40 - B - 100 - 25 - S FP1 I

With switch

SCA2 - P - LB - 40 - B - 100 - 25 - T0H - R - S FP1 I

A Variation

B Mounting
*1

C Bore size

D Port thread

E Cushion

F Stroke length *2

G Stroke Adjusting range

H Switch model No.
*4

I Switch quantity
*5

J Option
*6
*7

K Accessory
*8

⚠ Precautions for model No. selection

- *1: Mounting bracket will be shipped with the product. (The axial foot type, head side flange type and trunnion type are assembled at shipment.)
- *2: Refer to Pneumatic Cylinders I (CB-029SA) when max. stroke length is exceeded.
- *3: Refer to Pneumatic Cylinders I (CB-029SA) for the min. stroke length with switch.
- *4: Switches are shipped with the product.
- *5: Mounting When selecting TA or TB format, the switch quantity is limited to "H" (1 on head side) for TA, and "R" (1 on rod side) for TB.
- *6: Instantaneous max. temperature is the temperature when sparks or cutting chips, etc., instantaneously contact the bellows.
- *7: When selecting TA, TB or TD or TE mounting form, the cushion needle position cannot be changed. (With blank, the cushion needle position will be "S".)
- *8: "I" and "Y" cannot be selected together.
- *9: Refer to Pneumatic Cylinders I (CB-029SA) for custom specifications of rod end form.
- *10: Refer to Pneumatic Cylinders I (CB-029SA) for combinations of variations and options.

[Model No. example]

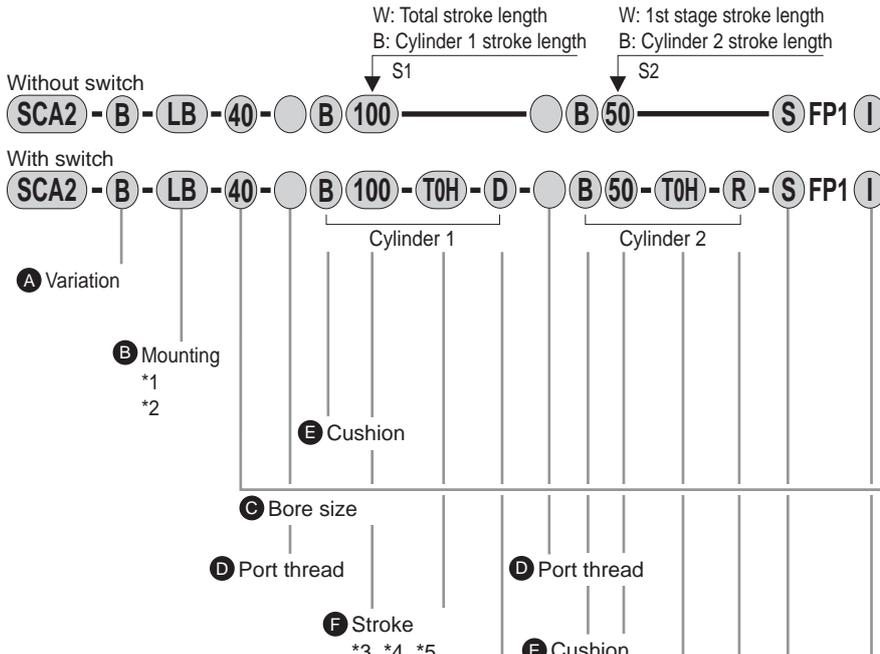
SCA2-P-LB-40B-100-25-T0H-R-SFP1I

Model: Selex cylinder Food-grade grease specifications

- A Variation : Double acting/stroke adjustable (push)
- B Mounting : Axial foot
- C Bore size : ø40 mm
- D Port thread : Rc thread
- E Cushion : Both sides cushioned
- F Stroke length : 100 mm
- G Adjustable stroke range : 25 mm
- H Switch model No. : Reed T0H switch, lead wire length 1 m
- I Switch quantity : 1 on rod side
- J Option : Cushion needle position S
- K Accessory : Rod eye

Code	Description		
A Variation			
P	Double acting/adjustable stroke (push)		
R	Double acting/adjustable stroke (pull)		
B Mounting			
00	Basic		
LB	Axial foot		
FA	Rod side flange		
FB	Head side flange		
TC	Intermediate trunnion		
TA	Rod side trunnion		
TB	Head side trunnion		
TF	Intermediate hole trunnion(ø40 cannot be selected)		
TD	Rod side hole trunnion(ø40 cannot be selected)		
TE	Head side hole trunnion(ø40 cannot be selected)		
C Bore size (mm)			
40	ø40		
50	ø50		
63	ø63		
80	ø80		
100	ø100		
D Port thread			
Blank	Rc thread		
N	NPT thread (made to order)		
G	G thread (made-to-order product)		
E Cushion			
B	Both sides cushioned		
R	Rod side cushioned		
H	Head side cushioned		
N	Without cushion		
F Stroke length (mm)			
Refer to the stroke length table on page 49.			
G Adjustable stroke range (mm)			
25, 50, 75, 100			
H Switch model No.			
Refer to the switch model No. on page 53.			
I Switch quantity			
R	1 on rod side		
H	1 on head side		
D	2		
T	3		
J Option			
	Max. ambient temp	Instantaneous max. temp	
J	Bellows	100°C	200°C
L	Bellows	250°C	400°C
M	Piston rod material (stainless steel)		
Blank	Cushion needle position R (standard)		
S	Cushion needle position S		
T	Cushion needle position T		
K Accessory			
I	Rod eye		
Y	Rod clevis (pin and snap ring attached)		
B4	Trunnion No. 2 bracket (2 pcs./set)		

How to order(Variation: B, W)



⚠ Precautions for model No. selection

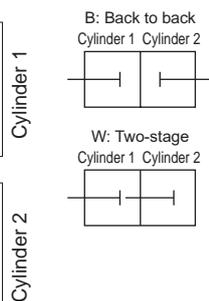
- *1 : Mounting bracket will be shipped with the product. (Trunnion types are assembled at shipment.)
- *2: The mounting types CA and CB are unavailable for the variation B.
- *3: Refer to Pneumatic Cylinders I (CB-029SA) when max. stroke length is exceeded.
- *4: For variation W, no value can be selected when S1 = S2.
- *5 : Refer to Pneumatic Cylinders I (CB-029SA) for the min. stroke length with switch.
- *6: Switches are shipped with the product.
- *7: When selecting TA or TB mounting, the switch quantity is limited to "H" (1 on head side) for TA, and "R" (1 on rod side) for TB are limited.
- *8: When selecting TA or TB mounting, the switch quantity is limited to "H" (1 on head side) for TA, and "R" (1 on rod side) for TB.
- *9: When selecting TA, TB or TD or TE mounting form, the cushion needle position cannot be changed. (With blank, the cushion needle position will be "S".)
- *10: The accessories B1, B2, and B3 are unavailable for the variation B.
- *11: Refer to Pneumatic Cylinders I (CB-029SA) for custom specifications of rod end form.
- *12: Refer to Pneumatic Cylinders I (CB-029SA) for combinations of variations and options.

[Example of model No.]

SCA2-B-LB-40-B100-T0H-D-B50-T0H-R-SFP1I

Model: Medium bore size cylinder Food-grade grease specifications

- A Variation : Double acting/back to back
- B Mounting : Axial foot
- C Bore size : ϕ 40 mm
- D Port thread : Rc thread
- E Cushion : Both sides cushioned
- F Stroke length S1 : 100 mm
- G Switch model No.: Reed T0H switch, Lead wire 1 m
- H Switch quantity : 2 pcs. included
- D Port thread : Rc thread
- E Cushion : Both sides cushioned
- F Stroke length S2 : 50mm
- G Switch model No.: Reed T0H switch, Lead wire 1 m
- H Switch quantity : 1 on rod side
- I Option : Cushion needle position S
- J Accessory : Rod eye



Code	Description
A Variation	
B	Double acting/back to back
W	Double acting/two-stage

B Mounting	
00	Basic
LB	Axial foot
FA	Rod side flange
FB	Head side flange
FC	Head side special flange
CA	Eye bracket
CB	Clevis bracket (pin and snap ring attached)
TA	Rod side trunnion
TB	Head side trunnion
TD	Rod side hole trunnion (ϕ 40 cannot be selected)
TE	Head side hole trunnion (ϕ 40 cannot be selected)

C Bore size (mm)	
40	ϕ 40
50	ϕ 50
63	ϕ 63
80	ϕ 80
100	ϕ 100

D Port thread	
Blank	Rc thread
N	NPT thread (made to order)
G	G thread (made-to-order product)

E Cushion	
B	Both sides cushioned
R	Rod side cushioned
H	Head side cushioned
N	Without cushion

F Stroke length (mm)				
Bore size	B		W (*3)	
	S1	S2	S1	S2
ϕ 40				
ϕ 50	1 to 600	1 to 600	2 to 600	1 to 200
ϕ 63				
ϕ 80	1 to 700	1 to 700		
ϕ 100	1 to 800	1 to 800		

G Switch model No.	
Refer to the switch model numbers on the following page.	

H Switch quantity	
R	1 on rod side
H	1 on head side
D	2
T	3

I Option			
		Max. ambient temp.	Instantaneous max. temp.
J	Bellows	100°C	200°C
L	Bellows	250°C	400°C
M	Piston rod material (stainless steel)		
Blank	Cushion needle position R (standard)		
S	Cushion needle position S		
T	Cushion needle position T		

J Accessory	
I	Rod eye
Y	Rod clevis (pin and snap ring attached)
B1	Eye bracket
B2	Clevis bracket (pin and snap ring attached)
B3	Eye bracket
B4	Trunnion No. 2 bracket (2 pcs./set)

SCA2-FP1 Series

Switch model No.

● Variation: blank, D, G, P, R, B, W

Switch model No.							
Lead wire Straight	Lead wire L-shaped	Contact	Voltage		Display	Lead wire	
			AC	DC			
T0H*	T0V*	Reed	●	●	1-color display	2-wire	
T5H*	T5V*		●	●	Without indicator lamp		
T8H*	T8V*		●	●	1-color display		
T1H*	T1V*	Proximity	●		1-color display	2-wire	
T2H*	T2V*			●			2-wire
T3H*	T3V*			●		3-wire	
T2WH*	T2WV*			●	2-color display	2-wire	
T2YH*	T2YV*			●			2-wire
T3WH*	T3WV*			●			3-wire
T3YH*	T3YV*			●			3-wire
T3PH*	T3PV*			●	1-color display (Made to order)	3-wire	
T2YD*	-			●	2-color display AC magnetic field	2-wire	
T2YDT*	-			●			2-wire
T2JH*	T2JV*		●	1-color display off-delay	2-wire		
* Lead wire length							
Blank	1 m (standard)						
3	3 m (option)						
5	5 m (option)						

● Variation: G2, G3

Switch model No.						
Lead wire Straight	Lead wire L-shaped	Contact	Voltage		Display	Lead wire
			AC	DC		
T2YLH*	T2YLV*	Proximity		●	2-color display	2-wire
T3YLH*	T3YLV*			●		3-wire
* Lead wire length						
Blank	1 m (standard)					
3	3 m (option)					
5	5 m (option)					

How to order mounting brackets

Bore size (mm)	ø40	ø50	ø63	ø80	ø100
Mounting bracket					
Foot (LB) *2	S1-LB-40	S1-LB-50	S1-LB-63	S1-LB-80	S1-LB-100
Flange (FA/FB)	S1-FA-40	S1-FA-50	S1-FA-63	S1-FA-80	S1-FA-100
Eye bracket (CA)	S1-CA-40-FP1	S1-CA-50-FP1	S1-CA-63-FP1	S1-CA-80-FP1	S1-CA-100-FP1
Clevis bracket (CB)	S1-CB-40-FP1	S1-CB-50-FP1	S1-CB-63-FP1	S1-CB-80-FP1	S1-CB-100-FP1

*1: For materials of the mounting bracket, refer to Pneumatic Cylinders I (CB-029SA).

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

*3: All mounting brackets have mounting bolts attached.

*4: The dimensions of the eye bracket (CA) and clevis bracket (CB) are the same as the standard products.

For dimensions, refer to the SCA2 Series in "Pneumatic Cylinders I (CB-029SA)".