

Slide Unit/Double Rod Type

CX2 Series

Slide Bearing: $\phi 10, \phi 15, \phi 25$

How to Order

Basic type

With auto switch

Cylinder with auto switch

Symbol	Specifications/Mounting
DB	With auto switch/ Housing mounting
DP	With auto switch/ Plate mounting

Type

N	Non-lube type
H	Air-hydro type (Except $\phi 10$)

Bore size/Stroke (mm)

	$\phi 10$	$\phi 15$	$\phi 25$
25, 50, 75, 100			
25, 50, 75, 100, 125, 150, 175, 200			
25, 50, 75, 100, 125, 150, 175, 200			

For $\phi 15$ and $\phi 25$, strokes up to 300 are available as made-to-order. (-XB11)

Cushion (Option)

Nil	With adjusting bolt (2 pcs.)
B	With shock absorber (2 pcs.)
BS	With shock absorber (1 pc.)

Port thread type

Symbol	Type	Bore size
Nil	M thread	$\phi 10, \phi 15$
	Rc 1/8	
TN	NPT 1/8	$\phi 25$
TF	G 1/8	

Auto switch

Nil	Without auto switch (Built-in magnet)	Number of auto switches
Nil		2 pcs.
S		1 pc.
n		"n" pcs.

* For the applicable auto switch model, refer to the table below.

Shock Absorbers

Type	Bore size (mm)		
	10, 15	15	25
Standard (shock absorber RB series)	RB0805		RB1006
Shock absorber soft type RJ series type (-XB22)	RJ0806H		RJ1007H

* The shock absorber service life is different from that of the CX2 cylinder. Refer to "Specific Product Precautions" for each shock absorber for the replacement period.
* The shock absorber soft type RJ series type (-XB22) is a made to order specification. For details, refer to page 1296.

Ordering Example:

Basic type: CX2 N 15 - 100 B -

With auto switch: C DB X2 N 15 - 100 B - J79W

Applicable Auto Switches/Refer to pages 1119 to 1245 for further information on auto switches.

Type	Special function	Electrical entry	Indicating light	Wiring (Output)	Load voltage		Rail mounting		Applicable cylinder size		Pre-wired connector	Applicable load									
					DC	AC	Perpendicular	In-line	Housing mounting	Plate mounting		0.5 (Nil)	3 (L)	5 (Z)	None (N)						
Solid state auto switch	—	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	F7NV	F79	$\phi 15$	$\phi 10$	●	●	○	IC circuit						
				3-wire (PNP)				F7PV	F7P			●	●	○							
		2-wire		F7BV				J79	●			●	○	—							
		3-wire (PNP)		J79C				—	●			●	●								
	Diagnostic indication (2-color indicator)	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	F7NWW	F79W	$\phi 25$	$\phi 15$	●	●	○	IC circuit						
				3-wire (PNP)				—	F7PW			●	●	○							
	2-wire	F7BWW		J79W				●	●			○	—								
	4-wire (NPN)	F7BAV**		F7BA**				●	●			○									
	Water resistant (2-color indicator)	Grommet	Yes	3-wire	24 V	5 V, 12 V	—	—	F79F	$\phi 25$	$\phi 10$	●	●	○	IC circuit						
				3-wire				—	A76H			●	●	○							
With diagnostic output (2-color indicator)	Grommet	No		2-wire				24 V	5 V, 12 V			200 V	A72	A72H		$\phi 15$	$\phi 15$	●	●	○	—
				2-wire									12 V	A73				A73H	●	●	
—	Connector		No	2-wire	24 V	12 V	100 V or less			A80	A80H		$\phi 25$	$\phi 25$	●			●	○	IC circuit	
				2-wire						12 V	A73C				—			●	●		
—	Grommet	No		3-wire				24 V	5 V, 12 V	24 V or less	A80C	—			$\phi 10$	—	●	●	○		IC circuit
				3-wire							—	E76A					●	●	○		
—	Grommet		No	2-wire	24 V	12 V	100 V				—	E73A	$\phi 10$	—			●	●	○	—	
				2-wire							5 V, 12 V	100 V or less					—	E80A	●		

** Water resistant type auto switches can be mounted on the above models, but in such case SMC cannot guarantee water resistance.

Consult with SMC regarding water resistant types with the above model numbers.

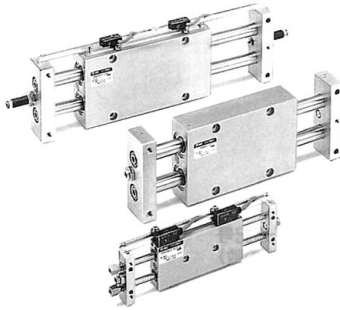
* Lead wire length symbols: 0.5 m Nil (Example) F79W
3 m L (Example) F79WL
5 m Z (Example) F79WZ
None N (Example) J79CN

* Solid state auto switches marked with "○" are produced upon receipt of order.

* Refer to pages 1192 and 1193 for details of auto switches with a pre-wired connector.

* Auto switches are shipped together (not assembled).

Specifications



Type		Non-lube	Air-hydro type
Fluid		Air	Hydraulic fluid
Proof pressure		1.5 MPa	
Max. operating pressure		1.0 MPa	
Min. operating pressure	CX2N10	0.15 MPa	—
	CX2□15		0.15 MPa
	CX2□25		0.10 MPa
Ambient and fluid temperature		-10°C to +60°C	
Piston speed (Non-lube)	With adjusting bolt	30 to 200 mm/s	Refer to Table (1).
	With shock absorber	30 to 500 mm/s	
Cushion		With shock absorber (Option)	
Stroke adjustable range		Standard stroke: ±2 mm	
Max. load mass ⁽¹⁾	CX2N10	9.8 N	
	CX2□15	29.4 N	
	CX2□25	58.8 N	
Non-rotating accuracy (Except piston rod deflection)	CX2N10	±0.1°	
	CX2□15	±0.04°	
	CX2□25	±0.02°	
Accessory (Option)		Straight knock pin (2 pcs.), Adjusting bolt (-X138) ⁽²⁾ Shock absorber	

Note 1) Place the center of gravity of the load as close to the center of the slide unit as possible during operation. If they are placed far apart, consult with SMC.

Note 2) "-X138" has a stroke adjustable range of 12.5 mm on one side.



Made to Order: Individual Specifications
(For details, refer to pages 706 to 708.)

Symbol	Specifications
-X138	Adjustable stroke
-X146	Hollow piston rod
-X168	CX helical insert thread
-X169	2 built-in magnets

Made to Order Specifications
(For details, refer to pages 1247 to 1440.)

Symbol	Specifications
-XB11	Long stroke type
-XB13	Low speed cylinder (5 to 50 mm/s)
-XB22	Shock absorber soft type RJ series type
-XC22	Fluororubber seals

Table (1) Air-hydro/Piston Speed

Model	Plate mounting	Housing mounting
CX2H15	Refer to the below. ^{Note 1)}	5 to 50 mm/s
CX2H25	5 to 40 mm/s	5 to 100 mm/s

Note 1) Consult with SMC when the air-hydro type is mounted on a plate.

Note 2) Consult with SMC when units are used at a low speed (10 mm/s or faster) (when intermediate stops are not required) since -XB13 (Low speed specification) is available.

Note 3) When using the air-hydro type, use the double side hydro unit.

Shock Absorber Specifications

Shock absorber		RB0805	RB1006
Applicable slide unit		CX2N10, CX2□15	CX2□25
Maximum energy absorption (J)		0.98	3.92
Stroke absorption (mm)		5	6
Max. collision speed (m/sec)		0.05 to 5	
Max. operating frequency (cycle/min)		80	70
Max. allowable thrust (N)		147	353
Ambient temperature range (°C)		-10 to 80	
Spring force (N)	Extended	1.96	4.22
	Retracted	3.83	6.18
Weight (g)		15	25

* The above shows the maximum absorption energy per cycle. Accordingly, the operating frequency can be increased in accordance with the absorption energy.

* The shock absorber service life is different from that of the cylinder body depending on the operating conditions. Refer to the RB Series Specific Product Precautions for the replacement period.

Moisture Control Tube IDK Series



When operating an actuator with a small diameter and a short stroke at a high frequency, the dew condensation (water droplet) may occur inside the piping depending on the conditions.

Simply connecting the moisture control tube to the actuator will prevent dew condensation from occurring. For details, refer to [the IDK series in the Best Pneumatics No. 6.](#)

Theoretical Output

Model	Rod size (mm)	Piston area (mm ²)	Operating pressure (MPa)								(N)
			0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	
CX2N10	6	101	20	30	40	51	61	71	81	91	
CX2□15	8	207	41	62	83	104	124	145	166	186	
CX2□25	14	597	119	179	239	299	358	418	478	537	

Note) Theoretical output (N) = Pressure (MPa) x Piston area (mm²)

CX2

CXW

CXT

CXSJ

CXS

D-□

-X□