

Slide Unit

Series CXWM/CXWL

Slide Bearing/CXWM: $\phi 10, \phi 16, \phi 20, \phi 25, \phi 32$

Ball Bushing Bearing/CXWL: $\phi 10, \phi 16, \phi 20, \phi 25, \phi 32$

Provided with shock absorbers to absorb impact and noise.

The slide unit can absorb energy in a wide range, in high speed, low-load applications to low speed, high-load applications, without requiring adjustments.

Ensures high positional accuracy.

A high level of positional accuracy can be attained because the two parallel piston rods prevent the rods from rotating, and the workpiece mounting surface and the parallelism of the piston rods are made highly precise.

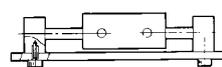
Auto switches can be installed.

Smooth operation and high thrust.

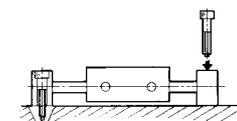
Mountable on the housing or on the plate.

The slide unit can be mounted on the housing or on the plate, depending on the application. It can also be bolted from the bottom or from the top. The piping can be fitted to the port in any of the three positions, according to how the unit is mounted.

<Fixing the plate>

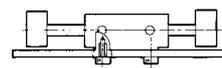


Mounting from the bottom side

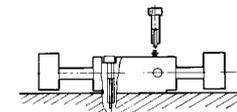


Mounting from the upper side

<Fixing the housing>



Mounting from the bottom side



Mounting from the upper side

Series Variations

Slide unit	Bearing type	Model	Bore size (mm)	Stroke (mm)	Accessory	Auto switch mounting	Page			
								25	50	75
Slide bearing	Slide bearing	Series CXWM Built-in shock absorber type	10	(2)			(1)	8-26-8		
			16	(2)						
			20	(3)						
			25	(2)						
			32	(3)	(3)					
			32	(3)						
Ball bushing bearing	Ball bushing bearing	Series CXWL Built-in shock absorber type	10				(1)	8-26-33		
			16							
			20							
			25							
			32	(3)						
			32							



Note 1) Only type E (Reed switch) is applicable as an auto switch when mounting a housing of $\phi 10$.

Note 2) The shock absorbers are to be mounted on the both sides for the 25 stroke of Series CXWM10 to 25.

Note 3) The shock absorber is to be mounted on one side of the plate for the 25 stroke of Series CXWM20, CXWM32, CXWL32 and the 50 stroke of Series CXWM32.

With end lock
Shock absorber
Adjusting bolt
Housing mounting
Plate mounting

MX

MTS

MY

CY

MG

CX

D-

-X

20-

Data

Slide Unit: Built-in Shock Absorber Slide Bearing Type

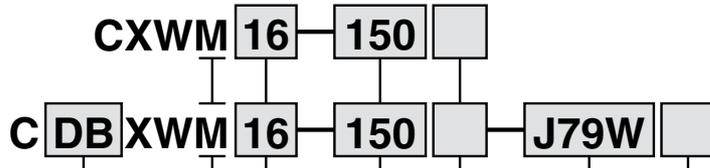
Series CXWM

ø10, ø16, ø20, ø25, ø32

How to Order

Without auto switch

With auto switch



Cylinder with auto switch

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

Number of auto switches

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

Bearing type

M	Slide bearing
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Bore size/Stroke (mm)

10	(25), 50, 75, 100
16	(25), 50, 75, 100, 125, 150, 175, 200
20	(25), 50, 75, 100, 125, 150, 175, 200
25	(25), 50, 75, 100, 125, 150, 175, 200
32	(25), (50), 75, 100, 125, 150, 175, 200

Auto switch

Nil	Without auto switch
* For the applicable auto switch model, refer to the table below.	
* Auto switches are shipped together, (but not assembled).	

End lock

R	End lock
Nil	None

Note1) For the strokes indicated in the parentheses of the ø10, ø16 and ø25, shock absorbers are to be mounted on both sides of the plate. For the strokes indicated in the parentheses of the ø20 and ø32, a shock absorber is to be mounted on single side of the plate.

Note2) For the strokes other than those indicated above, refer to page 8-26-9.

Note3) For ø16, ø20 and ø25, strokes up to 300, and for ø32, strokes up to 250 are available as made-to-order. (-XB11)

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		Applicable cylinder size		Lead wire length (m) *				Pre-wire connector	Applicable load				
					DC	AC	Perpendicular	In-line	Housing mounting	Plate mounting	0.5 (Nil)	3 (L)	5 (Z)	None (N)						
Reed switch	—	Grommet	Yes	3-wire (NPN equivalent)	—	5 V	—	A76H	ø16 ø20 ø25 ø32	ø10 ø16 ø20 ø25 ø32	●	●	—	—	—	IC circuit	—			
				2-wire	24 V	12 V	100 V	A72 A72H A73 A73H A73C —			●	●	—	—	—	—	Relay, PLC			
		Grommet		3-wire (NPN equivalent)	—	5 V	—	E76A E73A			ø10	—	●	●	—	—	—	—	IC circuit	—
		2-wire		24 V	12 V	100 V	F79	●					●	—	—	—	—	—	Relay, PLC	
Solid state switch	—	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	F7NV F7P	ø16 ø20 ø25 ø32	ø10 ø16 ø20 ø25 ø32	●	●	○	—	○	IC circuit	Relay, PLC			
				3-wire (PNP)				F7PV J79			●	●	○	—	○					
		2-wire		F7BV —				●			●	○	—	○						
		3-wire (NPN)		J79C F79W				●			●	●	●	—	—					
	Diagnostic indication (2-color indication)	Grommet		3-wire (PNP)	5 V, 12 V	—	F7NWV	●			●	○	—	○	IC circuit					
				2-wire	12 V	—	F7BWV J79W	●			●	○	—	○						
				Water resistant (2-color indication)	2-wire	12 V	—	F7BAV —			—	●	○	—	○					
				With diagnostic output (2-color indication)	4-wire (NPN)	5 V, 12 V	—	F79F			●	●	○	—	○					

* Lead wire length symbols: 0.5 m Nil (Example) A73C
 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.
 ** It is impossible to mount solid state switches to the housing mounting ø10.

- Since there are other applicable auto switches than listed, refer to page 8-26-50 for details.
- For details about auto switches with pre-wire connector, refer to page 8-30-52.

Slide Unit: Build-in Shock Absorber Slide Bearing Type Series CXWM

Built-in shock absorber

This is a built-in shock absorber style in which the shock absorber is enclosed in the housing.

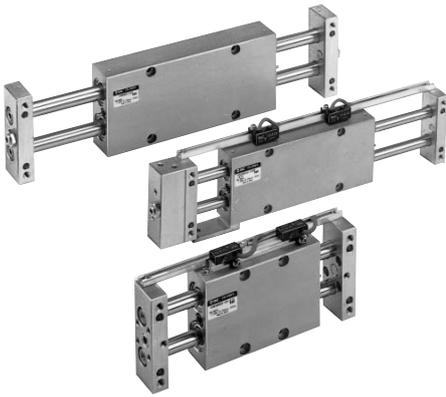
Compared to Series CX2 with shock absorber, this style achieves space savings in the longitudinal direction (except 25 mm stroke).

Dramatically reduced installation labor

The machining precision required for positioning during the installation of the cylinder has been reduced through the adoption of a special pin hole machining process, thus decreasing the amount of labor involved in adjustment.

Provided with an end lock mechanism

An end lock is also available, which maintains the cylinder's original position even if the air supply is interrupted.



Specifications

Type	Non-lube	
Fluid	Air	
Proof pressure	1.5 MPa	
Max. operating pressure	1.0 MPa	
Min. operating pressure	CXWM10/16	0.15 MPa
	CXWM20/25/32	0.1 MPa
Ambient & fluid temperature	-10 to 60°C (No freezing)	
Piston speed (Non-lube)	30 to 500 mm/s	
Cushion	Shock absorber	
Stroke adjustable range	Standard stroke: ±2 mm	
Accessory (Option)	Straight knock pin (2 pcs.), Adjusting bolt* (-X138)	

* "-X138" has a stroke adjustable range of 12.5 mm on one side.

Maximum Load Weight/Non-rotating Accuracy/Maximum Holding Force

Model	CXWM10	CXWM16	CXWM20	CXWM25	CXWM32
Maximum load weight*	1 kg	4 kg	5 kg	6 kg	10 kg
Non-rotating accuracy (Deflection of a piston rod is not included.)	±0.09°	±0.03°	±0.03°	±0.02°	±0.01°
Maximum holding force (End lock model)	39.2 N	98.1 N	147.1 N	245.2 N	392.3 N

* Place the center of gravity of the load and center of the slide unit close during operation. If they are placed far apart from each other, please consult with SMC.

Shock Absorber Specifications

Shock absorber ⁽¹⁾	RB0805-X552	RB0805	RB1006-X552	RB1006	RB1411-X552	RB1411
Applicable slide unit	CXWM10/16-□□		CXWM20/25-□□		CXWM32-□□	
Maximum energy absorption (J)	0.98		3.92		14.7	
Stroke absorption (mm)	5		6		11	
Max. collision speed (m/sec)	0.05 to 5					
Max. operating frequency (cycle/min) ⁽²⁾	80		70		45	
Max. allowable thrust (N)	147		353		667	
Ambient temperature range (°C)	-10 to 80					
Spring force (N)	Extended	1.96	4.22	6.86		
	Retracted	3.83	6.18	15.30		
Weight (g)	15		25		65	



Note 1) "-X552" is an exclusive shock absorber installed in the housing, and is the screw not attached specification of the outer part of the outer tube. The shock absorber plate mounting style of 25 and 50 strokes have the screw attached specification.

Note 2) 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

(N)

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	
CXWM10-□□	6	101	20	30	40	51	61	71	81	91	
CXWM16-□□	10	245	49	74	98	123	147	172	196	221	
CXWM20-□□	12	402	80	121	161	201	241	281	322	362	
CXWM25-□□	14	597	119	179	239	299	358	418	478	537	
CXWM32-□□	20	980	196	294	392	490	588	686	784	882	

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

Standard Stroke

Model	Standard stroke (mm)								
	25	50	75	100	125	150	175	200	
CXWM10-□□	(*) (1)	●	●	●	—	—	—	—	
CXWM16-□□	(*) (1)	●	●	●	●	●	●	●	
CXWM20-□□	(*) (2)	●	●	●	●	●	●	●	
CXWM25-□□	(*) (1)	●	●	●	●	●	●	●	
CXWM32-□□	(*) (2)	(*) (2)	●	●	●	●	●	●	



Note 1) The strokes marked with "(*)" has an absorber of double side plate mounting style.
Note 2) The strokes marked with "(*)" has an absorber of single side plate mounting style.



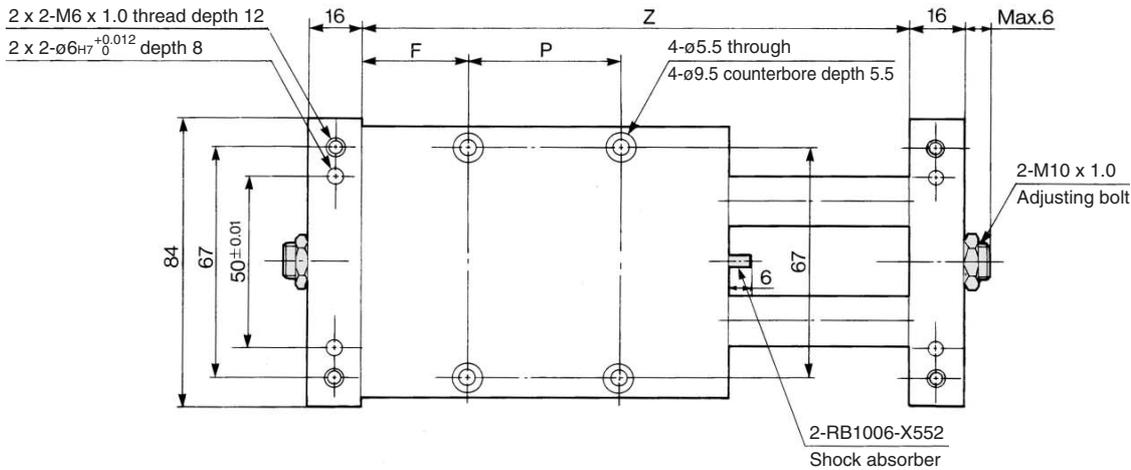
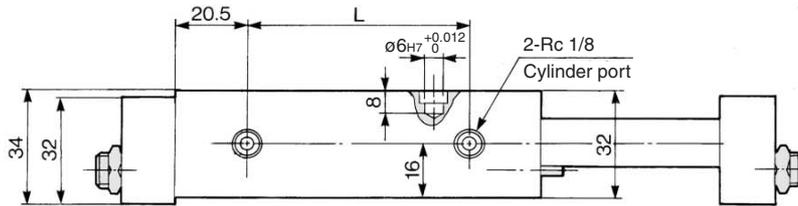
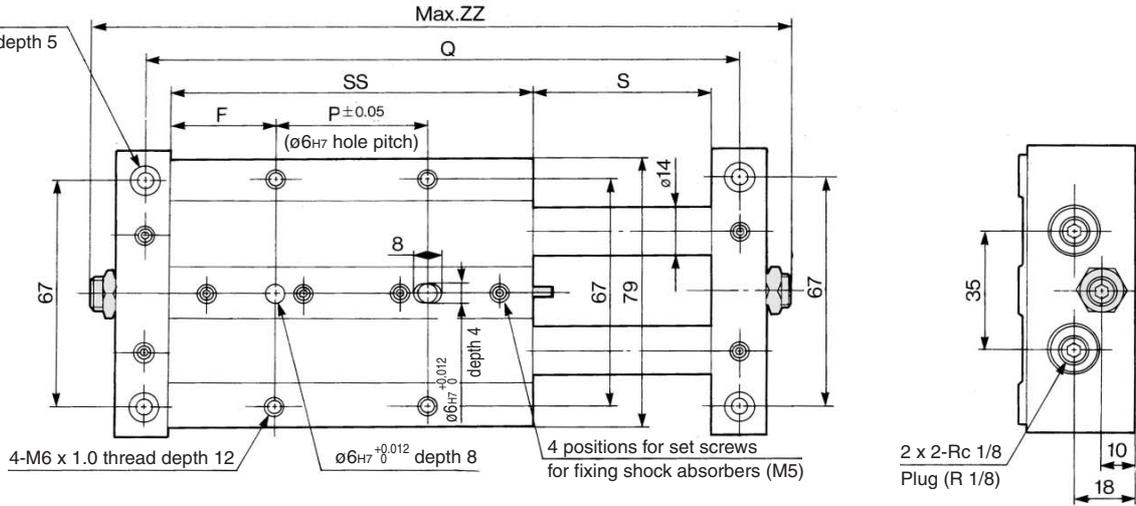
Made to Order Specifications (For details, refer to page 8-31-1.)

Symbol	Specifications
-XB11	Long stroke type
-XB13	Low speed cylinder (5 to 50 mm/s)
-XC18	NPT finish piping port
-X146	Hollow piston rod
-X138	Adjustable stroke
-X168	CX helical insert thread

Slide Unit: Build-in Shock Absorber Slide Bearing Type Series CXWM

ø25 Basic Type: CXWM25-Stroke/50 to 200

2 x 2-ø5.2 through
2 x 2-ø9.5 counterbore depth 5



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



Note) For 25 stroke, the shock absorber is mounted on a plate.
For dimensions of 25 stroke, refer to page 8-26-26.

Model	F	L	P	Q	S	SS	Z	ZZ
CXWM25-50	31	66	45	175	52	107	159	203
CXWM25-75	33.5	91	65	225	77	132	209	253
CXWM25-100	33.5	116	90	275	102	157	259	303
CXWM25-125	46	141	90	325	127	182	309	353
CXWM25-150	58.5	166	90	375	152	207	359	403
CXWM25-175	71	191	90	425	177	232	409	453
CXWM25-200	83.5	216	90	475	202	257	459	503

(mm)