Air Cylinder: Standard Type
Double Acting, Double Rod
CM2W Series
ø20, ø25, ø32, ø40

RoHS

How to Order

Cushion

Nil	Rubber bumper
A	Air cushion

∗ Air-hydro cylinder: Rubber bumper only

Cylinder stroke (mm)
Refer to "Standard Strokes" on page 194.

Bore size

20	20 mm
25	25 mm
32	32 mm
40	40 mm

Type

Nil	Pneumatic
H	Air-hydro

Rod end thread

Nil	Male rod end
F	Female rod end

Rod boot

Nil	None
J	Nylon tarpaulin (One side)
JJ	Nylon tarpaulin (Both sides)
K	Heat resistant tarpaulin (One side)
KK	Heat resistant tarpaulin (Both sides)

∗ For female rod end, no rod boot is provided.

CM2W □ L 40 □ – 150 A □ □ Z – □

With auto switch: CDM2W □ L 40 □ – 150 A □ □ Z – M9BW □ – □

With auto switch
(Built-in magnet)

Mounting

B	Basic (Double-side bossed)
L	Axial foot
F	Flange
U	Trunnion

Port thread type

Nil	Rc
TN	NPT
TF	G

∗ Air-hydro type: Rc only

Auto switch

Nil	Without auto switch

∗ For applicable auto switches, refer to the table below.

Number of auto switches

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

Made to Order
Refer to page 194 for details. (Refer to "Air-hydro type" on page 196.)

Applicable Auto Switches/Refer to pages 1575 to 1701 for further information on auto switches.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage DC	Load voltage AC	Auto switch model: Perpendicular	Auto switch model: In-line	Lead wire length (m): 0.5 (Nil)	1 (M)	3 (L)	5 (Z)	None (N)	Pre-wired connector	Applicable load	
Solid state auto switch	—	Grommet	Yes	3-wire (NPN)	5 V, 12 V	—	M9NV	M9N	●	●	●	○	—	○	IC circuit	Relay, PLC
				3-wire (PNP)			M9PV	M9P	●	●	●	○	—	○		
				2-wire	12 V		M9BV	M9B	●	●	●	○	—	○	—	
		Connector					—	H7C	●	—	●	●	●	—		
		Terminal conduit		3-wire (NPN)	5 V, 12 V		—	G39A	—	—	—	—	●	—	IC circuit	
				2-wire	12 V		—	K39A	—	—	—	—	●	—	—	
	Diagnostic indication (2-color indicator)	Grommet		3-wire (NPN)	5 V, 12 V		M9NWV	M9NW	●	●	●	○	—	○	IC circuit	
				3-wire (PNP)			M9PWV	M9PW	●	●	●	○	—	○		
				2-wire	12 V		M9BWV	M9BW	●	●	●	○	—	○	—	
	Water resistant (2-color indicator)			3-wire (NPN)	5 V, 12 V		M9NAV∗1	M9NA∗1	○	○	●	○	—	○	IC circuit	
				3-wire (PNP)			M9PAV∗1	M9PA∗1	○	○	●	○	—	○		
				2-wire	12 V		M9BAV∗1	M9BA∗1	○	○	●	○	—	○	—	
	With diagnostic output (2-color indicator)			4-wire (NPN)	5 V, 12 V		—	H7NF	●	—	●	○	—	○	IC circuit	
Reed auto switch	—	Grommet	Yes	3-wire (NPN equivalent)	—	5 V	—	A96V	A96	●	—	●	—	—	—	IC circuit	—
			No	2-wire	24 V	12 V	100 V	A93V∗2	A93	●	●	●	●	—	—	—	
			Yes				100 V or less	A90V	A90	●	—	●	—	—	—	IC circuit	
			No				100 V, 200 V	—	B54	●	—	●	●	—	—	—	Relay, PLC
			Yes				200 V or less	—	B64	●	—	●	—	—	—	—	
		Connector	No				—	—	C73C	●	—	●	●	●	—		
			Yes				24 V or less	—	C80C	●	—	●	●	●	—	IC circuit	
		Terminal conduit	Yes				—	—	A33A	—	—	—	—	●	—	—	PLC
							100 V, 200 V	—	A34A	—	—	—	—	●	—	—	Relay, PLC
		DIN terminal					—	—	A44A	—	—	—	—	●	—		
	Diagnostic indication (2-color indicator)	Grommet			—	—	—	B59W	●	—	●	—	—	—		

∗1 Water resistant type auto switches can be mounted on the above models, but in such case SMC cannot guarantee water resistance. Please contact SMC regarding water resistant types with the above model numbers.
∗2 1 m type lead wire is only applicable to D-A93.

∗ Lead wire length symbols: 0.5 m ·····Nil (Example) M9NW
1 m ····· M (Example) M9NWM
3 m ····· L (Example) M9NWL
5 m ····· Z (Example) M9NWZ
None ····· N (Example) H7CN

∗ Solid state auto switches marked with "○" are produced upon receipt of order.
∗ Do not indicate suffix "N" for no lead wire on D-A3□A/A44A/G39A/K39A models.

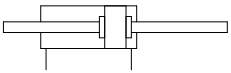
∗ Since there are other applicable auto switches than listed above, refer to page 266 for details.
∗ For details about auto switches with pre-wired connector, refer to pages 1648 and 1649.
∗ The D-A9□□/M9□□□ auto switches are shipped together, (but not assembled). (However, only the auto switch mounting brackets are assembled before shipment.)

Specifications

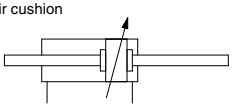
Bore size (mm)			20	25	32	40
Action			Double acting, Double rod			
Fluid			Air			
Proof pressure			1.5 MPa			
Maximum operating pressure			1.0 MPa			
Minimum operating pressure			0.08 MPa			
Ambient and fluid temperature			Without auto switch: –10°C to 70°C With auto switch: –10°C to 60°C (No freezing)			
Lubrication			Not required (Non-lube)			
Stroke length tolerance			$^{+1.4}_{0}$ mm			
Piston speed			Rubber bumper: 50 to 750 mm/s, Air cushion: 50 to 1000 mm/s			
Cushion			Rubber bumper, Air cushion			
Allowable kinetic energy	**Rubber bumper**	Male thread	0.27 J	0.4 J	0.65 J	1.2 J
		Female thread	0.11 J	0.18 J	0.29 J	0.52 J
	Air cushion (Effective cushion length (mm))	Male thread	0.54 J (11.0)	0.78 J (11.0)	1.27 J (11.0)	2.35 J (11.8)
		Female thread	0.11 J	0.18 J	0.29 J	0.52 J

Symbol

Rubber bumper



Air cushion



Standard Strokes

Bore size (mm)	Standard stroke Note 1) (mm)	Maximum manufacturable stroke (mm)
20	25, 50, 75, 100, 125, 150, 200, 250, 300	500
25		
32		
40		

Note 1) Other intermediate strokes can be manufactured upon receipt of order. Manufacture of intermediate strokes at 1 mm intervals is possible. (Spacers are not used.)

Note 2) Applicable strokes should be confirmed according to the usage. For details, refer to "Air Cylinders Model Selection" on front matter pages. In addition, the products that exceed the standard stroke might not be able to fulfill the specifications due to the deflection etc.

Made to Order

Made to Order: Individual Specifications (For details, refer to page 267.)

Symbol	Specifications
-X446	PTFE grease

Made to Order

Click here for details

Symbol	Specifications
-XA□	Change of rod end shape
-XB6	Heat resistant cylinder (–10 to 150°C)
-XB7	Cold resistant cylinder (–40 to 70°C)*1
-XB12	External stainless steel cylinder*2
-XC3	Special port location
-XC4	With heavy duty scraper
-XC5	Heat resistant cylinder (–10 to 110°C)
-XC6	Made of stainless steel
-XC13	Auto switch rail mounting
-XC22	Fluororubber seal
-XC25	No fixed throttle of connection port*1
-XC29	Double knuckle joint with spring pin
-XC35	With coil scraper*1
-XC38	Vacuum (Rod through-hole)
-XC52	Mounting nut with set screw
-XC85	Grease for food processing equipment

*1 Rubber bumper only.

*2 The shape is the same as the current product.

Accessories

Refer to pages 189 and 190 for accessories, since it is the same as standard type, double acting, single rod.

* Stainless steel mounting brackets and accessories are also available. Refer to page 190 for details.

Rod Boot Material

Symbol		Rod boot material	Maximum ambient temperature
One side	Both sides		
J	**JJ**	Nylon tarpaulin	70°C
K	**KK**	Heat resistant tarpaulin	110°C*

* Maximum ambient temperature for the rod boot itself.

Mounting Brackets/Part No.

Mounting bracket	Min. order q'ty	Bore size (mm)				Contents (for minimum order quantity)
		20	25	32	40	
Axial foot*	2	CM-L020B	CM-L032B		CM-L040B	2 foots, 1 mounting nut
Flange	1	CM-F020B	CM-F032B		CM-F040B	1 flange
Trunnion (with nut)	1	CM-T020B	CM-T032B		CM-T040B	1 trunnion, 1 trunnion nut

* Order 2 foots per cylinder.

Refer to pages 262 to 266 for cylinders with auto switches.

- Auto switch proper mounting position (detection at stroke end) and its mounting height
- Minimum stroke for auto switch mounting
- Operating range
- Auto switch mounting brackets/Part no.

Mounting and Accessories

Accessories / Mounting	Standard		Option			
	Mounting nut	Rod end nut	Single knuckle joint	Double knuckle joint Note 2)	Rod boot	Pivot bracket
Basic (Double-side bossed)	● (1 pc.)	● (2 pcs.)	●	●	●	—
Axial foot	● (2 pcs.)	● (2 pcs.)	●	●	●	
Flange	● (1 pc.)	● (2 pcs.)	●	●	●	
Trunnion	● (1 pc.) Note 1)	● (2 pcs.)	●	●	●	●
Note					One/Both side(s)	

Note 1) Trunnion nut is attached to the trunnion.
Note 2) A pin and retaining rings (split pins for ø40) are shipped together with double knuckle joint.

Weights

(kg)

Bore size (mm)		20	25	32	40
Basic weight	Basic (Double-side bossed)	0.16	0.25	0.32	0.65
	Axial foot	0.31	0.41	0.48	0.92
	Flange	0.22	0.34	0.41	0.77
	Trunnion	0.20	0.32	0.38	0.75
Additional weight per 50 mm of stroke		0.06	0.09	0.13	0.19
Weight reduction for female rod end		–0.02	–0.04	–0.04	–0.08
Option bracket	Single knuckle joint	0.06	0.06	0.06	0.23
	Double knuckle joint (with pin)	0.07	0.07	0.07	0.20

Calculation: (Example) **CM2WL32-100Z**
- Basic weight·····0.48 (Foot, ø32)
- Additional weight·····0.13/50 stroke
- Cylinder stroke·····100 stroke

0.48 + 0.13 x 100/50 = **0.74 kg**

⚠ Precautions

Be sure to read this before handling the products. Refer to back page 50 for Safety Instructions and pages 3 to 12 for Actuator and Auto Switch Precautions.

Handling

⚠Warning

1. Do not rotate the cover.
If a cover is rotated when installing a cylinder or screwing a fitting into the port, it is likely to damage the junction part with cover.

2. Do not operate with the cushion needle in a fully closed condition.
Using it in the fully closed state will cause the cushion seal to be damaged. When adjusting the cushion needle, use the "Hexagon wrench key: nominal size 1.5".

3. Do not open the cushion needle wide excessively.
If the cushion needle were set to be completely wide (more than 3 turns from fully closed), it would be equivalent to the cylinder with no cushion, thus making the impacts extremely high. Do not use it in such a way. Besides, using with fully open could give damage to the piston or cover.

4. Do not open the cushion needle after rotating it numerous times in a row. Though uncommon, there are cases in which the cushion needle may leak air.
The cushion needle should be adjusted by gradually opening it while checking the operation of the cylinder cushion. In the unlikely event that air leakage occurs, return the cushion needle to the fully-closed state, and readjust the cushion needle to the desired position.

5. Operate the cylinder within the specified cylinder speed, kinetic energy and lateral load at the rod end.

6. The allowable kinetic energy is different between the cylinders with male rod end and with female rod end due to the different thread sizes.

7. When female rod end is used, use a washer, etc. to prevent the contact part at the rod end from being deformed depending on the material of the work piece.

8. Do not apply excessive lateral load to the piston rod.
Easy checking method
Minimum operating pressure after the cylinder is mounted to the equipment (MPa) = Minimum operating pressure of cylinder (MPa) + {Load mass (kg) x Friction coefficient of guide/Sectional area of cylinder (mm^2)}
If smooth operation is confirmed within the above value, the load on the cylinder is the resistance of the thrust only and it can be judged as having no lateral load.

⚠Caution

1. Not able to disassemble.
Cover and cylinder tube are connected to each other by caulking method, thus making it impossible to disassemble. Therefore, internal parts of a cylinder other than rod seal are not replaceable.

2. Use caution to the popping of a retaining ring.
When replacing rod seals and removing and mounting a retaining ring, use a proper tool (retaining ring plier: tool for installing a type C retaining ring). Even if a proper tool is used, it is likely to inflict damage to a human body or peripheral equipment, as a retaining ring may be flown out of the tip of a plier. Be much careful with the popping of a retaining ring. Be-sides, be certain that a retaining ring is placed firmly into the groove of rod cover before supplying air at the time of installment.

3. Do not touch the cylinder during operation.
Use caution when handling a cylinder, which is running at a high speed and a high frequency, because the surface of a cylinder tube could get so hot enough as to cause you get burned.

4. Do not use the air cylinder as an air-hydro cylinder.
If it uses turbine oil in place of fluids for cylinder, it may result in oil leak.

5. Combine the rod end section, so that a rod boot might not be twisted.
If a rod boot is installed with being twisted when installing a cylinder, it will cause a rod boot to fail during operation.

6. The base oil of grease may seep out.
The base oil of grease in the cylinder may seep out of the tube, cover, or crimped part depending on the operating conditions (ambient temperature 40°C or more, pressurized condition, low frequency operation).

7. The oil stuck to the cylinder is grease.

8. When rod end female thread is used, use a thin wrench when tightening the piston rod.

9. When using a rod end bracket, make sure it does not interfere with other brackets, workpieces and rod section, etc.

Built-in One-touch Fittings (The shape is the same as the current product.)

CM2W [Mounting type] [Bore size] **F** — [Stroke]

• **Built-in One-touch fittings**

This type has the One-touch fitting integrated in a cylinder, which enables to reduce the piping labor and installing space dramatically.

Specifications

Action	Double acting, Double rod
Bore size (mm)	ø20, ø25, ø32, ø40
Max. operating pressure	1.0 MPa
Min. operating pressure	0.08 MPa
Cushion	Rubber bumper
Piping	One-touch fittings
Piston speed	50 to 750 mm/s
Mounting	Basic, Axial foot, Flange, Trunnion

∗ Auto switch can be mounted.

Applicable Tubing O.D./I.D.

Bore size (mm)	**20**	**25**	**32**	**40**
Applicable tubing O.D./I.D. (mm)	6/4	6/4	6/4	8/6
Applicable tubing material	Can be used for either nylon, soft nylon or polyurethane tubing.			

⚠ Caution

1. One-touch fitting cannot be replaced.
   • One-touch fitting is press-fit into the cover, thus cannot be replaced.
2. Refer to Fittings and Tubing Precautions (Best Pneumatics No. 7) for handling One-touch fittings.

Air-hydro

CM2WH [Mounting type] [Bore size] – [Stroke] [Rod boot] **Z** – [Made to Order]

• **Air-hydro**

A low hydraulic pressure cylinder used at a pressures of 1.0 MPa or below.
Through the concurrent use of the CC series air-hydro unit, it is possible to operate at a constant or low speeds or to effect an intermediate stop, just like a hydraulic unit, while using pneumatic equipment such as a valve.

- For construction, refer to page 197.
- Since the dimensions of mounting type are the same as pages 200 to 202, refer to those pages.

Specifications

Type	Air-hydro type	
Fluid	Turbine oil	
Action	Double acting, Double rod	
Bore size (mm)	ø20, ø25, ø32, ø40	
Proof pressure	1.5 MPa	
Max. operating pressure	1.0 MPa	
Min. operating pressure	0.18 MPa	
Piston speed	15 to 300 mm/s	
Ambient and fluid temperature	+5 to +60°C	
Stroke length tolerance	+1.4 0 mm	
Cushion	Rubber bumper (Standard equipment)	
Mounting	Basic, Axial foot, Flange, Trunnion	
Made to Order∗∗	**-XA□**	Change of rod end shape

∗ Auto switch can be mounted.
∗∗ For details, refer to pages 1703 to 1896.

Clean Series

10-CM2W | **Mounting type** | **Bore size** | – | **Stroke** | **Z**

Clean Series (With relief port)

The type which is applicable for using inside the clean room graded ISO Class 4 by making an actuator's rod section a double seal construction and discharging by relief port directly to the outside of clean room.

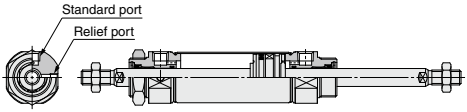
For detailed specifications about the clean series, refer to the "Pneumatic Clean Series" (CAT.E02-23).

Specifications

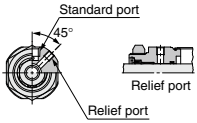
Action	Double acting, Double rod
Bore size (mm)	ø20, ø25, ø32, ø40
Max. operating pressure	1.0 MPa
Min. operating pressure	0.08 MPa
Cushion	Rubber bumper
Relief port size	M5 x 0.8
Piston speed	30 to 400 mm/s
Mounting	Basic, Axial foot, Flange

∗ Auto switch can be mounted.

Construction



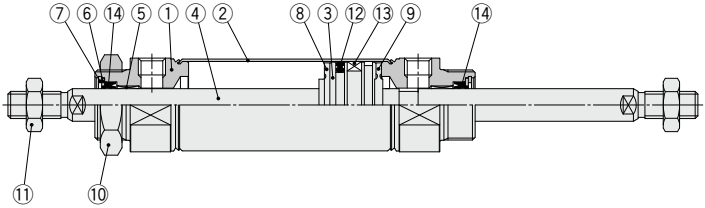
ø20, ø25



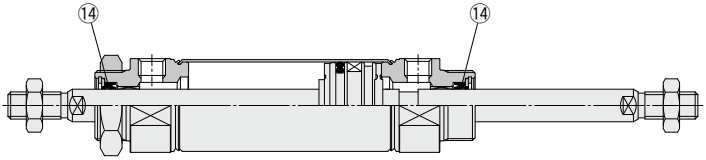
ø32, ø40

Construction

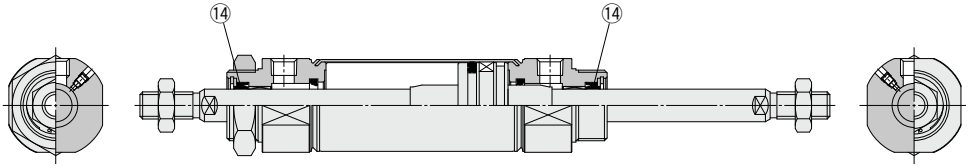
Rubber bumper



Air-hydro



With air cushion



Component Parts

No.	Description	Material	Note
1	**Rod cover**	Aluminum alloy	Anodized
2	**Cylinder tube**	Stainless steel	
3	**Piston**	Aluminum alloy	
4	**Piston rod**	Carbon steel	Hard chrome plating
5	**Bushing**	Bearing alloy	
6	**Seal retainer**	Stainless steel	
7	**Retaining ring**	Carbon steel	Phosphate coating
8	**Bumper**	Resin	
9	**Bumper**	Resin	
10	**Mounting nut**	Carbon steel	
11	**Rod end nut**	Carbon steel	
12	**Piston seal**	NBR	Nickel plating
13	**Magnet**	—	CDM2W□20 to 40-□Z
14	**Rod seal**	NBR	

Replacement Part: Seal

● With Rubber Bumper/With Air Cushion

No.	Description	Material	Part no.			
			20	**25**	**32**	**40**
14	**Rod seal**	NBR	CM20Z-PS	CM25Z-PS	CM32Z-PS	CM40Z-PS

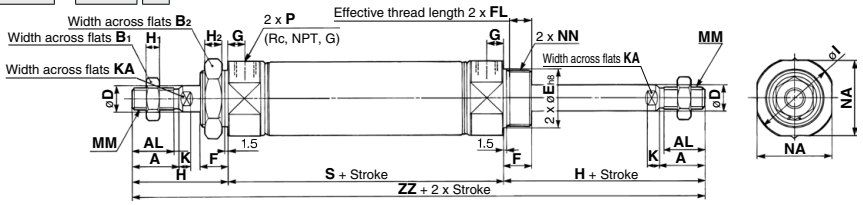
● Air-hydro

No.	Description	Material	Part no.			
			20	**25**	**32**	**40**
14	**Rod seal**	NBR	CM2H20-PS	CM2H25-PS	CM2H32-PS	CM2H40-PS

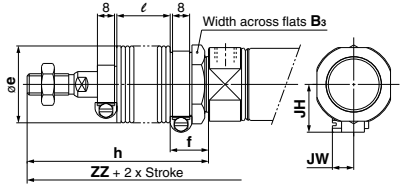
∗ Since the seal does not include a grease pack, order it separately.
Grease pack part number: GR-S-010 (10 g)

Basic (Double-side Bossed) (B)

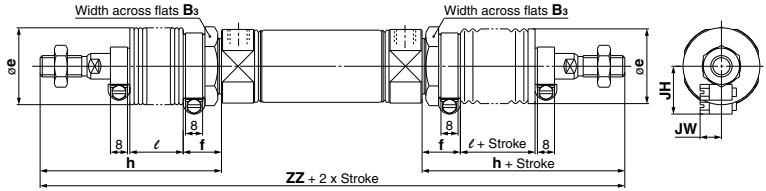
CM2WB Bore size – Stroke ☐ **Z**



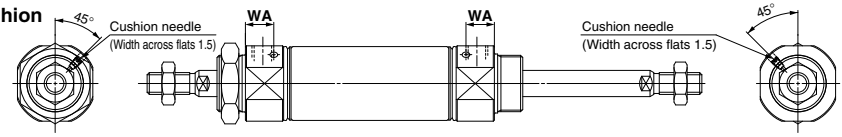
With rod boot (One side)



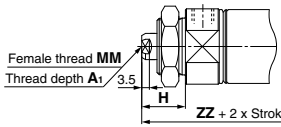
With rod boot (Both sides)



With air cushion



Female rod end



(mm)

Bore size	A	AL	B1	B2	D	E	F	FL	G	H	H1	H2	I	K	KA	MM	NA	NN	P	S	ZZ
20	18	15.5	13	26	8	$20^{0}_{-0.033}$	13	10.5	8	41	5	8	28	5	6	M8 x 1.25	24	M20 x 1.5	1/8	62	144
25	22	19.5	17	32	10	$26^{0}_{-0.033}$	13	10.5	8	45	6	8	33.5	5.5	8	M10 x 1.25	30	M26 x 1.5	1/8	62	152
32	22	19.5	17	32	12	$26^{0}_{-0.033}$	13	10.5	8	45	6	8	37.5	5.5	10	M10 x 1.25	34.5	M26 x 1.5	1/8	64	154
40	24	21	22	41	14	$32^{0}_{-0.039}$	16	13.5	11	50	8	10	46.5	7	12	M14 x 1.5	42.5	M32 x 2	1/4	88	188

With Rod Boot

(mm)

Bore size	B3	e	f	h					ℓ					ZZ (Both sides)				
				1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	1 to 50	51 to 100	101 to 150	151 to 200	201 to 300
20	30	36	18	68	81	93	106	131	12.5	25	37.5	50	75	198	224	248	274	324
25	32	36	18	72	85	97	110	135	12.5	25	37.5	50	75	206	232	256	282	332
32	32	36	18	72	85	97	110	135	12.5	25	37.5	50	75	208	234	258	284	334
40	41	46	20	77	90	102	115	140	12.5	25	37.5	50	75	242	268	292	318	368

With Rod Boot

(mm)

Bore size	ZZ (One side)					JH	JW
	1 to 50	51 to 100	101 to 150	151 to 200	201 to 300		
20	171	184	196	209	234	23.5	10.5
25	179	192	204	217	242	23.5	10.5
32	181	194	206	219	244	23.5	10.5
40	215	228	240	253	278	27	10.5

With Air Cushion (mm)

Bore size	WA
20	12
25	12
32	11
40	16

Female Rod End

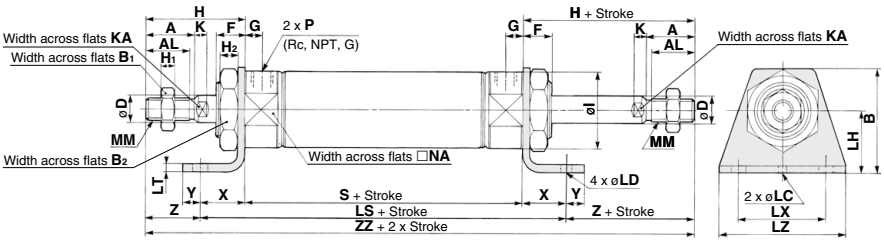
(mm)

Bore size	A1	H	MM	ZZ
20	8	20	M4 x 0.7	102
25	8	20	M5 x 0.8	102
32	12	20	M6 x 1	104
40	13	21	M8 x 1.25	130

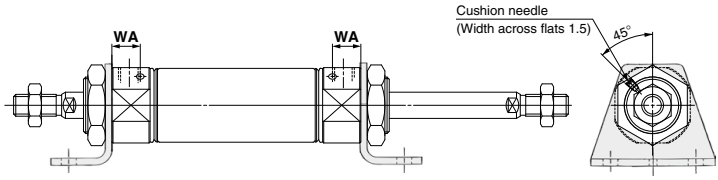
* When female thread is used, use a thin wrench when tightening the piston rod.
* When female thread is used, use a washer etc. to prevent the contact part at the rod end from being deformed depending on the material of the workpiece.

Axial Foot (L)

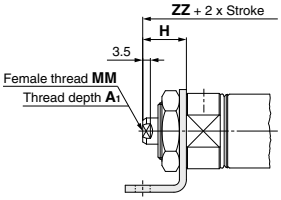
CM2WL Bore size – Stroke ☐ **Z**



With air cushion



Female rod end



(mm)

Bore size	A	AL	B	B_1	B_2	D	F	G	H	H_1	H_2	I	K	KA	LC	LD	LH	LS	LT	LX	LZ	MM	NA	P	S	X	Y	Z	ZZ
20	18	15.5	40	13	26	8	13	8	41	5	8	28	5	6	4	6.8	25	102	3.2	40	55	M8 x 1.25	24	1/8	62	20	8	21	144
25	22	19.5	47	17	32	10	13	8	45	6	8	33.5	5.5	8	4	6.8	28	102	3.2	40	55	M10 x 1.25	30	1/8	62	20	8	25	152
32	22	19.5	47	17	32	12	13	8	45	6	8	37.5	5.5	10	4	6.8	28	104	3.2	40	55	M10 x 1.25	34.5	1/8	64	20	8	25	154
40	24	21	54	22	41	14	16	11	50	8	10	46.5	7	12	4	7	30	134	3.2	55	75	M14 x 1.5	42.5	1/4	88	23	10	27	188

∗ In the case of with rod boot, refer to basic type on page 199.
∗ The bracket is shipped together.

With Air Cushion (mm)

Bore size	WA
20	12
25	12
32	11
40	16

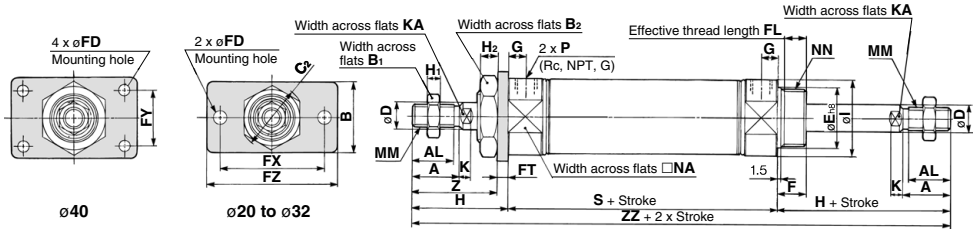
Female Rod End (mm)

Bore size	A_1	H	MM	ZZ
20	8	20	M4 x 0.7	102
25	8	20	M5 x 0.8	102
32	12	20	M6 x 1	104
40	13	21	M8 x 1.25	130

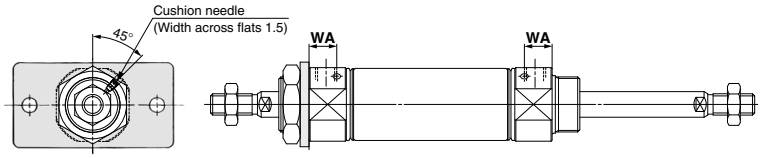
∗ When female thread is used, use a thin wrench when tightening the piston rod.
∗ When female thread is used, use a washer etc. to prevent the contact part at the rod end from being deformed depending on the material of the workpiece.

Flange (F)

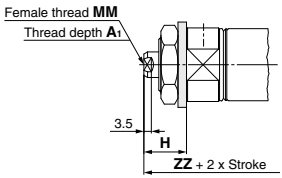
CM2WF Bore size – Stroke □ Z



With air cushion



Female rod end



(mm)

Bore size	A	AL	B	B_1	B_2	C_2	D	E	F	FD	FL	FT	FX	FY	FZ	G	H	H_1	H_2	I	K	KA	MM
20	18	15.5	34	13	26	30	8	$20^{0}_{-0.033}$	13	7	10.5	4	60	—	75	8	41	5	8	28	5	6	M8 x 1.25
25	22	19.5	40	17	32	37	10	$26^{0}_{-0.033}$	13	7	10.5	4	60	—	75	8	45	6	8	33.5	5.5	8	M10 x 1.25
32	22	19.5	40	17	32	37	12	$26^{0}_{-0.033}$	13	7	10.5	4	60	—	75	8	45	6	8	37.5	5.5	10	M10 x 1.25
40	24	21	52	22	41	47.3	14	$32^{0}_{-0.039}$	16	7	13.5	5	66	36	82	11	50	8	10	46.5	7	12	M14 x 1.5

(mm)

Bore size	NA	NN	P	S	Z	ZZ
20	24	M20 x 1.5	1/8	62	37	144
25	30	M26 x 1.5	1/8	62	41	152
32	34.5	M26 x 1.5	1/8	64	41	154
40	42.5	M32 x 2	1/4	88	45	188

∗ In the case of with rod boot, refer to basic type on page 199.
∗ The bracket is shipped together.

With Air Cushion (mm)

Bore size	WA
20	12
25	12
32	11
40	16

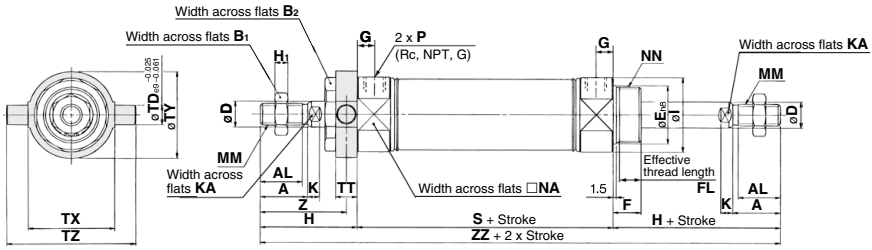
Female Rod End (mm)

Bore size	A_1	H	MM	ZZ
20	8	20	M4 x 0.7	102
25	8	20	M5 x 0.8	102
32	12	20	M6 x 1	104
40	13	21	M8 x 1.25	130

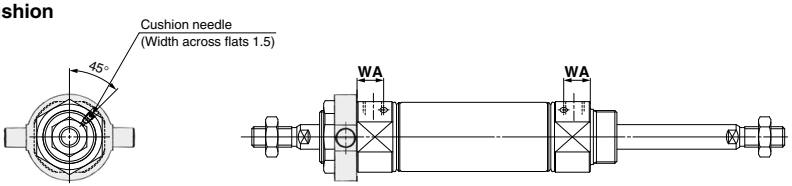
∗ When female thread is used, use a thin wrench when tightening the piston rod.
∗ When female thread is used, use a washer etc. to prevent the contact part at the rod end from being deformed depending on the material of the workpiece.

Trunnion (U)

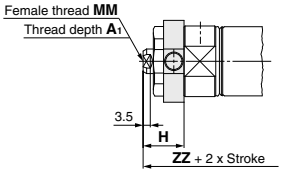
CM2WU **Bore size** – **Stroke** □ **Z**



With air cushion



Female rod end



(mm)

Bore size	A	AL	B_1	B_2	D	E	F	FL	G	H	H_1	I	K	KA	MM	NA	NN	P	S	TD
20	18	15.5	13	26	8	$20^{0}_{-0.033}$	13	10.5	8	41	5	28	5	6	M8 x 1.25	24	M20 x 1.5	1/8	62	8
25	22	19.5	17	32	10	$26^{0}_{-0.033}$	13	10.5	8	45	6	33.5	5.5	8	M10 x 1.25	30	M26 x 1.5	1/8	62	9
32	22	19.5	17	32	12	$26^{0}_{-0.033}$	13	10.5	8	45	6	37.5	5.5	10	M10 x 1.25	34.5	M26 x 1.5	1/8	64	9
40	24	21	22	41	14	$32^{0}_{-0.039}$	16	13.5	11	50	8	46.5	7	12	M14 x 1.5	42.5	M32 x 2	1/4	88	10

(mm)

Bore size	TT	TX	TY	TZ	Z	ZZ
20	10	32	32	52	36	144
25	10	40	40	60	40	152
32	10	40	40	60	40	154
40	11	53	53	77	44.5	188

∗ In the case of with rod boot, refer to basic type on page 199.
∗ The bracket is shipped together.

With Air Cushion (mm)

Bore size	WA
20	12
25	12
32	11
40	16

Female Rod End (mm)

Bore size	A_1	H	MM	ZZ
20	8	20	M4 x 0.7	102
25	8	20	M5 x 0.8	102
32	12	20	M6 x 1	104
40	13	21	M8 x 1.25	130

∗ When female thread is used, use a thin wrench when tightening the piston rod.
∗ When female thread is used, use a washer etc. to prevent the contact part at the rod end from being deformed depending on the material of the workpiece.