

Rotary Actuators

Air Grippers

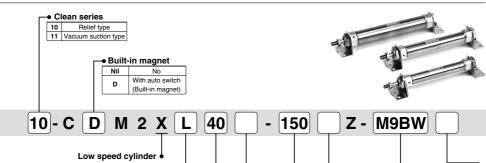
Air Preparation Equipment

Modular F.

Pressure Control Equipment







Mounting

	mounting v
В	Basic (Double-side bossed)
L	Axial foot
F	Rod flange
G	Head flange
BZ	Boss-cut, Basic
FZ	Boss-cut, Rod flange

Bore size (mm)

Port thread type					
	Nil	Rc			
	TN	NPT*			
	TF	G*			

* Rubber bumper only

Cylinder stroke (mm)

Auto switch

- Nil Without auto switch * For applicable auto switches, refer to
- the "Applicable Auto Switch List".
- * The minimum stroke for auto switch mounting, operating range and auto switch mounting brackets/part no. are the same as standard products.

Number of auto switches

Nil	2 pcs.
S	1 pc.
n	n pcs.

THOU E	ena urreau
Nil	Male rod end
F	Female rod end

Model

	Model	Bore size (mm)	Port size	Lubrication	Action	Standard stroke (mm)	Auto switch mounting	Cushion Rubber
96	10-CM2X □20	20						
type	10-CM2X □25	25	1/8					
Relief	10-CM2X □32	32						
æ	10-CM2X □40	40	1/4	Non-lube	Double acting,	25, 50, 75, 100, 125,	0	0
ype	11-CM2X □20	20		Non-lube	Single Rod	150, 200, 250, 300	Ŭ	Ŭ
F 2	11-CM2X □25	25	1/8					
Vacuum suction type	11-CM2X□32	32						
ons	11-CM2X □40	40	1/4					

SMC

Specifications

Bore size (mm)	20/25/32/40		
Proof pressure	1.5 MPa		
Maximum operating pressure	1.0 MPa		
Minimum operating pressure	0.05 MPa		
Ambient and fluid temperature	Without auto switch: -10°C to 70°C With auto switch: -10°C to 60°C (No freezing)		
Piston speed	30 to 400 mm/s		
Stroke length tolerance	+1.4 0		
Mounting	Basic/Axial foot/Rod flange/Head flange		
Grease	Fluorine grease		
0	10-: Class 4		
Cleanliness class (ISO class)	11-: Class 3		

Suction Flow Rate of Vacuum Suction Type (Reference values)

Bore size (mm)	Suction flow rate L/min (ANR)
20/25/32/40	2

Dimensions and applicable auto switches are the same as 10-/11-CM2-Z. Refer to pages 701 to 707.

⚠ Specific Product Precautions

Be sure to read this before handling.

Handling

⚠ Warning

1. Do not rotate the cover.

If a cover is rotated when installing a cylinder or screwing a fitting into the port, it is likely to damage the junction part with cover.

⚠ Caution

1. Use caution to the popping of a retaining ring.

When replacing rod seals and removing and mounting a retaining ring, be much careful with the popping of a retaining ring.

Maintenance

⚠ Caution

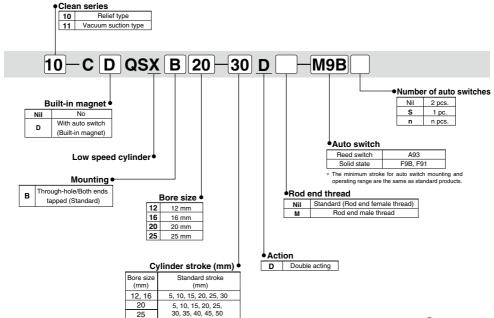
1. Grease pack

When maintenance requires only grease, use the following part number to order.

Grease pack part no.: GR-X-005 (5 g)

Pressure Switches/ Pressure Sensors





Model

		Bore size				Standard stroke	Auto switch	Cus	hion		
	Model	(mm)	Port size	Lubrication	Action	(mm)	mounting	Rubber	Air		
9	10-CQSXB12	12				E 10 1E 00 0E 00					
Relief type	10-CQSXB16	16				5, 10, 15, 20, 25, 30					
Jie I	10-CQSXB20	20				5, 10, 15, 20, 25,			ĺ		
æ	10-CQSXB25	25	MEYOR		Non-lube [Double acting Single rod	Double acting	30, 35, 40, 45, 50	0		
- be	11-CQSXB12	12	IVID X U.6				5, 10, 15, 20, 25, 30		_		
Vacuum suction type	11-CQSXB16	16				5, 10, 15, 20, 25, 50					
	11-CQSXB20	20				5, 10, 15, 20, 25,					
ا ۾ ^	11-CQSXB25	25	1			30, 35, 40, 45, 50					

Manufacturing of intermediate strokes Intermediate strokes in 1 mm increments are available by using spacers with standard stroke cylinders. The overall length of cylinder is the same as a standard stroke one size longer than this intermediate stroke.

Example) 10-CQSXB25-47D: Install a 3 mm width spacer in a standard stroke cylinder 10-CQSXB25-50D.

Low Speed Cylinder 10-CQSX/11-CQSX

Specifications

871

Bore size		10- (Re	lief type)			
(mm)	12	16	20	25		
Fluid		A	Air			
Proof pressure	1.5 MPa					
Maximum operating pressure	MPa					
Minimum operating pressure	0.04 MPa 0.035 MF			5 MPa		
Ambient and fluid temperature	Without auto switch: -10 to 70°C (With no freezing)					
Ambient and fluid temperature	With auto switch: -10 to 60°C (With no freezing)					
Piston speed		1 to 200 mm/s				
Stroke length tolerance		+1.0	mm			
Port size		M5	x 0.8			
Relief port	M5 x 0.8					
Grease	Fluorine grease					
Cleanliness class (ISO class)	Class 4					

Bore size	1	11- (Vacuum suction type)				
(mm)	12 16 20					
Fluid	Air					
Proof pressure		1.5	MPa			
Maximum operating pressure	1.0	MPa				
Minimum operating pressure	0.03	MPa	a 0.025 MPa			
Ambient and fluid temperature	Without auto switch: -10 to 70°C (With no freezing)					
Ambient and nuid temperature	With auto switch: -10 to 60°C (With no freezing)					
Piston speed	1 to 200			00 mm/s		
Stroke length tolerance		+1.0	mm			
Port size		M5	x 0.8			
Vacuum suction port		M5	x 0.8			
Grease	Fluorine grease					
Cleanliness class (ISO class)	Class 3					
Suction flow rate (Reference values)		5 L/mir	n (ANR)			

Dimensions and applicable auto switches are the same as 10-/11-CQS. Refer to pages 750 to 754.

2 pcs.

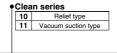
1 pc.

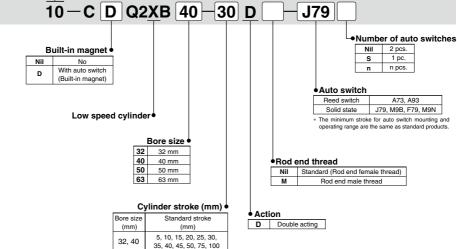
n pcs.

A73, A93

J79, M9B, F79, M9N

How to Order





·Manufacturing of intermediate strokes Intermediate strokes in 1 mm increments are available by using spacers with standard stroke cylinders

50, 63

10, 15, 20, 25, 30,

35, 40, 45, 50, 75, 100

Please contact SMC for ø40 with bumper

Example) 10-CQ2XB40-57D; Install an 18 mm width spacer in a standard stroke cylinder 10-CQ2XB40-75D.

Model

	Model	Bore size	Port size	Lubrication	Action	Standard stroke	Auto switch	Cus	hion
	Model	(mm)	FUIT SIZE	Lubiication	ACTION	(mm)	mounting	Rubber	Air
_ ed	10-CQ2XB32	32	M5 x 0.8, Rc1/8 Note 1)			5, 10, 15, 20, 25, 30,			
₹	10-CQ2XB40	40	Rc1/8			35, 40, 45, 50, 75, 100			
Relief typ	10-CQ2XB50	50	Do1/4			10, 15, 20, 25, 30, 35			
æ	10-CQ2XB63	63	Rc1/4	Non-lube	Double acting	40, 45, 50, 75, 100			
m type	11-CQ2XB32	32	M5 x 0.8, Rc1/8 Note 1)	INOII-IUDE	Single rod	5, 10, 15, 20, 25, 30,	0	_	_
i d	11-CQ2XB40	40	Rc1/8			35, 40, 45, 50, 75, 100			
Vacuum suction tyl	11-CQ2XB50	50	Rc1/4]		10, 15, 20, 25, 30, 35			
> ns	11-CQ2XB63	63	NC1/4			40, 45, 50, 75, 100			

Note 1) For ø32 without an auto switch, M5 x 0.8 is used for 5 mm stroke only.

Pressure Switches/ Pressure Sensors



Low Speed Cylinder 10-CQ2X/11-CQ2X

Specifications

Bore size		10- (Rel	ief type)			
(mm)	32	40	50	63		
Fluid		Α	ir			
Proof pressure		1.5	MPa			
Maximum operating pressure		1.0 l	МРа			
Minimum operating pressure	0.035	MPa	0.03 MPa			
Ambient and fluid temperature	Without auto switch: -10 to 70°C (With no freezing)					
Ambient and hald temperature	With auto switch: -10 to 60°C (With no freezing)					
Piston speed	1 to 200 mm/s					
Stroke length tolerance	+1.0 mm					
Port size	M5 x 0.8, 1/8	1/8	1	/4		
Relief port	M5 x 0.8					
Grease	Fluorine grease					
Cleanliness class (ISO class)	Class 4					

Bore size	11- (Vacuum suction type)			
(mm)	32	40	50	63
Fluid	Air			
Proof pressure	1.5 MPa			
Maximum operating pressure	1.0 MPa			
Minimum operating pressure	0.025 MPa		0.02 MPa	
Ambient and fluid temperature	Without auto switch: -10 to 70°C (With no freezing)			
	With auto switch: -10 to 60°C (With no freezing)			
Piston speed	0.5 to 200 mm/s			
Stroke length tolerance	^{+1.0} mm			
Port size	M5 x 0.8, 1/8	1/8	1/	4
Vacuum suction port	M5 x 0.8			
Grease	Fluorine grease			
Cleanliness class (ISO class)	Class 3			
Suction flow rate (Reference values)	5 L/mir	(ANR)	10 L/mii	n (ANR)

Dimensions and applicable auto switches are the same as 10-/11-CQ2. Refer to pages 759 to 762.

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