Air Cylinder

CM3 Series

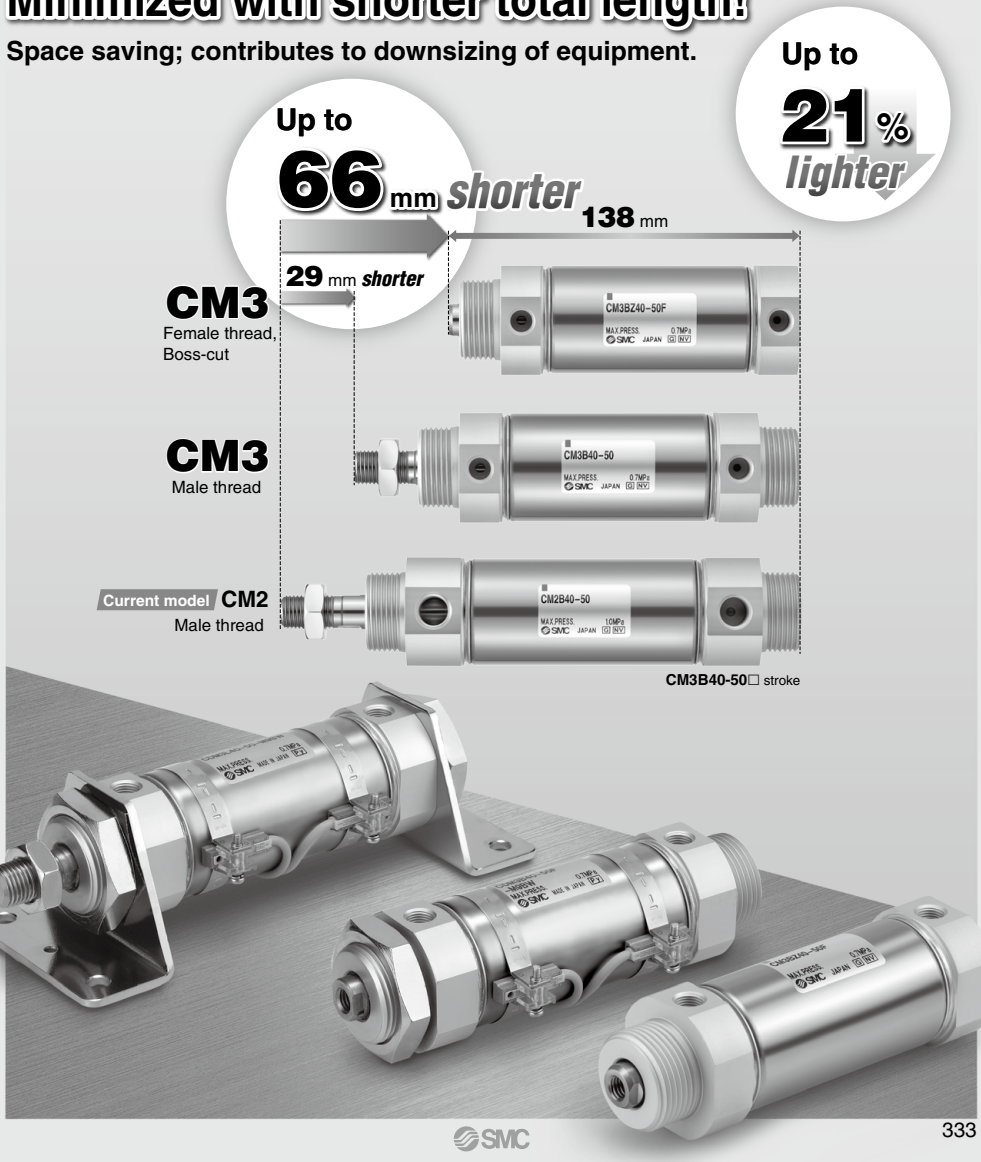
ø20, ø25, ø32, ø40

RoHS

Compact with a new construction!
New release with full functions

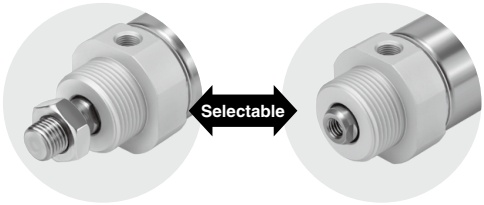
Minimized with shorter total length!

Space saving; contributes to downsizing of equipment.



Female rod end available as standard

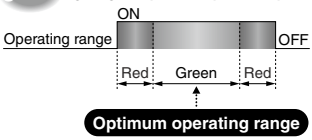
Applications expanded by making it possible to select either male or female thread within the standard model.



2-color indicator solid state auto switch mountable

Possible to confirm whether the position is appropriate at a glance.
Increases effectiveness of adjustment time.

A green light lights up at the optimum operating range.



Shorter total length than CM2 series

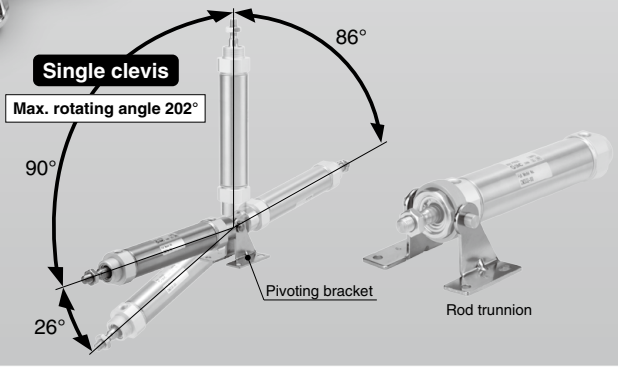
Bore size (mm)	Shortened by
20	17 mm
25	17 mm
32	13 mm
40	29 mm

∗ Compared with the basic type with male thread

Tube is resistant against external shock.
Prevents deformation and damage by external shock.

Small auto switches are mountable.

Pivoting single clevis and trunnion bracket are mountable.
Rotation: Max. 202° (CM3C40)



Series Variations

Series	Bore size (mm)	Standard stroke (mm)	Action	Rod	Mounting	Built-in magnet for auto switch	Rubber bumper	Auto switch
CM3	**20, 25, 32, 40**	25 to 300	Double acting	Single rod	Basic, Foot, Flange, Clevis, Trunnion, etc.	●	●	D-M9□(W), D-A90

Air Cylinder Short Type
Standard: Double Acting, Single Rod
CM3 Series
ø20, ø25, ø32, ø40

RoHS

How to Order

CM3 L 40 – 150 □

With auto switch CDM3 L 40 – 150 □ – M9BW □ – C

With auto switch
(Built-in magnet)

Mounting

B	Basic
L	Foot
F	Rod flange
G	Head flange
C	Single clevis
D	Double clevis
U	Rod trunnion

T	Head trunnion
E	Integrated clevis
BZ	Boss-cut/Basic
FZ	Boss-cut/Rod flange
UZ	Boss-cut/Rod trunnion

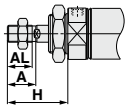
Bore size

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

Rod end thread

Nil	Male thread
F	Female thread
G	Long male rod end*

* G: Same rod end dimensions (A, AL, H) as CM2 series.



Cylinder stroke (mm)
Refer to the next page for standard strokes.

Auto switch mounting bracke Note)

Note) This symbol is indicated when the D-A9□ or M9□ type auto switch is specified. This mounting bracket does not apply to other auto switches (D-C7□ and H7□, etc.) (Nil)

Number of auto switches

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

Auto switch

Nil	Without auto switch

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

Built-in Magnet Cylinder Model

If a built-in magnet cylinder without an auto switch is required, there is no need to enter the symbol for the auto switch.
(Example) CDM3F32-100

Applicable Auto Switches/Refer to pages 1271 to 1365 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	○	○	●	○	—	○		
				3-wire (PNP)			M9PAV*1	M9PA*1	○	○	●	○	—	○		
				2-wire	12 V		M9BAV*1	M9BA*1	○	○	●	○	—	○		
	Diagnostic output (2-color indicator)			4-wire (NPN)	5 V, 12 V		—	H7NF	●	—	●	○	—	○	IC circuit	
Reed auto switch	——	Grommet	Yes	3-wire (Equiv. to NPN)	—	5 V	—	A96V	A96	●	—	●	—	—	—	IC circuit	—
			No	2-wire	24 V	100 V		A93V*2	A93	●	●	●	●	—	—	—	
			No			100 V or less		A90V	A90	●	—	●	—	—	—	IC circuit	Relay, PLC
			Yes			100 V, 200 V		—	B54	●	—	●	●	—	—		
			Yes			200 V or less		—	B64	●	—	●	—	—	—	—	
		Connector	Yes			—		—	C73C	●	—	●	●	●	—		
			No			24 V or less		—	C80C	●	—	●	●	●	—	IC circuit	
		Terminal conduit	Yes			—		—	A33A	—	—	—	—	●	—	—	PLC
		DIN terminal				100 V, 200 V		—	A34A	—	—	—	—	●	—		Relay, PLC
								—	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. A water-resistant type cylinder is recommended for use in an environment which requires water resistance.
*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 the D-A3□A/A44A/G39A/K39A types.
* The D-G39A/K39A cannot be mounted on the bore size ø20.

* Since there are other applicable auto switches than listed above, refer to page 350 for details.
* For details about auto switches with pre-wired connector, refer to pages 1340 and 1341.
* The D-A9□(V), M9□(V), M9□W(V), M9□A(V) type auto switches are shipped together, (but not assembled). (However, auto switch mounting brackets are assembled when being shipped.)

Specifications

Bore size (mm)		20	25	32	40
Type		Pneumatic			
Action		Double acting, Single rod			
Fluid		Air			
Proof pressure		1.0 MPa			
Maximum operating pressure		0.7 MPa			
Minimum operating pressure		0.05 MPa			
Ambient and fluid temperature		Without auto switch: −10 to +70°C (No freezing) With auto switch: −10 to +60°C (No freezing)			
Lubrication		Not required (Non-lube)			
Stroke length tolerance		$^{+1.4}_{0}$ mm			
Piston speed		50 to 750 mm/s			
Cushion		Rubber bumper			
Allowable kinetic energy	**Male rod end**	0.2 J	0.29 J	0.46 J	0.84 J
	Female rod end	0.11 J	0.18 J	0.29 J	0.52 J

∗ Operate the cylinder within the allowable kinetic energy. Refer to page 338 for details.

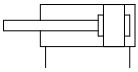
Standard Strokes

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

∗ Other intermediate strokes can be manufactured upon receipt of order.
Manufacture of intermediate strokes in 1 mm increments is possible. (Spacers are not used.)

Symbol

Double acting,
Single rod/Rubber bumper



Refer to pages 347 to 350 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.

Boss-cut

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

Comparison of the Full Length Dimension (Versus CM3□-□ type)

(mm)

ø20	ø25	ø32	ø40
−13	−13	−13	−16

Mounting

■ Boss-cut/Basic (BZ) ■ Boss-cut/Rod flange (FZ)
■ Boss-cut/Rod trunnion (UZ)

Mounting Brackets/Part No.

Mounting bracket	Min. order qty.	Bore size (mm)				Contents (for minimum order quantity)
		20	25	32	40	
Foot ∗	2	CM-L020B	CM-L032B		CM-L040B	2 foots, 1 mounting nut
Flange	1	CM-F020B	CM-F032B		CM-F040B	1 flange
Single clevis ∗∗	1	CM-C020B	CM-C032B		CM-C040B	1 single clevis, 3 liners
Double clevis ∗∗ ∗∗∗ (with pin)	1	CM-D020B	CM-D032B		CM-D040B	1 double clevis, 3 liners, 1 clevis pin, 2 retaining rings
Trunnion (with nut)	1	CM3-T020B	CM3-T032B		CM3-T040B	1 trunnion, 1 trunnion nut

∗ Order 2 foots per cylinder.
∗∗ 3 liners are included with a clevis bracket for adjusting the mounting angle.
∗∗∗ A clevis pin and retaining rings (split pins for ø40) are included.

⚠Warning

1. **Operate the cylinder within the specified cylinder speed, kinetic energy and lateral load at the rod end.**
2. **The allowable kinetic energy is different between the cylinders with male rod end and with female rod end due to the different thread sizes. Refer to page 338.**
3. **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.**

⚠Caution

1. **Use a thin wrench when tightening the piston rod.**

Mounting and Accessories

Mounting \ Accessories	Standard			Option		
	Mounting nut	Rod end nut (male thread)	Clevis pin	Single knuckle joint	Double knuckle joint Note 3)	Pivoting clevis bracket Note 4)
Basic	●(1 pc.)	●	—	●	●	—
Foot	●(2)	●	—	●	●	—
Rod flange	●(1)	●	—	●	●	—
Head flange	●(1)	●	—	●	●	—
Integrated clevis	— Note 1)	●	—	●	●	●
Single clevis	— Note 1)	●	—	●	●	—
Double clevis Note 3)	— Note 1)	●	● Note 5)	●	●	—
Rod trunnion	●(1) Note 2)	●	—	●	●	—
Head trunnion	●(1) Note 2)	●	—	●	●	—
Boss-cut/Basic	●(1)	●	—	●	●	—
Boss-cut/Rod flange	●(1)	●	—	●	●	—
Boss-cut/Rod trunnion	●(1)	●	—	●	●	—

Note 1) Mounting nuts are not attached to the Integrated clevis, single clevis and double clevis types.
Note 2) Trunnion nuts are attached to the rod trunnion and head trunnion types.
Note 3) A pin and retaining rings (split pins for ø40) are included with the double clevis and double knuckle joint.
Note 4) A pivoting clevis bracket pin and retaining rings are included with the pivoting clevis bracket.
Note 5) Retaining rings (split pins for ø40) are included with the clevis pin.

Mounting Brackets, Accessories/Material, Surface Treatment

Segment	Description	Material	Surface treatment
Mounting brackets	Foot	Iron	Nickel plated
	Flange	Iron	Nickel plated
	Single clevis	Iron	Nickel plated
	Double clevis	Iron	Nickel plated
	Trunnion	Iron	Electroless nickel plated
Accessories	Rod end nut (male thread)	Iron	Zinc chromated
	Mounting nut	Iron	Nickel plated
	Trunnion nut	Iron	Nickel plated
	Pivoting clevis bracket	Iron	Nickel plated
	Pivoting clevis bracket pin	Iron	(None)
	Single knuckle joint	Iron	Electroless nickel plated
	Double knuckle joint	Iron	Electroless nickel plated Metallic silver color painted for ø40
	Double clevis pin	Iron	(None)
	Double knuckle joint pin	Iron	(None)

∗ For part numbers and dimensions of accessories, refer to pages 344 and 345.

⚠ 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.

⚠ Caution

1. Do not touch the cylinder during operation at a high speed and a high frequency.
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.

2. Do not use the air cylinder as an air-hydro cylinder.
If it uses turbine oil in place of fluids for cylinder, it will result in oil leakage and damage the product.

Weights

(kg)

Bore size (mm)		20	25	32	40
Basic weight	Basic	0.12	0.18	0.25	0.45
	Long male rod end (G)	0.13	0.20	0.27	0.48
	Female rod end (F)	0.11	0.17	0.23	0.41
	Boss-cut/Basic	0.11	0.17	0.23	0.42
	Boss-cut/Long male rod end	0.12	0.18	0.25	0.45
	Boss-cut/Female rod end	0.10	0.15	0.22	0.38
	Integrated clevis	0.12	0.18	0.26	0.46
	Integrated clevis/Long male rod end	0.13	0.19	0.28	0.48
	Integrated clevis/Female rod end	0.11	0.16	0.25	0.41
Additional weight for bracket	Foot	0.15	0.16	0.16	0.27
	Flange	0.06	0.09	0.09	0.12
	Single clevis	0.04	0.04	0.04	0.09
	Double clevis	0.05	0.06	0.06	0.13
	Trunnion	0.04	0.07	0.07	0.10
Pivoting bracket		0.08	0.09	0.17	0.25
Single knuckle joint		0.05	0.09	0.09	0.10
Double knuckle joint (with pin)		0.05	0.09	0.09	0.13
Additional weight per 50 mm of stroke		0.04	0.06	0.08	0.11
Additional weight for switch magnet		0.01	0.01	0.01	0.01

Calculation: (Example) **CDM3F20-100G**
(Flange type, ø20, 100 mm stroke)
- Basic weight ····· 0.13 (Basic type G, ø20)
- Additional weight for bracket ···· 0.06 (Flange)
- Additional weight for stroke ····· 0.04/50 mm
- Air cylinder stroke ····· 100 mm
- Additional weight for switch magnet ···· 0.01

0.13 + 0.06 + 0.04 x (100/50) + 0.01 = 0.28 kg

Allowable Kinetic Energy

Table (1) Max. Allowable Kinetic Energy [J]

Bore size (mm)	20	25	32	40
Male rod end	0.2	0.29	0.46	0.84
Female rod end	0.11	0.18	0.29	0.52

Kinetic energy E (J) $= \dfrac{(m_1 + m_2)\, V^2}{2}$

m_1: Mass of cylinder movable parts kg
m_2: Load mass kg
V : Piston speed at the end m/s

Table (2) Mass of Cylinder Movable Parts: At Each Rod End/Without Built-in Magnet/0 Stroke [g]

Bore size (mm)	20	25	32	40
Basic	31.2	55.8	82.5	147.3
Long male rod end (G)	39.4	69.4	102.0	172.7
Female rod end (F)	22.4	38.5	66.5	102.3

∗ Mass of the rod end nut is included for the basic type and the long male rod end type (G).

Table (3) Additional Mass [g]

Bore size (mm)	20	25	32	40
Additional mass per 50 mm of stroke	19.6	30.6	44.1	60.6
Switch magnet	3.5	4.0	5.0	6.0

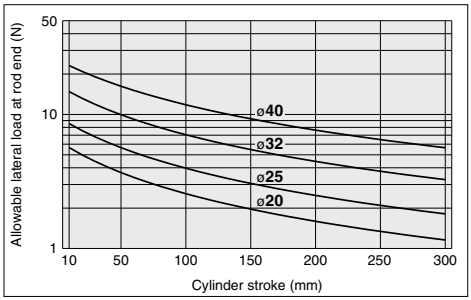
∗ Do not apply a lateral load over the allowable range to the rod end when it is mounted horizontally.

Calculation: (Example) **CDM3B40-175**

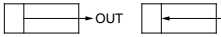
- Basic mass of movable parts: Table (2) Rod end [Basic], Bore size [40] ····· 147.3 g
- Additional mass: Additional mass of stroke 60.6 x 175/50 = 212.1 g ···· 212.1 g
  Switch magnet ····· 6.0 g

Total 365.4 g

Allowable Lateral Load at Rod End



Theoretical Output



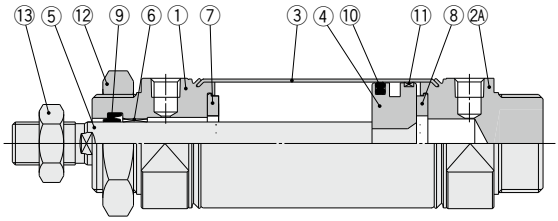
Unit: N

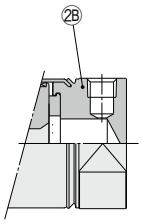
Bore size D (mm)	Rod size d (mm)	Operating direction	Piston area (mm^2)	Operating pressure (MPa) 0.2	0.3	0.4	0.5	0.6	0.7
20	8	OUT	314	62.8	94.2	125.6	157	188.4	219.8
		IN	264	52.8	79.2	105.6	132	158.4	184.8
25	10	OUT	491	98.2	147.3	196.4	245.5	294.6	343.7
		IN	412	82.4	123.6	164.8	206	247.2	288.4
32	12	OUT	804	160.8	241.2	321.6	402	482.4	562.8
		IN	691	138.2	207.3	276.4	345.5	414.6	483.7
40	14	OUT	1257	251.4	377.1	502.8	628.5	754.2	879.9
		IN	1103	220.6	330.9	441.2	551.5	661.8	772.1

∗ Theoretical outpt (N) = Pressure (MPa) x Piston area (mm^2)

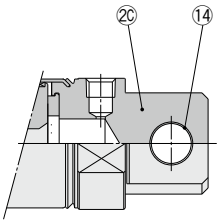
Construction

With rubber bumper





Boss-cut



Clevis integrated

Component Parts

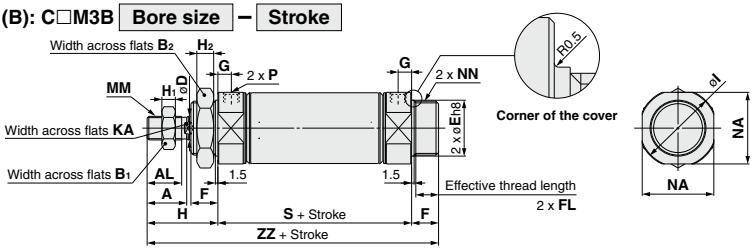
No.	Description	Material	Note
1	**Rod cover**	Aluminum alloy	Anodized
2A	**Head cover A**	Aluminum alloy	Anodized
2B	**Head cover B**	Aluminum alloy	Anodized
2C	**Head cover C**	Aluminum alloy	Anodized
3	**Cylinder tube**	Stainless steel	
4	**Piston**	Aluminum alloy	Chromated
5	**Piston rod**	Carbon steel	Hard chrome plated
6	**Bushing**	Bearing alloy	
7	**Bumper A**	Urethane	
8	**Bumper B**	Urethane	
9	**Rod seal**	NBR	
10	**Piston seal**	NBR	
11	**Wear ring**	Resin	
12	**Mounting nut**	Carbon steel	Nickel plated
13	**Rod end nut**	Carbon steel	Zinc chromated
14	**Bushing for clevis**	Bearing alloy	

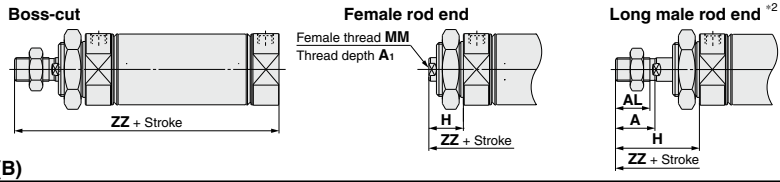
⚠ Caution

1. Not able to disassemble.
Cover and cylinder tube are connected to each other by crimping method, thus making it impossible to disassemble.

Dimensions

Basic (B): C□M3B Bore size – Stroke





Basic (B)

(mm)

Bore size	A	AL	B1	B2	D	E	F	FL	G	H	H1	H2	I	KA	MM	NA	NN
20	14.5	12	13	26	8	$20^{0}_{-0.033}$	13	10.5	6	31	5	8	27.9	Width across flats 6 length 3.5	M8 x 1.25	24	M20 x 1.5
25	17.5	15	17	32	10	$26^{0}_{-0.033}$	13	10.5	6	34	6	8	33.4	Width across flats 8 length 3.5	M10 x 1.25	30	M26 x 1.5
32	17.5	15	17	32	12	$26^{0}_{-0.033}$	13	10.5	8	34	6	8	37.4	Width across flats 10 length 3.5	M10 x 1.25	34.5	M26 x 1.5
40	23.5	20.5	22	41	14	$32^{0}_{-0.039}$	16	13.5	8	42	8	10	46.4	Width across flats 12 length 3.5	M14 x 1.5	42.5	M32 x 2

Bore size	P	S	ZZ
20	M5 x 0.8	55	99
25	M5 x 0.8	56	103
32	Rc1/8	62	109
40	Rc1/8	67	125

Boss-cut (mm)

Bore size	ZZ
20	86
25	90
32	96
40	109

Female Rod End (mm)

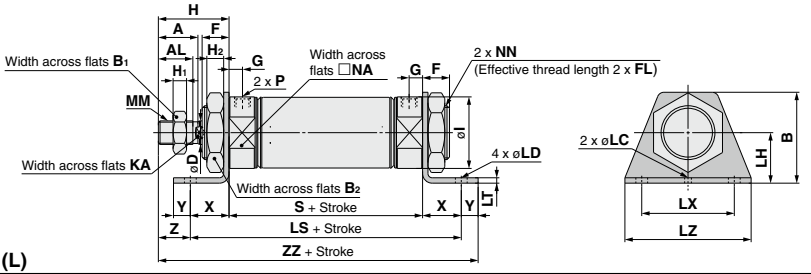
Bore size	A1	H	MM	ZZ
20	8	20	M4 x 0.7	88
25	8	20	M5 x 0.8	89
32	12	20	M6 x 1	95
40	13	21	M8 x 1.25	104

Long Male Rod End (mm)

Bore size	A	AL	H	ZZ
20	18	15.5	41	109
25	22	19.5	45	114
32	22	19.5	45	120
40	24	21	50	133

∗1 Use a thin wrench when tightening the piston rod.
∗2 The dimension from the rod cover to the male rod end of the long male rod end type is the same as the CM2 series.
∗3 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 work piece.

Foot (L): C□M3L Bore size – Stroke



Foot (L)

(mm)

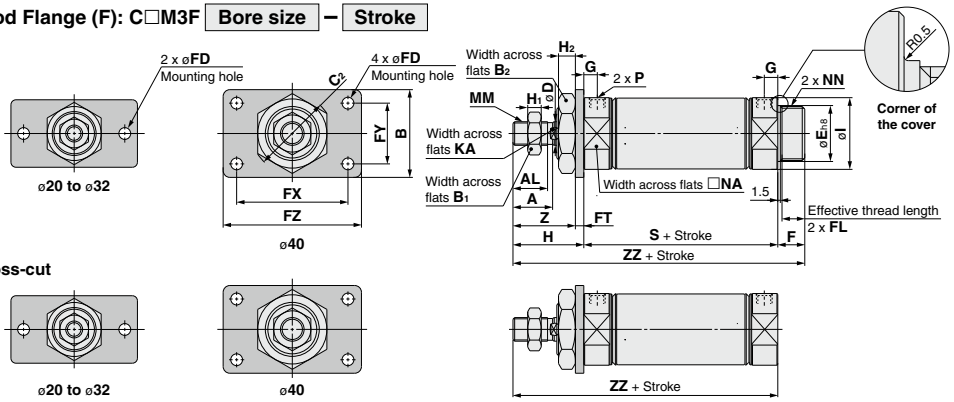
Bore size	A	AL	B	B1	B2	D	F	FL	G	H	H1	H2	I	KA	LC	LD	LH	LS
20	14.5	12	40	13	26	8	13	10.5	6	31	5	8	27.9	Width across flats 6 length 3.5	4	6.8	25	95
25	17.5	15	47	17	32	10	13	10.5	6	34	6	8	33.4	Width across flats 8 length 3.5	4	6.8	28	96
32	17.5	15	47	17	32	12	13	10.5	8	34	6	8	37.4	Width across flats 10 length 3.5	4	6.8	28	102
40	23.5	20.5	54	22	41	14	16	13.5	8	42	8	10	46.4	Width across flats 12 length 3.5	4	7	30	113

Bore size	LT	LX	LZ	MM	NA	NN	P	S	X	Y	Z	ZZ
20	3.2	40	55	M8 x 1.25	24	M20 x 1.5	M5 x 0.8	55	20	8	11	114
25	3.2	40	55	M10 x 1.25	30	M26 x 1.5	M5 x 0.8	56	20	8	14	118
32	3.2	40	55	M10 x 1.25	34.5	M26 x 1.5	Rc1/8	62	20	8	14	124
40	3.2	55	75	M14 x 1.5	42.5	M32 x 2	Rc1/8	67	23	10	19	142

∗ Use a thin wrench when tightening the piston rod.
∗ Refer to the dimensions of the basic type for the female rod end type and the long male rod end type.

Dimensions

Rod Flange (F): C□M3F Bore size – Stroke



Boss-cut

Rod Flange (F)

(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
20	14.5	12	34	13	26	30	8	$20^{0}_{-0.033}$	13	7	10.5	4	60	—	75	6	31	5	8
25	17.5	15	40	17	32	37	10	$26^{0}_{-0.033}$	13	7	10.5	4	60	—	75	6	34	6	8
32	17.5	15	40	17	32	37	12	$26^{0}_{-0.033}$	13	7	10.5	4	60	—	75	8	34	6	8
40	23.5	20.5	52	22	41	47.3	14	$32^{0}_{-0.039}$	16	7	13.5	5	66	36	82	8	42	8	10

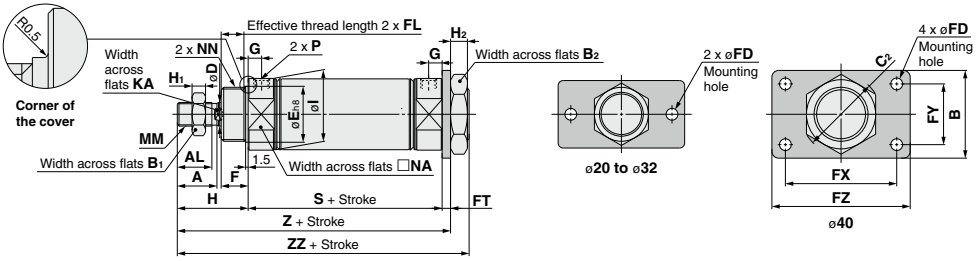
Bore size	I	KA	MM	NA	NN	P	S	Z	ZZ
20	27.9	Width across flats 6 length 3.5	M8 x 1.25	24	M20 x 1.5	M5 x 0.8	55	27	99
25	33.4	Width across flats 8 length 3.5	M10 x 1.25	30	M26 x 1.5	M5 x 0.8	56	30	103
32	37.4	Width across flats 10 length 3.5	M10 x 1.25	34.5	M26 x 1.5	Rc1/8	62	30	109
40	46.4	Width across flats 12 length 3.5	M14 x 1.5	42.5	M32 x 2	Rc1/8	67	37	125

Boss-cut (mm)

Bore size	ZZ
20	86
25	90
32	96
40	109

∗ Use a thin wrench when tightening the piston rod.
∗ Refer to the dimensions of the basic type for the female rod end type and the long male rod end type.

Head Flange (G): C□M3G Bore size – Stroke



Head Flange (G)

(mm)

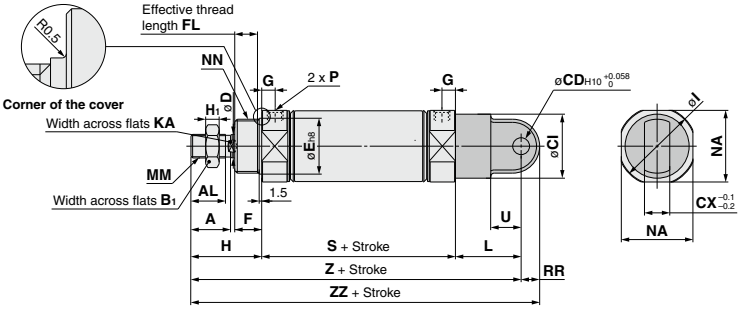
Bore size	A	AL	B	B_1	B_2	C_2	D	E	F	FD	FL	FT	FX	FY	FZ	G	H	H_1	H_2
20	14.5	12	34	13	26	30	8	$20^{0}_{-0.033}$	13	7	10.5	4	60	—	75	6	31	5	8
25	17.5	15	40	17	32	37	10	$26^{0}_{-0.033}$	13	7	10.5	4	60	—	75	6	34	6	8
32	17.5	15	40	17	32	37	12	$26^{0}_{-0.033}$	13	7	10.5	4	60	—	75	8	34	6	8
40	23.5	20.5	52	22	41	47.3	14	$32^{0}_{-0.039}$	16	7	13.5	5	66	36	82	8	42	8	10

Bore size	I	KA	MM	NA	NN	P	S	Z	ZZ
20	27.9	Width across flats 6 length 3.5	M8 x 1.25	24	M20 x 1.5	M5 x 0.8	55	90	99
25	33.4	Width across flats 8 length 3.5	M10 x 1.25	30	M26 x 1.5	M5 x 0.8	56	94	103
32	37.4	Width across flats 10 length 3.5	M10 x 1.25	34.5	M26 x 1.5	Rc1/8	62	100	109
40	46.4	Width across flats 12 length 3.5	M14 x 1.5	42.5	M32 x 2	Rc1/8	67	114	125

∗ Use a thin wrench when tightening the piston rod.
∗ Refer to the dimensions of the basic type for the female rod end type and the long male rod end type.

Dimensions

Single Clevis (C): C□M3C **Bore size** – **Stroke**



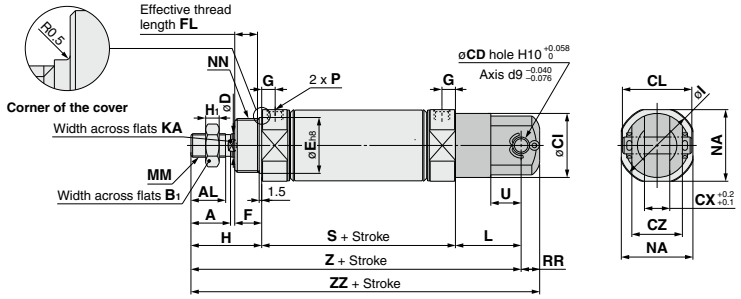
Single Clevis (C) (mm)

Bore size	A	AL	B1	CD	CI	CX	D	E	F	FL	G	H	H1	I	KA	L
20	14.5	12	13	9	24	10	8	$20^{0}_{-0.033}$	13	10.5	6	31	5	27.9	Width across flats 6 length 3.5	30
25	17.5	15	17	9	30	10	10	$26^{0}_{-0.033}$	13	10.5	6	34	6	33.4	Width across flats 8 length 3.5	30
32	17.5	15	17	9	30	10	12	$26^{0}_{-0.033}$	13	10.5	8	34	6	37.4	Width across flats 10 length 3.5	30
40	23.5	20.5	22	10	38	15	14	$32^{0}_{-0.039}$	16	13.5	8	42	8	46.4	Width across flats 12 length 3.5	39

Bore size	MM	NA	NN	P	RR	S	U	Z	ZZ
20	M8 x 1.25	24	M20 x 1.5	M5 x 0.8	9	55	14	116	125
25	M10 x 1.25	30	M26 x 1.5	M5 x 0.8	9	56	14	120	129
32	M10 x 1.25	34.5	M26 x 1.5	Rc1/8	9	62	14	126	135
40	M14 x 1.5	42.5	M32 x 2	Rc1/8	11	67	18	148	159

∗ Use a thin wrench when tightening the piston rod.
∗ Refer to the dimensions of the basic type for the female rod end type and the long male rod end type.

Double Clevis (D): C□M3D **Bore size** – **Stroke**



Double Clevis (D) (mm)

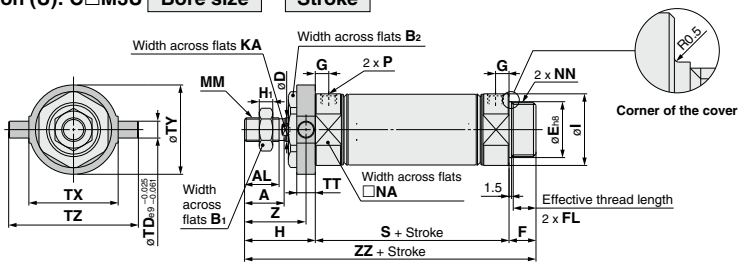
Bore size	A	AL	B1	CD	CI	CL	CX	CZ	D	E	F	FL	G	H	H1	I	KA
20	14.5	12	13	9	24	25	10	19	8	$20^{0}_{-0.033}$	13	10.5	6	31	5	27.9	Width across flats 6 length 3.5
25	17.5	15	17	9	30	25	10	19	10	$26^{0}_{-0.033}$	13	10.5	6	34	6	33.4	Width across flats 8 length 3.5
32	17.5	15	17	9	30	25	10	19	12	$26^{0}_{-0.033}$	13	10.5	8	34	6	37.4	Width across flats 10 length 3.5
40	23.5	20.5	22	10	38	41.2	15	30	14	$32^{0}_{-0.039}$	16	13.5	8	42	8	46.4	Width across flats 12 length 3.5

Bore size	L	MM	NA	NN	P	RR	S	U	Z	ZZ
20	30	M8 x 1.25	24	M20 x 1.5	M5 x 0.8	9	55	14	116	125
25	30	M10 x 1.25	30	M26 x 1.5	M5 x 0.8	9	56	14	120	129
32	30	M10 x 1.25	34.5	M26 x 1.5	Rc1/8	9	62	14	126	135
40	39	M14 x 1.5	42.5	M32 x 2	Rc1/8	11	67	18	148	159

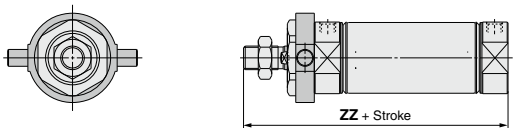
∗ A clevis pin and retaining rings (split pins for ø40) are shipped together.
∗ Use a thin wrench when tightening the piston rod.
∗ Refer to the dimensions of the basic type for the female rod end type and the long male rod end type.

Dimensions

Rod Trunnion (U): C□M3U Bore size – Stroke



Boss-cut



Rod Trunnion (U)

(mm)

Bore size	A	AL	B1	B2	D	E	F	FL	G	H	H1	I	KA	MM	NA
20	14.5	12	13	26	8	$20^{0}_{-0.033}$	13	10.5	6	31	5	27.9	Width across flats 6 length 3.5	M8 x 1.25	24
25	17.5	15	17	32	10	$26^{0}_{-0.033}$	13	10.5	6	34	6	33.4	Width across flats 8 length 3.5	M10 x 1.25	30
32	17.5	15	17	32	12	$26^{0}_{-0.033}$	13	10.5	8	34	6	37.4	Width across flats 10 length 3.5	M10 x 1.25	34.5
40	23.5	20.5	22	41	14	$32^{0}_{-0.039}$	16	13.5	8	42	8	46.4	Width across flats 12 length 3.5	M14 x 1.5	42.5

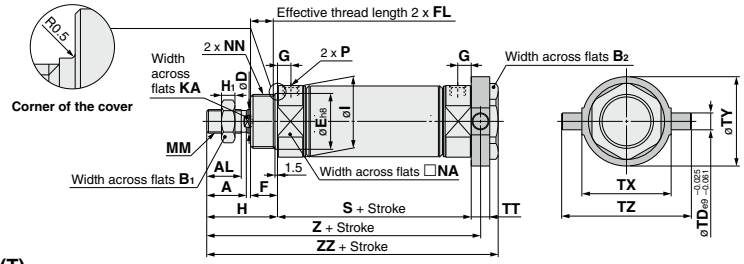
Bore size	NN	P	S	TD	TT	TX	TY	TZ	Z	ZZ
20	M20 x 1.5	M5 x 0.8	55	8	10	32	32	52	26	99
25	M26 x 1.5	M5 x 0.8	56	9	10	40	40	60	29	103
32	M26 x 1.5	Rc1/8	62	9	10	40	40	60	29	109
40	M32 x 2	Rc1/8	67	10	11	53	53	77	36.5	125

Boss-cut (mm)

Bore size	ZZ
20	86
25	90
32	96
40	109

∗ Use a thin wrench when tightening the piston rod.
∗ Refer to the dimensions of the basic type for the female rod end type and the long male rod end type.

Head Trunnion (T): C□M3T Bore size – Stroke



Head Trunnion (T)

(mm)

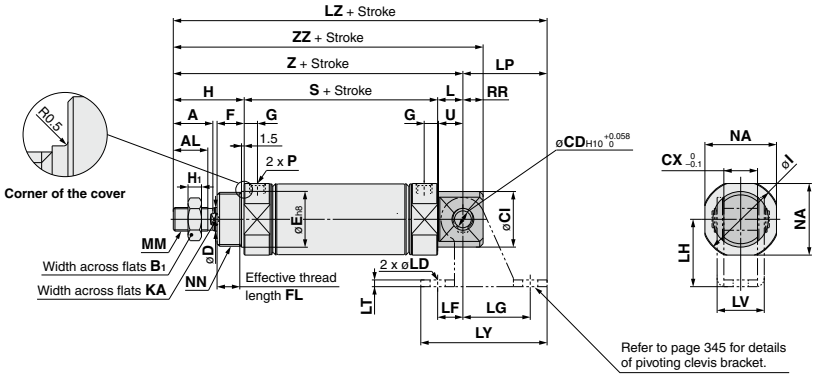
Bore size	A	AL	B1	B2	D	E	F	FL	G	H	H1	I	KA	MM	NA
20	14.5	12	13	26	8	$20^{0}_{-0.033}$	13	10.5	6	31	5	27.9	Width across flats 6 length 3.5	M8 x 1.25	24
25	17.5	15	17	32	10	$26^{0}_{-0.033}$	13	10.5	6	34	6	33.4	Width across flats 8 length 3.5	M10 x 1.25	30
32	17.5	15	17	32	12	$26^{0}_{-0.033}$	13	10.5	8	34	6	37.4	Width across flats 10 length 3.5	M10 x 1.25	34.5
40	23.5	20.5	22	41	14	$32^{0}_{-0.039}$	16	13.5	8	42	8	46.4	Width across flats 12 length 3.5	M14 x 1.5	42.5

Bore size	NN	P	S	TD	TT	TX	TY	TZ	Z	ZZ
20	M20 x 1.5	M5 x 0.8	55	8	10	32	32	52	91	101
25	M26 x 1.5	M5 x 0.8	56	9	10	40	40	60	95	105
32	M26 x 1.5	Rc1/8	62	9	10	40	40	60	101	111
40	M32 x 2	Rc1/8	67	10	11	53	53	77	114.5	125

∗ Use a thin wrench when tightening the piston rod.
∗ Refer to the dimensions of the basic type for the female rod end type and the long male rod end type.

Dimensions

Integrated Clevis (E): C□M3E **Bore size** – **Stroke**



Integrated Clevis (E)

(mm)

Bore size	A	AL	B_1	CD	CI	CX	D	E	F	FL	G	H	H_1	I	KA	L
20	14.5	12	13	8	20	12	8	$20^{0}_{-0.033}$	13	10.5	6	31	5	27.9	Width across flats 6 length 3.5	12
25	17.5	15	17	8	22	12	10	$26^{0}_{-0.033}$	13	10.5	6	34	6	33.4	Width across flats 8 length 3.5	12
32	17.5	15	17	10	27	20	12	$26^{0}_{-0.033}$	13	10.5	8	34	6	37.4	Width across flats 10 length 3.5	15
40	23.5	20.5	22	10	33	20	14	$32^{0}_{-0.039}$	16	13.5	8	42	8	46.4	Width across flats 12 length 3.5	15

Bore size	MM	NA	NN	P	RR	S	U	Z	ZZ
20	M8 x 1.25	24	M20 x 1.5	M5 x 0.8	9	55	11.5	98	107
25	M10 x 1.25	30	M26 x 1.5	M5 x 0.8	9	56	11.5	102	111
32	M10 x 1.25	34.5	M26 x 1.5	Rc1/8	12	62	14.5	111	123
40	M14 x 1.5	42.5	M32 x 2	Rc1/8	12	67	14.5	124	136

Pivoting Clevis Bracket

(mm)

Bore size	LD	LF	LG	LH	LP	LT	LV	LY	LZ
20	6.8	15	30	30	37	3.2	18.4	59	135
25	6.8	15	30	30	37	3.2	18.4	59	139
32	9	15	40	40	50	4	28	75	161
40	9	15	40	40	50	4	28	75	174

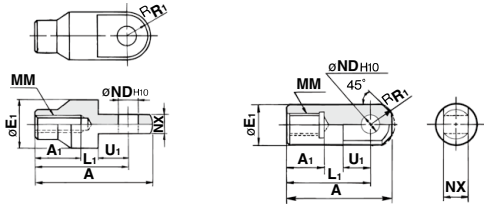
∗ Use a thin wrench when tightening the piston rod.
∗ Refer to the dimensions of the basic type for the female rod end type and the long male rod end type.

Dimensions of Accessories 1

Single Knuckle Joint

(mm)

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



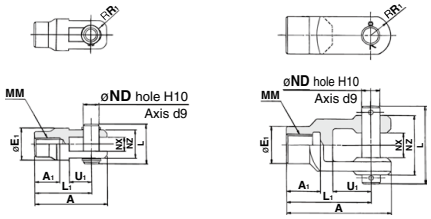
Part no.	Applicable bore size	A	A_1	E_1	L_1	MM	ND_{H10}	NX	R_1	U_1
I-020B	**20**	46	16	20	36	M8 x 1.25	$9^{+0.058}_{0}$	$9^{-0.1}_{-0.2}$	10	14
I-032B	**25, 32**	48	18	20	38	M10 x 1.25	$9^{+0.058}_{0}$	$9^{-0.1}_{-0.2}$	10	14
I-040B	**40**	69	22	24	55	M14 x 1.5	$12^{+0.070}_{0}$	$16^{-0.1}_{-0.3}$	15.5	20

∗ Use a thin wrench when tightening the piston rod.

Double Knuckle Joint

(mm)

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



Part no.	Applicable bore size	A	A_1	E_1	L	L_1	MM	ND	NX	NZ	R_1	U_1	Included pin part no.	Retaining ring Split 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	Type C9 for axis
Y-032B	**25, 32**	48	18	20	25	38	M10 x 1.25	9	$9^{+0.2}_{+0.1}$	18	5	14	CDP-1	Type C9 for axis
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

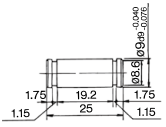
∗ A knuckle pin and retaining rings (split pins for ø40) are included.

Double Clevis Pin

(mm)

Bore size/ø20, ø25, ø32

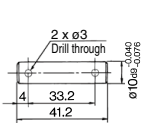
CDP-1 Material: Carbon steel



Retaining ring: Type C9 for axis

Bore size/ø40

CDP-2 Material: Carbon steel



Split pin: ø3 x 18ℓ

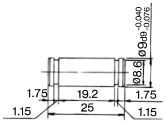
∗ Retaining rings (split pins for ø40) are included.

Double Knuckle Joint Pin

(mm)

Bore size/ø20, ø25, ø32

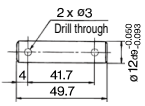
CDP-1 Material: Carbon steel



Retaining ring: Type C9 for axis

Bore size/ø40

CDP-3 Material: Carbon steel



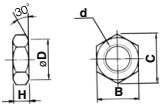
Split pin: ø3 x 18ℓ

∗ Retaining rings (split pins for ø40) are included.

Rod End Nut

(mm)

Material: Carbon steel

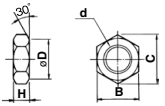


Part no.	Applicable bore size	B	C	D	d	H
NT-02	**20**	13	15.0	12.5	M8 x 1.25	5
NT-03	**25, 32**	17	19.6	16.5	M10 x 1.25	6
NT-04	**40**	22	25.4	21.0	M14 x 1.5	8

Mounting Nut

(mm)

Material: Carbon steel

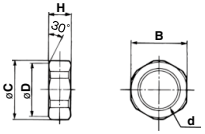


Part no.	Applicable bore size	B	C	D	d	H
SN-020B	**20**	26	30	25.5	M20 x 1.5	8
SN-032B	**25, 32**	32	37	31.5	M26 x 1.5	8
SN-040B	**40**	41	47.3	40.5	M32 x 2.0	10

Trunnion Nut

(mm)

Material: Carbon steel

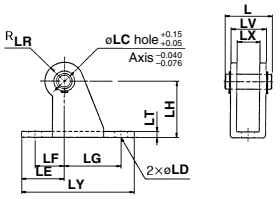


Part no.	Applicable bore size	B	C	D	d	H
TN-020B	**20**	26	28	25.5	M20 x 1.5	10
TN-032B	**25, 32**	32	34	31.5	M26 x 1.5	10
TN-040B	**40**	41	45	40.5	M32 x 2	10

Pivoting Clevis Bracket (For CM3E)

(mm)

Material: Carbon steel



Part no.	Applicable bore size	L	LC	LD	LE	LF	LG	LH	LR
CM-E020B	**20, 25**	24.5	8	6.8	22	15	30	30	10
CM-E032B	**32, 40**	34	10	9	25	15	40	40	13

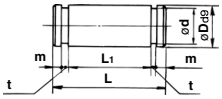
Part no.	Applicable bore size	LT	LX	LY	LV	Included pin part no.
CM-E020B	**20, 25**	3.2	12	59	18.4	CD-S02
CM-E032B	**32, 40**	4	20	75	28	CD-S03

Note 1) A pivoting clevis bracket pin and retaining rings are included.
Note 2) It cannot be used for the single clevis (CM3C) and double clevis (CM3D) types.

Pivoting Clevis Bracket Pin (For CM3E)

(mm)

Material: Carbon steel



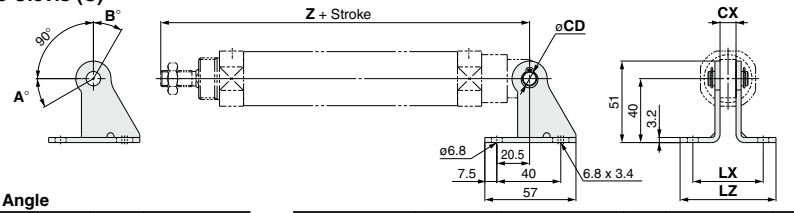
Part no.	Applicable bore size	D_{d9}	d	L	L_1	m	t	Included retaining ring
CD-S02	**20, 25**	$8^{-0.040}_{-0.076}$	7.6	24.5	19.5	1.6	0.9	Type C8 for axis
CD-S03	**32, 40**	$10^{-0.040}_{-0.076}$	9.6	34	29	1.35	1.15	Type C10 for axis

Note) Retaining rings are included.

CM3 Series
Dimensions of Accessories 2

Dimensions

■Single Clevis (C)



Rotating Angle

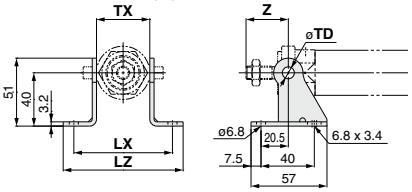
Bore size (mm)	A°	B°	A° + B° + 90°
20	25	85	200
25, 32	21	81	192
40	26	86	202

(mm)

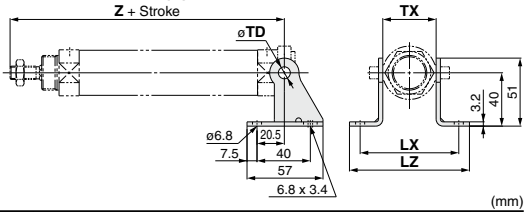
Mounting	Part no.	Applicable bore size	CX	Z + Stroke	CD	LX	LZ
CM3C (Single clevis)	**CM-B032**	**20**	10	116	9	44	60
		25		120			
		32		126			
	CM-B040	**40**	15	148	10	49	65

Note 1) A pivoting bracket pin and retaining rings are not included with the pivoting bracket.
Note 2) The above dimensions are for the male rod end type.

■Rod Trunnion (U)



■Head Trunnion (T)



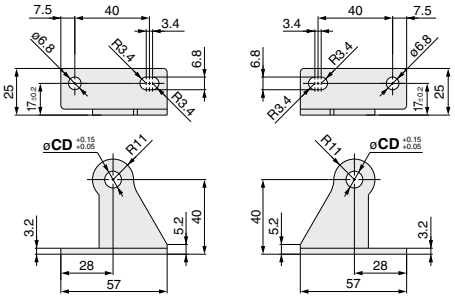
(mm)

Mounting	Part no.	Applicable bore size	TX	Rod trunnion Z	Head trunnion Z + Stroke	TD	LX	LZ
CM3U, CM3T (Rod trunnion, Head trunnion)	**CM-B020**	**20**	32	26	91	8	66	82
	CM-B032	**25**	40	29	95	9	74	90
		32			101			
	CM-B040	**40**	53	36.5	114.5	10	87	103

Note 1) A pivoting bracket pin and retaining rings are not included with the pivoting bracket.
Note 2) The above dimensions are for the male rod end type.

Pivoting Bracket

∗ Pivoting brackets consist of a set of two brackets.

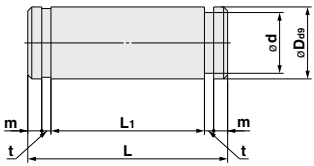


(mm)

Part no.	CD
CM-B020 Note 2)	8
CM-B032	9
CM-B040	10

Note 1) A pivoting bracket pin and retaining rings are not included with the pivoting bracket.
Note 2) **CM-B020** is applicable only for trunnion type.

Pivoting Bracket Pin



(mm)

Applicable bore size	Part no.	Dd9	d	L	L1	m	t	Included retaining ring
20, 25, 32	**CDP-1**	$9^{-0.040}_{-0.076}$	8.6	25	19.2	1.75	1.15	Type C9 for axis
40	**CD-S03**	$10^{-0.040}_{-0.076}$	9.6	34	29	1.35	1.15	Type C10 for axis

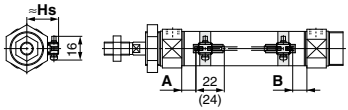
Note) Retaining rings are included with the pivoting bracket pin.

Auto Switch Mounting 1

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

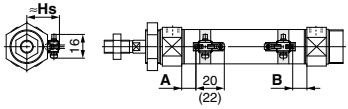
Solid state auto switch

D-M9□
D-M9□W
D-M9□A



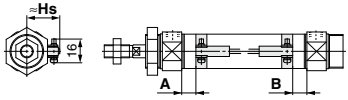
( ): Dimension of the D-M9□A.
A and B are the dimensions from the end of the head cover/rod cover to the end of the auto switch.

D-M9□V
D-M9□WV
D-M9□AV

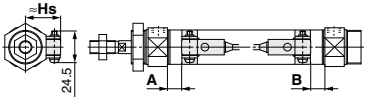


( ): Dimension of the D-M9□AV.
A and B are the dimensions from the end of the head cover/rod cover to the end of the auto switch.

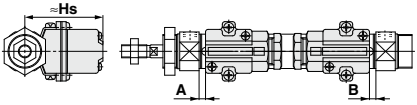
D-H7□/H7□W/H7NF/H7BA/H7C



D-G5NT

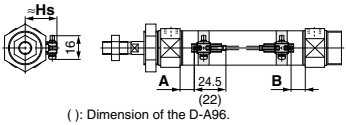


D-G39A/K39A



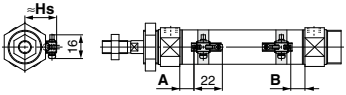
Reed auto switch

D-A9□



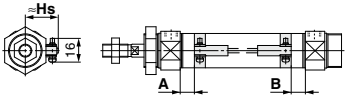
( ): Dimension of the D-A96.
A and B are the dimensions from the end of the head cover/rod cover to the end of the auto switch.

D-A9□V

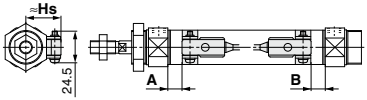


A and B are the dimensions from the end of the head cover/rod cover to the end of the auto switch.

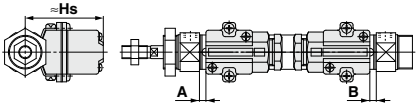
D-C7/C8/C73C/C80C



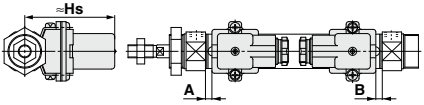
D-B5/B6/B59W



D-A33A/A34A



D-A44A



Auto Switch Mounting 2

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

Auto Switch Proper Mounting Position

(mm)

Auto switch model / Bore size	D-M9□(V) D-M9□W(V) D-M9□A(V)		D-A9□(V)		D-B54 D-B64		D-C73C D-C80C		D-B59W		D-A3□A D-A44A D-G39A Note 2) D-K39A Note 2)		D-H7C D-H7BA D-H7NF		D-G5NT	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
20	10	9	6	5	0.5	0	6.5	5.5	3.5	2.5	0	0	5.5	4.5	2	1
25	10	10	6	6	0.5	0.5	6.5	6.5	3.5	3.5	0	0	5.5	5.5	2	2
32	10	10	6	6	0.5	0.5	6.5	6.5	3.5	3.5	0	0	5.5	5.5	2	2
40	12	12	8	8	2.5	2.5	8.5	8.5	5.5	5.5	2	2	7.5	7.5	4	4

Note 1) Adjust the auto switch after confirming the operating condition in the actual setting.
Note 2) The D-G39A/K39A cannot be mounted on the bore size ø20.
Note 3) For the combination of the following auto switches, bore sizes and mounting positions, the auto switch cannot be mounted to the port side.
- D-G5□ type: On the head side and the rod side of the bore size ø32
- D-B5□/B64 types (except B59W) ··· On the head side of the bore size ø20, ø32, On the rod side of the bore size ø32

Auto Switch Mounting Height

(mm)

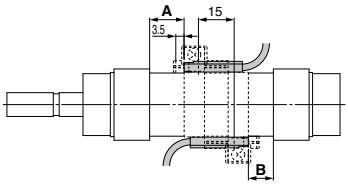
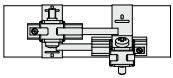
Auto switch model / Bore size	D-M9□V D-M9□WV D-M9□AV D-A9□V	D-M9□ D-M9□W D-M9□A D-A9□ D-H7□ D-H7□W D-H7NF D-H7BA D-C7/C8	D-G5NT D-H7C D-B5□ D-B64 D-B59W	D-C73C D-C80C	D-G39A D-K39A D-A3□A	D-A44A
	Hs	Hs	Hs	Hs	Hs	Hs
20	23.5	22.5	25.5	25	60	69.5
25	26	25	28	27.5	62.5	72
32	29.5	28.5	31.5	31	66	75.5
40	33.5	32.5	35.5	35	70	79.5

Minimum Stroke for Auto Switch Mounting

n: Number of auto switches (mm)

Auto switch model	Number of auto switches				
	With 1 pc.	With 2 pcs.		With n pcs.	
		Different surfaces	Same surface	Different surfaces	Same surface
D-M9□	5	20	55	$20 + 35\frac{(n-2)}{2}$ (n = 2, 4, 6…)	55 + 35 (n – 2) (n = 2, 3, 4, 5…)
D-M9□W	10	20	55	$20 + 35\frac{(n-2)}{2}$ (n = 2, 4, 6…)	55 + 35 (n – 2) (n = 2, 3, 4, 5…)
D-M9□A	10	25	60	$25 + 35\frac{(n-2)}{2}$ (n = 2, 4, 6…)	60 + 35 (n – 2) (n = 2, 3, 4, 5…)
D-A9□	5	15	50	$15 + 35\frac{(n-2)}{2}$ (n = 2, 4, 6…)	50 + 35 (n – 2) (n = 2, 3, 4, 5…)
D-M9□V	5	20	35	$20 + 35\frac{(n-2)}{2}$ (n = 2, 4, 6…)	35 + 35 (n – 2) (n = 2, 3, 4, 5…)
D-A9□V	5	15	25	$15 + 35\frac{(n-2)}{2}$ (n = 2, 4, 6…)	25 + 35 (n – 2) (n = 2, 3, 4, 5…)
D-M9□WV **D-M9□AV**	10	20	35	$20 + 35\frac{(n-2)}{2}$ (n = 2, 4, 6…)	35 + 35 (n – 2) (n = 2, 3, 4, 5…)
D-C7□ **D-C80**	5	20	60	$20 + 45\frac{(n-2)}{2}$ (n = 2, 4, 6…)	60 + 45 (n – 2) (n = 2, 3, 4, 5…)
D-H7□ **D-H7□W** **D-H7BA** **D-H7NF**	10	25	70	$25 + 45\frac{(n-2)}{2}$ (n = 2, 4, 6…)	70 + 45 (n – 2) (n = 2, 3, 4, 5…)
D-C73C **D-C80C** **D-H7C**	15	30	80	$30 + 50\frac{(n-2)}{2}$ (n = 2, 4, 6…)	80 + 50 (n – 2) (n = 2, 3, 4, 5…)
D-B5□ **D-B64** **D-G5□** **D-K59□**	10	25	70	$25 + 50\frac{(n-2)}{2}$ (n = 2, 4, 6…)	70 + 50 (n – 2) (n = 2, 3, 4, 5…)
D-B59W	15	30	75	$30 + 50\frac{(n-2)}{2}$ (n = 2, 4, 6…)	75 + 50 (n – 2) (n = 2, 3, 4, 5…)
D-A3□A **D-G39A** **D-K39A** **D-A44A**	20	35	110	$35 + 30\frac{(n-2)}{2}$ (n = 2, 4, 6…)	110 + 100 (n – 2) (n = 2, 3, 4, 5…)

Note 1) Auto switch mounting

Auto switch model	With 2 auto switches	
	Different surfaces	Same surface
	 Correct auto switch mounting position is 3.5 mm from the back face of the switch holder.	 The auto switch is mounted by slightly displacing it in a direction (cylinder tube circumferential exterior) so that the auto switch and lead wire do not interfere with each other.
D-M9□ **D-M9□W**	Less than 20 stroke Note 2)	Less than 55 stroke Note 2)
D-M9□A	Less than 25 stroke Note 2)	Less than 60 stroke Note 2)
D-A9□	—	Less than 50 stroke Note 2)

Note 2) Minimum stroke for auto switch mounting in types other than those mentioned in Note 1

Auto Switch Mounting 3

Operating Range

(mm)

Auto switch model	Bore size			
	20	25	32	40
D-M9□(V) D-M9□W(V) D-M9□A(V)	3	3	4	3.5
D-A9□	6	6	6	6
D-C7□/C80 D-C73C/C80C	7	8	8	8
D-B5□/B64 D-A3□A/A44A	8	8	9	9
D-B59W	12	12	13	13
D-H7□/H7□W/H7BA D-G5NT/H7NF	4	4	4.5	5
D-H7C	7	8.5	9	10
D-G39A/K39A	8	9	9	9

∗ Values which include hysteresis are for guideline purposes only, they are not a guarantee (assuming approximately ±30% dispersion) and may change substantially depending on the ambient environment.

Auto Switch Mounting Brackets/Part No.

Auto switch model	Bore size (mm)			
	20	25	32	40
D-M9□(V) D-M9□W(V) D-A9□(V)	Note 1) BM5-020 (A set of a, b, c, d)	Note 1) BM5-025 (A set of a, b, c, d)	Note 1) BM5-032 (A set of a, b, c, d)	Note 1) BM5-040 (A set of a, b, c, d)
D-M9□A(V) Note 2)	BM5-020S (A set of b, c, e, f)	BM5-025S (A set of b, c, e, f)	BM5-032S (A set of b, c, e, f)	BM5-040S (A set of b, c, e, f)
D-H7□ D-H7□W D-H7NF D-C7□/C80 D-C73C/C80C	BM2-020A (A set of c and d)	BM2-025A (A set of c and d)	BM2-032A (A set of c and d)	BM2-040A (A set of c and d)
D-H7BA	BM2-020AS (A set of c and f)	BM2-025AS (A set of c and f)	BM2-032AS (A set of c and f)	BM2-040AS (A set of c and f)
D-B5□/B64 D-B59W D-G5□/K59 D-G5□W/K59W D-G5BA/G59F D-G5NT	BA2-020 (A set of c and d)	BA2-025 (A set of c and d)	BA2-032 (A set of c and d)	BA2-040 (A set of c and d)
D-A3□A/A44A D-G39A/K39A	BM3-020 (A set of c and d)	BM3-025 (A set of c and d)	BM3-032 (A set of c and d)	BM3-040 (A set of c and d)

Note 1) Since the switch bracket (made from nylon) are affected in an environment where alcohol, chloroform, methylamines, hydrochloric acid or sulfuric acid is splashed over, so it cannot be used. Please consult SMC regarding other chemicals.

Note 2) When mounting a D-M9□A(V) type auto switch, if the switch bracket is mounted on the indicator light, it may damage the auto switch. Therefore, be sure to avoid mounting the switch bracket on the indicator light.

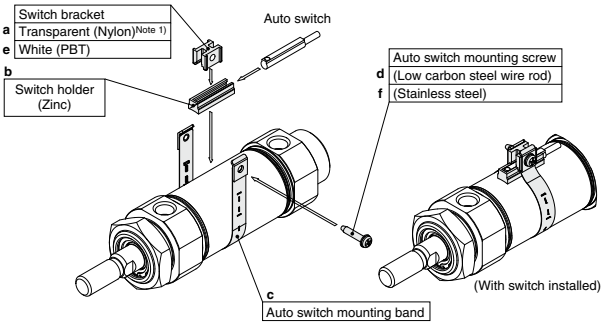
[Stainless Steel Mounting Screw]

The following stainless steel mounting screw is available. Use it in accordance with the operating environment. (Since switch mounting bracket is not included, order it separately.)

BBA4: For D-C7/C8/H7 types

Note 4) Refer to page 1370 for details of BBA4 screws.

The above stainless steel screws are used when a cylinder is shipped with the D-H7BAL auto switches. When only an auto switch is shipped independently, the BBA4 screw is attached.



∗ Band (c) is mounted so that the projected part is on the internal side (contact side with the tube).

Other than the applicable auto switches listed in "How to Order," the following auto switches are mountable.

Refer to pages 1271 to 1365 for detailed specifications.

Type	Model	Electrical entry	Features
Solid state auto switch	D-H7A1, H7A2, H7B	Grommet (In-line)	—
	D-H7NW, H7PW, H7BW		Diagnostic indication(2-color indicator)
	D-H7BA		Water resistant(2-color indicator)
	D-G5NT		With timer
Reed auto switch	D-B53, C73, C76		—
	D-C80		Without indicator light

∗ With pre-wired connector is also available for solid state auto switches. For details, refer to pages 1340 and 1341.

∗ Normally closed (NC = b contact) solid state auto switches (D-M9□E(V)) are also available. For details, refer to page 1290.