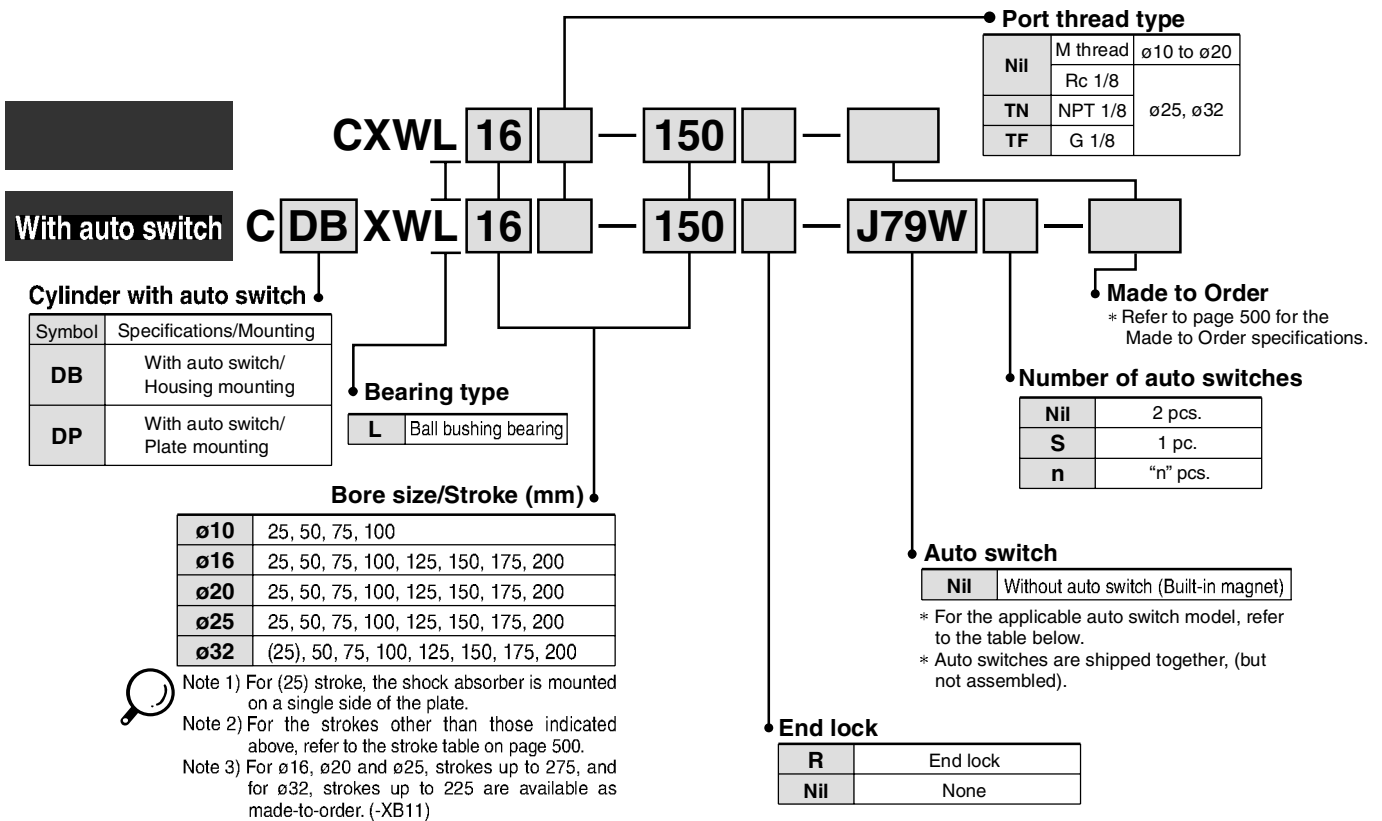


Slide Unit: Built-in Shock Absorber Ball Bushing Bearing Type Series CXWL

ø10, ø16, ø20, ø25, ø32

How to Order



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		Rail mounting		Applicable cylinder size		Lead wire length (m)*				Pre-wired connector	Applicable load										
					DC	AC	Perpendicular	In-line	Housing mounting	Plate mounting	0.5 (Nil)	3 (L)	5 (Z)	None (N)		IC circuit	Relay, PLC									
Solid state switch	-	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	-	F7NV	F79	ø16 ø20 ø25 ø32	ø10 ø16 ø20 ø25 ø32	●	●	○	-			○	-	-						
				3-wire (PNP)				F7BV	F7P			●	●	○	-	○										
				2-wire				F7BW	J79			●	●	○	-	○										
		3-wire (NPN)		F7NWV				F79W	●			●	○	-	○	-	-									
		3-wire (PNP)		-				F7PW	●			●	○	-	○											
		2-wire		F7BWV				J79W	●			●	○	-	○											
	4-wire (NPN)	F7BAV	F7BA	●	●	○	-	○																		
	Water resistant (2-color indication) With diagnostic output (2-color indication)	Grommet	Yes	3-wire (NPN equivalent)	24 V	5 V, 12 V	-	-	F79F	ø16 ø20 ø25 ø32	ø10 ø16 ø20 ø25 ø32	●	●	○	-	○	-	-								
	2-wire			-				-	●			●	○	-	○											
	3-wire (NPN equivalent)			-				-	●			●	○	-	○	-			-							
2-wire	-			-				●	●			○	-	○												
Reed switch	-	Grommet	Yes	3-wire (NPN equivalent)	24 V	5 V	-	-	A76H	ø16 ø20 ø25 ø32	ø10 ø16 ø20 ø25 ø32	●	●	-	-	-	-	-								
				2-wire				A72	A72H			●	●	-	-	-										
				2-wire				A73	A73H			●	●	-	-	-										
				2-wire				A73C	-			●	●	-	-	-										
				2-wire				A80	A80H			●	●	-	-	-										
		Connector		No				Yes	2-wire			24 V	5 V, 12 V	24 V or less	-	A73C	ø16 ø20 ø25 ø32	ø10 ø16 ø20 ø25 ø32	●	●	●	●	-	-	-	-
									2-wire						-	-			●	●	●	●				
									2-wire						-	-			●	●	●	●				
									2-wire						-	-			●	●	●	●				
									2-wire						-	-			●	●	●	●				
Grommet	No	Yes	3-wire (NPN equivalent)	24 V	12 V	100 V or less	-	E76A	ø10	-	●	●	-	-	-	-	-									
			2-wire				-	-			●	●	-	-	-											
			2-wire				-	-			●	●	-	-	-											
			2-wire				-	-			●	●	-	-	-											
			2-wire				-	-			●	●	-	-	-											

* Lead wire length symbols: 0.5 m Nil (Example) F79W
3 m L (Example) F79WL
5 m Z (Example) F79WZ
None N (Example) J79CW

* Solid state auto 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 517 for details.
- For details about auto switches with pre-wired connector, refer to pages 1784 and 1785.

Gentle Automatic Solution Sdn Bhd

Tel :603-80237743 Fax :603-80239743 Email :sales@gentle.com.my http://www.gentle.com.my

Series CXWL

Built-in shock absorber

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

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.

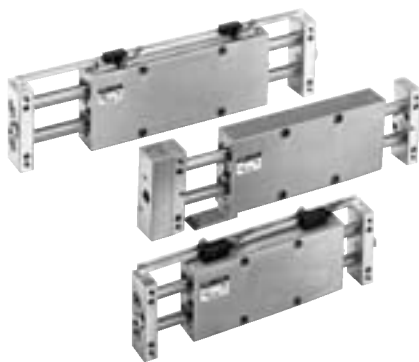
High-precision ball bushing

The bearings made of ball bushings decrease the rise in starting pressure that could be caused by a load imbalance.

This also enables smooth operation by ensuring stable travel resistance.

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.



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)
—XC22	Fluororubber seal
—X146	Hollow piston rod
—X138	Adjustable stroke
—X168	Helical insert thread
—X169	2 built-in magnets

Standard Stroke

Model	Standard stroke (mm)							
	25	50	75	100	125	150	175	200
CXWL10-□□	●	●	●	●	—	—	—	—
CXWL16-□□	●	●	●	●	●	●	●	●
CXWL20-□□	●	●	●	●	●	●	●	●
CXWL25-□□	●	●	●	●	●	●	●	●
CXWL32-□□	(*)	●	●	●	●	●	●	●

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

Specifications

Type	Non-lube	
Fluid	Air	
Proof pressure	1.5 MPa	
Max. operating pressure	1.0 MPa	
Min. operating pressure	CXWL10/16	0.15 MPa
	CXWL20/25/32	0.10 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 Mass/Non-rotating Accuracy/Maximum Holding Force

Model	CXWL10	CXWL16	CXWL20	CXWL25	CXWL32
Max. movable mass ⁽¹⁾	1 kg	4 kg	5 kg	7 kg	10 kg
Non-rotating accuracy ⁽²⁾ (Deflection of a piston rod is not included.)	± 0.09°	± 0.03°	± 0.03°	± 0.02°	± 0.01°
Max. holding force (End lock model)	39.2 N	98.1 N	147.1 N	245.2 N	392.3 N

Note 1) 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.

Note 2) The factors are obtained under the conditions of a 25 strokes plate is pushed out.

Shock Absorber Specifications

Shock absorber ⁽¹⁾	RB0805-X552	RB1006-X552	RB1411 RB1411-X552
Applicable slide unit	CXWL10/16-□□	CXWL20/25-□□	CXWL32-□□
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
	Retracted	3.83	6.18
Mass (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. "CXWL32-25" is mounted on a single side of the plate and of 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.

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

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
CXWL10-□□	6	101	20	30	40	51	61	71	81	91
CXWL16-□□	10	245	49	74	98	123	147	172	196	221
CXWL20-□□	12	402	80	121	161	201	241	281	322	362
CXWL25-□□	14	597	119	179	239	299	358	418	478	537
CXWL32-□□	20	980	196	294	392	490	588	686	784	882

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

Slide Unit: Built-in Shock Absorber Ball Bushing Bearing Type **Series CXWL**

Mass

(kg)

Model	Stroke (mm)							
	25	50	75	100	125	150	175	200
CXWL10	0.33	0.40	0.46	0.53	–	–	–	–
CXWL16	0.72	0.85	0.98	1.11	1.23	1.36	1.49	1.62
CXWL20	1.0	1.18	1.35	1.53	1.71	1.89	2.06	2.24
CXWL25	1.32	1.54	1.76	1.97	2.19	2.43	2.63	2.86
CXWL32	2.56	2.96	3.37	3.75	4.19	4.56	4.98	5.39

Additional Mass with End Lock (CXWL□-R)

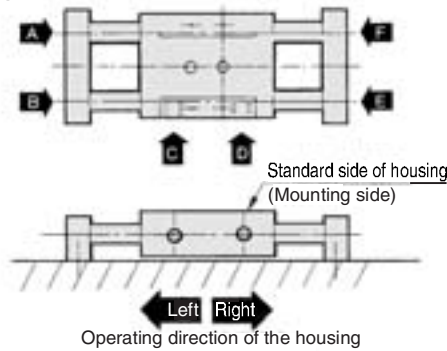
(kg)

Applicable model	Additional mass
CXWL10	0.08
CXWL16	0.14
CXWL20	0.15
CXWL25	0.20
CXWL32	0.43

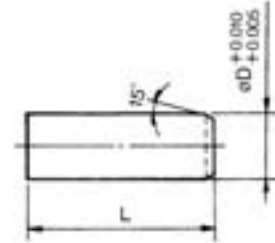
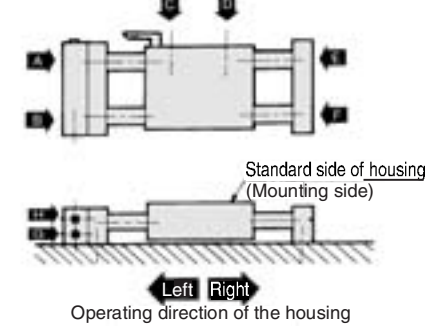
Accessory Straight Knock Pin (Option)

Operating Direction with Different Pressure Ports

Operating direction of housing when the plate is fixed



With end lock (CXWL-□R)
Operating direction of housing when the plate is fixed



(mm)

Model	L	øD	Model*
CXWL10	10	4	MS4-10
CXWL16	10	5	MS5-10
CXWL20	15	6	MS6-15
CXWL25	15	6	MS6-15
CXWL32	20	8	MS8-20

* Manufactured by Misumi Trading Ltd.

Pressure port	A	B	C	D	E	F
Operating direction	Right	Left	Left	Right	Left	Right

* There are 9 possible reciprocating piping methods.

Pressure port	A	B	C	D	E	F	G	H
Operating direction	Right	Left	Left	Right	Right	Left	Left	Right

* There are 16 possible reciprocating piping methods.

Deflection of Piston Rod by Center Loading (Reference)

When center loading is added to the center of the housing



(mm)

Model	Stroke Load (N)	Stroke	
		100	200
CXWL10	9.81	0.07	–
CXWL16	39.2	0.05	0.20
CXWL20	49	0.04	0.15
CXWL25	68.6	0.03	0.10
CXWL32	98.1	0.02	0.07

When center loading is added to the center of the plate



(mm)

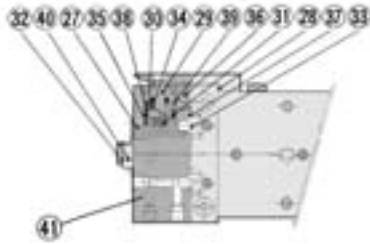
Model	Stroke Load (N)	Stroke			
		50	100	150	200
CXWL10	2.94	0.06	0.30	–	–
CXWL16	4.90	0.03	0.10	0.25	0.45
CXWL20	7.84	0.03	0.09	0.18	0.35
CXWL25	9.81	0.03	0.09	0.16	0.25
CXWL32	29.42	0.02	0.05	0.10	0.15

Note) The values denote the total width of the deflections in the upward/downward direction.

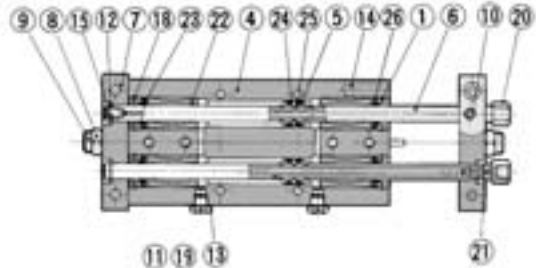
Series CXWL

Construction: $\varnothing 10$, $\varnothing 16$, $\varnothing 25$

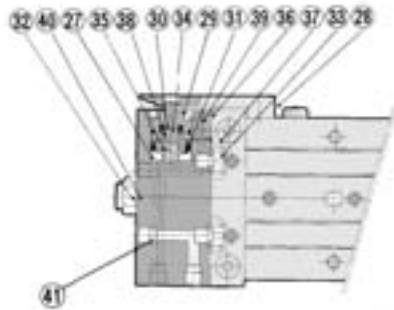
CXWL10



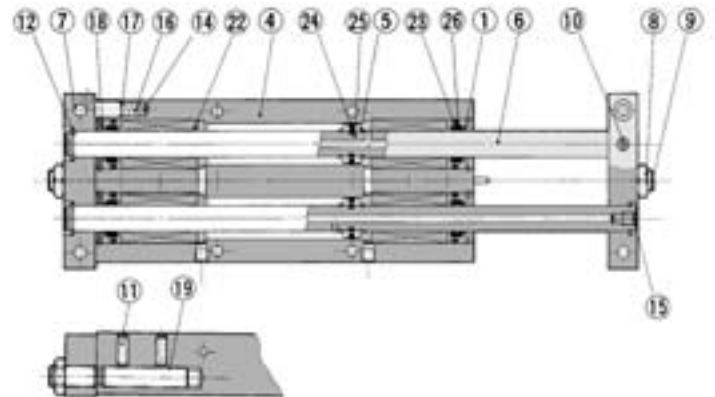
With end lock



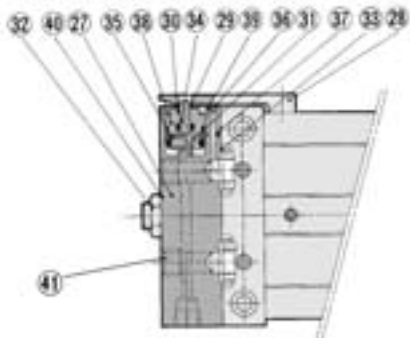
CXWL16



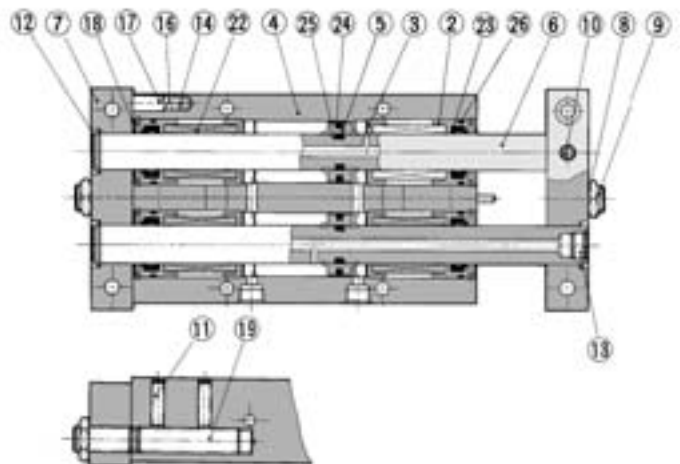
With end lock



CXWL25



With end lock



Construction: ø10, ø16, ø25

Component Parts

No.	Description	Material	Note
1	Rod cover	Aluminum alloy	Anodized
2	Rod cover A	Aluminum alloy	Anodized
3	Rod cover B	Aluminum alloy	Anodized
4	Housing	Aluminum alloy	Hard anodized
5	Piston	Aluminum alloy	Chromated
6	Piston rod	High carbonate chrome bearing steel pipe	Quenched, Hard chrome plated
7	Plate	Aluminum alloy	Hard anodized
8	Lock nut	Carbon steel	Nickel plated
9	Adjusting bolt	Chromium steel	Nickel plated
10	Set screw (For fixing rods)	Chromium steel	Nickel plated
11	Set screw (For fixing shock absorbers)	Stainless steel	
12	Retaining ring	Carbon tool steel	Nickel plated
13	Plug	Brass	Nickel plated
14	Magnet	—	ø5
15	Set screw for seal	Chromium steel	Nickel plated
16	Spring	Stainless steel	
17	Type CR retaining ring	Carbon tool steel	
18	Round type R retaining ring	Carbon tool steel	Nickel plated
19	Shock absorber	—	(RB0805-X552 or RB1006-X552)
20	Socket	Brass	Electroless nickel plated
21	Gasket	NBR	
22	Ball bushing	—	
23	Rod seal	NBR	
24	Piston seal	NBR	
25	Piston gasket	NBR	
26	Cylinder tube gasket	NBR	

Component Parts: With End Lock

No.	Description	Material	Note
27	Locking body	Aluminum alloy	Hard anodized
28	Lock finger	Alloy tool steel	Nickel plated after quenched
29	Lock piston	Carbon tool steel	Electroless nickel plated after quenched
30	Rod cover	Aluminum alloy	
31	Return spring	Spring steel	Zinc chromated
32	Adjusting bolt	Chromium steel	Nickel plated
33	Body gasket	NBR	
34	Rod seal	NBR	
35	Piston seal	NBR	
36	Steel ball	High carbon chrome bearing steel	
37	Steel ball	High carbon chrome bearing steel	
38	O-ring	NBR	
39	Round type R retaining ring	Carbon tool steel	Nickel plated
40	Lock nut	Carbon steel	Nickel plated
41	Plug	Chromium steel	Nickel plated

Replacement Parts: Seal Kit End Lock

Model	Kit no.	Contents
CXWL10	CXWL10R-PS	A set of 33, 34, 35 and 38 listed above
CXWL16	CXWL16R-PS	
CXWL25	CXWL25R-PS	

- * Seal kit includes 33, 34, 35 and 38. Order the seal kit with the part number for each model.
- * Since the seal kit does not include a grease pack, order it separately.
Grease pack part no.: GR-S-010 (10 g)

Replacement Parts: Seal Kit Cylinder Body

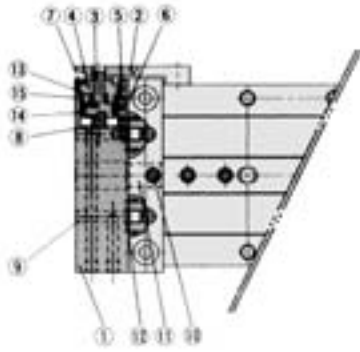
Model	Kit no.	Contents
CXWL10	CXWL10-PS	A set of 23, 24 and 26 listed above
CXWL16	CXWL16-PS	
CXWL25	CXWL25-PS	

- * Seal kit includes 23, 24 and 26. Order the seal kit with the part number for each model.
- * 25 is not replaceable.
- * Since the seal kit does not include a grease pack, order it separately.
Grease pack part no.: GR-S-010 (10 g)

Series CXWL

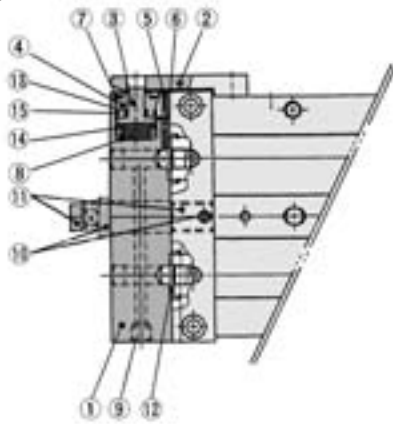
Construction: $\varnothing 20, \varnothing 32$

CXWL20



With end lock

CXWL32



With end lock

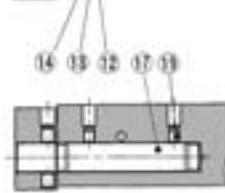
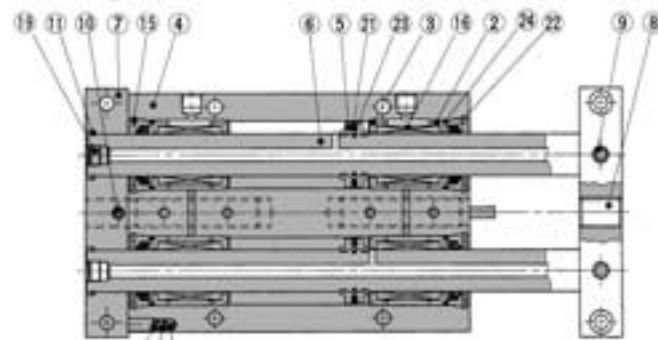
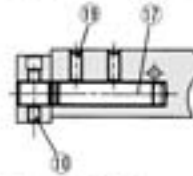
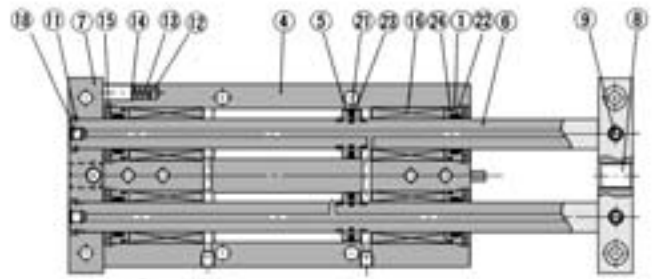
Component Parts

No.	Description	Material	Note
1	Rod cover	Aluminum alloy	Anodized
2	Rod cover A	Aluminum alloy	Anodized
3	Rod cover B	Aluminum alloy	Anodized
4	Housing	Aluminum alloy	Hard anodized
5	Piston	Aluminum alloy	Chromated
6	Piston rod	High carbon chrome bearing steel	—
7	Plate	Aluminum alloy	Hard anodized
8	Adjusting bolt	Chromium steel	Nickel plated
9	Hex. socket head set screw	Chromium steel	Nickel plated
10	Hex. socket head set screw	Chromium steel	Nickel plated
11	Retaining ring	Tool steel	Nickel plated
12	Magnet	—	$\varnothing 5$
13	Spring	Stainless steel	
14	Type CR retaining ring	Carbon tool steel	
15	Round type R retaining ring	Carbon tool steel	Nickel plated
16	Ball bushing	—	
17	Shock absorber	—	RB1006-X552 or RB1411-X552
18	Plug	Chromium steel	Nickel plated
19	Hex. socket head set screw	Stainless steel	
21	Piston seal	NBR	
22	Rod seal	NBR	
23	Piston gasket	NBR	
24	Cylinder tube gasket	NBR	

Replacement Parts: Seal Kit Cylinder Body

Model	Kit no.	Contents
CXWL20	CXWL20-PS	A set of ①, ② and ④ listed above
CXWL32	CXWL32-PS	

- * Seal kit includes ①, ② and ④. Order the seal kit with the part number for each model.
 - * ③ is not replaceable.
 - * Since the seal kit does not include a grease pack, order it separately.
- Grease pack part no.: GR-S-010 (10 g)**



Component Parts: With End Lock

No.	Description	Material	Note
1	Locking body	Aluminum alloy	Hard anodized
2	Lock finger	Alloy tool steel	Nickel plating after quenched
3	Lock piston	Tool steel	Electroless nickel plated after quenched
4	Rod cover	Aluminum bearing alloy	
5	Steel ball	High carbon chrome bearing steel	
6	Steel ball	High carbon chrome bearing steel	
7	Round type R retaining ring	Carbon tool steel	Nickel plated
8	Return spring	Spring steel	Zinc chromated
9	Plug	Chromium steel	Nickel plated
Note 10	25, (50) to 200 ST (25) ST	Hexagon socket head set screw	Chromium steel
		Hexagon nut	Carbon steel
Note 11	25, (50) to 200 ST (25) ST	Adjusting bolt	Chromium steel
		Shock absorber	—
12	Body gasket	NBR	
13	Rod seal	NBR	
14	Piston seal	NBR	
15	O-ring	NBR	

Note) Figures in parentheses denote the case of CXWM32.

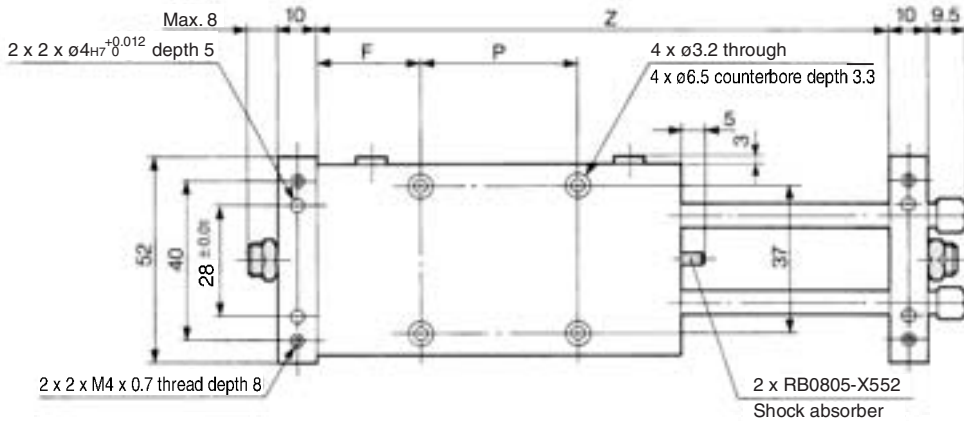
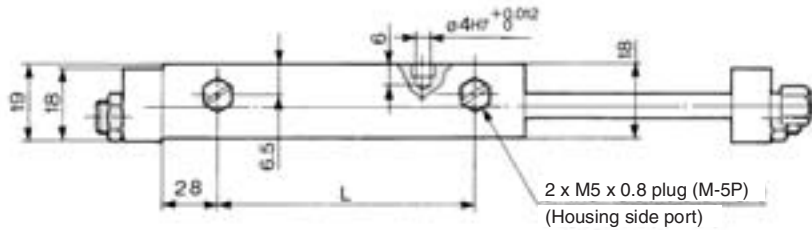
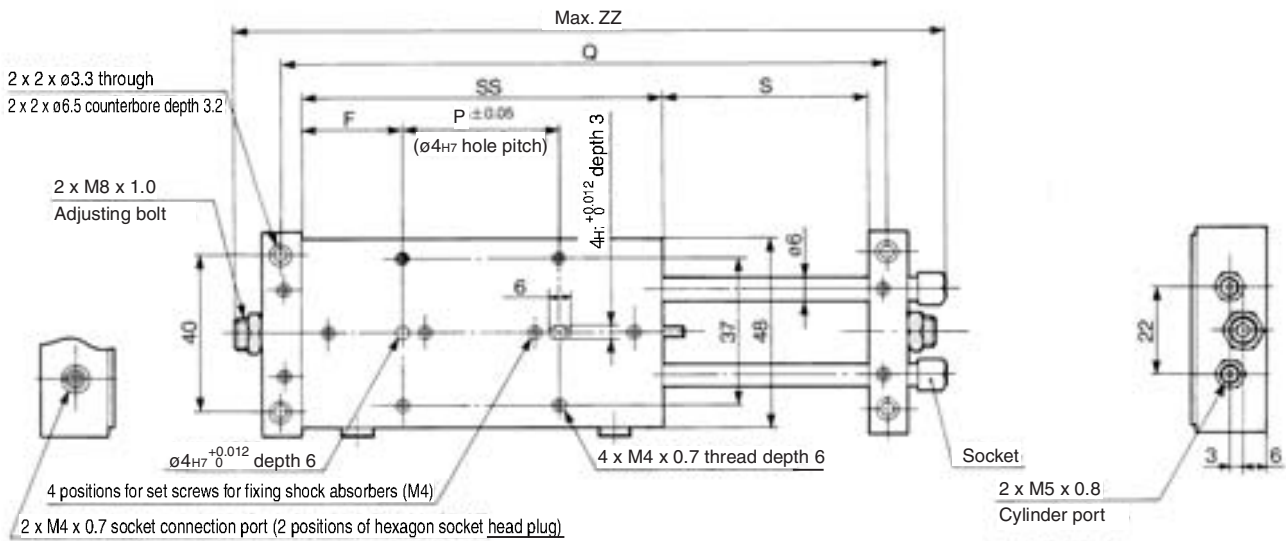
Replacement Parts: Seal Kit End Lock

Model	Kit no.	Contents
CXWL20	CXWL20R-PS	A set of ⑫, ⑬, ⑭ and ⑮ listed above
CXWL32	CXWL32R-PS	

- * Seal kit includes ⑫, ⑬, ⑭ and ⑮. Order the seal kit with the part number for each model.
 - * Since the seal kit does not include a grease pack, order it separately.
- Grease pack part no.: GR-S-010 (10 g)**

Slide Unit: Built-in Shock Absorber Ball Bushing Bearing Type **Series CXWL**

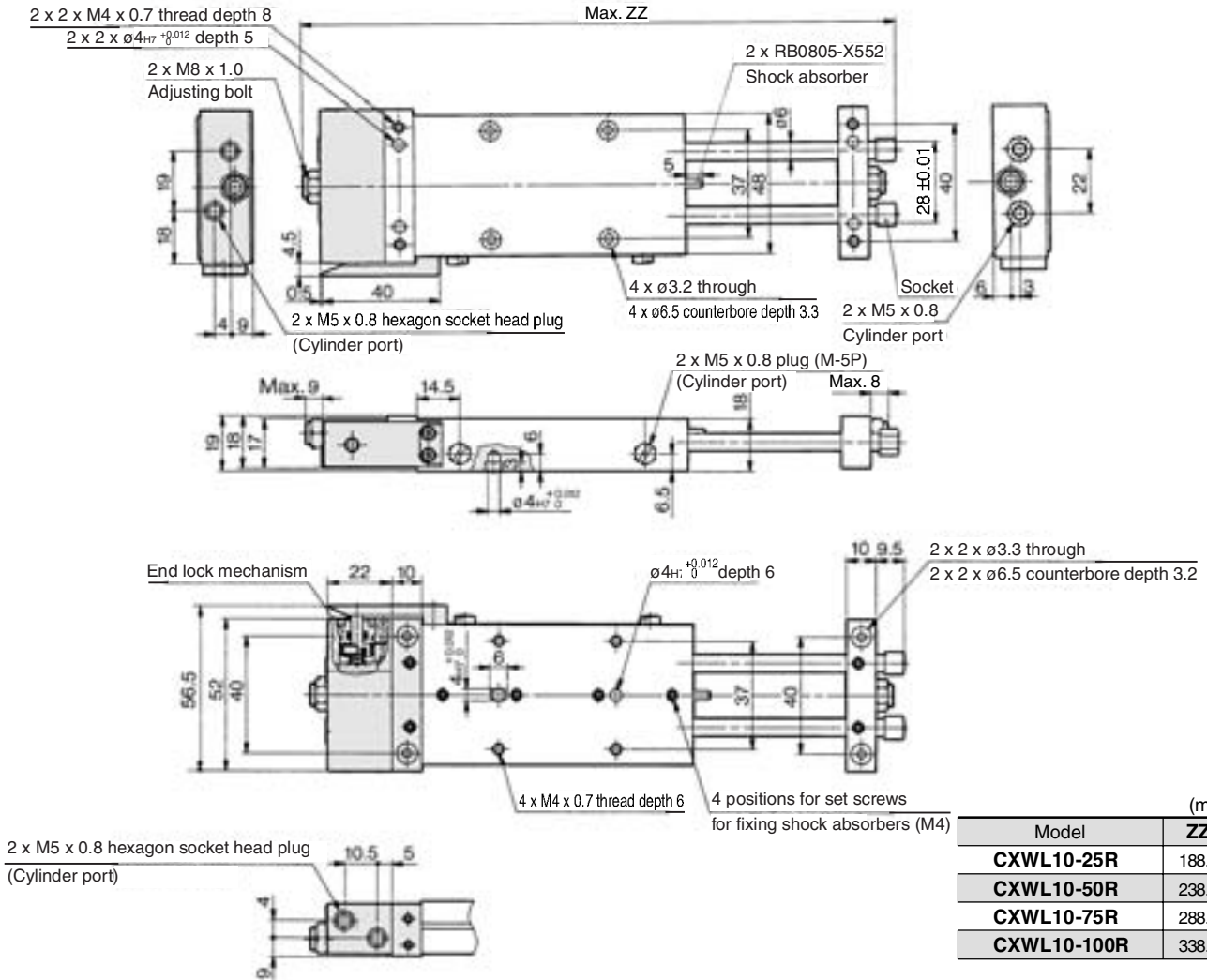
ø10 Basic Type: CXWL10-Stroke/25 to 100



Model	F	L	P	Q	S	SS	Z	ZZ
CXWL10-25	35.5	45	30	138	27	101	128	165.5
CXWL10-50	38	70	50	188	52	126	178	215.5
CXWL10-75	40.5	95	70	238	77	151	228	265.5
CXWL10-100	43	120	90	288	102	176	278	315.5

Series CXWL

ø10 With End Lock: CXWL10-Stroke/25 to 100 R



Housing mounting style with auto switch CDBXWL10-Stroke, CDBXWL10-Stroke R

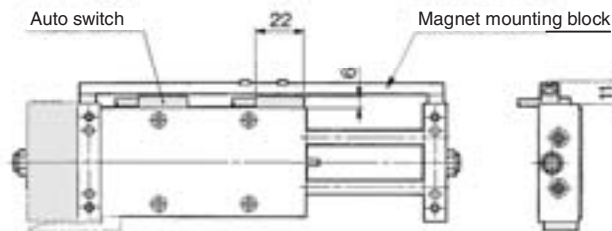
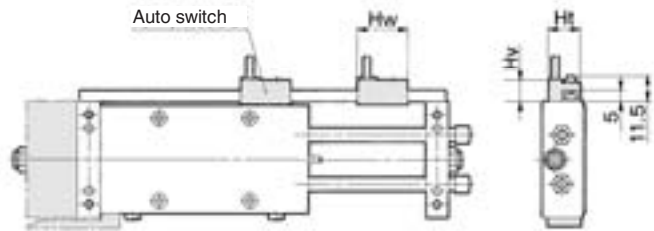


Plate mounting style with auto switch CDPXWL10-Stroke, CDPXWL10-Stroke R



Note 1) The figure above is for D-E7□A/E80A.

Note 2) For only 25 stroke, 2 magnets for auto switches are equipped with the magnet mounting block.

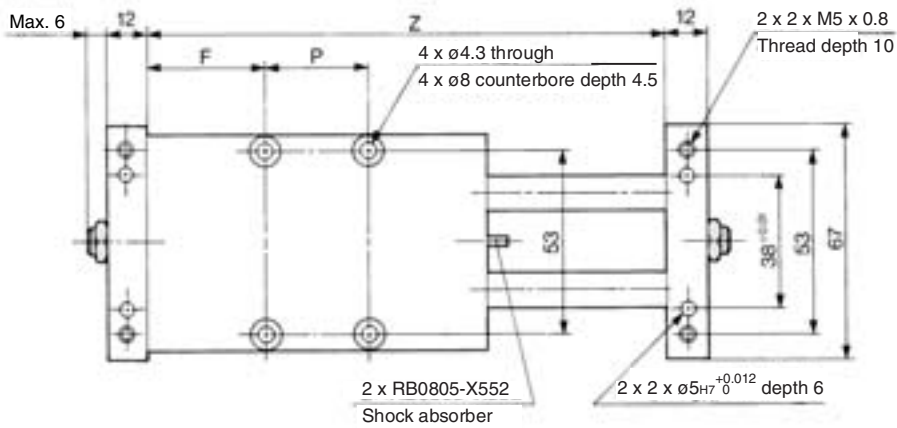
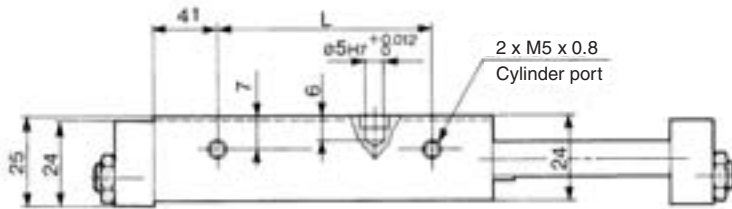
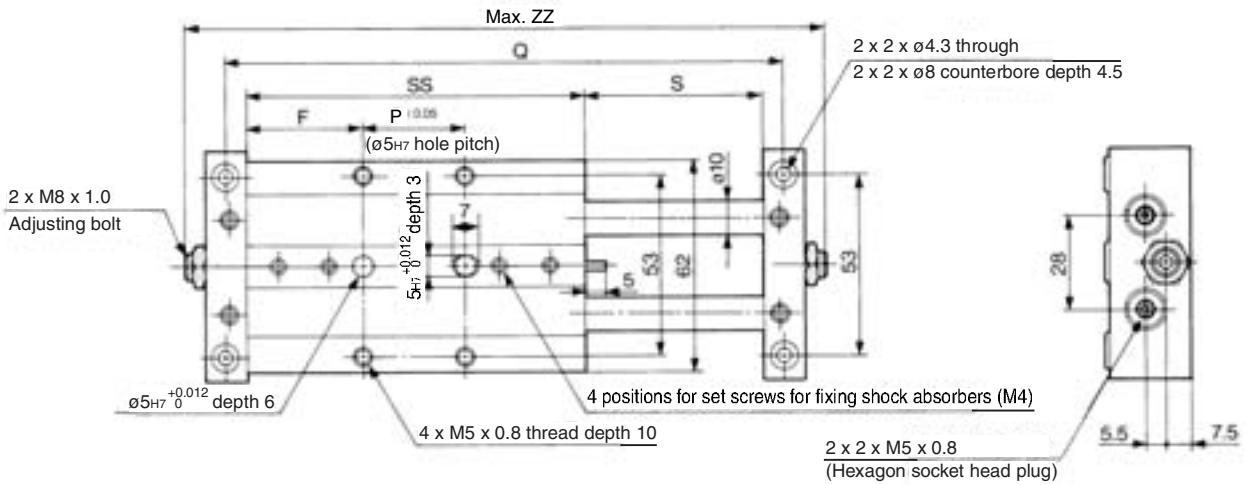
Note 1) The dimensions show D-A7 and D-A8. (mm)

Auto switch model	Hw	Ht	Hv
D-A7□, D-A80	23	15	10.5
D-F7□, D-J79, D-J79W, D-F7□W, D-F79F, D-F7BAL, D-F7NTL	23	15	10
D-A7□H, D-A80H	22	15	9
D-A73C, D-A80C	23	17.5	17.5
D-F7□V, D-F7□WV, D-F7BAV	23	15	14
D-J79C	24	17.5	16

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

Slide Unit: Built-in Shock Absorber Ball Bushing Bearing Type **Series CXWL**

ø16 Basic Type: CXWL16-Stroke/25 to 200

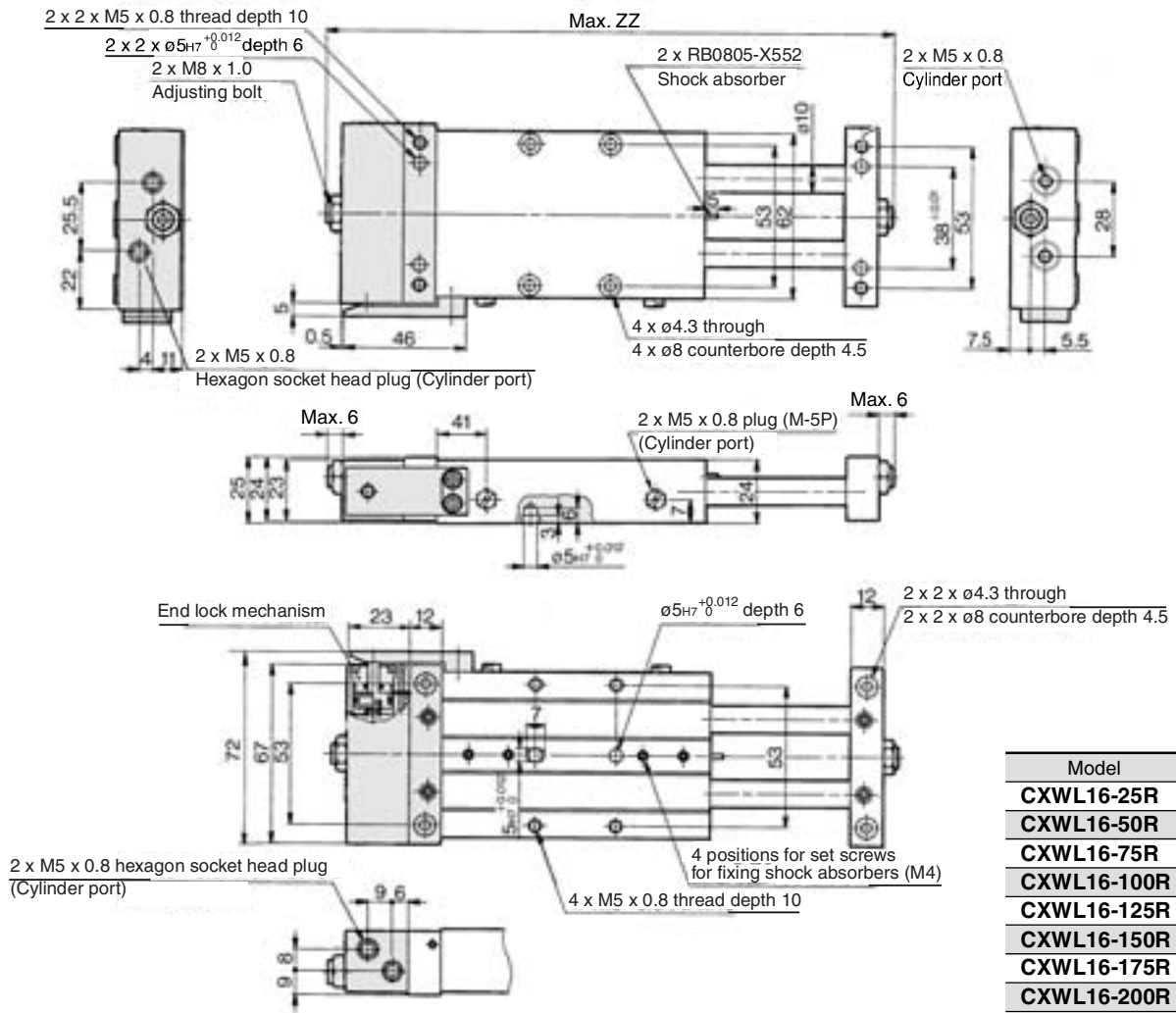


(mm)

Model	F	L	P	Q	S	SS	Z	ZZ
CXWL16-25	34.5	39	52	160	27	121	148	184
CXWL16-50	47	64	52	210	52	146	198	234
CXWL16-75	53	89	65	260	77	171	248	284
CXWL16-100	53	114	90	310	102	196	298	334
CXWL16-125	65.5	139	90	360	127	221	348	384
CXWL16-150	78	164	90	410	152	246	398	434
CXWL16-175	90.5	189	90	460	177	271	448	484
CXWL16-200	103	214	90	510	202	296	498	534

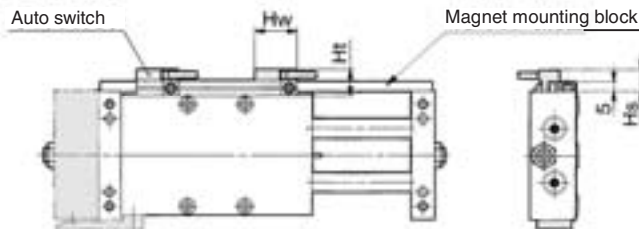
Series CXWL

ø16 With End Lock: CXWL16-Stroke/25 to 200 R



Model	ZZ (mm)
CXWL16-25R	207
CXWL16-50R	257
CXWL16-75R	307
CXWL16-100R	357
CXWL16-125R	407
CXWL16-150R	457
CXWL16-175R	507
CXWL16-200R	557

Housing mounting style with auto switch CDBXWL16-Stroke, CDBXWL16-Stroke R

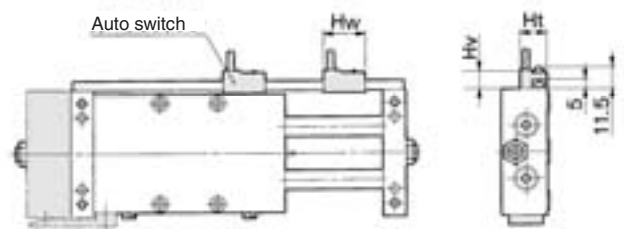


Note 1) The dimensions show D-A7 and D-A8. (mm)

Auto switch model	Hw	Hs	Ht
D-A7□, D-A80	23	12.5	15
D-F7□, D-J79, D-J79W, D-F7□W, 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, D-F7□WV, D-F7BAV	23	12.5	15
D-J79C	24	15	17.5
D-F7LF	30	12.5	15

Note 2) For only 25 stroke, 2 magnets for auto switches are equipped with the magnet mounting block.

Plate mounting style with auto switch CDPXWL16-Stroke, CDPXWL16-Stroke R



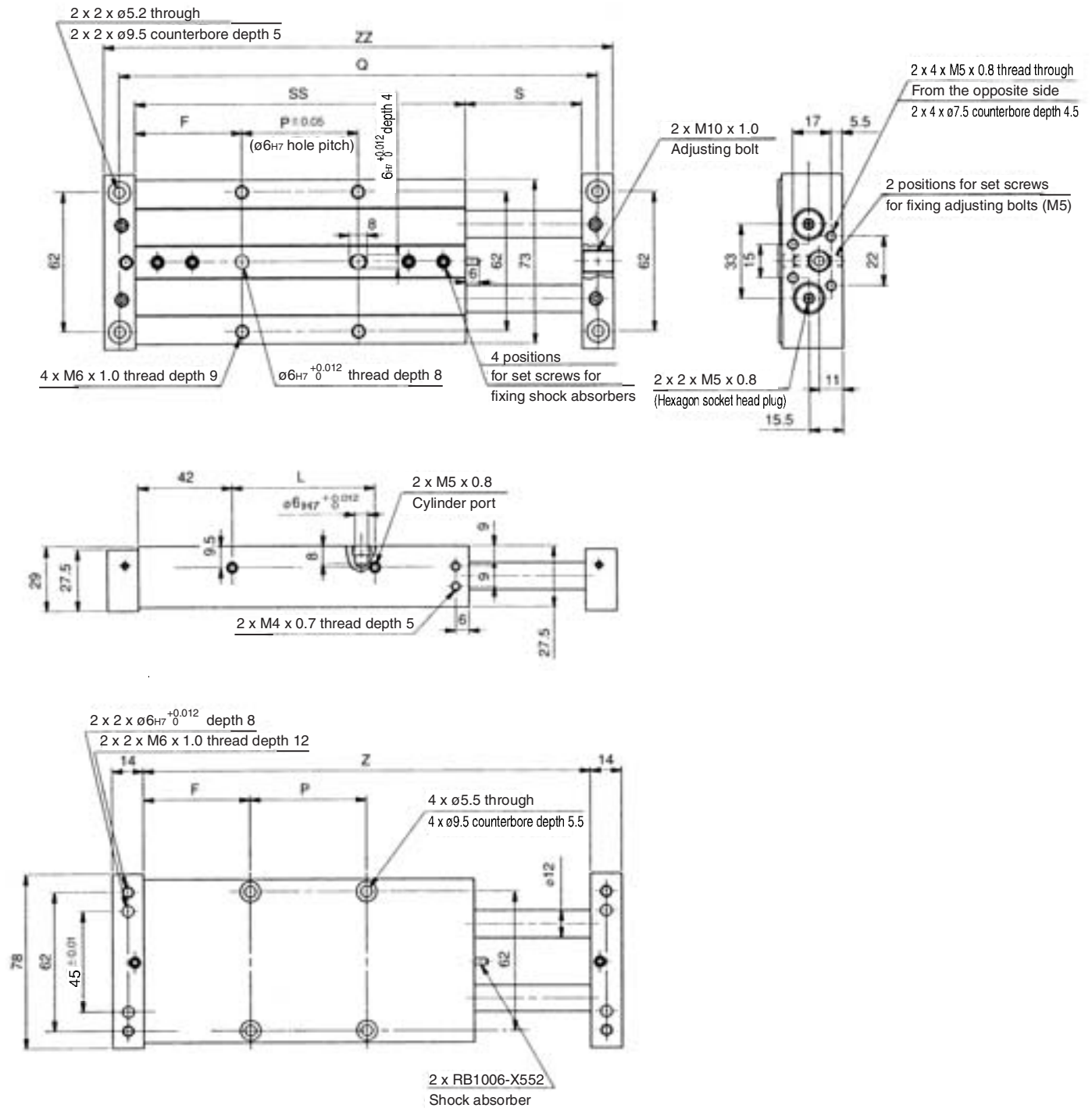
Note 1) The dimensions show D-A7 and D-A8. (mm)

Auto switch model	Hw	Ht	Hv
D-A7□, D-A80	23	15	10.5
D-F7□, D-J79, D-J79W, D-F7□W, D-F79F, D-F7BAL, D-F7NTL	23	15	10
D-A7□H, D-A80H	22	15	9
D-A73C, D-A80C	23	17.5	17.5
D-F7□V, D-F7□WV, D-F7BAV	23	15	14
D-J79C	24	17.5	16

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

Slide Unit: Built-in Shock Absorber Ball Bushing Bearing Type **Series CXWL**

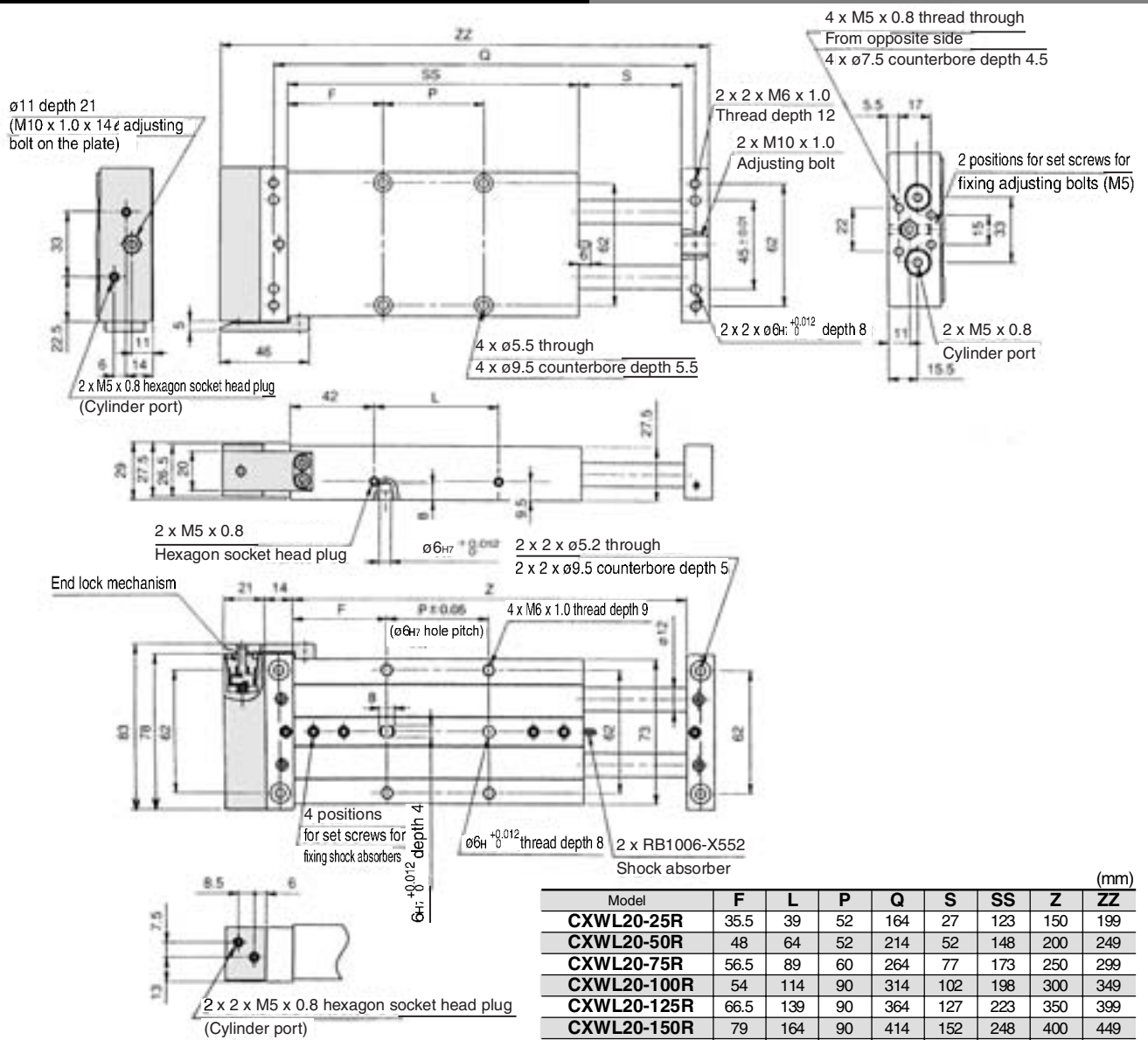
ø20 Basic Type: CXWL20-Stroke/25 to 200



	(mm)							
Model	F	L	P	Q	S	SS	Z	ZZ
CXWL20-25	35.5	39	52	164	27	123	150	178
CXWL20-50	48	64	52	214	52	148	200	228
CXWL20-75	56.5	89	60	264	77	173	250	278
CXWL20-100	54	114	90	314	102	198	300	328
CXWL20-125	66.5	139	90	364	127	223	350	378
CXWL20-150	79	164	90	414	152	248	400	428
CXWL20-175	91.5	189	90	464	177	273	450	478
CXWL20-200	104	214	90	514	202	298	500	528

Series CXWL

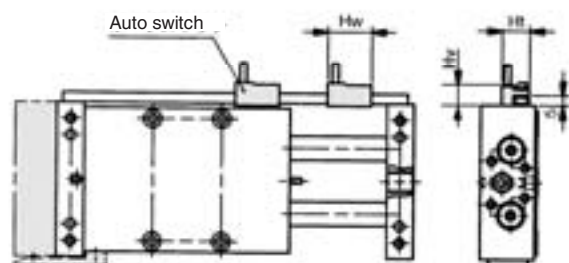
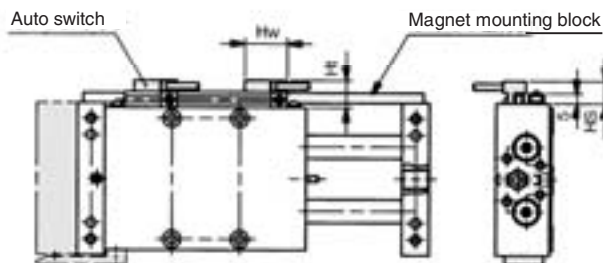
ø20 With End Lock: CXWL20-Stroke/25 to 200R



Model	F	L	P	Q	S	SS	Z	ZZ
CXWL20-25R	35.5	39	52	164	27	123	150	199
CXWL20-50R	48	64	52	214	52	148	200	249
CXWL20-75R	56.5	89	60	264	77	173	250	299
CXWL20-100R	54	114	90	314	102	198	300	349
CXWL20-125R	66.5	139	90	364	127	223	350	399
CXWL20-150R	79	164	90	414	152	248	400	449
CXWL20-175R	91.5	189	90	464	177	273	450	499
CXWL20-200R	104	214	90	514	202	298	500	549

Housing mounting style with auto switch CDBXWL20-Stroke, CDBXWL20-Stroke R

Plate mounting style with auto switch CDPXWL20-Stroke, CDPXWL20-Stroke R



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

Auto switch model	Hw	Hs	Ht
D-A7□, D-A80	23	12.5	15
D-F7□, D-J79, D-J79W, D-F7□W, 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, D-F7□WV, D-F7BAV	23	12.5	15
D-J79C	24	15	17.5
D-7LF	30	12.5	15

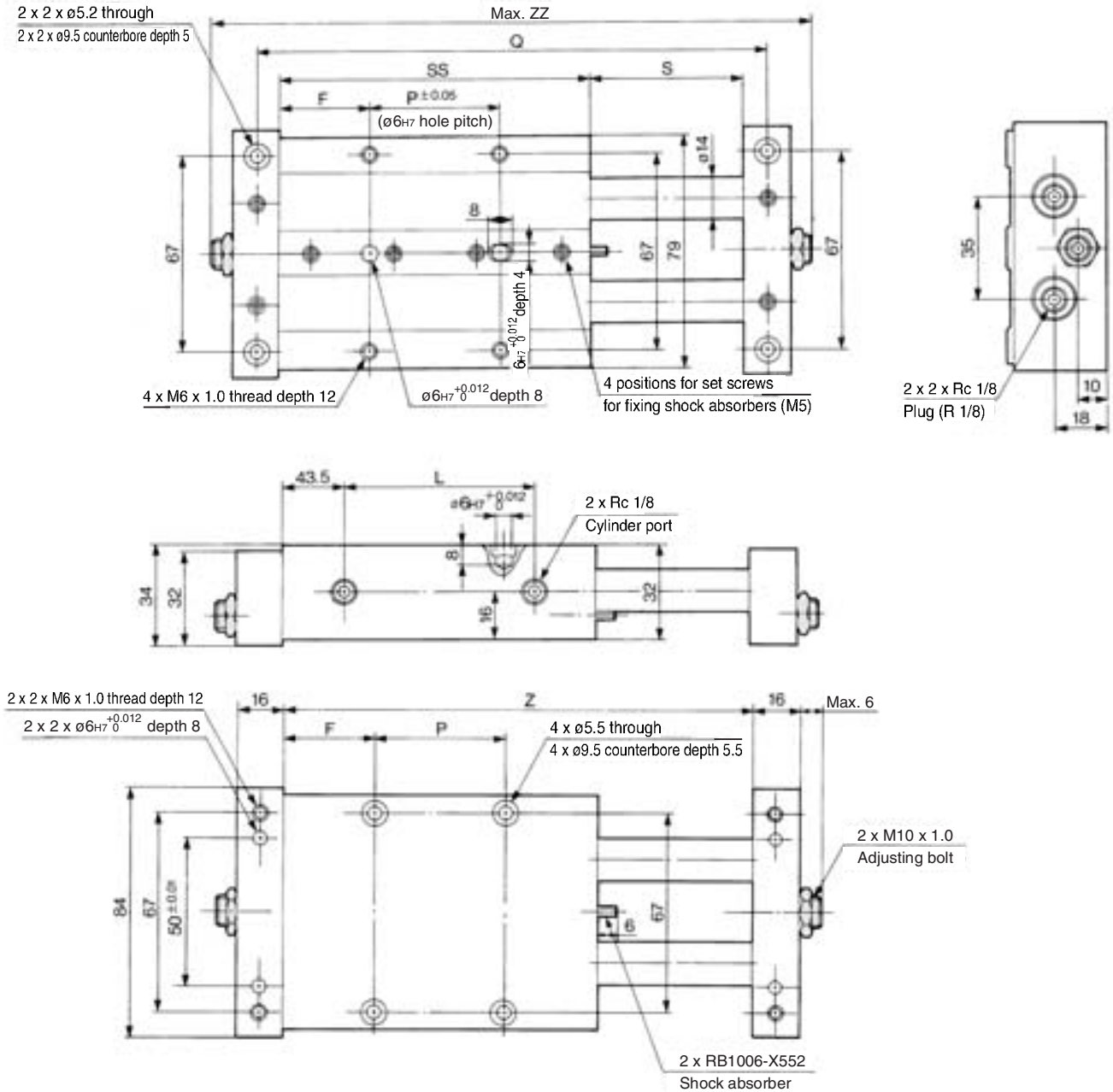
Note 1) The dimensions show D-A7 and D-A8. (mm)

Auto switch model	Hw	Ht	Hv
D-A7□, D-A80	23	15	10.5
D-F7□, D-J79, D-J79W, D-F7□W, D-F79F, D-F7BAL, D-F7NTL	23	15	10
D-A7□H, D-A80H	22	15	9
D-A73C, D-A80C	23	17.5	17.5
D-F7□V, D-F7□WV, D-F7BAV	23	15	14
D-J79C	24	17.5	16

Note 2) For 25 stroke, 2 magnets for auto switches are equipped to the magnet mounting block.

Slide Unit: Built-in Shock Absorber Ball Bushing Bearing Type **Series CXWL**

ø25 Basic Type: CXWL25-Stroke/25 to 200

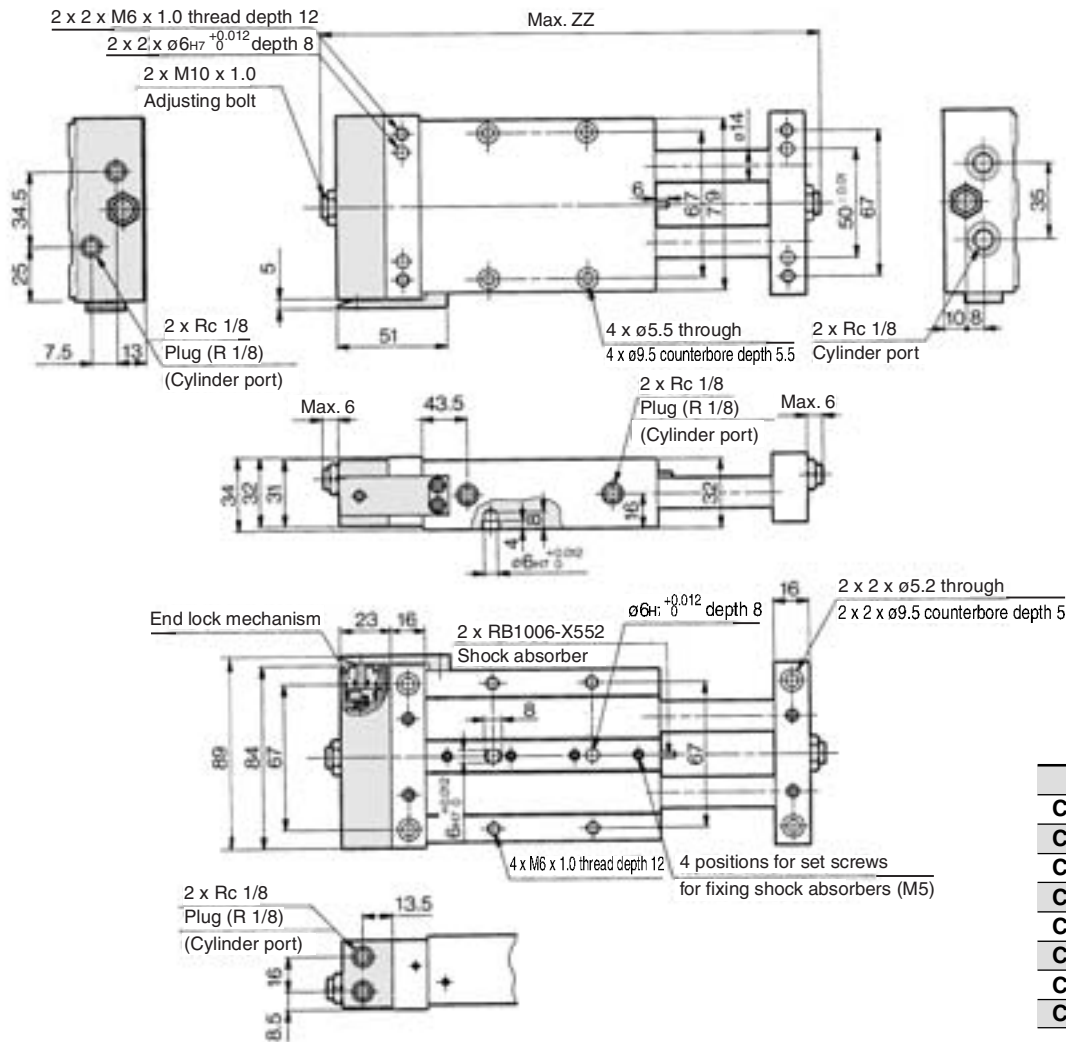


Model	F	L	P	Q	S	SS	Z	ZZ
CXWL25-25	31.5	41	65	171	27	128	155	199
CXWL25-50	31.5	66	90	221	52	153	205	249
CXWL25-75	56.5	91	65	271	77	178	255	299
CXWL25-100	56.5	116	90	321	102	203	305	349
CXWL25-125	69	141	90	371	127	228	355	399
CXWL25-150	81.5	166	90	421	152	253	405	449
CXWL25-175	94	191	90	471	177	278	455	499
CXWL25-200	106.5	216	90	521	202	303	505	549

(mm)

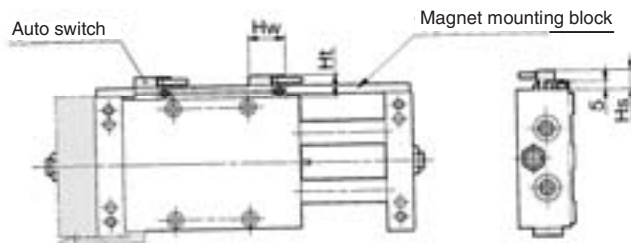
Series CXWL

ø25 With End Lock: CXWL25-Stroke/25 to 200|R



Model	ZZ (mm)
CXWL25-25R	222
CXWL25-50R	272
CXWL25-75R	322
CXWL25-100R	372
CXWL25-125R	422
CXWL25-150R	472
CXWL25-175R	522
CXWL25-200R	572

Housing mounting style with auto switch CDBXWL25-Stroke, CDBXWL25-Stroke R

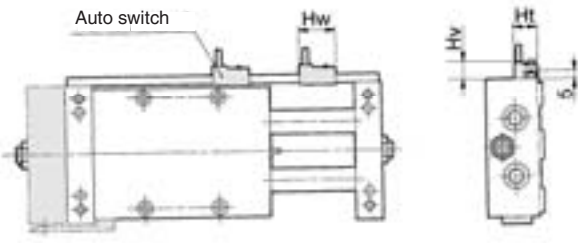


Note 1) The dimensions show D-A7 and D-A8. (mm)

Auto switch model	Hw	Hs	Ht
D-A7□, D-A80	23	12.5	15
D-F7□, D-J79, D-J79W, D-F7□W, 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, D-F7□WV, D-F7BAV	23	12.5	15
D-J79C	24	15	17.5
D-F7LF	30	12.5	15

Note 2) For only 25 stroke, 2 magnets for auto switches are equipped to the magnet mounting block.

Plate mounting style with auto switch CDPXWL25-Stroke, CDPXWL25-Stroke R



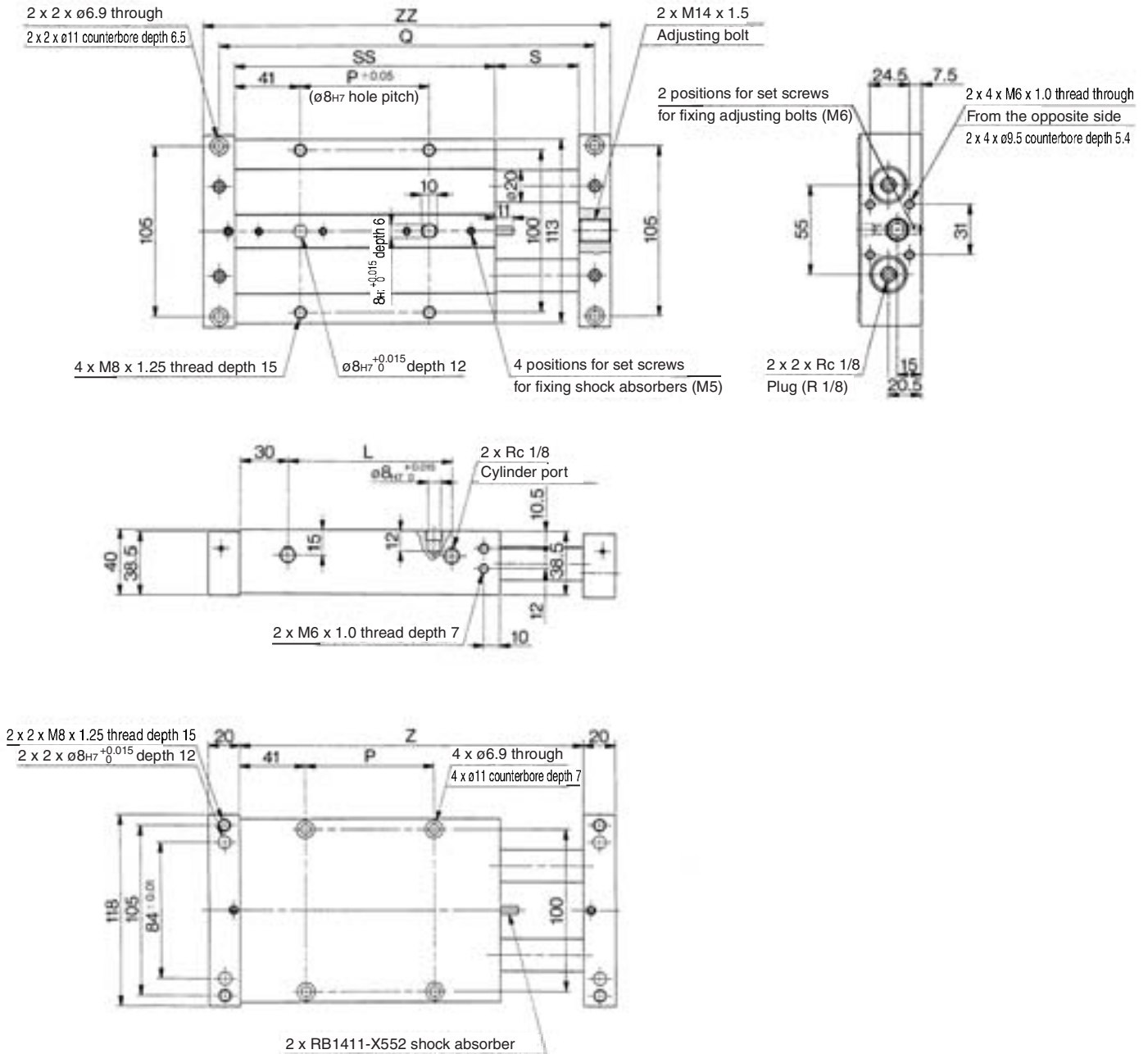
Note 1) The dimensions show D-A7 and D-A8. (mm)

Auto switch model	Hw	Ht	Hv
D-A7□, D-A80	23	15	10.5
D-F7□, D-J79, D-J79W, D-F7□W, D-F79F, D-F7BAL, D-F7NTL	23	15	10
D-A7□H, D-A80H	22	15	9
D-A73C, D-A80C	23	17.5	17.5
D-F7□V, D-F7□WV, D-F7BAV	23	15	14
D-J79C	24	17.5	16

Note 2) For only 25 stroke, 2 magnets for auto switches are built into the housing.

Slide Unit: Built-in Shock Absorber Ball Bushing Bearing Type **Series CXWL**

ø32 Basic Type: CXWL32-Stroke/50 to 200

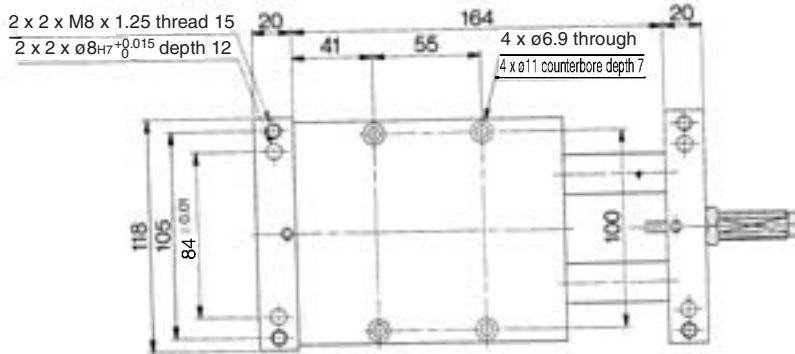
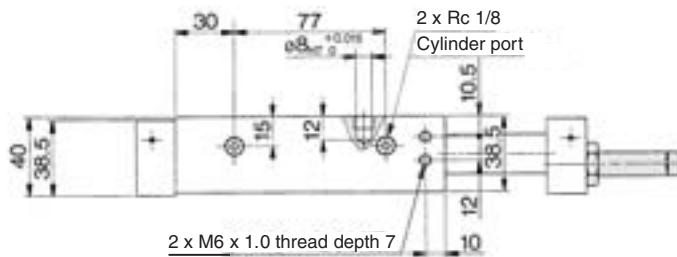
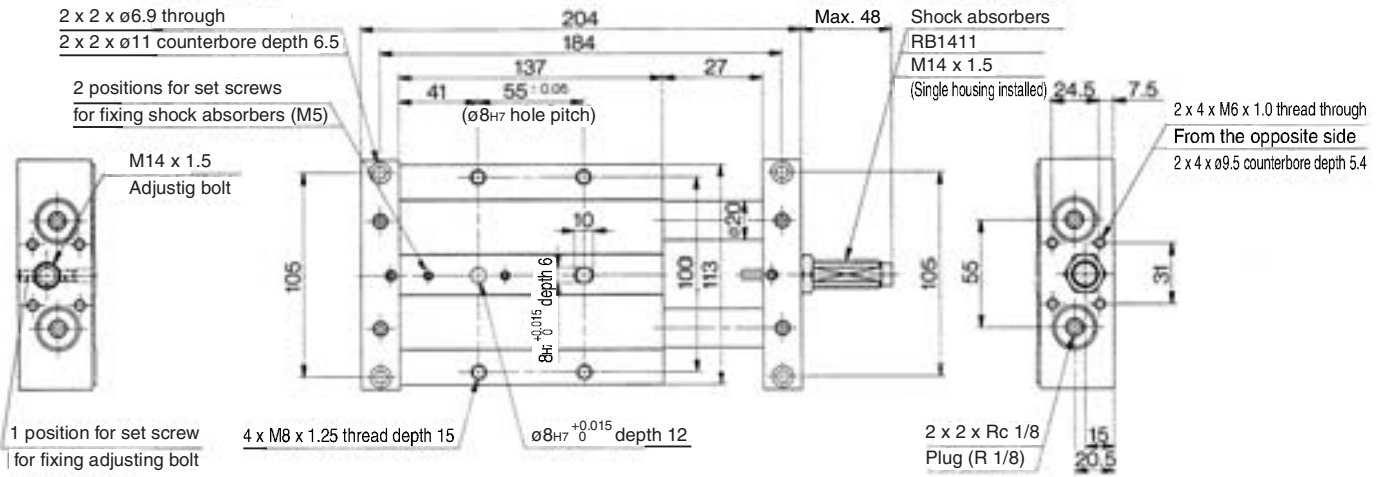


(mm)

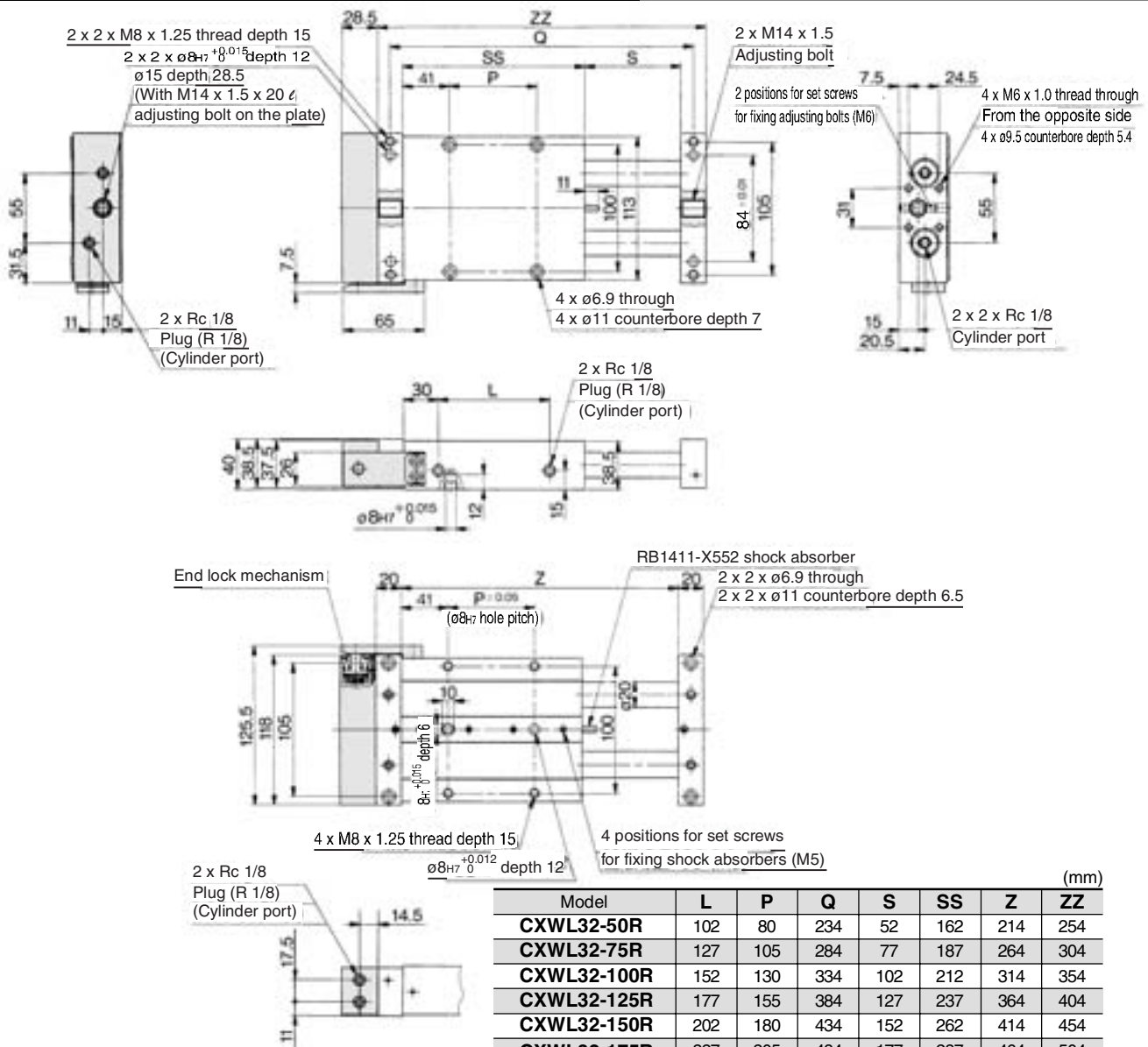
Model	L	P	Q	S	SS	Z	ZZ
CXWL32-50	102	80	234	52	162	214	254
CXWL32-75	127	105	284	77	187	264	304
CXWL32-100	152	130	334	102	212	314	354
CXWL32-125	177	155	384	127	237	364	404
CXWL32-150	202	180	434	152	262	414	454
CXWL32-175	227	205	484	177	287	464	504
CXWL32-200	252	230	534	202	312	514	554

Series CXWL

ø32 Basic Type: CXWL32-25 stroke



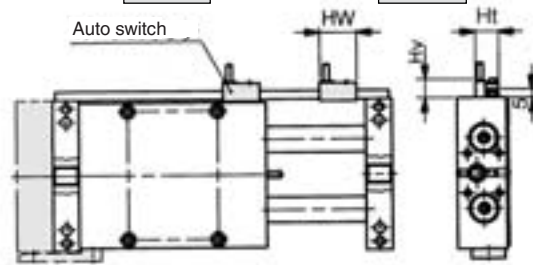
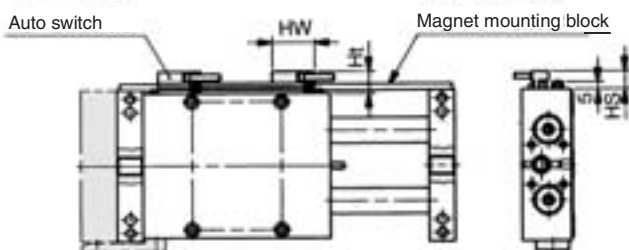
ø32 With End Lock: CXWL32-Stroke/50 to 200 R



Model	L	P	Q	S	SS	Z	ZZ
CXWL32-50R	102	80	234	52	162	214	254
CXWL32-75R	127	105	284	77	187	264	304
CXWL32-100R	152	130	334	102	212	314	354
CXWL32-125R	177	155	384	127	237	364	404
CXWL32-150R	202	180	434	152	262	414	454
CXWL32-175R	227	205	484	177	287	464	504
CXWL32-200R	252	230	534	202	312	514	554

Housing mounting style with auto switch
CDBXWL32-Stroke, CDBXWL32-Stroke R

Plate mounting style with auto switch
CDPXWL32-Stroke, CDPXWL32-Stroke R



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

Auto switch model	Hw	Hs	Ht
D-A7□, D-A80	23	12.5	15
D-F7□, D-J79, D-J79W, D-F7□W, 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, D-F7□WV, D-F7BAV	23	12.5	15
D-J79C	24	15	17.5
D-F7LF	30	12.5	15

Note 2) For 25 stroke, the shock absorber is mounted on a single side of the plate. For dimensions of 25 stroke, refer to page 516.

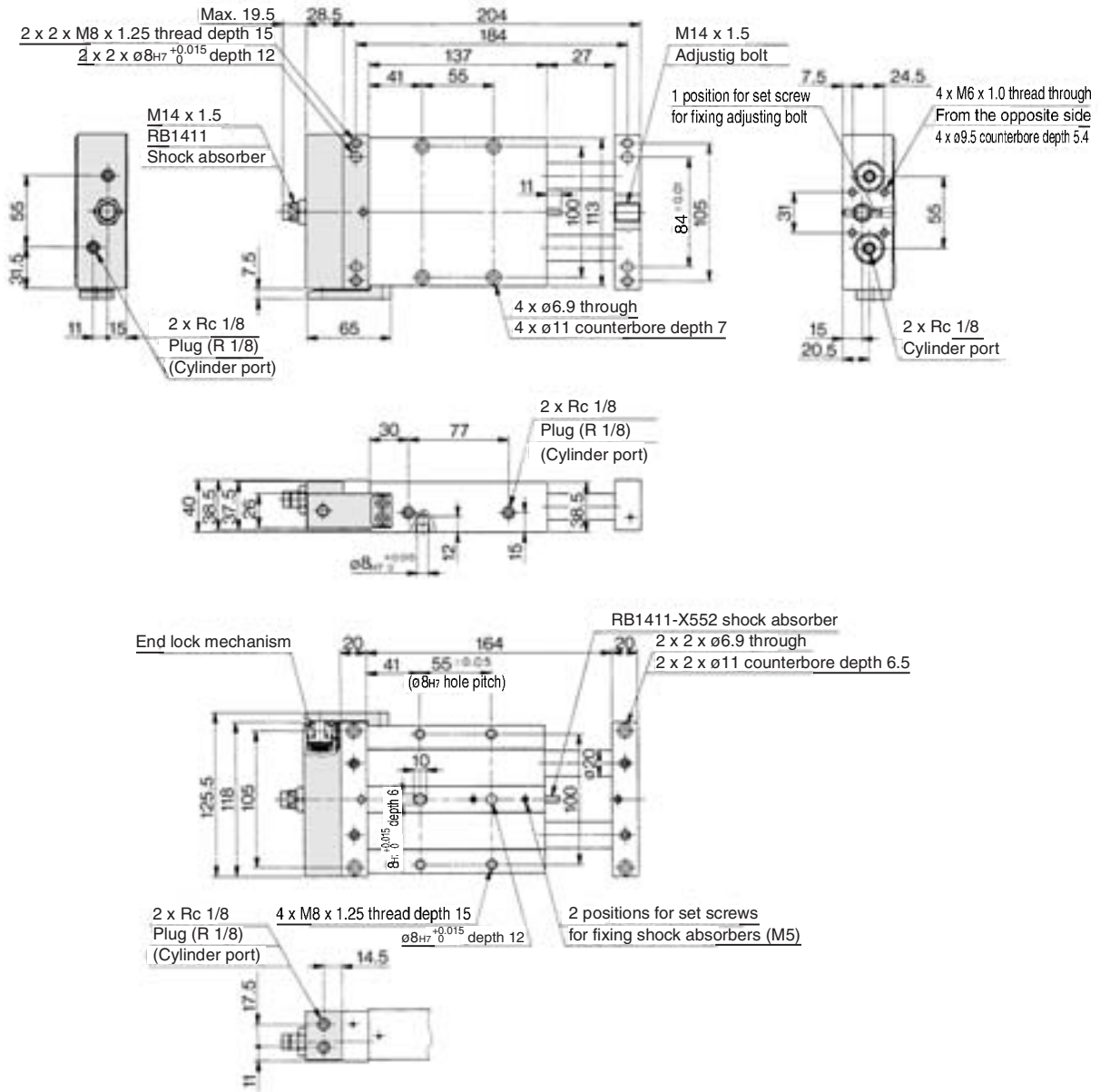
Note 1) The dimensions show D-A7 and D-A8. (mm)

Auto switch model	Hw	Ht	Hv
D-A7□, D-A80	23	15	10.5
D-F7□, D-J79, D-J79W, D-F7□W, D-F79F, D-F7BAL, D-F7NTL	23	15	10
D-A7□H, D-A80H	22	15	9
D-A73C, D-A80C	23	17.5	17.5
D-F7□V, D-F7□WV, D-F7BAV	23	15	14
D-J79C	24	17.5	16

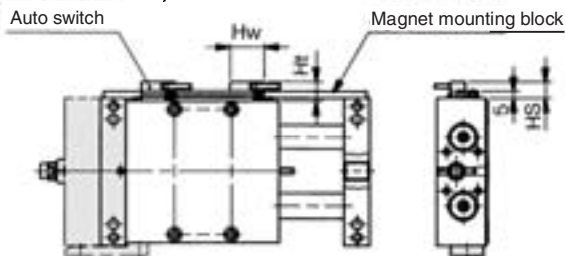
Note 2) For 25 stroke, the shock absorber is mounted on a single side of the plate. For dimensions of 25 stroke, refer to page 516.

Series CXWL

ø32 With End Lock: CXWL32-25 stroke R



Housing mounting style with auto switch CDBXWL32-25, CDBXWL32-25R

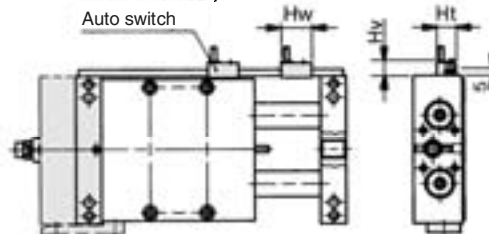


Note 1) The dimensions show D-A7 and D-A8. (mm)

Auto switch model	Hw	Hs	Ht
D-A7□, D-A80	23	12.5	15
D-F7□, D-J79, D-J79W, D-F7□W, 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, D-F7□WV, D-F7BAV	23	12.5	15
D-J79C	24	15	17.5
D-F7LF	30	12.5	15

Note 2) 2 magnets for auto switches are equipped to the magnet mounting block.

Plate mounting style with auto switch CDPXWL32-25, CDPXWL32-25R



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

Auto switch model	Hw	Ht	Hv
D-A7□, D-A80	23	15	10.5
D-F7□, D-J79, D-J79W, D-F7□W, D-F79F, D-F7BAL, D-F7NTL	23	15	10
D-A7□H, D-A80H	22	15	9
D-A73C, D-A80C	23	17.5	17.5
D-F7□V, D-F7□WV, D-F7BAV	23	15	14
D-J79C	24	17.5	16

Note 2) 2 magnets for auto switches are installed in the housing.

Operating Range

(mm)

Auto switch model		Applicable cylinder size				
		10	16	20	25	32
D-A7□/A80 D-A7□H/A80H D-A73C/A80C	Housing mounting	–	6	6	6	6
	Plate mounting	6				
D-E7□A/E80A	Housing mounting	6	–	–	–	–
D-F7□/J79 D-F7□V/J79C D-F7□W/F7□WV D-F7BAL/F7BAVL D-F79F/F7NTL	Housing mounting	–	4	2.5	3	3
	Plate mounting	3	3			2.5

* 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.

Other than the applicable auto switches listed in “How to Order”, the following auto switches can be mounted.
For detailed specifications, refer to pages 1719 to 1827.

Auto switch type	Model	Electrical entry (Fetching direction)	Features	Applicable cylinder size	
				Housing mounting	Plate mounting
Solid state	D-F7NTL	Grommet (In-line)	With timer	ø16, ø20 ø25, ø32	ø10, ø16 ø20, ø25 ø32

* With pre-wire connector is available for D-F7NTL type, too. For details, refer to pages 1784 and 1785.
* It is impossible to mount solid state auto switches to the housing mounting ø10.



Series CXW Specific Product Precautions 1

Be sure to read before handling. Refer to front matters 42 and 43 for Safety Instructions and pages 3 to 11 for Actuator and Auto Switch Precautions.

⚠ Warning

1. Take precautions to prevent your fingers or hands from getting caught between the plate and the housing.
 - Take sufficient care to avoid getting your hands or fingers caught when the cylinder is operated.

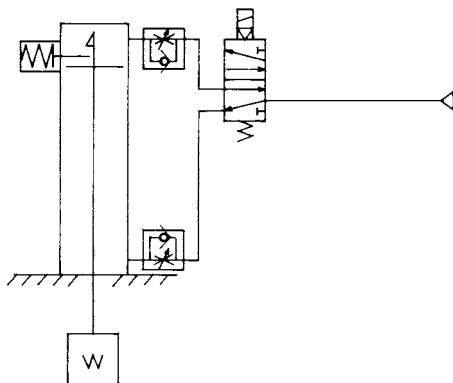
⚠ Caution

1. Make sure that the cylinder mounting surface is flat (a flatness of 0.05 or less {reference value}).
If it is not flat, it could lead to malfunction.
2. Make sure not to scratch or gouge the cylinder mounting surface.
Be aware that if the flatness of the housing mounting surface or the mounting surface of the plates on both sides is affected, it could lead to a malfunction.
3. Be careful not to twist the two piston rods.
If the piston rods are twisted or bent when mounting the housing, the operating resistance could become abnormally high or the bearings could wear prematurely, leading to reduced accuracy or air leakage.
4. Consider reinforcing the plates.
When the cylinder is mounted on the housing, and the plates are used for high-speed operation or used as a pusher, use a connector plate to bridge both plates. Failure to do so could cause the snap ring to become detached or the set screws to shift, causing the plates to fall off.

Recommended Pneumatic Circuit

⚠ Caution

1. This is necessary for the proper operation and release of the lock for cylinders with an end lock.



Precautions for Handling the End Lock Mechanism

⚠ Caution

1. Do not use 3 position solenoid valves.
Avoid using this cylinder in combination with a 3 position solenoid valve (particularly the closed center metal seal type). If air pressure becomes sealed inside the port of the side that contains the lock mechanism, the lock will not engage. Even if the lock is engaged at first, the air that leaks from the solenoid valve could enter the cylinder and cause the lock to disengage as time elapses.
2. Back pressure is required to release the end lock.
Be sure that air is supplied to the cylinder side without the locking mechanism (For cylinders with a double lock, the side with an unlocked piston rod) before starting operating, as shown in the drawing on the left. The lock may not be released. (Refer to the section on releasing the lock.)
3. Disengage the lock before installing or adjusting the cylinder.
The lock could become damaged if the cylinder is installed with its lock engaged.
4. Operate with a load ratio of 50% or less.
If the load ratio exceeds 50%, this may cause problems such as failure of the lock to release, or damage to the lock unit.
5. Do not operate multiple cylinders in synchronization.
Avoid applications in which two or more end lock cylinders are synchronized to move one workpiece, as one of the cylinder locks may not be able to release when required.
6. Use a speed controller with meter-out control.
Lock cannot be released occasionally by meter-in control.
7. Adjust the stroke within the range of the slotted hole of the lock finger.
As the hole for mounting the lock finger is slotted, the lock finger may be adjusted and mounted in accordance with the adjustment amount of the adjusting bolt. The adjustment amount of the adjusting bolt is ± 2 mm (± 1 mm for each side).
8. Regarding manual disengagement
Insert a Phillips screwdriver through the lock finger hole to push the lock piston down and slide it in the unlocking direction. When doing so, take precautions to prevent your fingers or hands from getting caught between the housing plate and the lock.

Operating Pressure

⚠ Caution

1. Apply a pressure more than the minimum operating pressure to the port on the side where the locking mechanism activates. The pressure is necessary to release the lock.

Releasing the Lock

⚠ Warning

1. Before releasing the lock, be sure to supply air to the side without the lock mechanism, so that there is no load applied to the lock mechanism when it is released. (Refer to the recommended pneumatic circuit.) If the lock is released when the port on the other side is in an exhaust state, and with a load applied to the lock unit, the lock unit may be subjected to an excessive force and be damaged. Furthermore, sudden movement of the piston rod is extremely dangerous.



Series CXW Specific Product Precautions 2

Be sure to read before handling. Refer to front matters 42 and 43 for Safety Instructions and pages 3 to 11 for Actuator and Auto Switch Precautions.

Handling on Shock Absorber

⚠ Caution

1. Use caution not to be exposed to cutting oil, water, or dust, etc.

The RB series cannot be used under conditions in which fluids such as cutting oil or water are present in atomized form or come in direct contact with the piston rod, or in which dust could adhere to the piston rod. Such conditions would cause malfunction.

2. Do not operate the shock absorber in an environment that poses the risk of corrosion.

The shock absorber could rust if used in an environment that poses the risk of corrosion.

Refer to the respective construction for type of material that is used in the shock absorber.

3. Abide by the table below for the tightening torque for a mounting nut.

Shock absorber model	RB0805	RB1006	RB1411
Applicable slide unit	CXWM $\frac{10}{8}$ -25	CXWM $\frac{20}{10}$ -25	CXWM32-25, 50 CXWL32-25
Thread O.D. (mm)	M8 x 1.0	M10 x 1.0	M14 x 1.5
Thread prepared hole size (mm)	$\phi 7.1^{+0.1}$	$\phi 9.1^{+0.1}$	$\phi 12.7^{+0.1}$
Tightening torque (N·m)	1.67	3.14	10.8

4. Do not scratch the sliding portion of the piston rod or the outside threads of the outer tube.

Do not scratch or gouge the sliding portion of the piston rod or the outside threads of the outer tube by striking it with an object, squeezing it, or by forcefully wedging a set screw in it. Failure to observe this precaution could damage the seals, which could lead to oil leakage and malfunction. Furthermore, scratches or gouges on the outside threads of the outer tube could prevent the shock absorber from being mounted onto the frame, or its internal components could deform, leading to a malfunction.

5. Never turn the screw on the bottom of the body.

(This is not an adjusting screw.)

Turning it could cause oil leakage.



6. Check the mounting nut is not loosen.

The shock absorber could become damaged if it is used in a loose state.

7. Pay attention to any abnormal impact sounds or vibrations.

If the impact sounds or vibrations have become abnormally high, the shock absorber may have reached the end of its service life. If this is the case, replace the shock absorber.

If use is continued in this state, it could damage the equipment to which the shock absorber is mounted.

8. Refer to the Instruction Manual for how to replace the built-in shock absorber for the CXW series.

Service Life and Replacement Period of Shock Absorber

⚠ Caution

1. Allowable operating cycle under the specifications set in this catalog is shown below.

1.2 million cycles RB08□□

2 million cycles RB10□□ to RB2725

Note) Specified service life (suitable replacement period) is the value at room temperature (20 to 25°C). The period may vary depending on the temperature and other conditions. In some cases the absorber may need to be replaced before the allowable operating cycle above.

Auto Switch Selection for the Adjustable Stroke Type (-X138)

⚠ Caution

1. When 50 stroke is adjusted to 40 stroke or less with the adjustable stroke type (-X138), auto switches may not be able to be mounted properly since they interfere with each other if the 2 in-line entry auto switches are used.

When strokes are adjusted to 40 stroke or less, select the perpendicular entry type or additionally select auto switches with 2 built-in magnets (-X169).