Air Cylinder
Series CM2
ø20, ø25, ø32, ø40

Longer life, increased by 50% (in-house comparison):
The cylinder's mounting and the machining accuracy of the parts have been improved. Furthermore, the shapes and the materials of the seals have been improved to enhance their wear resistance. As a result, the cylinder's life has been dramatically increased to 1.5 times that of Series CM .

Easy installation:
Because the rod cover and the head cover have wide surfaces, a wrench can be placed over the cover during installation, thus facilitating installation.

Compact and light weight:
The tube is made of stainless steel and the cover and the piston are made of aluminum. Through a compact design, it weighs 30 to 40% less than Series CM . The lateral width of the cover has been reduced approximately 10%, requiring less installation space

A tube that is resistant against external impacts:
To prevent deformation or damage caused by external impacts, a stainless tube with a thicker wall has been adopted to increase its strength.
Furthermore, the strength of the support bracket has been increased.

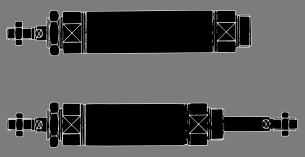
Excellent dust resistance:
A special shaped rod seal with a composite formed dust lip has been adopted. It prevents the intrusion of external dust, enabling the cylinder to be operated in unfavourable environments containing large amounts of cutting chips.

Improved installation accuracy:
The cylinder body and the mounting support bracket have been made with an even higher level of accuracy. Improving the installation accuracy simplifies the installation work and prolongs the life of the cylinder.

High speed drive possible:
The cushion function can be selected in accordance with the drive speed condition to be used. Therefore, it can support a high-speed drive.
- Rubber bumper ····· 50 to 750mm/s (Standard equipment)

Reduced piston rod deflection:
The clearance between the bushing and the piston rod, and between the tube and the wear ring have been decreased to achieve higher accuracy. Thus, the deflection of the piston rod has been decreased to 1/2 of Series CM .

Replaceable rod seal:
The rod seal, which is the first to wear out in a cylinder, can be replaced. This extends the life of the cylinder, and is economical. The seal can be replaced with the cylinder mounting, thus requiring less manpower.



Air Cylinder
Series CM2
ø20, ø25, ø32, ø40

Variations

Series	Action	Rod	Cushion	Basic	Variation: With One-touch fitting	Variation: Rod boot	Variation: Air hydro	Variation: Clean series	Variation: Copper free	Bore size (mm)	Page
Standard Series CM2 	Double acting	Single rod	Rubber	●	●	●	●	●	●	20, 25, 32, 40	1.4-3
			Air	●		●		●	●		
		Double rod	Rubber	●	●	●	●		●		1.4-22
			Air	●					●		
	Single acting	Single rod (Spring return/ Spring extend)	Rubber	●	●				●		1.4-33
Non-rotating rod Series CM2K 	Double acting	Single rod	Rubber	●		●			●		1.4-50
			Air	●		●			●		
		Double rod	Rubber	●					●		1.4-56
			Air	●					●		
	Single acting	Single rod (Spring return/ Spring extend)	Rubber	●					●		1.4-61
Direct mount style Series CM2R 	Double acting	Single rod	Rubber	●			●	●	●		1.4-66
			Air	●					●		
Direct mount/Non-rotating rod Series CM2RK 	Double acting	Single rod	Rubber	●					●		1.4-73
Low friction Series CM2Q 	Double acting	Single rod	Rubber	●							1.4-78
Centralized piping Series CM2□□P 	Double acting	Single rod	Rubber	●		●			●		1.4-83

Applicable auto switch

Auto switch model	Band mounting
Reed switch	D-C7/C8, D-C73C/C80C, D-B5/B6 D-B59W, D-A3□A, D-A44A
Solid state switch	D-H7□, D-H7□W, D-H7□F D-H7BAL, D-G5NTL, D-G39A/K39A

Made to Order

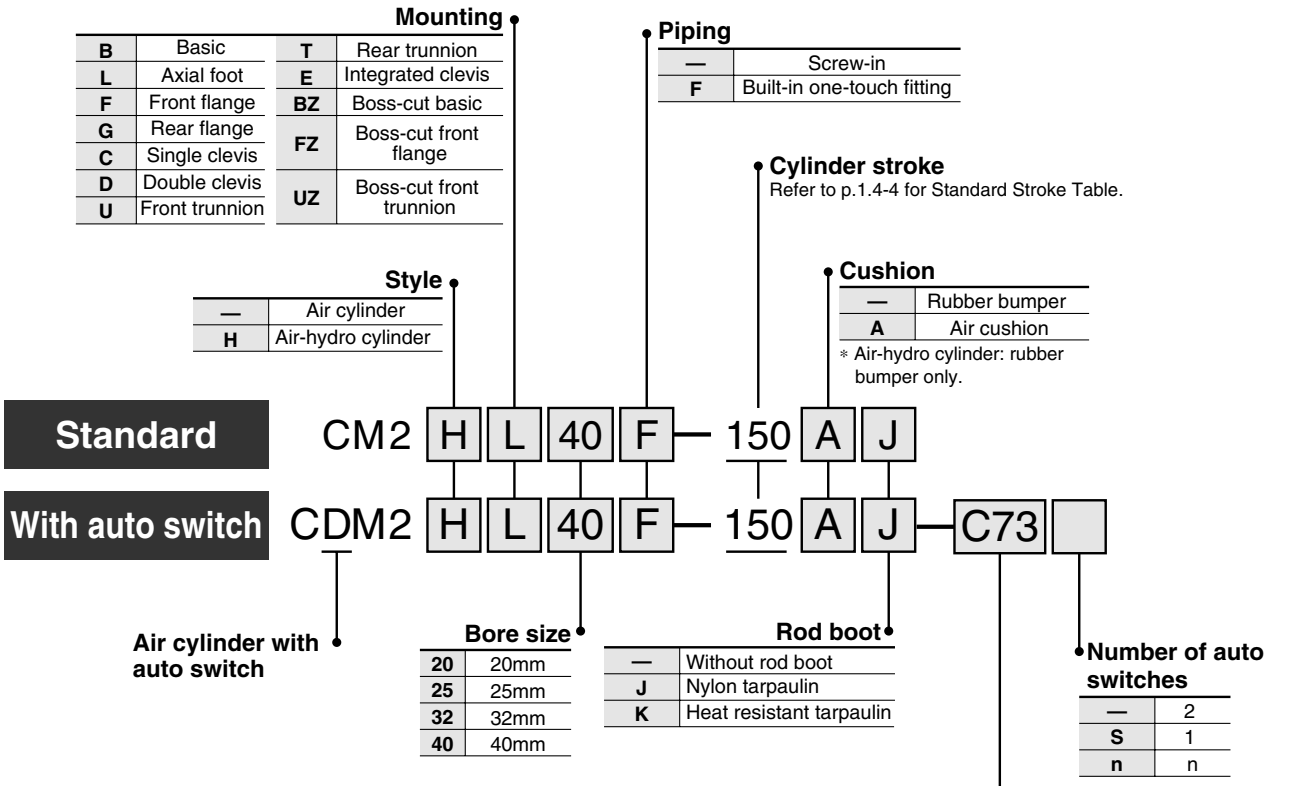
Refer to p.5.4-1 for made to order specifications for series CM2.

Standard: Double Acting Single Rod

Series CM2

ø20, ø25, ø32, ø40

How to Order



Applicable Auto Switches/Refer to p.5.3-2 for further information on auto switches.

Style	Special function	Electrical entry	Indicator	Wiring (Output)	Load voltage DC	Load voltage AC	Auto switch model	Lead wire∗ (m) 0.5 (—)	3 (L)	5 (Z)	None (N)	Applicable load	
Reed switch	—	Grommet	Yes	3 wire (NPN)	5V	—	C76	●	●	—	—	IC	—
				2 wire	12V	100V	C73	●	●	●	—	—	Relay PLC
			No		5V, 12V	100V or less	C80	●	●	—	—	IC	Relay PLC
			Yes		12V	—	B53	●	●	●	—	—	PLC
					12V	100V, 200V	B54	●	●	●	—		Relay PLC
			No		12V	200V or less	B64	●	●	—	—		
		Connector	Yes		12V	—	C73C	●	●	●	●		
			No		5V, 12V	24V or less	C80C	●	●	●	●	IC	
		Terminal conduit	Yes		12V	—	A33A	—	—	—	●	—	PLC
					12V	100V, 200V	A34A	—	—	—	●		Relay PLC
		DIN connector					A44A	—	—	—	●		
	Diagnostic indicator (2 colour)	Grommet			—	—	B59W	●	●	—	—		
Solid state switch	—	Grommet	Yes	3 wire(NPN)	5V, 12V	—	H7A1	●	●	○	—	IC	Relay PLC
				3 wire(PNP)			H7A2	●	●	○	—		
				2 wire	12V		H7B	●	●	○	—	—	
		Connector					H7C	●	●	●	●		
		Terminal conduit		3 wire(NPN)	5V, 12V		G39A	—	—	—	●	IC	
				2 wire	12V		K39A	—	—	—	●	—	
	Diagnostic indicator (2 colour)	Grommet		3 wire(NPN)	5V, 12V	—	H7NW	●	●	○	—	IC	
				3 wire(PNP)			H7PW	●	●	○	—		
				2 wire	12V		H7BW	●	●	○	—	—	
	Water resistant (2 colour)						H7BA	—	●	○	—		
	With timer			3 wire(NPN)	5V, 12V		G5NT	—	●	○	—	IC	
	Diagnostic output (2 colour)			4 wire (NPN)			H7NF	●	●	○	—		
	Latch with diagnostic output (2 colour)				—		H7LF	●	●	○	—	—	

∗ Lead wire length
0.5m : —
3m : L
5m : Z
None: N
e.g.) C80CZ, C80CN

∗ Solid state switches marked with "○" are manufactured upon receipt of order.

∗ Do not indicate symbol "N" for no lead wire on "D-A3□A", "A44A", "G39A" and "K39A" .

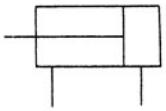
Integrated clevis style

Specifications

Bore size (mm)	20	25	32	40
Style	Air cylinder			
Action	Double acting/Single rod			
Fluid	Air			
Proof pressure	1.5MPa			
Max. operating pressure	1.0MPa			
Min. operating pressure	0.05MPa			
Ambient and fluid temperature	Without auto switch: –10 to +70°C (No freezing) With auto switch: –10 to +60°C (No freezing)			
Lubrication	Non-lube			
Thread tolerance	JIS class 2			
Stroke tolerance	$^{+1.4}_{0}$			
Piston speed	50 to 750mm/s			
Cushion	Rubber bumper			
Allowable kinetic energy	0.27J	0.4J	0.65J	1.2J

JIS symbol

Double acting/Single rod



Made to Order

Refer to p.5.4-1 for made to order specifications for series CM2.

Standard Stroke

Bore size (mm)	Standard stroke(mm) (1)	Long stroke (2) (mm)	Max. stroke (mm)
20	25, 50, 75, 100, 125, 150 200, 250, 300	400	1000
25		450	1500
32		450	2000
40		500	2000

Note 1) Other intermediate strokes can be manufactured upon receipt of order.
Note 2) Long stroke applies to the axial foot style and the front flange style. If other mounting brackets are used or the length exceeds the long stroke limit, the stroke should be selected based on the stroke selection table. (Refer to Data on p.0-21.)

Minimum Strokes for Auto Switches Mounting

(mm)

Auto switch model	Number of switches				
	2		n		1
	On different surfaces	On the same surface	On different surfaces	On the same surface	
D-C7 **D-C8**	15	50	15+45 ($\frac{n-2}{2}$) (n=2, 4, 6···)	50+45(n–2)	10
D-H7□ **D-H7□W** **D-H7BAL** **D-H7NF**	15	60		60+45(n–2)	10
D-C73C **D-C80C** **D-H7C**	15	65	15+50 ($\frac{n-2}{2}$) (n=2, 4, 6···)	65+50(n–2)	10
D-H7LF	20	65	20+50 ($\frac{n-2}{2}$) (n=2, 4, 6···)		10
D-B5 **D-B6**	15	75	15+50 ($\frac{n-2}{2}$) (n=2, 4, 6···)	75+55(n–2)	10
D-B59W	20	75	20+50 ($\frac{n-2}{2}$) (n=2, 4, 6···)		15
D-A3□A **D-G39A** **D-K39A** **D-A44A**	35	100	35+30 (n–2)	100+100(n–2)	10

Boss-cut Style

Boss for the head cover bracket is eliminated and the total length of cylinder is shortened.

Comparison of total cylinder length with standard style (mm)

ø20	ø25	ø32	ø40
▲13	▲13	▲13	▲16

Mounting

■Boss-cut basic (BZ) ■Boss-cut flange (FZ)
■Boss-cut trunnion (UZ)

Rod Boot Materials

Symbol	Material	Max. ambient temp.
J	Nylon tarpaulin	70°C
K	Neoprene cloth	110°C*

* Maximum ambient temperature for the rod boot only.

Mounting Bracket Part No.

Bore size mm	20	25	32	40
Axial foot*	CM-L020B	CM-L032B		CM-L040B
Flange	CM-F020B	CM-F032B		CM-F040B
Single clevis	CM-C020B	CM-C032B		CM-C040B
Double clevis (with pins)**	CM-D020B	CM-D032B		CM-D040B
Trunnion (with nuts)	CM-T020B	CM-T032B		CM-T040B

* Two foot brackets and a mounting nut are attached.
** Clevis pins and snap rings (cotter pins for bore size 40) are attached.

Auto Switch Mounting Bracket Part No.

Auto switch model	Bore size (mm)			
	20	25	32	40
D-C7/C8 D-H7□	BM2-020	BM2-025	BM2-032	BM2-040
D-B5/B6 D-G5NTL	BA2-020	BA2-025	BA2-032	BA2-040
D-A3□A/A44A D-G39A/K39A	BM3-020	BM3-025	BM3-032	BM3-040

Note) A set of following stainless steel mounting screws is attached. (A switch mounting band is not attached. Please order the band separately.)
BBA3: D-B5/B6/G5
BBA4: D-C7/C8/H7
· "D-H7BAL" switch is set on the cylinder with the screws above when shipped.
When a switch only is shipped, "BBA4" screws are attached

⚠ Precautions

Be sure to read before handling. Refer to p.0-39 to 0-43 for Safety Instructions and common precautions.

Precautions on Handling

⚠ Warning

① **Do not rotate the cover.**
· When installing the cylinder or screwing a pipe fitting into the port, the coupling portion of the cover could break if the cover is rotated.

⚠ Caution

① **Be careful with the snap ring that could fly out.**
· When replacing the rod seal, be careful with the removal of the snap ring, as the snap ring could fly out.

② **Do not touch the cylinder during operation.**
· If the cylinder is operating at a high frequency, be aware that the cylinder tube surface could become very hot, creating the risk of burns.

Mounting Accessories

Mounting \ Accessories	Standard			Option			
	Mounting nut	Rod end nut	Clevis pin	Single knuckle joint	Double knuckle joint (3)	Pivot bracket	Rod boot
Basic	● (1 pc.)	●	—	●	●	—	●
Axial foot	● (2)	●	—	●	●	—	●
Front flange	● (1)	●	—	●	●	—	●
Rear flange	● (1)	●	—	●	●	—	●
Integrated clevis	—(1)	●	—	●	●	●	●
Single clevis	—(1)	●	—	●	●	—	●
Double clevis (3)	—(1)	●	●	●	●	—	●
Front trunnion	● (1) (2)	●	—	●	●	—	●
Rear trunnion	● (1) (2)	●	—	●	●	—	●
Boss-cut basic	● (1)	●	—	●	●	—	●
Boss-cut flange	● (1)	●	—	●	●	—	●
Boss-cut trunnion	● (1)	●	—	●	●	—	●
Note					With pins	With pins	

Note 1) Mounting nuts are not attached for the integrated clevis, the single clevis, and the double clevis styles.
Note 2) Trunnion nuts are attached for the front trunnion and the rear trunnion styles.
Note 3) Pins and snap rings (cotter pins for bore size 40) are attached for double clevis and the double knuckle joint.

Weight

(kg)

Bore size (mm)		20	25	32	40
Basic weight	Basic	0.14	0.21	0.28	0.56
	Axial foot	0.29	0.37	0.44	0.83
	Flange	0.20	0.30	0.37	0.68
	Integrated clevis	0.12	0.19	0.27	0.52
	Single clevis	0.18	0.25	0.32	0.65
	Double clevis	0.19	0.27	0.33	0.69
	Trunnion	0.18	0.28	0.34	0.66
	Boss-cut basic	0.13	0.19	0.26	0.53
	Boss-cut flange	0.19	0.28	0.35	0.65
	Boss-cut trunnion	0.17	0.26	0.32	0.63
Additional weight by each 50 stroke		0.04	0.06	0.08	0.13
Accessory	Pivot bracket (with pins)	0.07	0.07	0.14	0.14
	Single knuckle joint	0.06	0.06	0.06	0.23
	Double knuckle joint (with pins)	0.07	0.07	0.07	0.20

Calculation example: CM2L32-100
- ●Basic weight:····· 0.44 (Foot, ø32)
- ●Additional weight:··· 0.08/50 stroke
- ●Cylinder stroke:····· 100 stroke

0.44+0.08 X 100/50=0.60kg

Water Resistant

CM2 | Mounting | Bore size | R | Stroke | -XC6

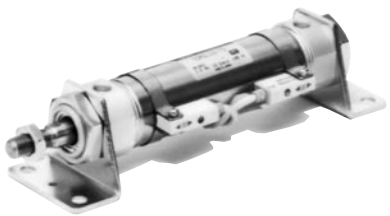
Material of piston rod and rod end nut

—	Carbon steel
-XC6	Stainless steel

Water resistant

R	Seal: NBR (Nitrile rubber)
V	Seal: FKM (Fluorine rubber)

Ideal for use in a machine tool environment exposed to coolant mist. Also suited for use in areas in which water splashes, such as food processing equipment or car washers.

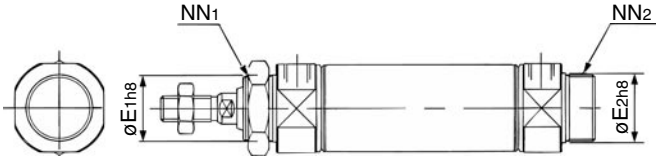


Specifications

Action	Double acting/Single rod
Bore size	ø20, ø25, ø32, ø40
Max. operating pressure	1.0MPa
Min. operating pressure	0.05MPa
Cushion	Rubber bumper
Piping	Screw-in
Piston speed	50 to 750mm/s

∗ Auto switch can be mounted.

Dimensions



Bore size (mm)	E1	E2∗	NN1	NN2∗
20	$22^{0}_{-0.033}$	$20^{0}_{-0.033}$	M22 X 1.5	M20 X 1.5

∗ These dimensions and other dimensions are the same as standard style. Contact SMC for part numbers of the foot, the flange and the mounting nut for ø20.

Air-hydro

CM2H | **Mounting** | **Bore size** — **Stroke** | **Rod boot**

Air-hydro style

A low hydraulic pressure cylinder used at a pressure of 1.0MPa or below.
Through the concurrent use of a 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.

Specifications

Style	Air-hydro
Fluid	Turbine oil
Action	Double acting/Single rod
Bore size	ø20, ø25, ø32, ø40
Proof pressure	1.5MPa
Max. operating pressure	1.0MPa
Min. operating pressure	0.18MPa
Piston speed	15 to 300mm/s
Ambient and fluid temperature	+5 to +60°C
Thread tolerance	JIS class 2
Stroke tolerance	+1.4 0
Cushion	Rubber bumper (Standard equipment)
Mounting	Basic, Axial foot, Front flange, Rear flange, Single clevis, Double clevis, Front trunnion, Rear trunnion, Integrated clevis, Boss-cut

∗ Auto switch can be mounted.
∗ Dimensions are the same as the standard model.

• Construction: Refer to p.1.4-9
• Dimensions: Refer to p.1.4-10 to 1.4-18

With Air Cushion

CM2 | **Mounting** | **Bore size** — **Stroke** | **A** | **Rod boot**

With air cushion

A cushion mechanism is provided on the cover at both ends to absorb the impact that is created during high speed operations. Thus, it does not transmit vibrations to the surroundings and prolongs the life of the cylinder.

Specifications

Action	Double acting/Single rod
Bore size	ø20, ø25, ø32, ø40
Max. operating pressure	1.0MPa
Min. operating pressure	0.05MPa
Cushion	Air cushion
Piston speed	50 to 1000mm/s
Mounting	Basic, Axial foot, Front flange, Rear flange, Single clevis, Double clevis, Front trunnion, Rear trunnion, Integrated clevis, Boss-cut

∗Auto switches can be mounted.

Allowable Kinetic Energy

Bore size (mm)	Effective cushion length (mm)	Kinetic energy absorption
20	11.0	0.54J
25	11.0	0.78J
32	11.0	1.27J
40	11.8	2.35J

• Construction: Refer to p.1.4-9
• Dimensions: Refer to p.1.4-10 to 1.4-18
• Refer to p.1.4-4 for other specifications.

Built-in One-touch Fitting

CM2 | **Mounting** | **Bore size** | **F** — **Stroke**

Built-in One-touch fitting

A style in which One-touch fittings are built in the cylinder. It dramatically reduces the piping labour and installation space.

• Construction: Refer to p.1.4-9
• Dimensions: Refer to p.1.4-10 to 1.4-18
• Refer to p1.4-4 for other specifications.

Specifications

Action	Double acting/Single rod
Bore size	ø20, ø25, ø32, ø40
Max. operating pressure	1.0MPa
Min. operating pressure	0.05MPa
Cushion	Rubber bumper
Piping	Built-in One-touch fitting
Piston speed	50 to 750mm/s
Mounting	Basic, Axial foot, Front flange, Rear flange, Single clevis, Double clevis, Front trunnion, Rear trunnion, Integrated clevis, Boss-cut

∗ Auto switches can be mounted.

Applicable Tube O.D./I.D.

Bore size (mm)	ø20	ø25	ø32	ø40
Applicable tube (mm)	ø6/4	ø6/4	ø6/4	ø8/6
Applicable tube material	Nylon, Soft nylon, Polyurethane			

⚠ Caution

The One-touch fitting cannot be replaced.
• The One-touch fitting is press-fit into the cover and cannot be replaced.

Clean Series

10-CM2 | Mounting | Bore size | Stroke

● Clean series

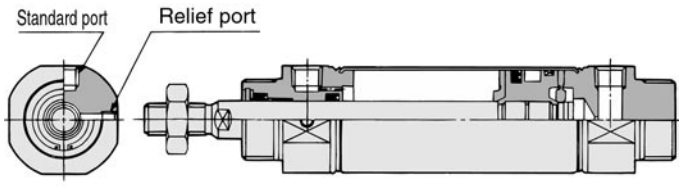
The rod portion of the actuator has a double seal construction, and a relief port is provided to discharge the exhaust air directly outside of the clean room. Thus, it can be used in a Class 100 clean room.

Specifications

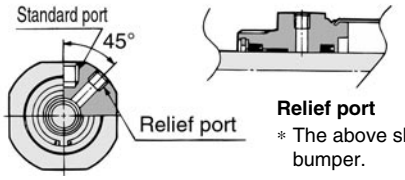
Action	Double acting/Single rod
Bore size	ø20, ø25, ø32, ø40
Max. operating pressure	1.0MPa
Min. operating pressure	0.05MPa
Cushion	Rubber bumper/Air cushion
Relief port size	M5
Piston speed	30 to 400mm/s
Mounting	Basic, Axial foot, Front flange, Rear flange, Boss-cut

∗ Auto switches can be mounted.

Construction



ø20, ø25



Relief port

∗ The above shows the case of rubber bumper.

ø32, ø40

Copper Free

20-CM2 | Mounting | Bore size | Stroke

● Copper free

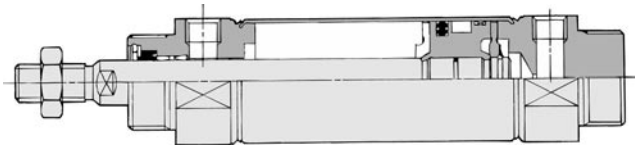
This cylinder eliminates any influences of copper ions or fluororesins on colour CRTs. Copper materials have been nickel plated or replaced with non-copper materials to prevent the generation of copper ions.

Specifications

Action	Double acting/Single rod	
Bore size	ø20, ø25, ø32, ø40	
Max. operating pressure	1.0MPa	
Min. operating pressure	0.05MPa	
Cushion	Rubber bumper	Air cushion
Piston speed	50 to 750mm/s	50 to1000mm/s
Mounting	Basic, Axial foot, Front flange, Rear flange, Single clevis, Double clevis, Front trunnion, Rear trunnion , Integrated clevis, Boss-cut	

∗ Auto switches can be mounted.

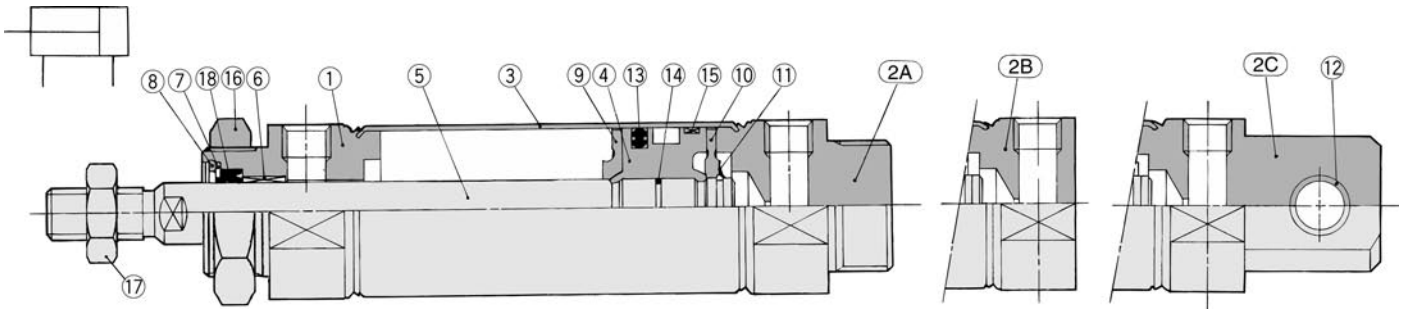
Construction



CJ1
CJP
CJ2
CM2
C85
C76
CG1
MB
MB1
CP95
C95
C92
CA1
CS1

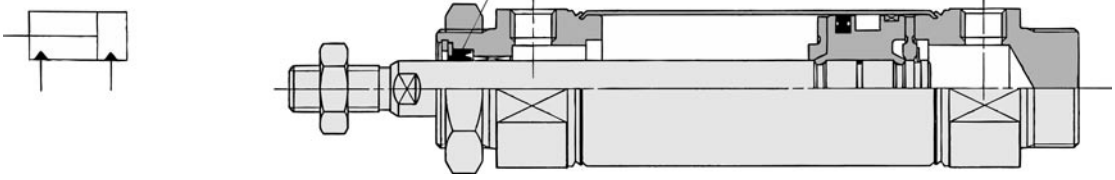
Construction

Rubber bumper

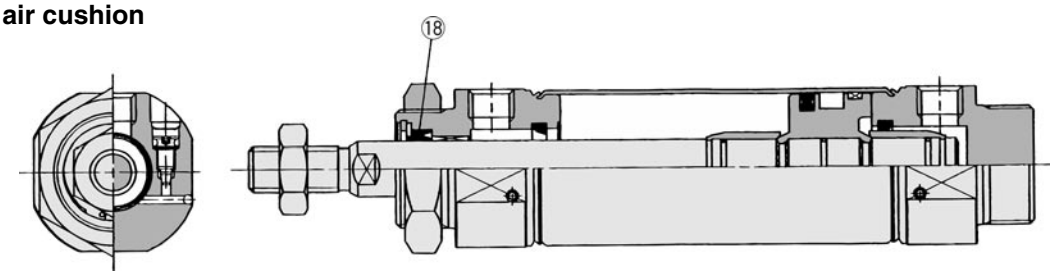


Boss-cut style Integrated clevis style

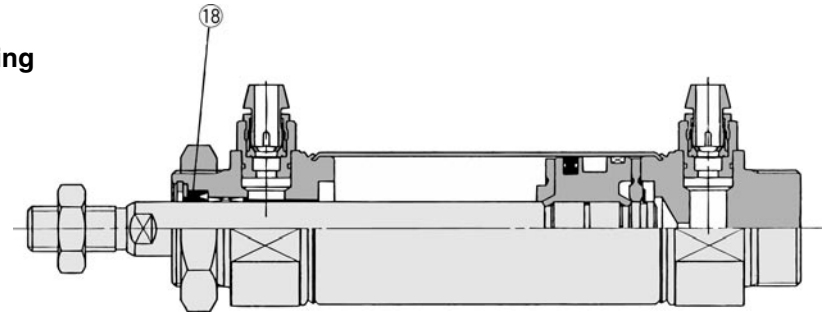
Air-hydro



With air cushion



Built-in One-touch fitting



Component Parts

No.	Description	Material	Note
①	Rod cover	Aluminum alloy	White anodized
2A	Head cover A	Aluminum alloy	White anodized (Standard style)
2B	Head cover B	Aluminum alloy	White anodized (boss-cut style)
2C	Head cover C	Aluminum alloy	White anodized (Integrated clevis style)
③	Cylinder tube	Stainless steel	
④	Piston	Aluminum alloy	Chromated
⑤	Piston rod	Carbon steel	Hard chrome plated
⑥	Bushing	Oil impregnated sintered alloy	
⑦	Seal retainer	Rolled steel	Nickel plated
⑧	Snap ring	Carbon steel	Nickel plated
⑨	Bumper A	Urethane	
⑩	Bumper B	Urethane	
⑪	Snap ring	Stainless	

No.	Description	Material	Note
⑫	Bushing for clevis	Oil impregnated sintered alloy	
⑬	Piston seal	NBR	
⑭	Piston gasket	NBR	
⑮	Wearing	Resin	
⑯	Mounting nut	Carbon steel	Nickel plated
⑰	Rod end nut	Carbon steel	Nickel plated

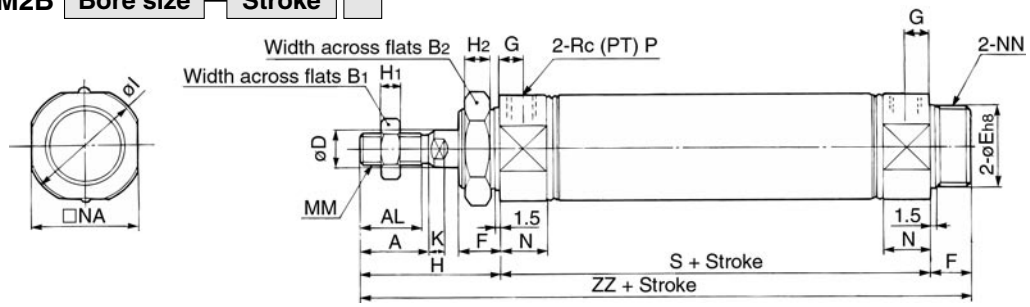
Replacement Parts

●With rubber bumper/With air cushion/Built-in One-touch fitting

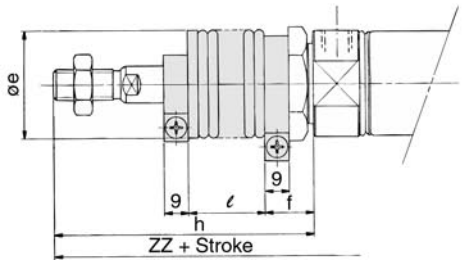
No.	Description	Material	Bore size (mm)/Part No.			
			20	**25**	**32**	**40**
⑱	Rod seal	NBR	PDU-8Z	PDU-10Z	PDU-12LZ	PDU-14LZ
●Air-hydro style						
⑱	Rod seal	NBR	HDU-8	HDU-10	HDU-12L	HDU-14

Basic (B)

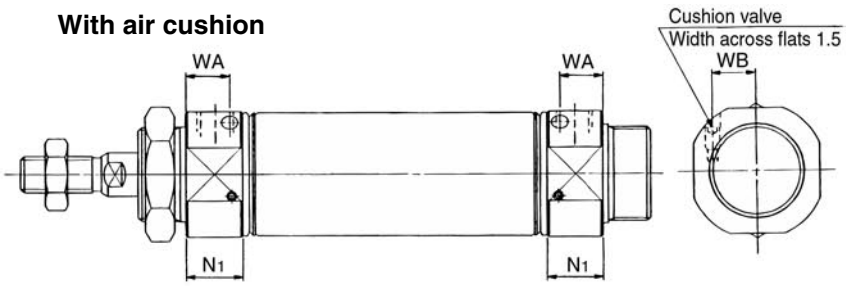
CM2B Bore size — Stroke



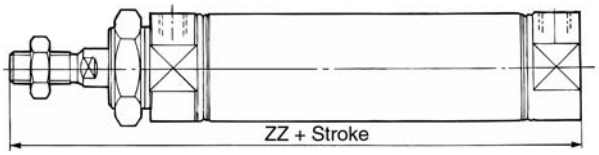
With rod boot



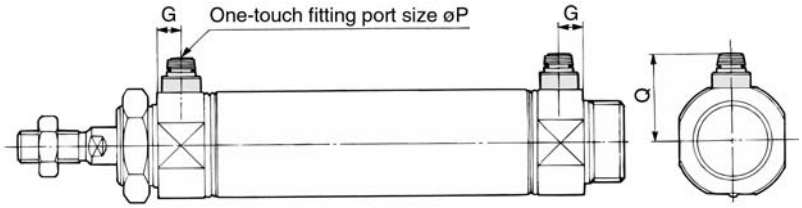
With air cushion



Boss-cut



Built-in One-touch fitting



(mm)

Bore	Stroke range	A	AL	B1	B2	D	E	F	G	H	H1	H2	I	K	MM	N	NA	NN	P	S	ZZ
20	1 to 300	18	15.5	13	26	8	$20^{0}_{-0.033}$	13	8	41	5	8	28	5	M8 X 1.25	15	24	M20 X 1.5	1/8	62	116
25	1 to 300	22	19.5	17	32	10	$26^{0}_{-0.033}$	13	8	45	6	8	33.5	5.5	M10 X 1.25	15	30	M26 X 1.5	1/8	62	120
32	1 to 300	22	19.5	17	32	12	$26^{0}_{-0.033}$	13	8	45	6	8	37.5	5.5	M10 X 1.25	15	34.5	M26 X 1.5	1/8	64	122
40	1 to 300	24	21	22	41	14	$32^{0}_{-0.039}$	16	11	50	8	10	46.5	7	M14 X 1.5	21.5	42.5	M32 X 2	1/4	88	154

With rod boot

(mm)

Bore \ Symbol / Stroke	e	f	h					ℓ					ZZ				
			1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	1 to 50	51 to 100	101to150	151 to 200	201 to 300	1 to 50	51 to 100	101 to 150	151 to 200	201 to 300
20	36	17	68	81	93	106	131	12.5	25	37.5	50	75	143	156	168	181	206
25	36	17	72	85	97	110	135	12.5	25	37.5	50	75	147	160	172	185	210
32	36	17	72	85	97	110	135	12.5	25	37.5	50	75	149	162	174	187	212
40	46	19	77	90	102	115	140	12.5	25	37.5	50	75	181	194	206	219	244

Boss-cut

(mm)

Bore	ZZ					
	Without gaiter	With gaiter				
		1 to 50	51 to 100	101 to 150	151 to 200	201 to 300
20	103	130	143	155	168	193
25	107	134	147	159	172	197
32	109	136	149	161	174	199
40	138	165	178	190	203	228

With air cushion

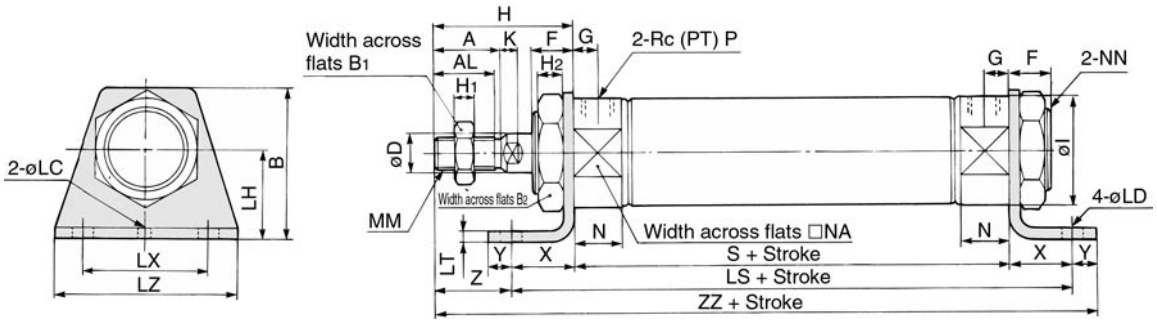
Bore	N1	WA	WB
20	17.5	13	8.5
25	17.5	13	10.5
32	17.5	13	11.5
40	21.5	16	15

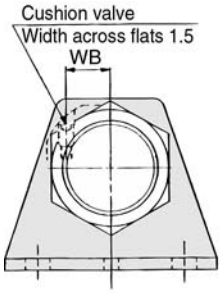
Built-in One-touch fitting

Bore	G	P	Q
20	8	6	23
25	8	6	26
32	8	6	28.5
40	11	8	32.5

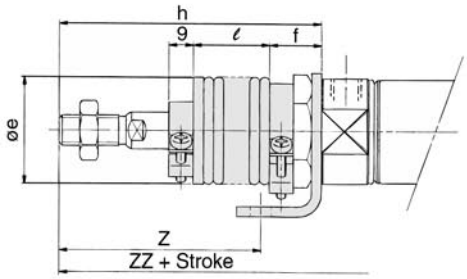
Axial Foot (L)

CM2L Bore size — Stroke

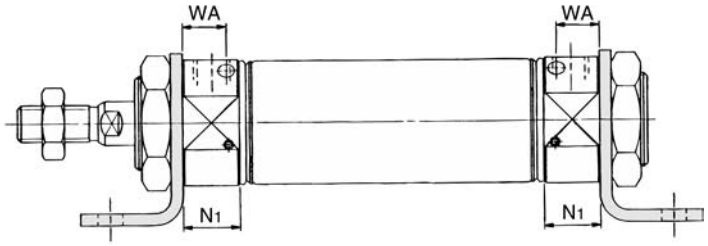




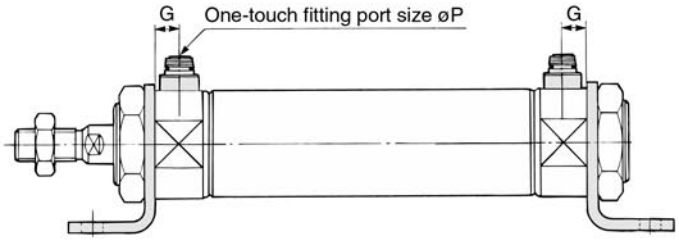
With rod boot

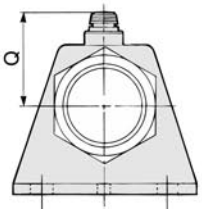


With air cushion



Built-in One-touch fitting





(mm)

Bore	Stroke range	A	AL	B	B1	B2	D	F	G	H	H1	H2	I	K	LC	LD	LH	LS	LT	LX	LZ	MM	N	NA	NN	P	S	X	Y	Z	ZZ
20	1to400	18	15.5	40	13	26	8	13	8	41	5	8	28	5	4	6.8	25	102	3.2	40	55	M8 X 1.25	15	24	M20 X 1.5	1/8	62	20	8	21	131
25	1to450	22	19.5	47	17	32	10	13	8	45	6	8	33.5	5.5	4	6.8	28	102	3.2	40	55	M10 X 1.25	15	30	M26 X 1.5	1/8	62	20	8	25	135
32	1to450	22	19.5	47	17	32	12	13	8	45	6	8	37.5	5.5	4	6.8	28	104	3.2	40	55	M10 X 1.25	15	34.5	M26 X 1.5	1/8	64	20	8	25	137
40	1to500	24	21	54	22	41	14	16	11	50	8	10	46.5	7	4	7	30	134	3.2	55	75	M14 X 1.5	21.5	42.5	M32 X 2	1/4	88	23	10	27	171

With rod boot

(mm)

Bore \ Symbol / Stroke	e	f	h							ℓ							Z						
			1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500	1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500	1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500
20	36	18.2	68	81	93	106	131	156	—	12.5	25	37.5	50	75	100	—	48	61	73	86	111	136	—
25	36	18.2	72	85	97	110	135	160	185	12.5	25	37.5	50	75	100	125	52	65	77	90	115	140	165
32	36	18.2	72	85	97	110	135	160	185	12.5	25	37.5	50	75	100	125	52	65	77	90	115	140	165
40	46	20.2	77	90	102	115	140	165	190	12.5	25	37.5	50	75	100	125	54	67	79	92	117	142	167

With rod boot

(mm)

Bore \ Symbol / Stroke	ZZ						
	1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500
20	158	171	183	196	221	246	—
25	162	175	187	200	225	250	275
32	164	177	189	202	227	252	277
40	198	211	223	236	261	286	311

With air cushion

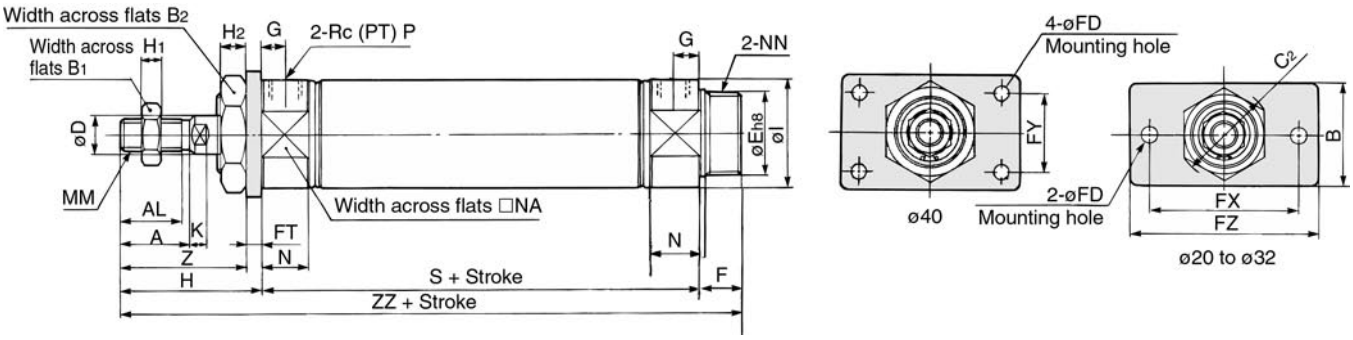
Bore	N1	WA	WB
20	17.5	13	8.5
25	17.5	13	10.5
32	17.5	13	11.5
40	21.5	16	15

Built-in One-touch fitting

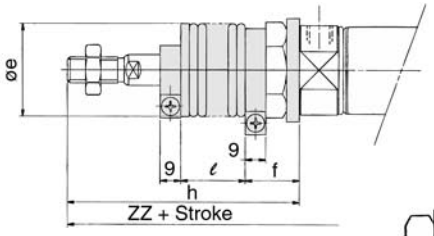
Bore	G	P	Q
20	8	6	23
25	8	6	26
32	8	6	28.5
40	11	8	32.5

Front Flange (F)

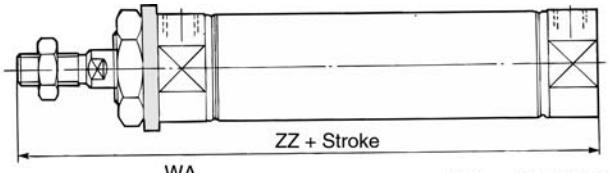
CM2F Bore size — Stroke



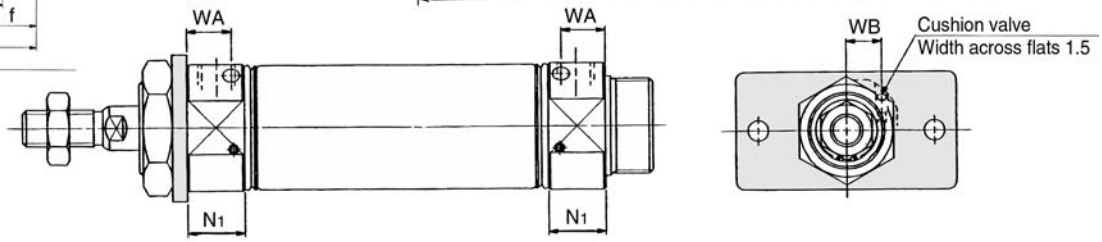
With rod boot



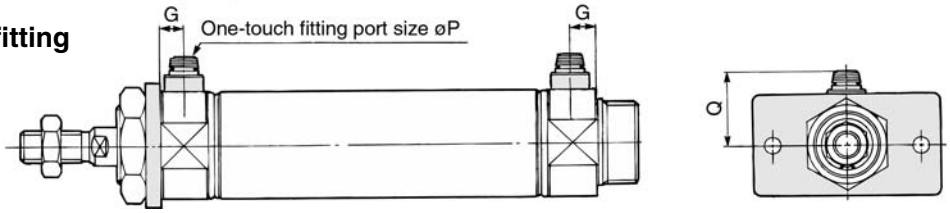
Boss-cut



With air cushion



Built-in One-touch fitting



(mm)

Bore	Stroke range	A	AL	B	B1	B2	C2	D	E	F	FD	FT	FX	FY	FZ	G	H	H1	H2	I	K	MM	N	NA	NN	P	S	Z	ZZ
20	1to400	18	15.5	34	13	26	30	8	$20^{0}_{-0.033}$	13	7	4	60	—	75	8	41	5	8	28	5	M8 X 1.25	15	24	M20 X 1.5	1/8	62	37	116
25	1to450	22	19.5	40	17	32	37	10	$26^{0}_{-0.033}$	13	7	4	60	—	75	8	45	6	8	33.5	5.5	M10 X 1.25	15	30	M26 X 1.5	1/8	62	41	120
32	1to450	22	19.5	40	17	32	37	12	$26^{0}_{-0.033}$	13	7	4	60	—	75	8	45	6	8	37.5	5.5	M10 X 1.25	15	34.5	M26 X 1.5	1/8	64	41	122
40	1to500	24	21	52	22	41	47.3	14	$32^{0}_{-0.039}$	16	7	5	66	36	82	11	50	8	10	46.5	7	M14 X 1.5	21.5	42.5	M32 X 2	1/4	88	45	154

With rod boot

(mm)

Bore \ Symbol / Stroke	e	f	h							ℓ							ZZ						
			1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500	1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500	1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500
20	36	19	68	81	93	106	131	156	—	12.5	25	37.5	50	75	100	—	143	156	168	181	206	231	—
25	36	19	72	85	97	110	135	160	185	12.5	25	37.5	50	75	100	125	147	160	172	185	210	235	260
32	36	19	72	85	97	110	135	160	185	12.5	25	37.5	50	75	100	125	149	162	174	187	212	237	262
40	46	22	77	90	102	115	140	165	190	12.5	25	37.5	50	75	100	125	181	194	206	219	244	269	294

Boss-cut

Bore	ZZ							
	Without gaiter	With gaiter						
		1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 t o500
20	103	130	143	155	168	193	218	—
25	107	134	147	159	172	197	222	247
32	109	136	149	161	174	199	224	249
40	138	165	178	190	203	228	253	278

With air cushion

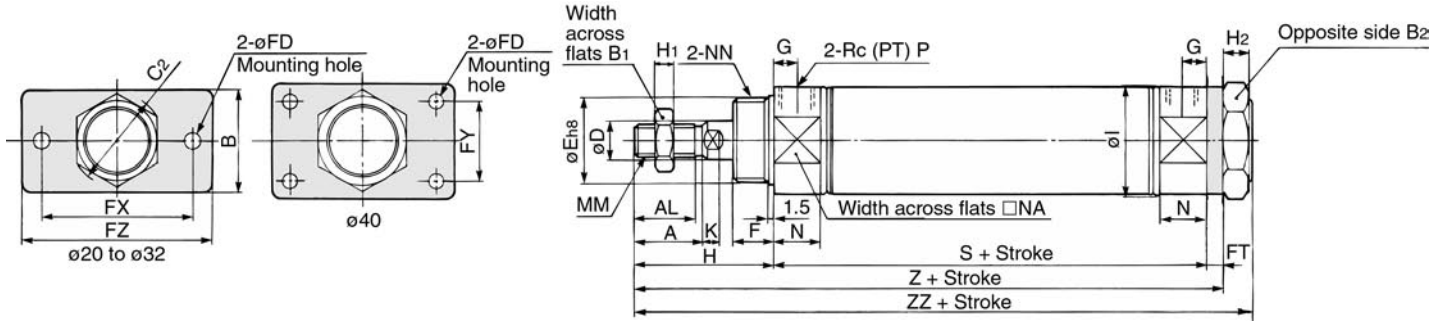
Bore	N1	WA	WB
20	17.5	13	8.5
25	17.5	13	10.5
32	17.5	13	11.5
40	21.5	16	15

Built-in One-touch fitting

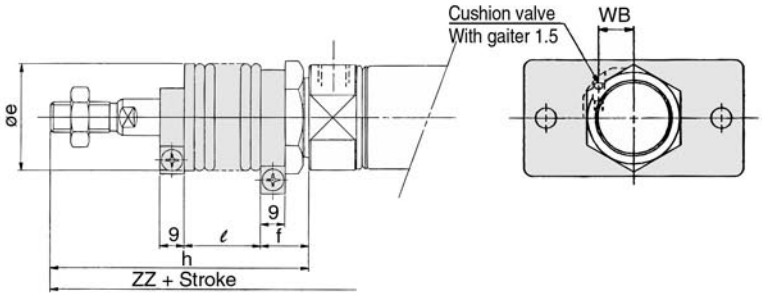
Bore	G	P	Q
20	8	6	23
25	8	6	26
32	8	6	28.5
40	11	8	32.5

Rear Flange (G)

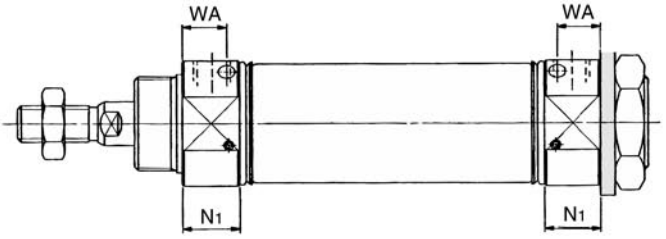
CM2G [Bore size] — [Stroke] [ ]



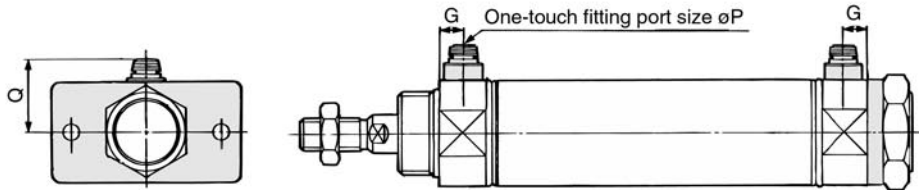
With rod boot



With air cushion



Built-in One-touch fitting



(mm)

Bore	Stroke range	A	AL	B	B1	B2	C2	D	E	F	FD	FT	FX	FY	FZ	G	H	H1	H2	I
20	1 to 300	18	15.5	34	13	26	30	8	$20^{0}_{-0.033}$	13	7	4	60	—	75	8	41	5	8	28
25	1 to 300	22	19.5	40	17	32	37	10	$26^{0}_{-0.033}$	13	7	4	60	—	75	8	45	6	8	33.5
32	1 to 300	22	19.5	40	17	32	37	12	$26^{0}_{-0.033}$	13	7	4	60	—	75	8	45	6	8	37.5
40	1 to 300	24	21	52	22	41	47.3	14	$32^{0}_{-0.039}$	16	7	5	66	36	82	11	50	8	10	46.5

(mm)

Bore	K	MM	N	NA	NN	P	S	Z	ZZ
20	5	M8 X 1.25	15	24	M20 X 1.5	1/8	62	107	116
25	5.5	M10 X 1.25	15	30	M26 X 1.5	1/8	62	111	120
32	5.5	M10 X 1.25	15	34.5	M26 X 1.5	1/8	64	113	122
40	7	M14 X 1.5	21.5	42.5	M32 X 2	1/4	88	143	154

With air cushion

Bore	N1	WA	WB
20	17.5	13	8.5
25	17.5	13	10.5
32	17.5	13	11.5
40	21.5	16	15

Built-in One-touch fitting

Bore	G	P	Q
20	8	6	23
25	8	6	26
32	8	6	28.5
40	11	8	32.5

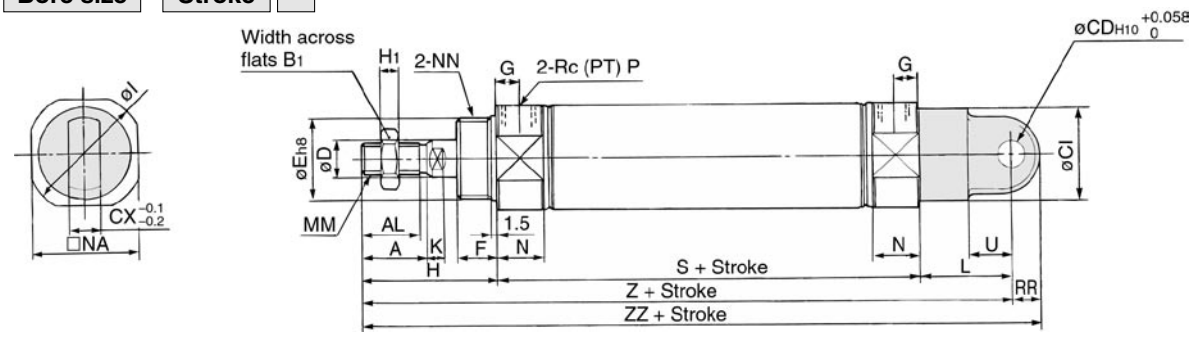
With rod boot

(mm)

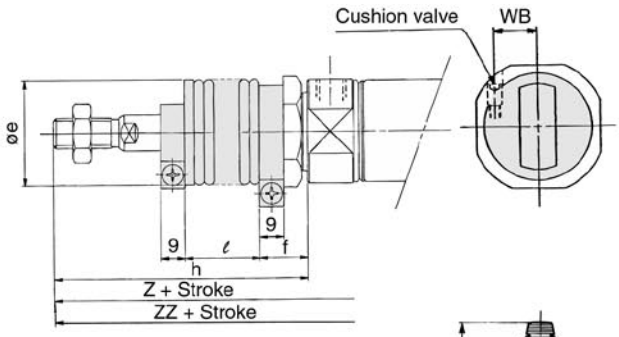
Symbol / Stroke / Bore	e	f	h					ℓ					ZZ				
			1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	1 to 50	51 to 100	101 to 150	151 to 200	201 to 300
20	35	17	68	81	93	106	131	12.5	25	37.5	50	75	143	156	168	181	206
25	35	17	72	85	97	110	135	12.5	25	37.5	50	75	147	160	172	185	210
32	35	17	72	85	97	110	135	12.5	25	37.5	50	75	149	162	174	187	212
40	46	19	77	90	102	115	140	12.5	25	37.5	50	75	181	194	206	219	244

Single Clevis (C)

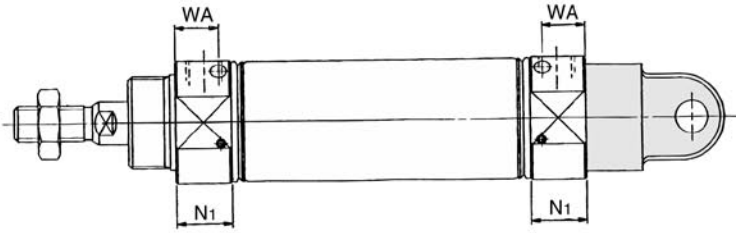
CM2C Bore size — Stroke



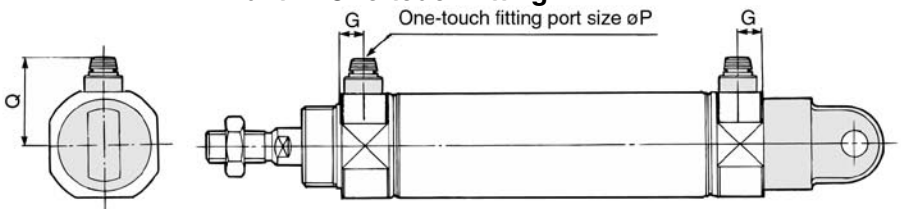
With rod boot



With air cushion



Built-in One-touch fitting



(mm)

Bore	Stroke range	A	AL	B1	CI	CD	CX	D	E	F	G	H	H1	I	K	L	MM	N	NA	NN	P	RR	S	U	Z	ZZ
20	1 to 300	18	15.5	13	24	9	10	8	$20^{0}_{-0.033}$	13	8	41	5	28	5	30	M8 X 1.25	15	24	M20 X 1.5	1/8	9	62	14	133	142
25	1 to 300	22	19.5	17	30	9	10	10	$26^{0}_{-0.033}$	13	8	45	6	33.5	5.5	30	M10 X 1.25	15	30	M26 X 1.5	1/8	9	62	14	137	146
32	1 to 300	22	19.5	17	30	9	10	12	$26^{0}_{-0.033}$	13	8	45	6	37.5	5.5	30	M10 X 1.25	15	34.5	M26 X 1.5	1/8	9	64	14	139	148
40	1 to 300	24	21	22	38	10	15	14	$32^{0}_{-0.039}$	16	11	50	8	46.5	7	39	M14 X 1.5	21.5	42.5	M32 X 2	1/4	11	88	18	177	188

With rod boot

(mm)

Symbol / Stroke / Bore	e	f	h					ℓ					Z				
			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	36	17	68	81	93	106	131	12.5	25	37.5	50	75	160	173	185	198	223
25	36	17	72	85	97	110	135	12.5	25	37.5	50	75	164	177	189	202	227
32	36	17	72	85	97	110	135	12.5	25	37.5	50	75	166	179	191	204	229
40	46	19	77	90	102	115	140	12.5	25	37.5	50	75	204	217	229	242	267

(mm)

Symbol / Stroke / Bore	ZZ				
	1 to 50	51 to 100	101 to 150	151 to 200	201 to 300
20	169	182	194	207	232
25	173	186	198	211	236
32	175	188	200	213	238
40	215	228	240	253	278

With air cushion

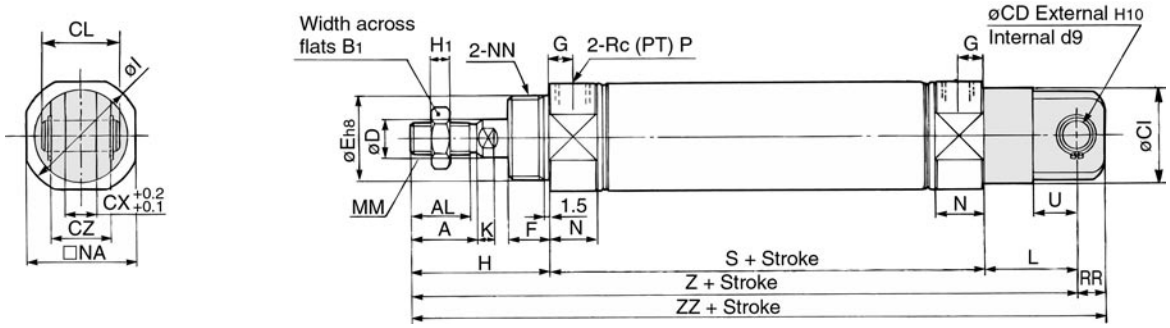
Bore	N1	WA	WB
20	17.5	13	8.5
25	17.5	13	10.5
32	17.5	13	11.5
40	21.5	16	15

Built-in One-touch fitting

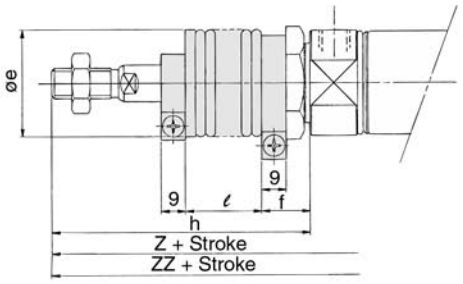
Bore	G	P	Q
20	8	6	23
25	8	6	26
32	8	6	28.5
40	11	8	32.5

Double Clevis (D)

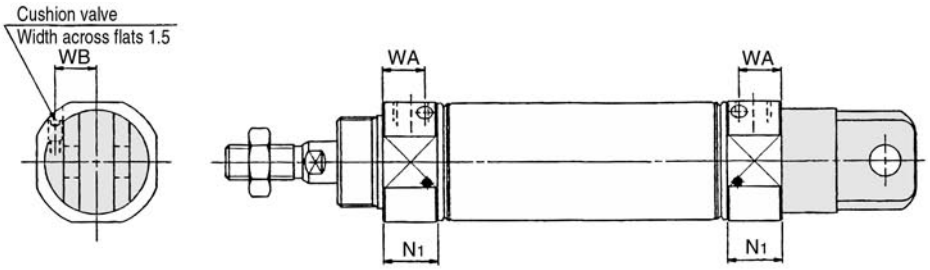
CM2D | Bore size | — | Stroke | |



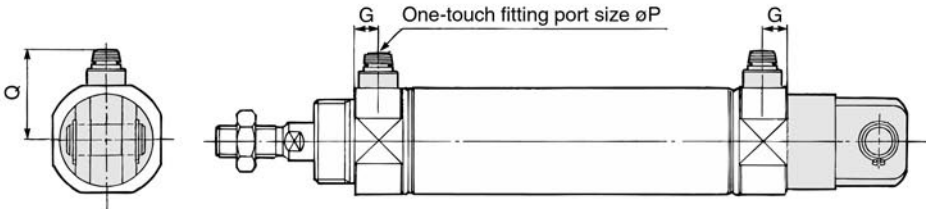
With rod boot



With air cushion



Built-in One-touch fitting



(mm)

Bore	Stroke range	A	AL	B1	CD	CI	CL	CX	CZ	D	E	F	G	H	H1	I	K	L	MM	N	NA	NN	P	RR	S	U	Z	ZZ
20	1 to 300	18	15.5	13	9	24	25	10	19	8	$20^{0}_{-0.033}$	13	8	41	5	28	5	30	M8 X 1.25	15	24	M20 X 1.5	1/8	9	62	14	133	142
25	1 to 300	22	19.5	17	9	30	25	10	19	10	$26^{0}_{-0.033}$	13	8	45	6	33.5	5.5	30	M10 X 1.25	15	30	M26 X 1.5	1/8	9	62	14	137	146
32	1 to 300	22	19.5	17	9	30	25	10	19	12	$26^{0}_{-0.033}$	13	8	45	6	37.5	5.5	30	M10 X 1.25	15	34.5	M26 X 1.5	1/8	9	64	14	139	148
40	1 to 300	24	21	22	10	38	41.2	15	30	14	$32^{0}_{-0.039}$	16	11	50	8	46.5	7	39	M14 X 1.5	21.5	42.5	M32 X 2	1/4	11	88	18	177	188

∗ Clevis pins and snap rings (cotter pins for ø40) are attached.

With rod boot

(mm)

Bore \ Symbol / Stroke	e	f	h					ℓ					Z				
			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	36	17	68	81	93	106	131	12.5	25	37.5	50	75	160	173	185	198	223
25	36	17	72	85	97	110	135	12.5	25	37.5	50	75	164	177	189	202	227
32	36	17	72	85	97	110	135	12.5	25	37.5	50	75	166	179	191	204	229
40	46	19	77	90	102	115	140	12.5	25	37.5	50	75	204	217	229	242	267

With rod boot

(mm)

Bore \ Symbol / Stroke	ZZ				
	1 to 50	51 to 100	101 to 150	151 to 200	201 to 300
20	169	182	194	207	232
25	173	186	198	211	236
32	175	188	200	213	238
40	215	228	240	253	278

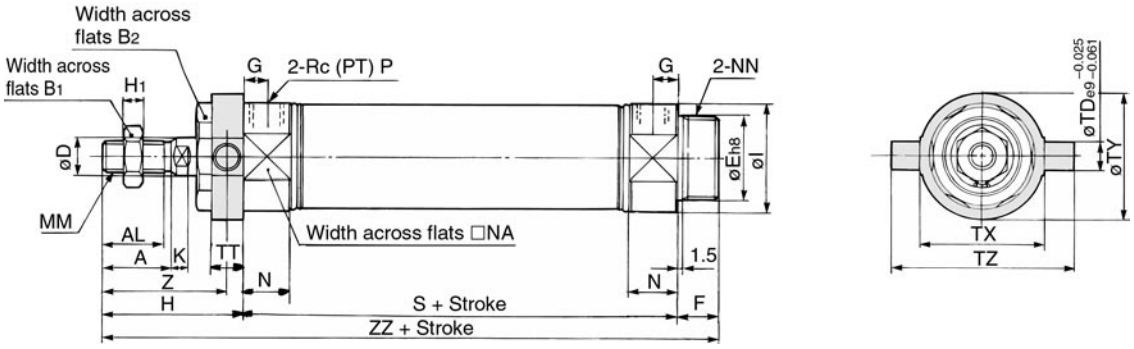
With air cushion

Bore	N1	WA	WB
20	17.5	13	8.5
25	17.5	13	10.5
32	17.5	13	11.5
40	21.5	16	15

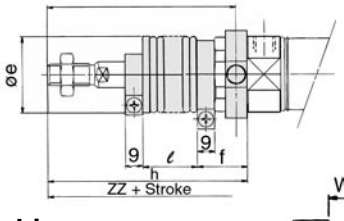
Built-in One-touch fitting

Bore	G	P	Q
20	8	6	23
25	8	6	26
32	8	6	28.5
40	11	8	32.5

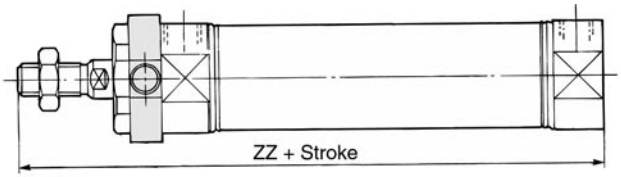
CM2U Bore size — Stroke



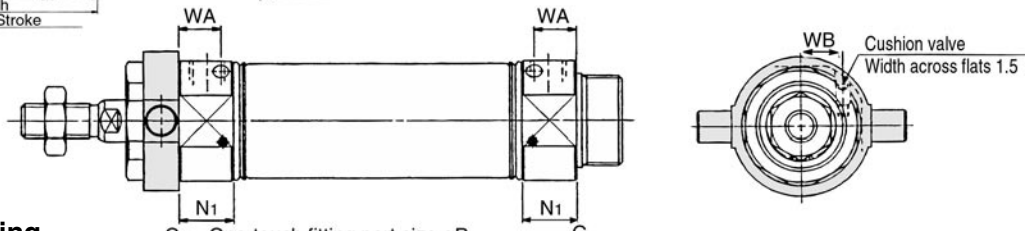
With rod boot



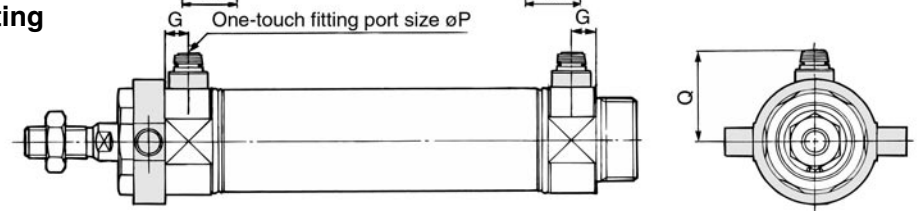
Boss-cut



With air cushion



Built-in One-touch fitting



(mm)

Bore size	Stroke range	A	AL	B1	B2	D	E	F	G	H	H1	I	K	MM	N	NA	NN	P
20	1 to 300	18	15.5	13	26	8	$20^{0}_{-0.033}$	13	8	41	5	28	5	M8 X 1.25	15	24	M20 X 1.5	1/8
25	1 to 300	22	19.5	17	32	10	$26^{0}_{-0.033}$	13	8	45	6	33.5	5.5	M10 X 1.25	15	30	M26 X 1.5	1/8
32	1 to 300	22	19.5	17	32	12	$26^{0}_{-0.033}$	13	8	45	6	37.5	5.5	M10 X 1.25	15	34.5	M26 X 1.5	1/8
40	1 to 300	24	21	22	41	14	$32^{0}_{-0.039}$	16	11	50	8	46.5	7	M14 X 1.5	21.5	42.5	M32 X 2	1/4

Bore	S	TD	TT	TX	TY	TZ	Z	ZZ
20	62	8	10	32	32	52	36	116
25	62	9	10	40	40	60	40	120
32	64	9	10	40	40	60	40	122
40	88	10	11	53	53	77	44.5	154

With rod boot

Bore \ Symbol / Stroke	e	f	h						
			1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500
20	36	24	68	81	93	106	131	156	—
25	36	24	72	85	97	110	135	160	185
32	36	24	72	85	97	110	135	160	185
40	46	25	77	90	102	115	140	165	190

With rod boot

(mm)

Bore \ Symbol / Stroke	ℓ					Z					ZZ				
	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	12.5	25	37.5	50	75	63	76	88	101	126	143	156	168	181	206
25	12.5	25	37.5	50	75	67	80	92	105	130	147	160	172	185	210
32	12.5	25	37.5	50	75	67	80	92	105	130	149	162	174	187	212
40	12.5	25	37.5	50	75	71.5	84.5	96.5	109.5	134.5	181	194	206	219	244

Boss-cut style

(mm)

Bore	ZZ					
	Without gaiter	With gaiter				
		1 to 50	51 to 100	101 to 150	151 to 200	201 to 300
20	103	130	143	155	168	193
25	107	134	147	159	172	197
32	109	136	149	161	174	199
40	138	165	178	190	203	228

With air cushion

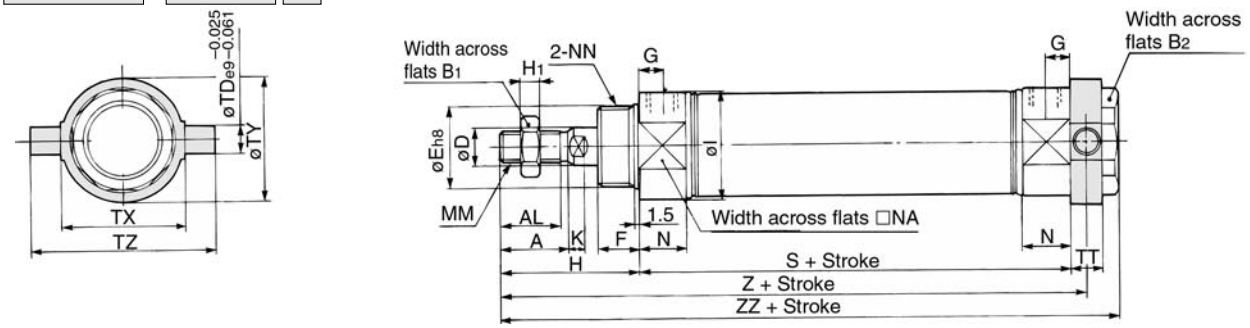
Bore	N1	WA	WB
20	17.5	13	8.5
25	17.5	13	10.5
32	17.5	13	11.5
40	21.5	16	15

Built-in One-touch fitting

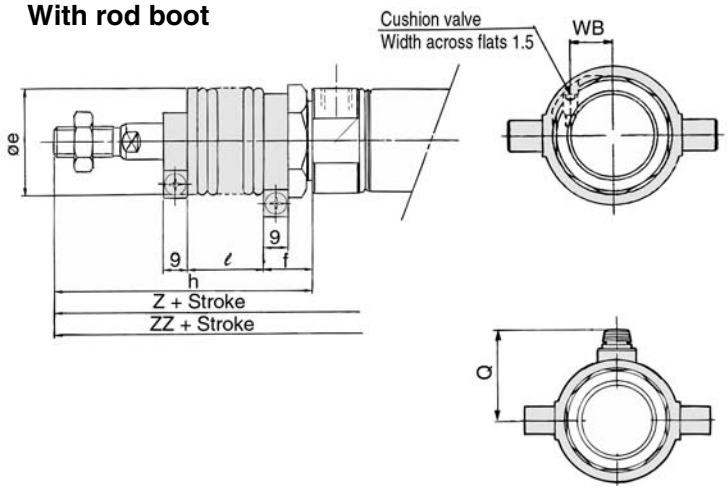
Bore	G	P	Q
20	8	6	23
25	8	6	26
32	8	6	28.5
40	11	8	32.5

Rear Trunnion (T)

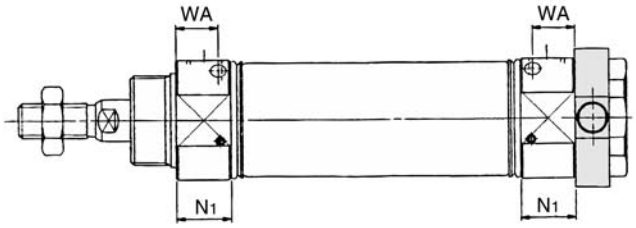
CM2T Bore size — Stroke



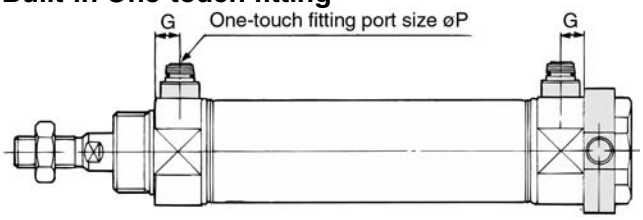
With rod boot



With air cushion



Built-in One-touch fitting



(mm)

Bore	Stroke range	A	AL	B1	B2	D	E	F	G	H	H1	I	K	MM	N	NA	NN	P
20	1 to 300	18	15.5	13	26	8	$20^{0}_{-0.033}$	13	8	41	5	28	5	M8 X 1.25	15	24	M20 X 1.5	1/8
25	1 to 300	22	19.5	17	32	10	$26^{0}_{-0.033}$	13	8	45	6	33.5	5.5	M10 X 1.25	15	30	M26 X 1.5	1/8
32	1 to 300	22	19.5	17	32	12	$26^{0}_{-0.033}$	13	8	45	6	37.5	5.5	M10 X 1.25	15	34.5	M26 X 1.5	1/8
40	1 to 300	24	21	22	41	14	$32^{0}_{-0.039}$	16	11	50	8	46.5	7	M14 X 1.5	21.5	42.5	M32 X 2	1/4

Bore	S	TD	TT	TX	TY	TZ	Z	ZZ
20	62	8	10	32	32	52	108	118
25	62	9	10	40	40	60	112	122
32	64	9	10	40	40	60	114	124
40	88	10	11	53	53	77	143.5	154

With rod boot

Symbol / Bore	e	f	h						
Stroke			1 to 50	51 to 100	101 to 150	151 to 200	201 to 300	301 to 400	401 to 500
20	36	17	68	81	93	106	131	156	—
25	36	17	72	85	97	110	135	160	185
32	36	17	72	85	97	110	135	160	185
40	46	19	77	90	102	115	140	165	190

With rod boot

(mm)

Symbol / Bore	ℓ					Z					ZZ				
Stroke	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	12.5	25	37.5	50	75	135	148	160	173	198	145	158	170	183	208
25	12.5	25	37.5	50	75	139	152	164	177	202	149	162	174	187	212
32	12.5	25	37.5	50	75	141	154	166	179	204	151	164	176	189	214
40	12.5	25	37.5	50	75	170.5	183.5	195.5	208.5	233.5	181	194	206	219	244

With air cushion

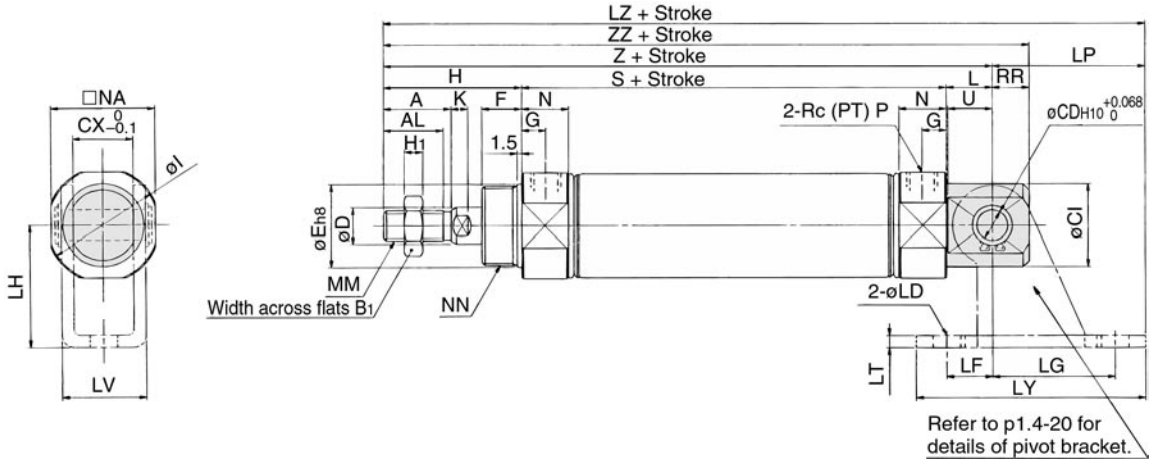
Bore	N1	WA	WB
20	17.5	13	8.5
25	17.5	13	10.5
32	17.5	13	11.5
40	21.5	16	15

Built-in One-touch fitting

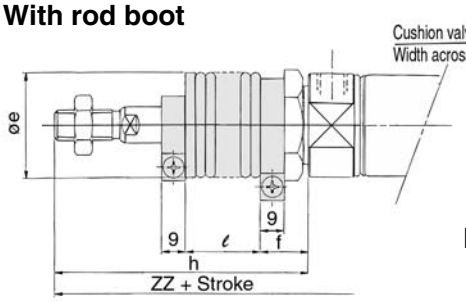
Bore	G	P	Q
20	8	6	23
25	8	6	26
32	8	6	28.5
40	11	8	32.5

Integrated Clevis (E)

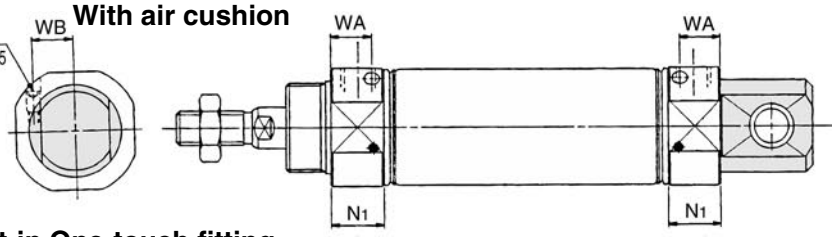
CM2E | **Bore size** | — | **Stroke** | |



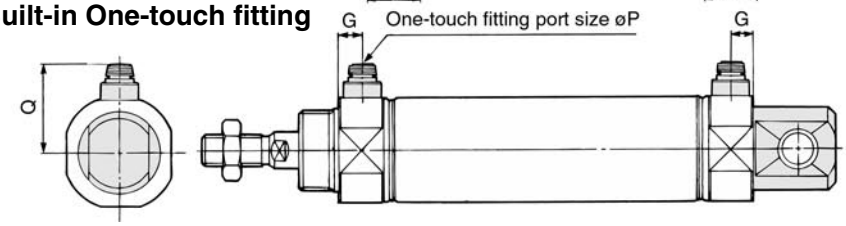
With rod boot



With air cushion



Built-in One-touch fitting



(mm)

Bore	Stroke range	A	AL	B1	CD	CI	CX	D	E	F	G	H	H1	I	K	L	MM	N	NA	NN
20	1 to 300	18	15.5	13	8	20	12	8	$20^{0}_{-0.033}$	13	8	41	5	28	5	12	M8 X 1.25	15	24	M20 X 1.5
25	1 to 300	22	19.5	17	8	22	12	10	$26^{0}_{-0.033}$	13	8	45	6	33.5	5.5	12	M10 X 1.25	15	30	M26 X 1.5
32	1 to 300	22	19.5	17	10	27	20	12	$26^{0}_{-0.033}$	13	8	45	6	37.5	5.5	15	M10 X 1.25	15	34.5	M26 X 1.5
40	1 to 300	24	21	22	10	33	20	14	$32^{0}_{-0.039}$	16	11	50	8	46.5	7	15	M14 X 1.5	21.5	42.5	M32 X 2

Bore	P	RR	S	U	Z	ZZ
20	1/8	9	62	11.5	115	124
25	1/8	9	62	11.5	119	128
32	1/8	12	64	14.5	124	136
40	1/4	12	88	14.5	153	165

With rod boot

Bore \ Symbol / Stroke	e	f	h				
			1 to 50	51 to 100	101 to 150	151 to 200	201 to 300
20	36	17	68	81	93	106	131
25	36	17	72	85	97	110	135
32	36	17	72	85	97	110	135
40	46	19	77	90	102	115	140

With rod boot

(mm)

Bore \ Symbol / Stroke	ℓ					Z					ZZ				
	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	12.5	25	37.5	50	75	142	155	167	180	205	151	164	176	189	214
25	12.5	25	37.5	50	75	146	159	171	184	209	155	168	180	193	218
32	12.5	25	37.5	50	75	151	164	176	189	214	163	176	188	201	226
40	12.5	25	37.5	50	75	180	193	205	218	243	192	205	217	230	255

With air cushion

Bore	N1	WA	WB
20	17.5	13	8.5
25	17.5	13	10.5
32	17.5	13	11.5
40	21.5	16	15

Built-in One-touch fitting

Bore	G	P	Q
20	8	6	23
25	8	6	26
32	8	6	28.5
40	11	8	32.5

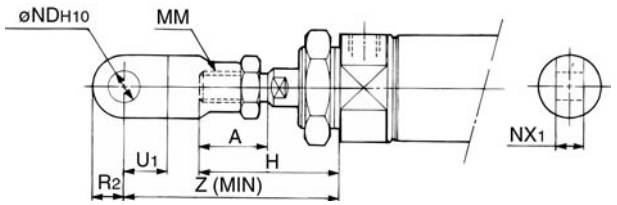
Pivot bracket

(mm)

Bore	LD	LF	LG	LH	LP	LT	LV	LY	LZ
20	6.8	15	30	30	37	3.2	18.4	59	152
25	6.8	15	30	30	37	3.2	18.4	59	156
32	9	15	40	40	50	4	28	75	174
40	9	15	40	40	50	4	28	75	203

Accessory Dimensions

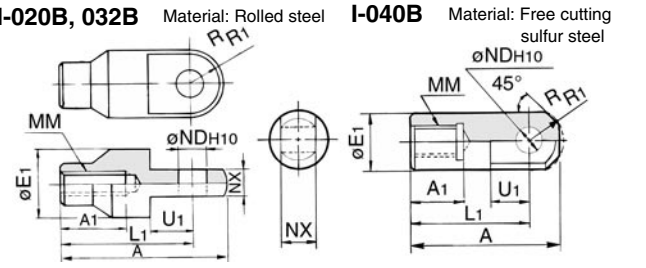
Single Knuckle Joint (mm)



Bore size	A	H	MM	NDH10	NX1	U1	R2	Z
20	18	41	M8 X 1.25	9 $^{+0.058}_{0}$	9 $^{-0.1}_{-0.2}$	14	10	66
25/32	22	45	M10 X 1.25	9 $^{+0.058}_{0}$	9 $^{-0.1}_{-0.2}$	14	10	69
40	24	50	M14 X 1.5	12 $^{+0.070}_{0}$	16 $^{-0.1}_{-0.3}$	20	14	92

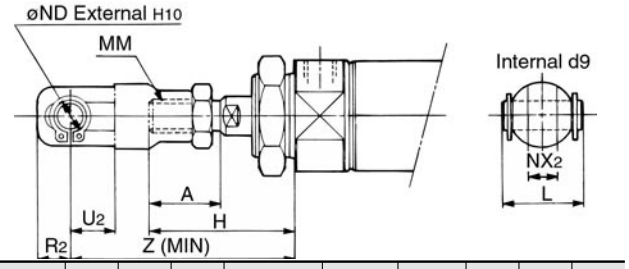
Single Knuckle Joint (mm)

I-020B, 032B Material: Rolled steel **I-040B** Material: Free cutting sulfur steel



Part No.	Applicable bore size	A	A1	E1	L1	MM	NDH10	NX	R1	U1
I-020B	**20**	46	16	20	36	M8 X 1.25	9 $^{+0.058}_{0}$	9 $^{-0.1}_{-0.2}$	10	14
I-032B	**25/32**	48	18	20	38	M10 X 1.25	9 $^{+0.058}_{0}$	9 $^{-0.1}_{-0.2}$	10	14
I-040B	**40**	69	22	24	55	M14 X 1.5	12 $^{+0.070}_{0}$	16 $^{-0.1}_{-0.3}$	15.5	20

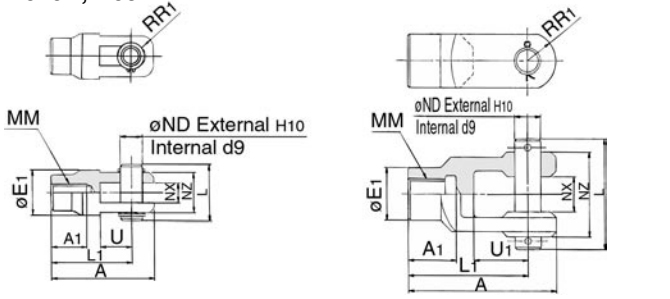
Double Knuckle Joint (mm)



Bore size	A	H	L	MM	ND	NX2	R2	U2	Z
20	18	41	25	M8 X 1.25	9	9 $^{+0.2}_{+0.1}$	10	14	66
25/32	22	45	25	M10 X 1.25	9	9 $^{+0.2}_{+0.1}$	10	14	69
40	24	50	49.7	M14 X 1.5	12	16 $^{+0.3}_{+0.1}$	13	25	92

Double Knuckle Joint (mm)

Y-020B,Y-032B Material: Rolled steel **Y-040B** Material: Cast iron



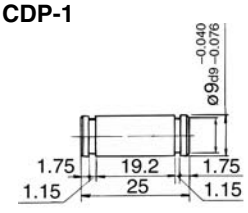
Part No.	Applicable bore size	A	A1	E1	L	L1	MM	ND	NX	NZ	R1	U1	Applicable pin part No.	Snap ring/ Cotter pin size
Y-020B	20	46	16	20	25	36	M8 X 1.25	9	9 $^{+0.2}_{+0.1}$	18	5	14	CDP-1	C9 type for pivot
Y-032B	25,32	48	18	20	25	38	M10 X 1.25	9	9 $^{+0.2}_{+0.1}$	18	5	14	CDP-1	C9 type for pivot
Y-040B	40	68	22	24	49.7	55	M14 X 1.5	12	16 $^{+0.3}_{+0.1}$	38	13	25	CDP-3	ø3 X 18ℓ

∗Clevis pins and snap rings (cotter pins for bore size 40) are attached.

Double Clevis Pin/Material: Carbon steel (mm)

Bore size:ø20, ø25, ø32

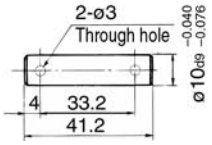
CDP-1



Snap ring: C9 type for pivot

Bore size: ø40

CDP-2

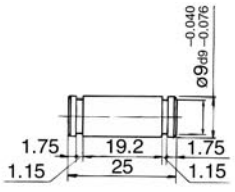


Cotter pin:ø3 X 18ℓ

Double Knuckle Pin/Material: Carbon steel (mm)

Bore size:ø20, ø25, ø32

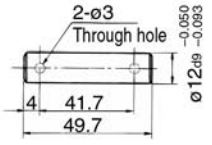
CDP-1



Snap ring: C9 type for pivot

Bore size: ø40

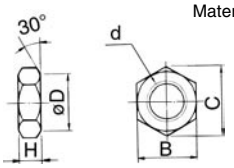
CDP-3



Cotter pin:ø3 X 18ℓ

Rod End Nut (mm)

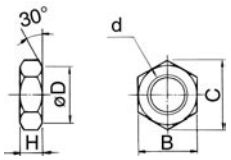
Material: Carbon steel



Part No.	Applicable bore size	B	C	D	d	H
NT-02	**20**	13	15.0	12.5	M8 X 1.25	5
NT-03	**25/32**	17	19.6	16.5	M10 X 1.25	6
NT-04	**40**	22	25.4	21.0	M14 X 1.5	8

Mounting Nut (mm)

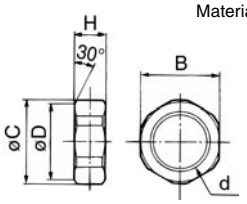
Material: Carbon steel



Part No.	Applicable bore size	B	C	D	d	H
SN-020B	**20**	26	30	25.5	M20 X 1.5	8
SN-032B	**25/32**	32	37	31.5	M26 X 1.5	8
SN-040B	**40**	41	47.3	40.5	M32 X 2.0	10

Trunnion Nut (mm)

Material: Carbon steel

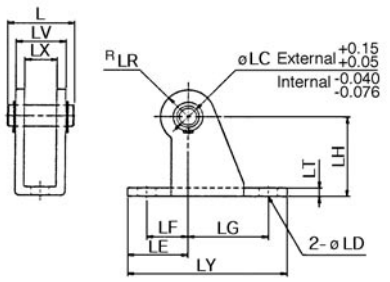


Part No.	Applicable bore size	B	C	D	d	H
TN-020B	**20**	26	28	25.5	M20 X 1.5	10
TN-032B	**25/32**	32	34	31.5	M26 X 1.5	10
TN-040B	**40**	41	45	40.5	M32 X 2	10

Pivot bracket for integrated clevis style CM2E: Please order it separately.

Pivot Bracket (mm)

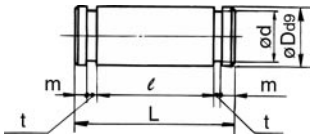
Material: Rolled steel



Part No.	Applicable bore size	L	LC	LD	LE	LF	LG	LH	LR	LT	LX	LY	LV	Applicable pin part No.
CM-E020B	**20/25**	24.5	8	6.8	22	15	30	30	10	3.2	12	59	18.4	CD-S02
CM-E032B	**32/40**	34	10	9	25	15	40	40	13	4	20	75	28	CD-S03

Clevis Pin (mm)

Material: Carbon steel

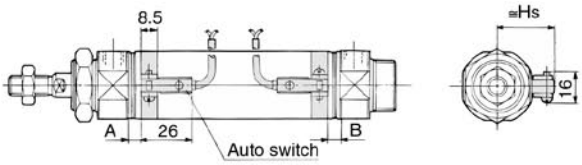


Part No.	Applicable bore size	D_{d9}	d	L	ℓ	m	t	Applicable snap ring part No.
CD-S02	**20/25**	$8^{-0.040}_{-0.076}$	7.6	24.5	19.5	1.6	0.9	C8 type for pivot
CD-S03	**32/40**	$10^{-0.040}_{-0.076}$	9.6	34	29	1.35	1.15	C10 type for pivot

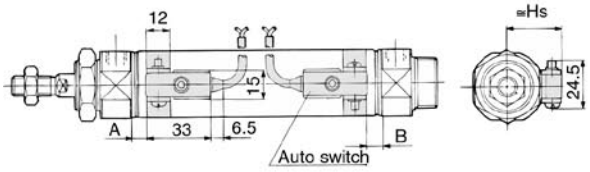
Auto Switch Mounting Position and Mounting Height

Reed Switch

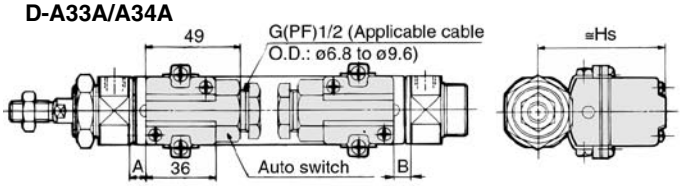
D-C7/C8



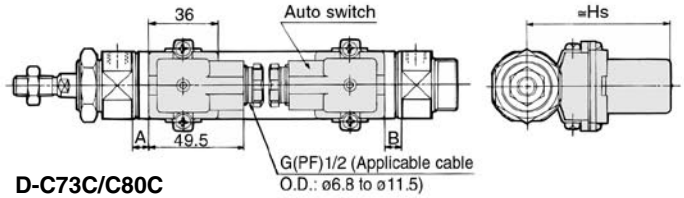
D-B5/B6/B59W



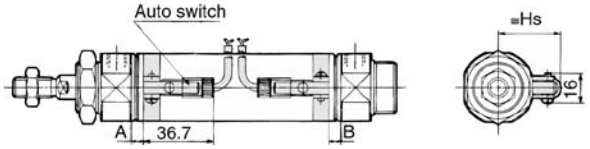
D-A33A/A34A



D-A44A

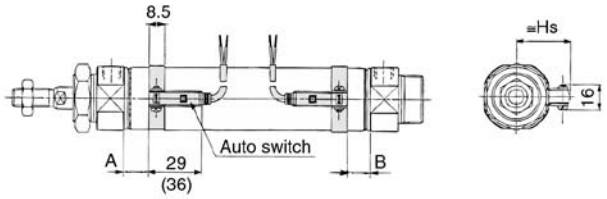


D-C73C/C80C



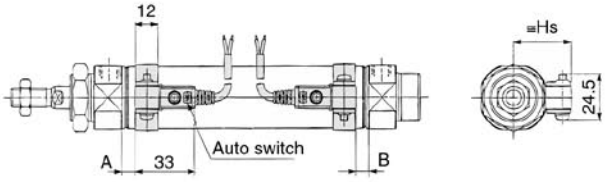
Solid State Switch

D-H7□/H7□W/H7□F/H7BAL

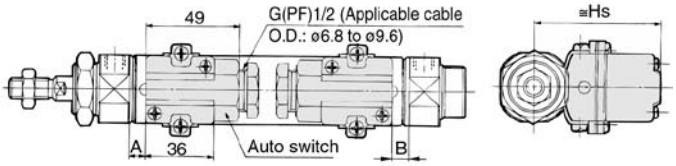


∗( ): D-H7LF

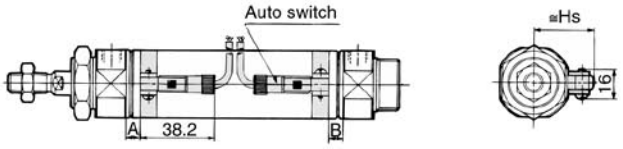
D-G5NTL



D-G39A/K39A



D-H7C



Auto Switch Mounting Position

(mm)

Auto switch model / Bore	D-B5 D-B6		D-C7 D-C8 D-C73C D-C80C		D-B59W		D-A3□A D-G39A D-K39A D-A44A		D-H7□ D-H7C		D-H7□W D-H7BAL D-H7□F		D-G5NTL	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B
ø20	1(0)	0(0)	7(5)	6(4)	4(2)	3(1)	0.5(0)	0(0)	6(4)	5(3)	4.5(2.5)	3.5(1.5)	2.5(0.5)	1.5(0)
ø25	1(0)	0(0)	7(5)	6(4)	4(2)	3(1)	0.5(0)	0(0)	6(4)	5(3)	4.5(2.5)	3.5(1.5)	2.5(0.5)	1.5(0)
ø32	2(0)	1(0)	8(6)	7(5)	5(3)	4(2)	1.5(0)	0.5(0)	7(5)	6(4)	5.5(3.5)	4.5(2.5)	3.5(1.5)	2.5(0.5)
ø40	7	6	13	12	10	9	6.5	5.5	12	11	10.5	9.5	8.5	7.5

∗( ): With air cushion

Mounting Height

(mm)

D-B5 D-B6 D-B59W D-G5NTL D-H7C	D-C7 D-C8 D-H7□ D-H7□W D-H7BAL D-H7□F	D-C73C D-C80C	D-A3□A D-G39A D-K39A	D-A44A
Hs	Hs	Hs	Hs	Hs
25.5	22.5	25	60	69.5
28	25	27.5	62.5	72
31.5	28.5	31	66	75.5
35.5	32.5	35	70	79.5