

Slide Unit/Double Rod Type

Series CX2

Slide Bearing: ø10, ø15, ø25

How to Order

Port thread type

Symbol	Type	Bore size
Nil	M thread	ø10, ø15
TN	Rc 1/8	ø25
TF	NPT 1/8	
	G 1/8	

With auto switch

Cylinder with auto switch

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

Type

Symbol	Specifications
N	Non-lube type
H	Air-hydro type (Except ø10)

Bore size/Stroke (mm)

Bore size	Stroke (mm)
ø10	25, 50, 75, 100
ø15	25, 50, 75, 100, 125, 150, 175, 200
ø25	25, 50, 75, 100, 125, 150, 175, 200

For ø15 and ø25, strokes up to 300 are available as made-to-order. (-XB11)

Made to Order
* Refer to page 465 for Made to Order specifications.

Number of auto switches

Symbol	Specifications
Nil	2 pcs.
S	1 pc.
n	"n" pcs.

Auto switch

Symbol	Specifications
Nil	Without auto switch (Built-in magnet)

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

Cushion (Option)

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

Applicable Auto Switch/Refer to pages 1719 to 1827 for further information on auto switches.

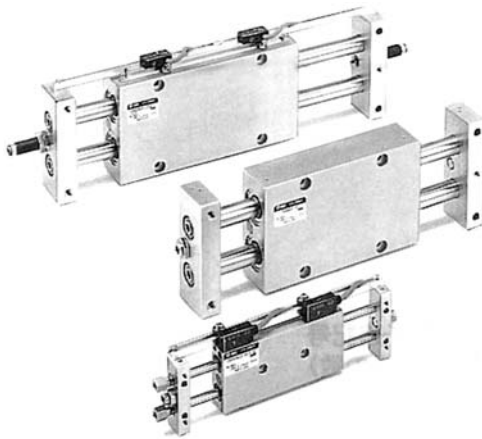
Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Auto switch part no.		Applicable cylinder size		Lead wire length (m)				Pre-wired connector		Applicable load						
					DC	AC	Electrical entry		Housing mounting	Plate mounting	0.5 (Nil)	3 (L)	5 (Z)	None (N)									
							Perpendicular	In-line															
Solid state switch	—	Grommet	Yes	3-wire (NPN)	24V	5V, 12V	—	F7NV	F79	ø15	ø10	●	●	○	—	○	IC circuit						
		3-wire (PNP)		F7PV				F7P	●			●	○	—	○								
	Connector	2-wire		F7BV				J79	●			●	○	—	○	—							
		J79C		—				●	●			●	●	—	—								
	Diagnostic indication (2-color indication)	Grommet		3-wire (NPN)				F7N WV	F79W			●	●	○	—	○	IC circuit						
				3-wire (PNP)				—	F7PW			●	●	○	—	○							
	Water resistant (2-color indication)	Grommet		2-wire				F7B WV	J79W			●	●	○	—	○	—						
				F7BAV				F7BA	—			●	○	—	○								
	With diagnostic output (2-color indication)	Grommet		4-wire (NPN)				—	F79F			●	●	○	—	○	IC circuit						
Reed switch	—	Grommet	Yes	3-wire	—	5V	—	—	A76H	ø15	ø10	●	●	—	—	—	IC circuit						
				Connector	No	2-wire	24V	12V	100V or less			A72	A72H	●	●	—		—	—	—			
												A73	A73H	●	●	●		—	—				
												A80	A80H	●	●	—		—	—		IC circuit		
		A73C	—									●	●	●	●	—	—						
		Grommet	Yes	3-wire	—	5V	—	—	E76A			ø10	—	●	●	—	—	—	IC circuit				
				2-wire	24V	12V	100V	—	E73A					●	●	—	—	—		—			
				No	2-wire	24V	5V, 12V	100V or less	—					E80A	●	●	—	—			—	IC circuit	

* 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 1784 and 1785 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.

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
Mass (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.

Theoretical Output

Model	Rod size (mm)	Piston area (mm ²)	Operating pressure (MPa)								
			0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	(N)
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)



Made to Order Specifications
(For details, refer to pages 1851 to 2021.)

Symbol	Specifications
—XB11	Long stroke type
—XB13	Low speed cylinder (5 to 50 mm/s)
—X146	Hollow piston rod
—X138	Adjustable stroke
—X168	CX helical insert thread
—X169	2 built-in magnets
—XC22	Fluororubber seals

CX2

CXW

CXT

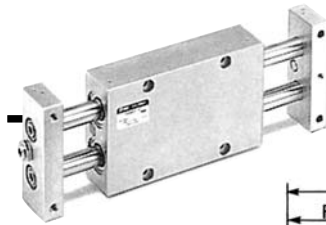
CXSJ

CXS

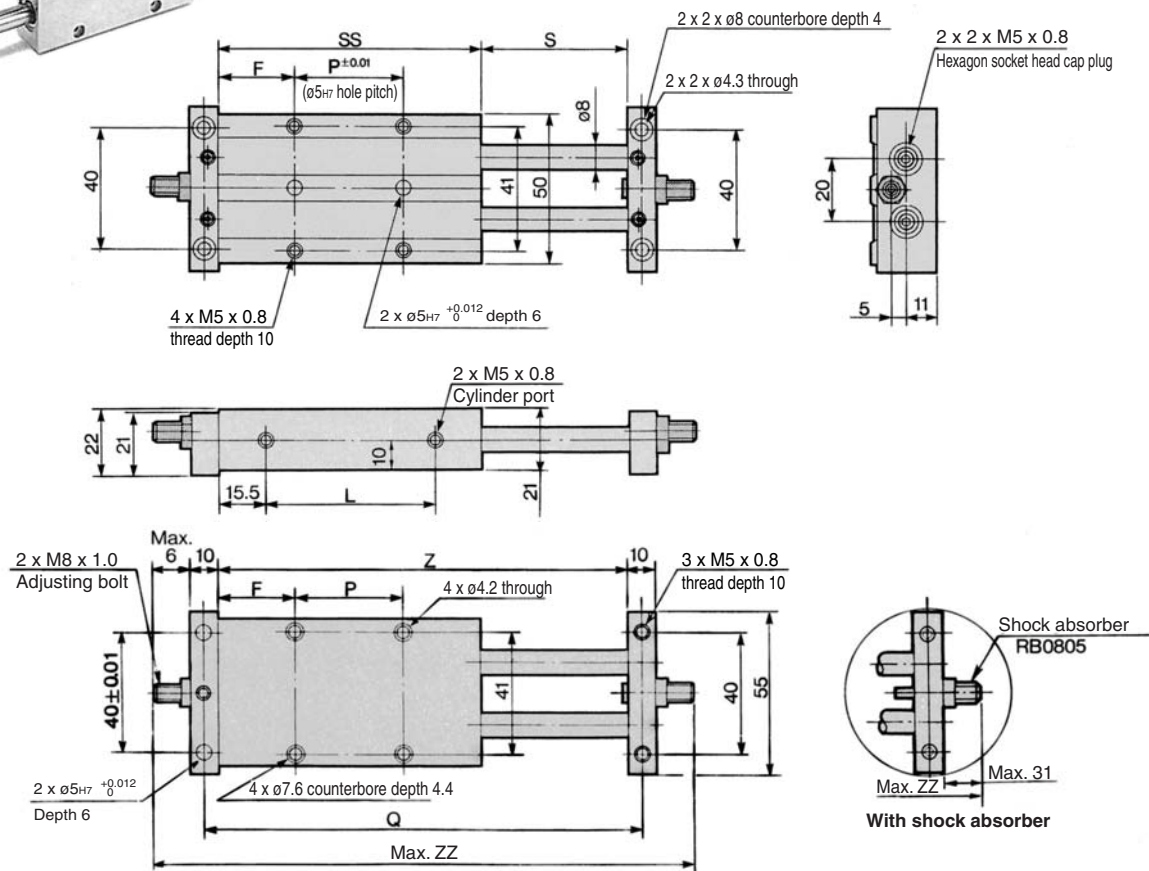
D-□

-X□

Individual
-X□



ø15 Basic Type: CX2□15- Strokes: 25 to 200 □

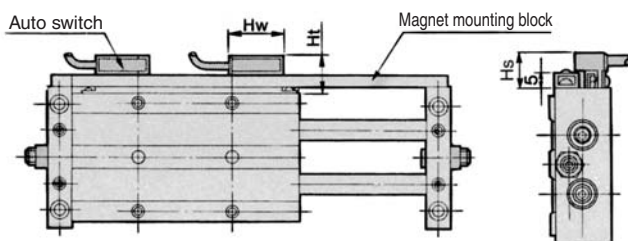


(mm)

Model	F	L	P	Q	S	SS	Z	With adjusting bolt	With shock absorber
								ZZ	ZZ
CX2□15-25□	24.5	38	20	106	27	69	96	128	178
CX2□15-50□	24.5	63	45	156	52	94	146	178	228
CX2□15-75□	27	88	65	206	77	119	196	228	278
CX2□15-100□	27	113	90	256	102	144	246	278	328
CX2□15-125□	39.5	138	90	306	127	169	296	328	378
CX2□15-150□	52	163	90	356	152	194	346	278	428
CX2□15-175□	64.5	188	90	406	177	219	396	428	478
CX2□15-200□	77	213	90	456	202	244	446	478	528

Housing mounting style with auto switch

CDBX2□15- Stroke



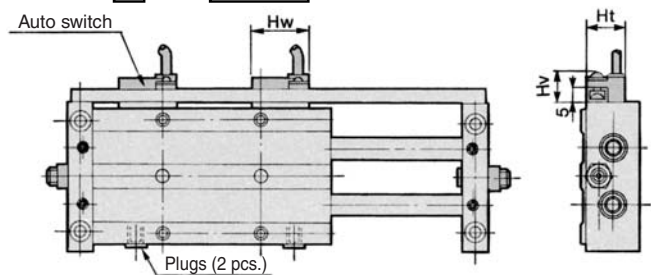
Note 1) The dimensions show D-A7 and D-A8.

Auto switch model	Hw	Hs	Ht
D-A7, D-A8	23	12.5	15
D-F7□, D-J79, D-J79W, D-F7PW, D-F79F, D-F7BAL, D-F7NTL	23	12.5	15
D-A7□H, D-A80H	22	12.5	15
D-A73C, D-A80C	23	15	17.5
D-F7□V	23	12.5	15
D-J79C	24	15	17.5
D-F7LF	30	12.5	15

Note 2) For only 25 strokes, two magnets for auto switches are installed to the magnet mounting block.

Plate mounting style with auto switch

CDPX2□15- Stroke



Note 1) The dimensions show D-A7 and D-A8.

Auto switch model	Hw	Ht	Hv
D-A7, D-A8	23	15	10.5
D-F7□, D-J79, D-J79W, D-F7PW, D-F79F, D-F7BAL, D-F7NTL	23	15	11.5
D-A7□H, D-A80H	22	15	11.5
D-A73C, D-A80C	23	17.5	17.5
D-F7□V	23	15	14
D-J79C	24	17.5	17
D-F7LF	30	15	11.5

Note 2) For only 25 strokes, two magnets for auto switches are installed in the housing.

CX2

CXW

CXT

CXSJ

CXS

D-□

-X□

Individual

-X□