

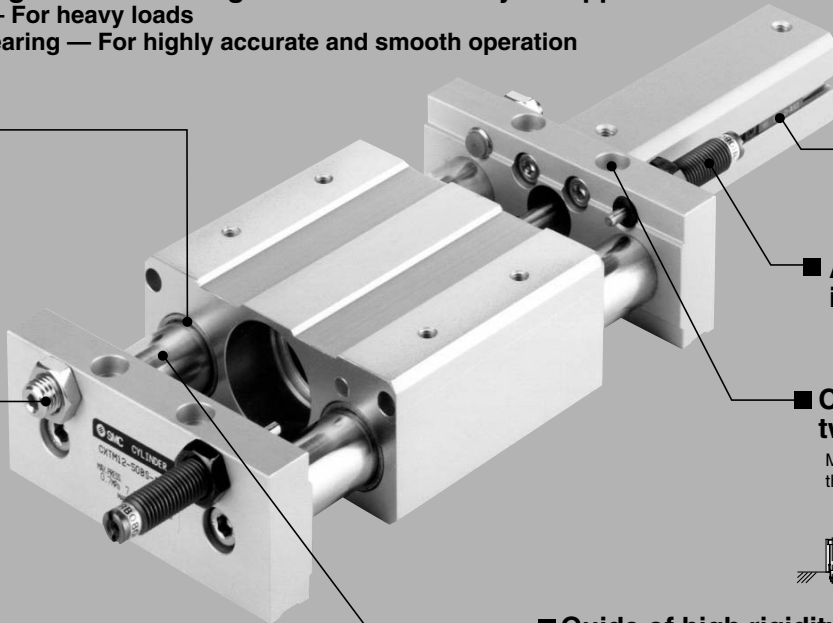
Platform Cylinder

Series CXT

ø12, ø16, ø20, ø25, ø32, ø40

A highly rigid and highly accurate slide table integrated with an actuator.

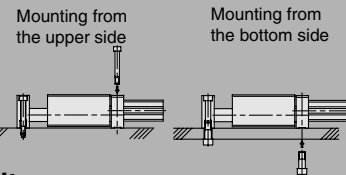
- Two styles of guide rod bearings to accommodate your application
 - Slide bearing — For heavy loads
 - Ball bushing bearing — For highly accurate and smooth operation



Auto switch can be mounted.

A shock absorber can be installed (option).

Can be mounted on two sides.



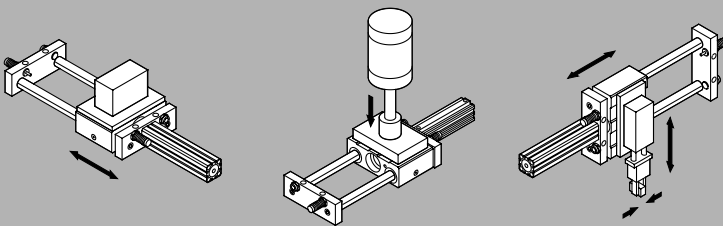
Adjusting bolt with bumper is standard.

Performs the function of a cushion and adjusts the stroke 5 mm on each side, or 10 mm for both sides.

For moving and transferring workpieces.

For moving the receptacle for workpieces used in stamping or press-fitting processes.

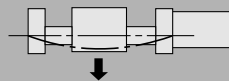
For using as a Pick & Place unit in combination with other actuators.



Guide of high rigidity

Series	Maximum load weight (kg)	CXTM (Slide bearing)		CXTL (Ball bushing bearing)	
		Table ⁽¹⁾ displacement (mm)	Allowable ⁽²⁾ static weight (kg)	Table ⁽¹⁾ displacement (mm)	Allowable ⁽²⁾ static weight (kg)
CXT□12	3	0.002	350	0.015	60
CXT□16	7	0.004	500	0.019	70
CXT□20	12	0.007	900	0.044	125
CXT□25	20	0.030	900	0.180	125
CXT□32	30	0.032	1100	0.123	140
CXT□40	50	0.025	1900	0.109	170

Note 1) Table displacement



"Table displacement" is the amount of deflection of the guide rod that occurs when a maximum load weight is placed on the maximum stroke table while the table is at the center of the stroke (the amount of looseness is not included).

Note 2) Allowable static weight



An "allowable stationary weight" is the allowable amount of stationary weight that can be applied vertically to the workpiece mounting surface of the table while the table is at the stroke end.

Series Variations

Bearing type		Bore size (mm)	Stroke (mm)										
Slide bearing	Ball bushing bearing		15	25	50	75	100	125	150	175	200	250	300
CXTM12	CXTL12	12	●	●	○	○	○	○	○	○	○	○	○
CXTM16	CXTL16	16	●	●	○	○	○	○	○	○	○	○	○
CXTM20	CXTL20	20	●	●	○	○	○	○	○	○	○	○	○
CXTM25	CXTL25	25	●	●	○	○	○	○	○	○	○	○	○
CXTM32	CXTL32	32	●	●	○	○	○	○	○	○	○	○	○
CXTM40	CXTL40	40	●	●	○	○	○	○	○	○	○	○	○

●Standard stroke ○Long stroke

- MX□
- MTS
- MY□
- CY□
- MG□
- CX□
- D-
- X
- 20-
- Data

Platform Cylinder

Series CXT

ø12, ø16, ø20, ø25, ø32, ø40

How to Order

CXT **M** **20** **100** **B** **F9BW** **S**

Bearing type

M	Slide bearing
L	Ball bushing bearing

Number of auto switches

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

Auto switch

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

* For the applicable auto switch model, refer to the table below.
* Auto switches are shipped together, (but not assembled).

Option

Nil	Adjusting bolt with bumper only (Standard)
B	With 2 shock absorbers (Set on the driving cylinder side only when packed.)
BS	With 1 shock absorber (Set on the driving cylinder side when packed.)

Bore size/Stroke (mm)

Bore size (mm)	Stroke (mm)										
	15	25	50	75	100	125	150	175	200	250	300
12	●	●	○	○	○						
16	●	●	○	○	○						
20	●	●	○	○	○	○	○	○	○	○	○
25	●	●	○	○	○	○	○	○	○	○	○
32	●	●	○	○	○	○	○	○	○	○	○
40	●	●	○	○	○	○	○	○	○	○	○

●Standard stroke ○Long stroke

* For minimum strokes for auto switch equipped style, refer to page 8-27-12.

Applicable Auto Switch/Refer to page 8-30-1 for further information on auto switches.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Rail mounting		Direct mounting		Lead wire length (m)*				Pre-wire connector	Applicable load				
					DC	AC	ø32, ø40		ø12 to ø40		0.5 (Nil)	3 (L)	5 (Z)	None (N)		IC circuit	Relay, PLC			
							Perpendicular	In-line	Perpendicular	In-line										
Reed switch	—	Grommet	Yes	3-wire (NPN equivalent)	—	5 V	—	—	A76H	A96V	A96	●	●	—	—	—	IC circuit	—		
				—	—	200 V	A72	A72H	—	—	●	●	—	—	—	—	—	—	—	
	Connector	2-wire		24 V	12 V	100 V	A73	A73H	—	—	●	●	●	—	—	—	—	—	Relay, PLC	
				12 V	—	—	A73C	—	—	—	—	●	●	●	●	—	—	—		—
Diagnostic indication (2-color indication)	Grommet	—	—	—	—	—	—	—	—	—	●	●	—	—	—	—	—			
Solid state switch	—	Grommet	Yes	3-wire (NPN)	5 V, 12 V	—	—	F7NV	F79	M9NV	M9N	●	●	○	—	○	IC circuit	Relay, PLC		
				3-wire (PNP)				F7PV	F7P	M9PV	M9P	●	●	○	—	○	—		—	
	Connector	2-wire		12 V	F7BV		J79	M9BV	M9B	●	●	○	—	○	—	—	—		—	
					J79C		—	—	—	●	●	●	●	—	—	—	—		—	
	Diagnostic indication (2-color indication)	Grommet		3-wire (NPN)	5 V, 12 V		—	F7N WV	F79 W	F9N WV	F9N W	●	●	○	—	○	—		○	IC circuit
								3-wire (PNP)	—	F7P W	F9P W	F9P W	●	●	○	—	○		—	○
	Water resistant (2-color indication)	Grommet		2-wire	12 V		—	F7B WV	J79 W	F9B WV	F9B W	●	●	○	—	○	—		○	—
								—	—	—	—	—	●	○	—	○	—		—	—
With diagnostic output (2-color indication)	—	—	—	—	—	—	—	—	—	—	●	○	—	○	—	—				
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—				
—	—	—	—	4-wire (NPN)	5 V, 12 V	—	—	—	F79F	—	—	●	●	○	—	○	IC circuit			

* Lead wire length symbols: 0.5 m Nil (Example) AC73C
3 m L (Example) A73CL
5 m Z (Example) A73CZ
None N (Example) A73CN

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

- Since there are other applicable auto switches than listed, refer to page 8-27-12 for details.
- For details about auto switches with pre-wire connector, refer to page 8-30-52.

Platform Cylinder Series CXT



Specifications

Fluid	Air
Action	Double acting
Proof pressure	1.5 MPa
Maximum operating pressure	0.7 MPa ^{Note)}
Minimum operating pressure	0.15 MPa
Ambient and fluid temperature	-10 to 60°C (No freezing)
Piston speed	50 to 500 mm/s
Cushion	Bumper (Both ends/Standard), Shock absorber (Option)
Lubrication	Not required (Non-lube)
Stroke adjusting range	-10 mm (Extension end, Retraction end: -5 mm each)



Note) Maximum operating pressure for this product with the bumper feature.
The maximum operating pressure for the cylinder alone is 1 MPa.

Long Adjusting Bolt

For "Made to Order Specifications" (Suffix "-X138" to the end of part number.) Adjusting bolt with a longer overall length can be used to further extend the adjusting range of the stroke. Refer to the table below for the adjustable range.

	CXT□12/16	CXT□20/25	CXT□32	CXT□40
Stroke adjustment range	-26 mm (One side -13 mm)	-28 mm (One side -14 mm)	-44 mm (One side -22 mm)	-40 mm (One side -20 mm)



Made to Order Specifications
(For details, refer to page 8-31-1.)

Symbol	Specifications
-XB13	Low speed cylinder (5 to 50 mm/s)

Shock Absorber Specifications

For detailed specifications about shock absorber, refer to page 10-22-1 of Best Pneumatic Vol.10.

Model		CXT□12 16	CXT□20	CXT□25	CXT□32 40
Shock absorber model		RB0806	RB1007	RB1411	RB2015
Max. energy absorption (J)		2.94	5.88	14.7	58.8
Stroke absorption (mm)		6	7	11	15
Collision speed		0.05 to 5 m/s			
Max. operating frequency* (cycle/min)		80	70	45	25
Ambient temperature		-10 to 80°C			
Spring force (N)	Extended	1.96	4.22	6.86	8.34
	Retracted	4.22	6.86	15.30	20.50
Weight (g)		15	25	65	150

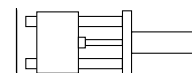


* It denotes the values at the maximum energy absorption per one cycle. Therefore, the operating frequency can be increased according to the energy absorption.

Theoretical Output

Bore size (mm)	Operating direction	Piston area (mm ²)	Operating pressure (MPa)		
			0.3	0.5	0.7
12	IN	84.8	25	42	59
	OUT	113	34	57	79
16	IN	151	45	75	106
	OUT	201	60	101	141
20	IN	236	71	118	165
	OUT	314	94	157	220
25	IN	378	113	189	264
	OUT	491	147	245	344
32	IN	603	181	302	422
	OUT	804	241	402	563
40	IN	1056	317	528	739
	OUT	1257	377	628	880

OUT ← → IN



Series CXT

Weight

CXTM (Slide bearing)

(kg)

Bore size (mm) \ Stroke (mm)	15	25	50	75	100	125	150	175	200	250	300
12	0.85 (0.35)	0.90 (0.35)	1.02 (0.35)	1.13 (0.36)	1.25 (0.37)	—	—	—	—	—	—
16	1.18 (0.50)	1.24 (0.50)	1.39 (0.51)	1.54 (0.52)	1.68 (0.53)	—	—	—	—	—	—
20	—	2.35 (0.85)	2.61 (0.87)	2.89 (0.88)	3.15 (0.90)	3.41 (0.91)	3.66 (0.93)	3.92 (0.94)	4.18 (0.96)	—	—
25	—	2.76 (1.09)	3.03 (1.11)	3.34 (1.14)	3.62 (1.16)	3.89 (1.18)	4.16 (1.21)	4.43 (1.23)	4.70 (1.25)	5.25 (1.30)	5.79 (1.34)
32	—	4.62 (2.06)	4.98 (2.10)	5.34 (2.14)	5.70 (2.17)	6.00 (2.21)	6.35 (2.25)	6.69 (2.29)	7.04 (2.33)	7.73 (2.41)	8.43 (2.49)
40	—	8.30 (3.71)	8.82 (3.75)	9.32 (3.79)	9.83 (3.83)	10.40 (3.87)	10.91 (3.91)	11.43 (3.95)	11.95 (3.99)	12.98 (4.07)	14.02 (4.15)

CXTL (Ball bushing bearing)

(kg)

Bore size (mm) \ Stroke (mm)	15	25	50	75	100	125	150	175	200	250	300
12	0.75 (0.41)	0.78 (0.42)	0.85 (0.42)	0.92 (0.42)	0.98 (0.43)	—	—	—	—	—	—
16	1.05 (0.57)	1.08 (0.57)	1.18 (0.58)	1.27 (0.59)	1.35 (0.60)	—	—	—	—	—	—
20	—	2.00 (1.02)	2.15 (1.04)	2.32 (1.05)	2.46 (1.07)	2.60 (1.08)	2.75 (1.10)	2.89 (1.11)	3.03 (1.13)	—	—
25	—	2.41 (1.25)	2.57 (1.28)	2.77 (1.30)	2.92 (1.33)	3.08 (1.35)	3.24 (1.37)	3.40 (1.39)	3.56 (1.42)	3.78 (1.46)	4.19 (1.50)
32	—	4.23 (2.26)	4.47 (2.30)	4.71 (2.34)	4.95 (2.38)	5.13 (2.42)	5.36 (2.46)	5.59 (2.50)	5.82 (2.54)	6.27 (2.62)	6.73 (2.70)
40	—	7.55 (4.31)	7.86 (4.35)	8.16 (4.39)	8.46 (4.43)	8.82 (4.47)	9.13 (4.51)	9.44 (4.55)	9.75 (4.59)	10.37 (4.67)	10.99 (4.74)

Note 1 (): Denotes the values of the movable parts weight. (Movable parts weight of a cylinder is included, too.)

Note 2) The weight indicated above does not include a shock absorber.

⚠ Caution on Handling

Operating Precautions

1. Make sure not to apply to the slide block a load that exceeds the value that has been calculated in the selection procedures.
2. Operate the cylinder securing it by its plates, not by securing it by its slide block.
3. The clearance between the slide block and the plate at the stroke end is approximately 1 mm to 6 mm. It could be extremely dangerous, as there is the risk of getting your fingers caught. Install a cover as necessary.
4. At both stroke ends, adjust the damper portion at the end of the adjusting bolt so that it comes in contact with the slide block. (The clearance between the slide block and the plate must be 1 mm or more.)
If it is operated without making any contact, the piston rod of the actuating cylinder or the connecting hardware (adapter) could become damaged by an excessive impact, or the slide block could collide with the plate and create an abnormal noise.
5. The load weight or operating speed will be limited if only the adjusting bolt is used. Refer to the section on "Allowable load when only the adjusting bolt is used" on page 8-27-6.
6. Please contact SMC if this product will be used in an environment in which the piston rod and the guide shaft surfaces will be exposed to water (hot water), coolant, cutting chips, or dust.
7. The slide block bearings must be greased periodically. Inject grease (Class 1 or 2 lithium soap grease consistency) through the grease inlet.

Note) On those with a cylinder bore of $\phi 12$, apply grease to the guide shaft.

8. To operate the cylinder, use a non-lubricating air supply. Use turbine oil Class 1 (ISO VG32), if lubricated. (Using machine oil or spindle oil are not allowed.)

Mounting

1. While a high level of flatness is desired for the surface on which the cylinder is to be mounted, if sufficient flatness cannot be attained, use shims to adjust the installation of the cylinder so that the slide block can operate throughout its stroke under the minimum operating pressure.
2. Do not scratch or gouge the piston rod of the actuating cylinder, as this could damage the rod seal and lead to air leaks. The same applies to the guide shaft.
3. Make sure not to apply shocks or excessive moment to the slide block of the ball bushing type.
4. The port direction of the actuating cylinder can be changed in 90° increments by removing the four bolts that secure the cylinder in place. After changing the direction, verify the operation at the minimum operating pressure.
5. Before the installation, thoroughly flush out the piping to prevent dust or cutting chips from entering the cylinder.
6. The mounting position of the adjusting bolt and the shock absorber cannot be inverted due to the constraints imposed by the locating pin for the shock absorber that is provided on the

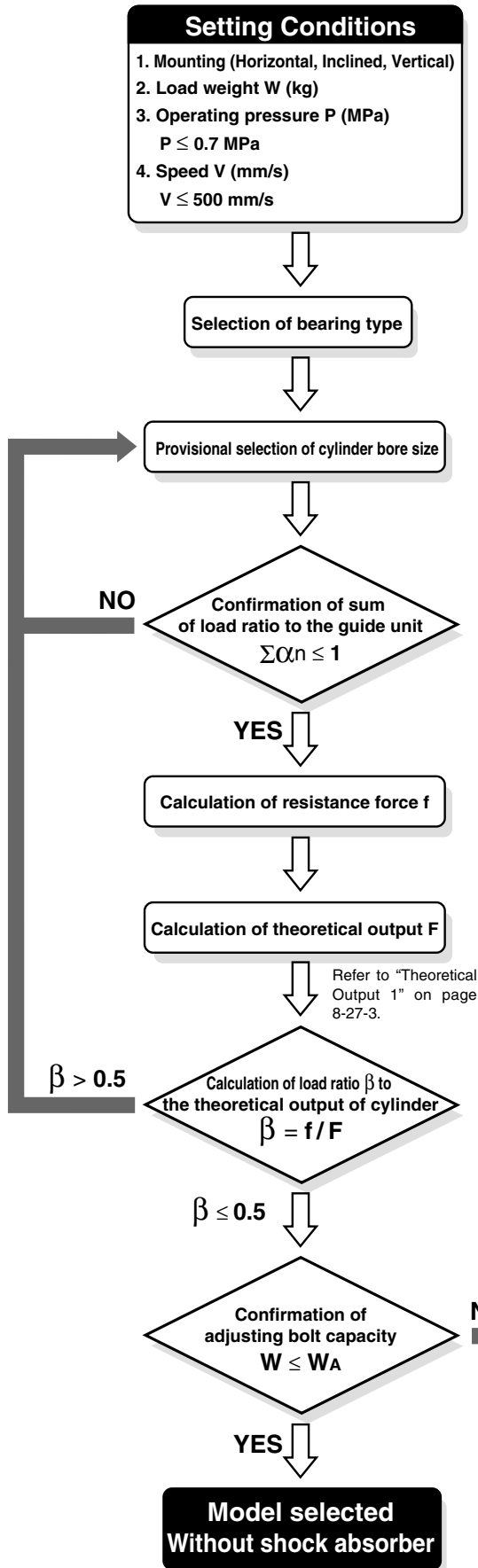
Handling on Shock Absorber

1. Series RB (SMC made) shock absorbers can absorb a wide range of energy without requiring adjustment. (No adjustment screw is provided.)
2. The screw at the bottom is not for adjustment. Never turn this screw as it could cause an oil leak (lowered performance).
3. Do not scratch the surface of the shock absorber rod because doing so could affect the shock absorber's durability or lead to poor retraction.

* For detailed specifications about the shock absorber, refer to Best Pneumatics Vol.10

Series CXT Model Selection

Selection Step



Guideline for Selection of Bearing Type

Bearing type	Required conditions
Slide bearing	<ul style="list-style-type: none"> • Impact load and vibration load are added. • Change in load is large. • Long life span is required.
Ball bushing bearing	<ul style="list-style-type: none"> • High accuracy (Little rattle is allowed.) • Smooth operation

$$\Sigma\alpha n = \frac{\text{Load weight [W]}}{\text{Maximum load weight [Wmax]}} + \frac{\text{Moment [mn]}}{\text{Allowable moment [Mn]}}$$

Load weight [W] are as follows in compliance to the mounting way.

Horizontal mounting: **W**

Inclined mounting: **Wcosθ** (θ: Angle of inclination, refer to the figure below.)

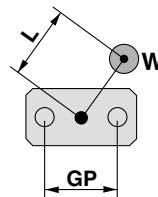
Vertical mounting: **0 (None)**

The moment load rate must be calculated in accordance with the above formula for all types, M1 to M3.

As for Wmax and Mn, refer to the maximum load mass and allowable moment table in the next section.

Note) Make sure that the distance between the guide shaft center to the center of gravity of the load does not exceed the distance GP between the guide shafts given in the table below.

$$\Sigma\alpha n \leq \frac{1}{(L/GP)^2} \quad (\text{Provided that } L > GP)$$



Bore size (mm)	12	16	20	25	32	40
Distance between guide rods GP	50	65	80	90	110	130

Horizontal mounting: **f = μ × W**

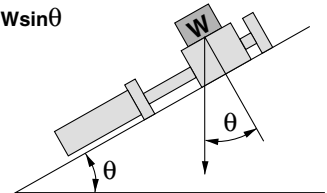
Inclined mounting: **f = μ × Wcosθ + Wsinθ**

(Refer to the figure on the right.)

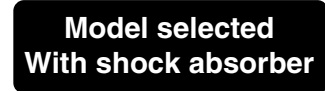
Vertical mounting: **f = W**

μ = 0.3 (Slide bearing)

μ = 0.1 (Ball bushing bearing)



Determine the movable weight W_A which can be operated only by adjusting bolts.



MX

MTS

MY

CY

MG

CX

D-

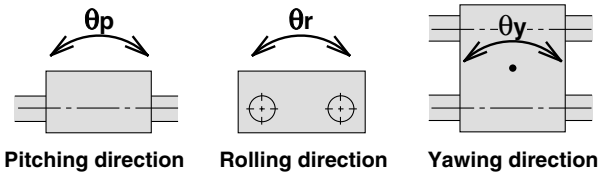
-X

20-

Data

Series CXT

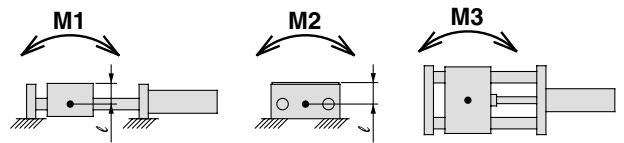
Non-rotating Accuracy of Slide Block



Bore size (mm)	CXTM (Slide bearing)		CXTL (Ball bushing bearing)	
	$\theta_p (= \theta_y)$	θ_r	$\theta_p (= \theta_y)$	θ_r
12	$\pm 0.09^\circ$	$\pm 0.12^\circ$	$\pm 0.05^\circ$	$\pm 0.05^\circ$
16	$\pm 0.08^\circ$	$\pm 0.10^\circ$	$\pm 0.05^\circ$	$\pm 0.04^\circ$
20	$\pm 0.07^\circ$	$\pm 0.08^\circ$	$\pm 0.04^\circ$	$\pm 0.03^\circ$
25	$\pm 0.07^\circ$	$\pm 0.07^\circ$	$\pm 0.04^\circ$	$\pm 0.03^\circ$
32	$\pm 0.08^\circ$	$\pm 0.07^\circ$	$\pm 0.04^\circ$	$\pm 0.03^\circ$
40	$\pm 0.06^\circ$	$\pm 0.06^\circ$	$\pm 0.03^\circ$	$\pm 0.03^\circ$

Maximum Load Weight and Allowable Moment

Bore size (mm)	Bearing	Maximum load weight W_{max} (kg)	Allowable moment (N·m)	
			M1 (= M3)	M2
12	Slide bearing	3	1.25	1.68
	Ball bushing bearing		0.53	0.70
16	Slide bearing	7	3.34	4.25
	Ball bushing bearing		1.53	2.11
20	Slide bearing	12	11.4	17.1
	Ball bushing bearing		5.60	7.28
25	Slide bearing	20	11.4	19.3
	Ball bushing bearing		5.60	8.19
32	Slide bearing	30	19.8	23.3
	Ball bushing bearing		10.1	14.8
40	Slide bearing	50	37.3	46.2
	Ball bushing bearing		21.3	27.5



Note) For the purpose of calculating the moment, the length of the arm is the distance that is measured from the guide shaft center ("●" mark). Dimension l from the guide shaft center to the top surface of the table is indicated below.

Bore size (mm)	12	16	20	25	32	40
l dimension	19.5	24	28	31	39.5	47.5

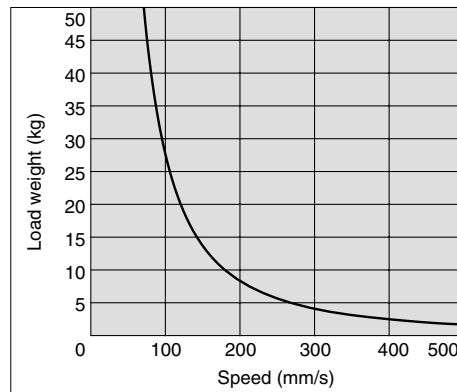
Allowable Load Only by Adjusting Bolt

If only the adjusting bolt is used for stopping the load, make sure that the load weight and the speed will be below the curve in the graph on the right, taking into consideration the durability of the rubber bumper that is attached to the end of the adjusting bolt and the vibration and noise that are created when stopping (provided that the maximum load weight is not exceeded).

In conditions in which the load mass and the speed will be above the curve, use a shock absorber (provided that the maximum load weight is not exceeded).

⚠ Caution

In the case of the ball bushing type, the service life could be drastically shortened if shocks or excessive moments are applied. Therefore, even if the conditions given above are not exceeded, the use of a shock absorber is recommended.



Static Movable Weight when Stopped

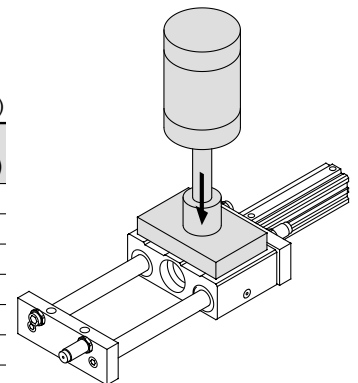
When Series CXT cylinder is used for moving the workpiece receptacle, such as in a stamping or press-fitting process, a vertical load will be applied to the top surface of the stopped slide block (refer to the figure on the right). In this case, the allowable weight is greater than the maximum load weight, as given in the table on the right.

⚠ Caution

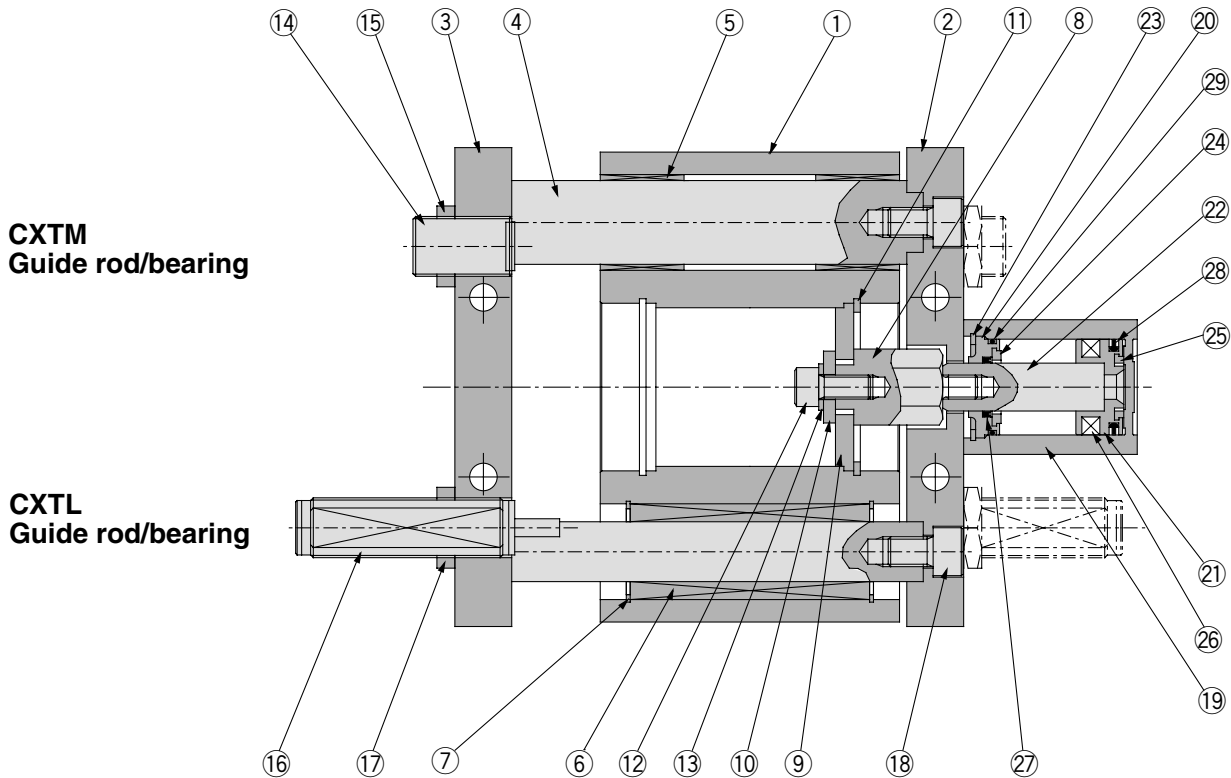
1. Make sure that the slide block is stopped at the stroke end.
2. Match the center of the weight to be applied with the center of the slide block. The direction of the weight must be vertically downward in relation to the surface on which the workpiece is mounted, as shown in the figure on the right.
3. Do not apply a load that involves shocks such as those caused by pounding (particularly with the ball bushing style).
4. If this weight is applied, the deflection of the guide shaft will also have a large value.

Allowable Static Weight (kg)

Bore size (mm)	CXTM (Slide bearing)	CXTL (Ball bushing bearing)
12	350	60
16	500	70
20	900	125
25	900	125
32	1100	140
40	1900	170



Construction



MX□

MTS

MY□

CY□

MG□

CX□

D-

-X

20-

Data

Component Parts

No.	Description	Material	Note
①	Slide block	Aluminum alloy	Hard anodized
②	Plate A	Aluminum alloy	Hard anodized
③	Plate B	Aluminum alloy	Hard anodized
④	Guide rod	CXTM Carbon steel	Hard chromium electroplated
		CXTL Bearing steel	High frequency quenching, Hard chrome plated
⑤	Slide bearing	Bearing alloy, Carbon steel	
⑥	Ball bushing	—	
⑦	C set ring	Carbon tool steel	Nickel plated
⑧	Adapter	Carbon steel	Nickel plated
⑨	Connected disk	Carbon steel	Nickel plated
⑩	Flat washer	Carbon steel	Zinc chromated
⑪	Type C snap ring	Carbon tool steel	Nickel plated
⑫	Hexagon socket head cap screw	Chromium molybdenum steel	Nickel plated
⑬	Spring washer	Steel wire	Nickel plated
⑭	Adjusting bolt (With damper)	Carbon steel, Elastomer	Nickel plated
⑮	Nut	Carbon steel	Nickel plated

No.	Description	Material	Note
⑯	Shock absorber	—	Option
⑰	Nut	Carbon steel	Shock absorber accessory
⑱	Hexagon socket head cap screw	Chromium molybdenum steel	Nickel plated
⑲	Cylinder tube	Aluminum alloy	Hard anodized
⑳	Collar	Aluminum alloy	Clear anodized
㉑	Piston	Aluminum alloy	Chromated
㉒	Piston rod	Stainless steel	— $\phi 12$ to 25
		Carbon steel	Hard chromium electroplated $\phi 32, 40$
㉓	Type C snap ring	Carbon tool steel	Phosphate coated
㉔	Bumper A	Polyurethane	
㉕	Bumper B	Polyurethane	
㉖	Magnet	—	
㉗	Rod seal	NBR	
㉘	Piston seal	NBR	
㉙ (Note)	Tube gasket	NBR	

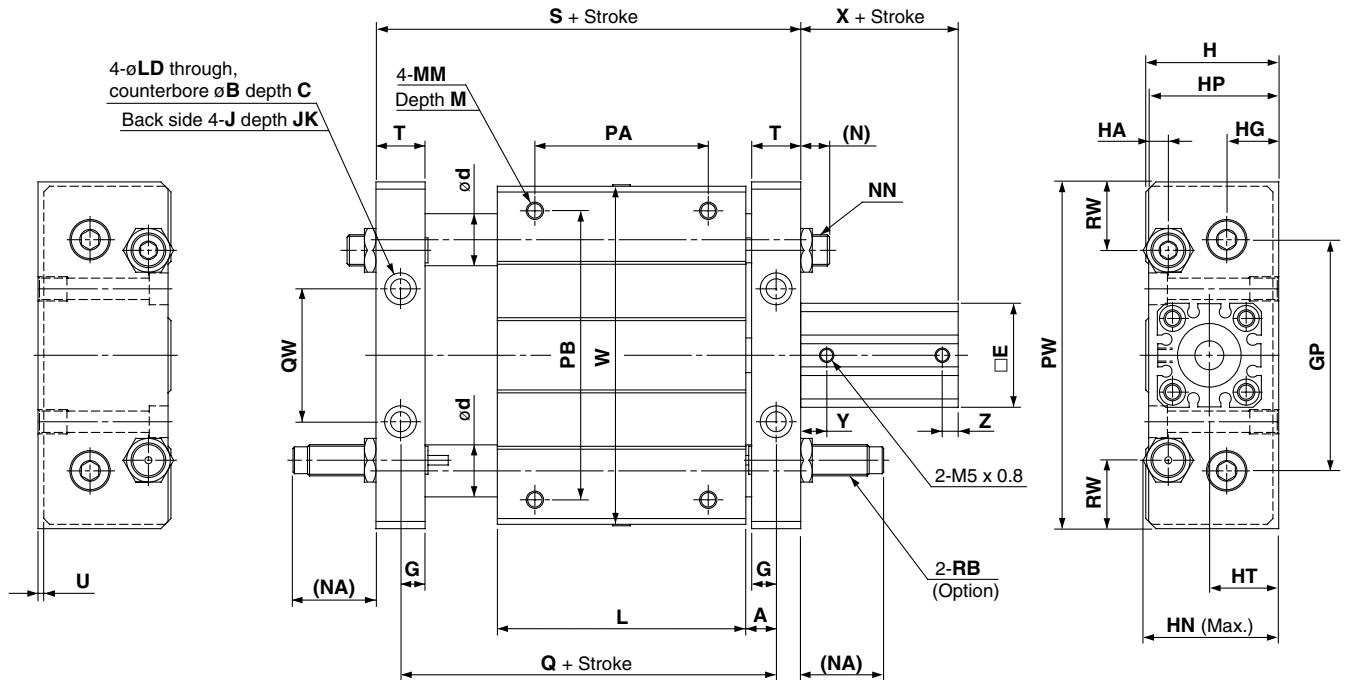
Note) The same type of the part is equipped to the head side for the long stroke type.

Replacement Parts: Seal Kit (A rod seal ㉗, a piston seal ㉘ and a tube gasket ㉙ are included in the seal kits. Order the seal kits with ordering numbers.)

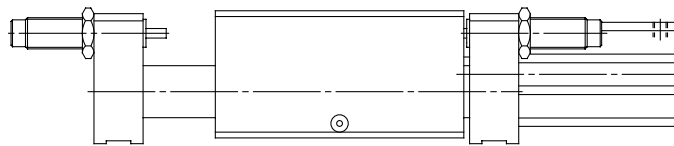
Model Cylinder Stroke	Kit no.					
	CXT□12	CXT□16	CXT□20	CXT□25	CXT□32	CXT□40
Standard stroke	CDQSB12	CDQSB16	CDQSB20	CDQSB25	CDQ2A32	CDQ2A40
Long stroke	CQSB12-L-PS	CQSB16-L-PS	CQSB20-L-PS	CQSB25-L-PS	CQ2A32-L-PS	CQ2A40-L-PS

Series CXT

Dimensions: $\phi 12$ to $\phi 25$



Cylinder form



$\phi 12$



$\phi 16$

Bore size (mm)	Standard stroke (mm)	A	B	C	d		E	G	GP	H	HA	HG	HN	HP	HT	J	JK	L	LD
					Slide	Ball bushing													
12	15, 25	8.5	8	4	16	10	25	7.5	50	34	6	14.5	34	33	18	M5 x 0.8	9.5	68	4.3
16	15, 25	7.5	9.5	5	18	12	29	6.5	65	40	6.5	16	39.5	39	21	M6 x 1	9.5	75	5.2
20	25, 50	9.5	11	6.5	25	16	36	8.5	80	46	9	18	44.1	45	24	M8 x 1.25	10	86	6.9
25	25, 50	9.5	11	6.5	25	16	40	8.5	90	54	9	23	55	53	28	M8 x 1.25	10	86	6.9

Bore size (mm)	MM	M	(N)	(NA)	NN	PA*	PB	PW	Q	QW	RB	RW	S	T	U	W	X	Y	Z
12	M4 x 0.7	6	8	27	M8 x 1.0	30	60	80	85	26	RB0806	17.5	96	13	1	77	22	7.5	5
16	M5 x 0.8	8	8	27	M8 x 1.0	45	70	95	90	40	RB0806	15	103	13	2	92	22	7.5	5
20	M6 x 1	10	10	29	M10 x 1.0	60	100	120	105	46	RB1007	26	122	17	2	117	29.5	9	5.5
25	M6 x 1	10	12	50	M14 x 1.5	60	100	130	105	50	RB1411	22	122	17	2	127	32.5	11	5.5

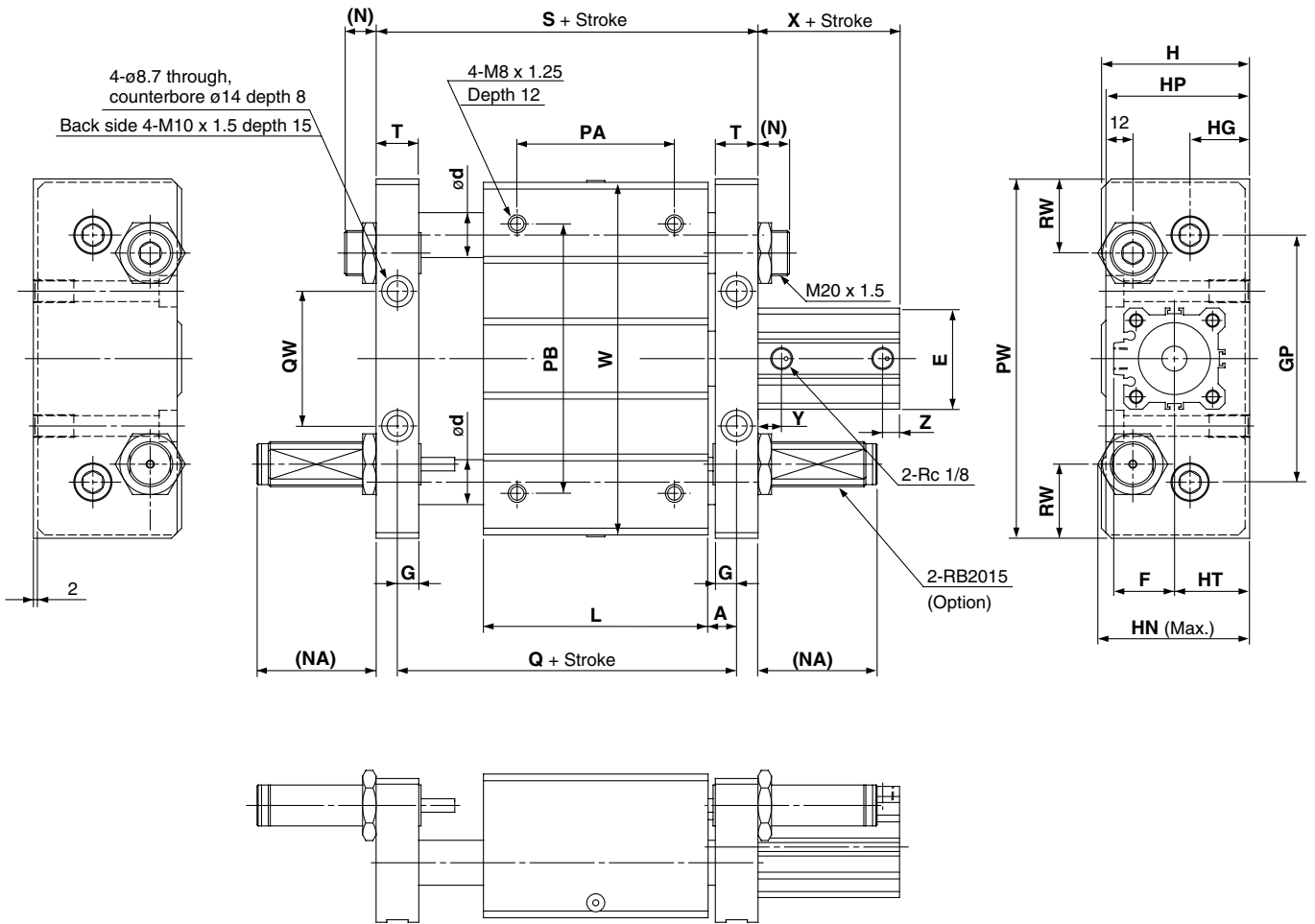
* PA dimension is the center sorted factor of the L dimension.

Long Stroke

Bore size (mm)	Stroke range (mm)	X	Y	Z
12	50, 75, 100	32	7.5	7.5
16	50, 75, 100	32	7.5	7.5
20	75, 100, 125, 150, 175, 200	41	9	9
25	75, 100, 125, 150, 175, 200, 250, 300	44	11	11

Platform Cylinder Series CXT

Dimensions: $\phi 32, \phi 40$



- MX
- MTS
- MY
- CY
- MG
- CX
- D-
- X
- 20-
- Data

Bore size (mm)	Standard stroke (mm)	A	d		E	F	G	GP	H	HG	HN	HP	HT	L	(N)	(NA)	PA*	PB	PW	Q
			Slide	Ball bushing																
32	25, 50, 75, 100	10.5	28	20	45	27	9.5	110	66	26.5	67.6	64	33.5	100	14	53	70	120	160	121
40	25, 50, 75, 100	11.5	36	25	52	31	10.5	130	78	30.5	77.6	74	40.5	136	12	51	90	140	190	159

* PA dimension is the center sorted factor of the L dimension.

Bore size (mm)	QW	RW	S	T	W	X	Y	Z
32	60	33	140	19	157	33	10.5	7.5
40	84	35	180	21	187	39.5	11	8

Long Stroke

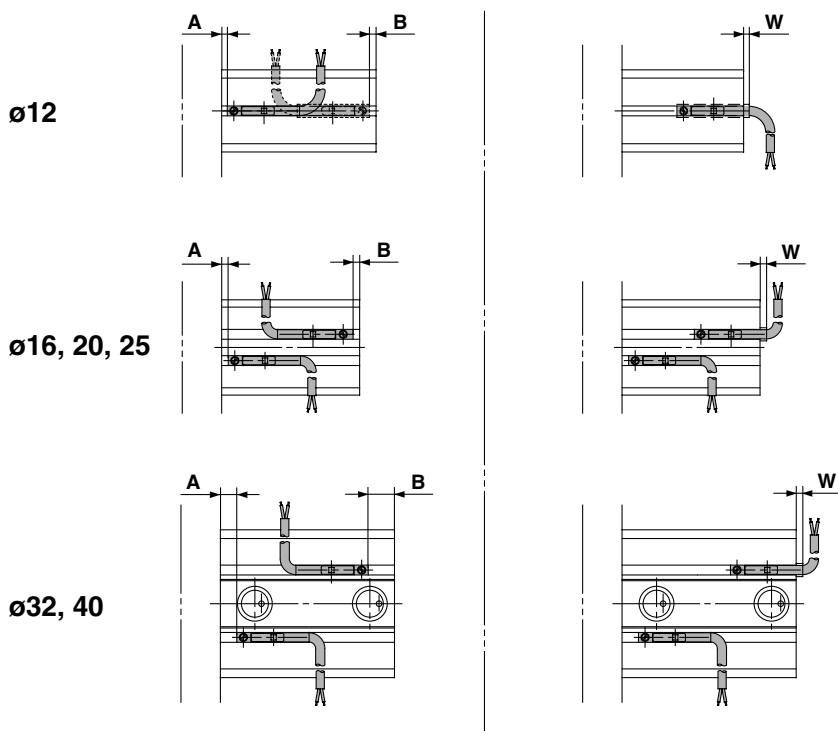
Bore size (mm)	Stroke range (mm)	X	Y	Z
32	125, 150, 175, 200, 250, 300	45.5	12.5	12.5
40	125, 150, 175, 200, 250, 300	55	14	14

Series CXT

Proper Auto Switch Mounting Position (Detection at stroke end) and Its Mounting Height

Reed switch
D-A9□

Solid state switch
D-M9□
D-F9BAL
D-F9□W

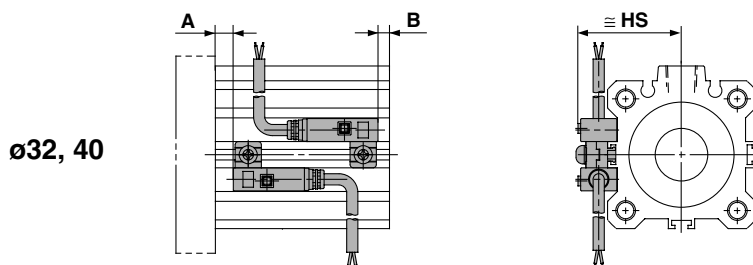


Auto switch model	D-A9□			D-M9□ D-F9□W			D-F9BAL			
	A	B	W	A	B	W	A	B	W	
Standard Stroke										
Bore size (mm)	12	1.5	0	1.5 (4)	5.5	4.5	5.5	4.5	3.5	14.5
	16	2	0	2 (4.5)	6	4	6	5	3	15
	20	6	3.5	-1.5 (1)	10	7.5	2.5	9	6.5	11.5
	25	7	5.5	-3.5 (-1)	11	9.5	0.5	10	8.5	9.5
	32	8	5	-3 (-0.5)	12	9	1	11	8	10
40	12	7.5	-5.5 (-3)	16	11.5	-1.5	15	10.5	7.5	
Long Stroke										
Bore size (mm)	12	5	7	-5 (-2.5)	9	11	-1	8	10	8
	16	5.5	6	-4.5 (-2)	9.5	10.5	-0.5	8.5	9.5	8.5
	20	9	11.5	-10 (-7.5)	13	16	-6	12	15	3.5
	25	10	13.5	-12 (-9.5)	14	18	-8	13	17	1
	32	8.5	16.5	-14.5 (-12)	12.5	20.5	-10.5	11.5	19.5	-1.5
40	12	22.5	-20.5 (-18)	16	26.5	-16.5	15	25.5	-7.5	

(): Denotes the values of D-A93.

Reed switch
D-A7□H
D-A80H

Solid state switch
D-F7□
D-J79
D-F7□W
D-J79W
D-F7BAL
D-F79F
D-F7NTL

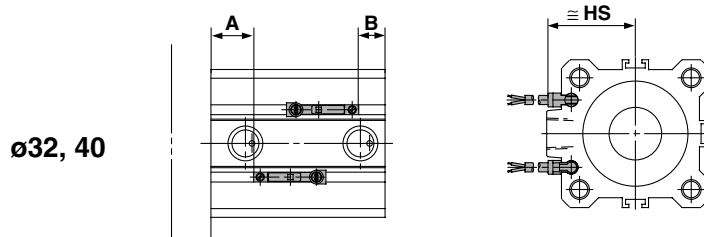
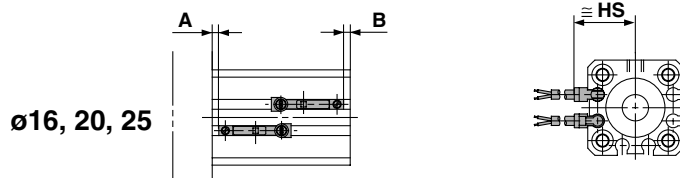
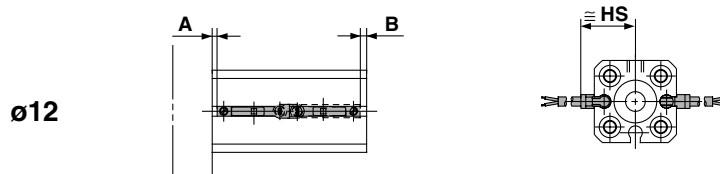


Auto switch model	D-A7□H D-A80H			D-F7□, D-J79W D-J79, D-F7BAL D-F7□W, D-F79F			D-F7NTL			
	A	B	Hs	A	B	Hs	A	B	Hs	
Standard Stroke										
Bore size (mm)	32	9.5	6.5	32.5	9.5	6.5	32.5	14.5	10.5	32.5
	40	13.5	9	36	13.5	9	36	18.5	13	36
Long Stroke										
Bore size (mm)	32	10	18	32.5	10	18	32.5	15	23	32.5
	40	13.5	24	36	13.5	24	36	18.5	29	36

Platform Cylinder Series CXT

Reed switch
D-A9□V

Solid state switch
D-M9□V
D-F9□WV

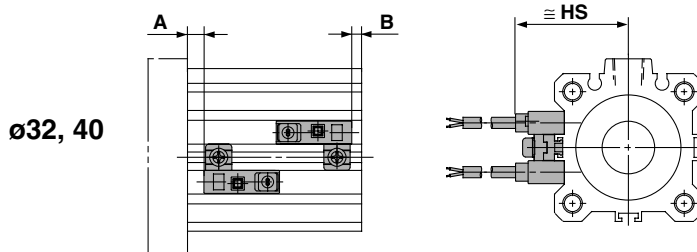


- MX□
- MTS
- MY□
- CY□
- MG□
- CX□**
- D-
- X
- 20-
- Data

Auto switch model	D-A9□V			D-M9□V D-F9□WV			
	Symbol	A	B	Hs	A	B	Hs
Standard Stroke							
Bore size (mm)	12	1.5	0	17	5.5	4.5	19
	16	2	0	19	6	4	21
	20	6	3.5	22.5	10	7.5	24
	25	7	5.5	24.5	11	9.5	26
	32	8	5	27	12	9	29
40	12	7.5	30.5	16	11.5	32.5	
Long Stroke							
Bore size (mm)	12	5	7	17	9	11	19
	16	5.5	6	19	9.5	10.5	21
	20	9	11.5	22.5	13	16	24
	25	10	13.5	24.5	14	18	26
	32	8.5	16.5	27	12.5	20.5	29
40	12	22.5	30.5	16	26.5	32.5	

Reed switch
D-A7□
D-A80
D-A73C
D-A80C
D-A79W

Solid state switch
D-F7□V
D-J79C
D-F7□WV
D-F7BAVL



Auto switch model	D-A7□ D-A80			D-A73C D-A80C			D-A79W			D-F7□V D-F7BAVL D-F7□WV			D-J79C			
	Symbol	A	B	Hs	A	B	Hs	A	B	Hs	A	B	Hs	A	B	Hs
Standard Stroke																
Bore size (mm)	32	9 (9.5)	6 (6.5)	31.5	9.5	6.5	38.5	6.5	3.5	34	9.5	6.5	35	9.5	6.5	38
	40	13 (13.5)	8.5 (9)	35	13.5	9	42	10.5	6	37.5	13.5	9	38.5	13.5	9	41.5
Long Stroke																
Bore size (mm)	32	9.5 (10)	17.5 (18)	31.5	10	18	38.5	7	15	34	10	18	35	10	18	38
	40	13 (13.5)	23.5 (24)	35	13.5	24	42	10.5	21	37.5	13.5	24	38.5	13.5	24	41.5

(): Denotes the values of D-A72.

Series CXT

Operating Range (Dimensions)

Auto switch model	Bore size (mm)					
	12	16	20	25	32	40
D-F7□, D-F7□V D-J79, D-J79C D-F7□W, D-F7□WV D-J79W D-F7BAL, D-F7BAVL D-F7NTL, D-F79F	—	—	—	—	6	6
D-M9□, D-M9□V	2.5	3	4	4	4	4
D-F9□W, D-F9□WV DF9BAL	3	4	5	5.5	5.5	5.5
D-A7□, D-A80	—	—	—	—	12	11
D-A9□(V)	6	7.5	10	10	9.5	9.5

* Since this is a guideline including hysteresis, not meant to be guaranteed. (Assuming approximately ±30% dispersion)
There may be the case it will vary substantially depending on an ambient environment.

Minimum Stroke for Mounting of Auto Switch

Application	No. of auto switches mounted	(mm)						
		D-A9□	D-A9□V	D-M9□	D-F9□W	D-M9□V	D-F9□WV	D-F9BAL
CXT□12 to CXT□25	2	10	10	15	20	5	10	25
	1	10	5	15	20	5	10	25
CXT□32 to CXT□40	2	10	10	10	15	5	15	20
	1	10	5	10	15	5	10	20

Application	No. of auto switches mounted	(mm)					
		D-F7□V D-J79C	D-A7□ D-A8□ D-A73C D-A80C	D-F7□WV D-F7BAVL	D-A7□H D-A80H D-F7□ D-J79	D-A79W	D-F7□W D-J79W D-F7BAL D-F7NT D-F79F
CXT□32 to CXT□40	2	5	10	15	15	20	20
	1	5	5	10	15	15	20

Other than the applicable auto switches listed in "How to Order", the following auto switches can be mounted.
For detailed specifications, refer to page 8-30-1.

Type	Model	Electrical entry (Fetching direction)	Features	Applicable bore size (mm)
Reed switch	D-A80	Grommet (Perpendicular)	Without indicator light	32 to 40
	D-A80H	Grommet (In-line)		
	D-A80C	Connector (Perpendicular)		
	D-A90	Grommet (In-line)		12 to 40
	D-A90V	Grommet (Perpendicular)		
Solid state switch	D-F7NTL	Grommet (In-line)	With timer	32, 40

* With pre-wire connector is available for D-F7NTL type, too. For details, refer to page 8-30-52.

* Normally closed (NC = b contact), solid state switch (D-F9G/F9H type) are also available. For details, refer to page 8-30-31.

⚠ Precautions

Be sure to read before handling. For Safety Instructions and Actuator Precautions, refer to pages 8-34-3 to 8-34-6.

- If the cylinder is used in an application in which a magnetic material is placed in close contact around the cylinder as shown in the graph on the right (including cases in which even one of the sides is in close contact) the operation of auto switches could become unstable. Therefore, please check with SMC for this type of application.

