

Low Speed Cylinder

Double Acting, Single Rod

Series CM2X

ø20, ø25, ø32, ø40

How to Order

Mounting style

B	Basic style	T	Head side trunnion style
L	Axial foot style	E	Clevis integrated style
F	Rod side flange style	BZ	Boss-cut basic style
G	Head side flange style	FZ	Boss-cut rod side flange style
C	Single clevis style	UZ	Boss-cut rod side trunnion style
D	Double clevis style		
U	Rod side trunnion style		

Cylinder stroke (mm)
Refer to "Standard Stroke" on page 1281.

Auto switch mounting bracket ^(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)

With auto switch **Low speed cylinder**

With auto switch (Built-in magnet)

Thread type

Nil	Rc
TN	NPT
TF	G

Bore size

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

Auto switch

Nil	Without auto switch
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* For the applicable auto switch model, refer to the table below.

Number of auto switches

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

CM2X L 40 - 150

CDM2X L 40 - 150 - M9BW - C

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) CDM2XF32-100

Applicable Auto Switches

Refer to pages 1893 to 2007 for further information on auto switches.

Type	Special function	Electrical entry	Indicating light	Wiring (Output)	Load voltage		Auto switch model		Lead wire (m)					Pre-wired connector	Applicable load							
					DC	AC	Perpendicular	In-line	0.5	1	3	5	None									
									(Nil)	(M)	(L)	(Z)				(N)						
Solid state auto switch	—	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	M9NV	M9N	●	●	●	○	—	○	IC circuit	Relay, PLC					
				3-wire (PNP)				M9PV	M9P	●	●	●	○	—	○							
				2-wire				M9BV	M9B	●	●	●	○	—	○							
		Connector		—				H7C	●	●	●	○	—	○								
		Terminal conduit		—				G39A	—	—	—	●	—	—	—			—	—	—	—	—
		—		—				K39A	—	—	—	●	—	—	—			—	—	—	—	—
	Diagnostic indication (2-color)	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	—	M9NVV	M9NV	●	●	●	○	—	○	IC circuit	—				
				3-wire (PNP)					M9PVV	M9PV	●	●	●	○	—	○						
				2-wire					M9BVV	M9BV	●	●	●	○	—	○						
				4-wire (NPN)					—	H7NF	●	●	●	○	—	○						
Reed auto switch	—	Grommet	Yes	3-wire (Equiv. NPN)	24 V	12 V	—	A96V	A96	●	●	—	—	—	—	—	—					
				Connector				2-wire	100 V	A93V	A93	●	—	●	—	—	—	—	—	—	—	
									100 V or less	A90V	A90	●	—	●	—	—	—	—	—	—	—	
									100 V, 200 V	—	B54	●	—	●	—	—	—	—	—	—	—	
									200 V or less	—	B64	●	—	●	—	—	—	—	—	—	—	
		Terminal conduit		2-wire				—	—	C73C	●	—	●	—	—	—	—	—	—	—	—	—
								24 V or less	—	C80C	●	—	●	—	—	—	—	—	—	—	—	—
								—	—	A33A	—	—	—	●	—	—	—	—	—	—	—	—
								—	—	A34A	—	—	—	●	—	—	—	—	—	—	—	—
								100 V, 200 V	—	A44A	—	—	—	●	—	—	—	—	—	—	—	—
Diagnostic indication (2-color)	Grommet	Yes	—	—	—	—	—	B59W	●	—	●	—	—	—	—	—	—					

* Lead wire length symbols: 0.5 m Nil (Example) M9NV
1 m M (Example) M9NWM
3 m L (Example) M9NWL
5 m Z (Example) M9NZL
None N (Example) H7CN

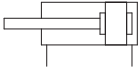
* Solid state auto switches marked with "○" are produced upon receipt of order.
* Do not add the suffix (N) indicating "no lead wire" to the part numbers of models D-A3□A, A44A, G39A and K39A.

* In addition to the models in the above table, there are some other auto switches that are applicable. For more information, refer to page 1293.
* Refer to pages 1960 and 1961 for details of auto switches with a pre-wired connector.
* D-A9□/M9□ auto switches are shipped together (not assembled). (Only auto switch mounting brackets are assembled before shipped.)



Symbol

Double acting, Single rod/Rubber bumper



Standard Stroke

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

* Manufacture of intermediate strokes at 1 mm intervals is possible. (Spacers are not used.)



Precautions

Be sure to read before handling.
Refer to front matter 39 for Safety Instructions and pages 3 to 12 for Actuator and Auto Switch Precautions.

Operating Precautions

Warning

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

Caution

- Be careful of the retaining ring to pop out.
 - When replacing the rod seal, take care that the retaining ring does not spring out while you are removing it.

Maintenance

Caution

- Replacement parts/Seal kit
Order it in accordance with the bore size.

Bore size (mm)	Kit no.	Contents
20	CM2X20-PS	Rod seal: 1 pc.
25	CM2X25-PS	
32	CM2X32-PS	Grease pack (10 g): 1 pc.
40	CM2X40-PS	

2. Grease pack

When maintenance requires only grease, use the following part numbers to order.

Grease pack part no.:

- GR-L-005 (5 g)
- GR-L-010 (10 g)
- GR-L-150 (150 g)

Specifications

Bore size (mm)	20	25	32	40
Type	Pneumatic			
Action	Double acting, Single rod			
Fluid	Air			
Proof pressure	1.5 MPa			
Maximum operating pressure	1.0 MPa			
Minimum operating pressure	0.025 MPa			
Ambient and fluid temperature	Without auto switch: -10 to 70°C (No freezing) With auto switch: -10 to 60°C (No freezing)			
Cushion	Rubber bumper			
Lubrication	Not required (Non-lube)			
Stroke length tolerance	+1.4 mm 0			

Piston Speed

Bore size (mm)	20	25	32	40
Piston speed (mm/s)	0.5 to 300			
Allowable kinetic energy (J)	0.27	0.4	0.65	1.2

Mounting Bracket Part No.

Mounting bracket	Minimum order	Bore size (mm)				Description (when ordering a minimum number)
		20	25	32	40	
Axial foot*	2	CM-L020B	CM-L032B	CM-L040B		Foot 2 pcs., Mounting nut 1 pc.
Flange	1	CM-F020B	CM-F032B	CM-F040B		Flange 1 pc.
Single clevis**	1	CM-C020B	CM-C032B	CM-C040B		Single clevis 1 pc., Liner 3 pcs.
Double clevis (with pin)***	1	CM-D020B	CM-D032B	CM-D040B		Double clevis 1 pc., Liner 3 pcs., Clevis pin 1 pc., Retaining ring 2 pcs.
Trunnion (with nut)	1	CM-T020B	CM-T032B	CM-T040B		Trunnion 1 pc., Trunnion nut 1 pc.

* When ordering foot brackets, order 2 pieces per cylinder unit.
** Three liners are included in the clevis bracket for adjusting an angle when mounting it.
*** Clevis pin and retaining ring (cotter pin for ø40) are shipped together.

Mounting Style and Accessory

Accessory	Standard equipment			Option				
	Mounting nut	Rod end nut	Clevis pin	Single knuckle joint	Double (3) knuckle joint	Clevis (4) bracket	Pivot (6) bracket	Pivot (7) bracket pin
Basic style	● (1 pc.)	●	—	●	●	—		
Axial foot style	● (2)	●	—	●	●	—		
Rod side flange style	● (1)	●	—	●	●	—	—	—
Head side flange style	● (1)	●	—	●	●	—		
Clevis integrated style	— Note 1)	●	—	●	●	●		
Single clevis style	— Note 1)	●	—	●	●	—	●	●
Double clevis style (3)	— Note 1)	●	● Note 5)	●	●	—	—	—
Rod side trunnion style	● (1) Note 2)	●	—	●	●	—		
Head side trunnion style	● (1) Note 2)	●	—	●	●	—	●	—
Boss-cut basic style	● (1)	●	—	●	●	—		
Boss-cut flange style	● (1)	●	—	●	●	—	—	—
Boss-cut trunnion style	● (1)	●	—	●	●	—		

Note 1) Mounting nut is not equipped with clevis integrated style, single clevis style and double clevis style.
Note 2) Trunnion nuts are attached for rod side trunnion and head side trunnion styles.
Note 3) Pin and retaining ring are shipped together with double clevis and double knuckle joint. (ø40 is cotter pin.)
Note 4) Pins and retaining rings are packed with clevis brackets.
Note 5) Retaining rings (cotter pins for ø40) are included in the clevis pins.
Note 6) Pivot brackets come with pins and retaining rings.
Note 7) Pivot bracket pins come with retaining rings.

REA

REB

REC

CFY

CMX

MQ

RHC

RZQ

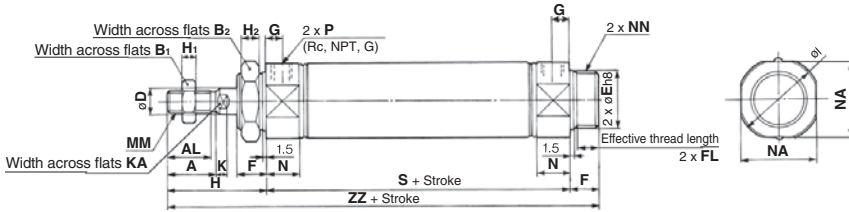
D-□

-X□

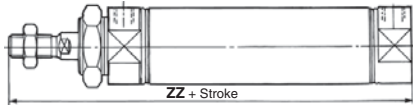
Series CM2X

Basic Style (B)

CM2XB —



Boss-cut style



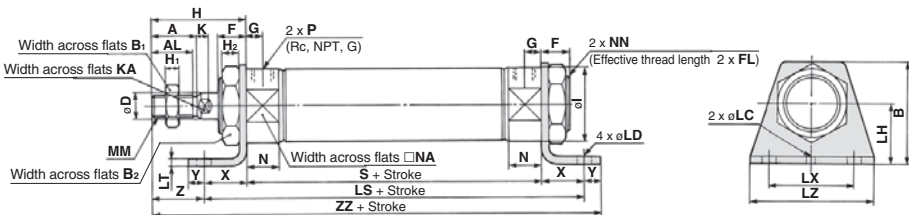
Bore size (mm)	A	AL	B ₁	B ₂	D	E	F	FL	G	H	H ₁	H ₂	I	K	KA	MM	N	NA	NN	P	S	ZZ
20	18	15.5	13	26	8	20 ⁰ _{-0.033}	13	10.5	8	41	5	8	28	5	6	M8 x 1.25	15	24	M20 x 1.5	1/8	62	116
25	22	19.5	17	32	10	26 ⁰ _{-0.033}	13	10.5	8	45	6	8	33.5	5.5	8	M10 x 1.25	15	30	M26 x 1.5	1/8	62	120
32	22	19.5	17	32	12	26 ⁰ _{-0.033}	13	10.5	8	45	6	8	37.5	5.5	10	M10 x 1.25	15	34.5	M26 x 1.5	1/8	64	122
40	24	21	22	41	14	32 ⁰ _{-0.039}	16	13.5	11	50	8	10	46.5	7	12	M14 x 1.5	21.5	42.5	M32 x 2	1/4	88	154

Boss-cut Style (mm)

Bore size (mm)	ZZ
20	103
25	107
32	109
40	138

Axial Foot Style (L)

CM2XL —

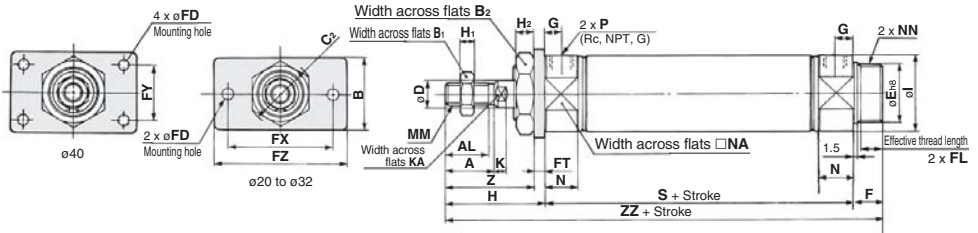


Bore size (mm)	A	AL	B	B ₁	B ₂	D	F	FL	G	H	H ₁	H ₂	I	K	KA	LC	LD	LH	LS	LT	LX	LZ	MM	N	NA	NN	P	S	X	Y	Z	ZZ
20	18	15.5	40	13	26	8	13	10.5	8	41	5	8	28	5	6	4	6.8	25	102	3.2	40	55	M8 x 1.25	15	24	M20 x 1.5	1/8	62	20	8	21	131
25	22	19.5	47	17	32	10	13	10.5	8	45	6	8	33.5	5.5	8	4	6.8	28	102	3.2	40	55	M10 x 1.25	15	30	M26 x 1.5	1/8	62	20	8	25	135
32	22	19.5	47	17	32	12	13	10.5	8	45	6	8	37.5	5.5	10	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	24	21	54	22	41	14	16	13.5	11	50	8	10	46.5	7	12	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

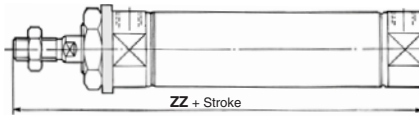
* Mounting bracket is supplied with the product.

Rod Side Flange Style (F)

CM2XF —



Boss-cut style



Bore size (mm)	A	AL	B	B ₁	B ₂	C ₂	D	E	F	FL	FD	FT	FX	FY	FZ	G	H	H ₁	H ₂	I	K	KA	MM	N	NA	NN	P	S	Z	ZZ
20	18	15.5	34	13	26	30	8	20 ⁰ _{-0.033}	13	10.5	7	4	60	—	75	8	41	5	8	28	5	6	M8 x 1.25	15	24	M20 x 1.5	1/8	62	37	116
25	22	19.5	40	17	32	37	10	26 ⁰ _{-0.033}	13	10.5	7	4	60	—	75	8	45	6	8	33.5	5.5	8	M10 x 1.25	15	30	M26 x 1.5	1/8	62	41	120
32	22	19.5	40	17	32	37	12	26 ⁰ _{-0.033}	13	10.5	7	4	60	—	75	8	45	6	8	37.5	5.5	10	M10 x 1.25	15	34.5	M26 x 1.5	1/8	64	41	122
40	24	21	52	22	41	47.3	14	32 ⁰ _{-0.039}	16	13.5	7	5	66	36	82	11	50	8	10	46.5	7	12	M14 x 1.5	21.5	42.5	M32 x 2	1/4	88	45	154

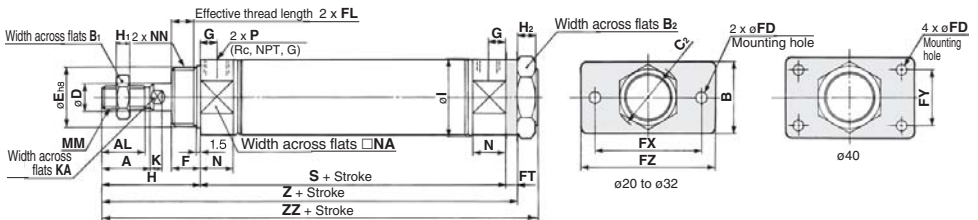
Boss-cut Style (mm)

Bore size (mm)	ZZ
20	103
25	107
32	109
40	138

* Mounting bracket is supplied with the product.

Head Side Flange Style (G)

CM2XG —



Bore size (mm)	A	AL	B	B ₁	B ₂	C ₂	D	E	F	FL	FD	FT	FX	FY	FZ	G	H	H ₁	H ₂	I
20	18	15.5	34	13	26	30	8	20 ⁰ _{-0.033}	13	10.5	7	4	60	—	75	8	41	5	8	28
25	22	19.5	40	17	32	37	10	26 ⁰ _{-0.033}	13	10.5	7	4	60	—	75	8	45	6	8	33.5
32	22	19.5	40	17	32	37	12	26 ⁰ _{-0.033}	13	10.5	7	4	60	—	75	8	45	6	8	37.5
40	24	21	52	22	41	47.3	14	32 ⁰ _{-0.039}	16	13.5	7	5	66	36	82	11	50	8	10	46.5

Bore size (mm)	K	KA	MM	N	NA	NN	P	S	Z	ZZ
20	5	6	M8 x 1.25	15	24	M20 x 1.5	1/8	62	107	116
25	5.5	8	M10 x 1.25	15	30	M26 x 1.5	1/8	62	111	120
32	5.5	10	M10 x 1.25	15	34.5	M26 x 1.5	1/8	64	113	122
40	7	12	M14 x 1.5	21.5	42.5	M32 x 2	1/4	88	143	154

* Mounting bracket is supplied with the product.

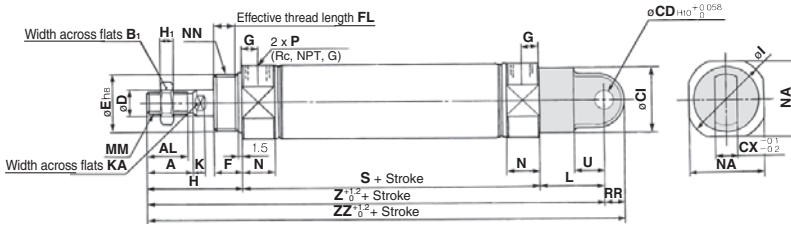
- REA
- REB
- REC
- CY
- CX
- MQ
- RHC
- RZQ

- D-□
- X□

Series CM2X

Single Clevis Style (C)

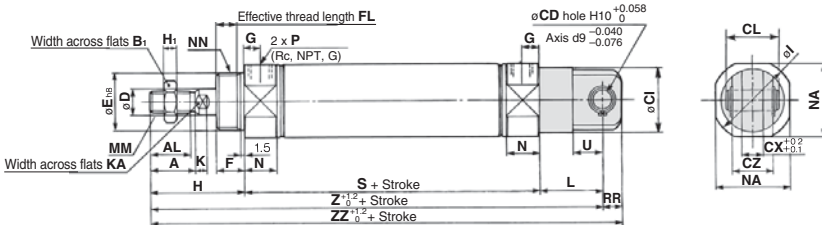
CM2XC —



Bore size (mm)	A	AL	B ₁	CI	CD	CX	D	E	F	FL	G	H	H ₁	I	K	KA	L	MM	N	NA	NN	P	RR	S	U	Z	ZZ
20	18	15.5	13	24	9	10	8	20 ^{-0.033}	13	10.5	8	41	5	28	5	6	30	M8 x 1.25	15	24	M20 x 1.5	1/8	9	62	14	133	142
25	22	19.5	17	30	9	10	10	26 ^{-0.033}	13	10.5	8	45	6	33.5	5.5	8	30	M10 x 1.25	15	30	M26 x 1.5	1/8	9	62	14	137	146
32	22	19.5	17	30	9	10	12	26 ^{-0.033}	13	10.5	8	45	6	37.5	5.5	10	30	M10 x 1.25	15	34.5	M26 x 1.5	1/8	9	64	14	139	148
40	24	21	22	38	10	15	14	32 ^{-0.039}	16	13.5	11	50	8	46.5	7	12	39	M14 x 1.5	21.5	42.5	M32 x 2	1/4	11	88	18	177	188

Double Clevis Style (D)

CM2XD —

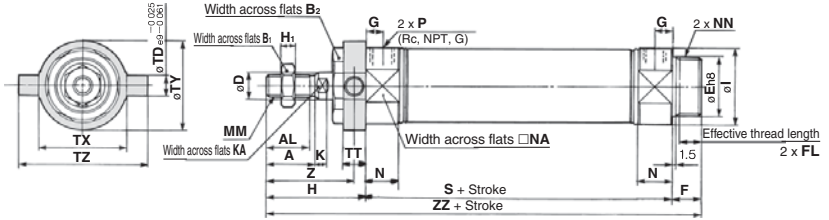


Bore size (mm)	A	AL	B ₁	CD	CL	CX	CZ	D	E	F	FL	G	H	H ₁	I	K	KA	L	MM	N	NA	NN	P	RR	S	U	Z	ZZ	
20	18	15.5	13	9	24	10	19	8	20 ^{-0.033}	13	10.5	8	41	5	28	5	6	30	M8 x 1.25	15	24	M20 x 1.5	1/8	9	62	14	133	142	
25	22	19.5	17	9	30	25	10	19	10	26 ^{-0.033}	13	10.5	8	45	6	33.5	5.5	8	30	M10 x 1.25	15	30	M26 x 1.5	1/8	9	62	14	137	146
32	22	19.5	17	9	30	25	10	19	12	26 ^{-0.033}	13	10.5	8	45	6	37.5	5.5	10	30	M10 x 1.25	15	34.5	M26 x 1.5	1/8	9	64	14	139	148
40	24	21	22	10	38	41.2	15	30	14	32 ^{-0.039}	16	13.5	11	50	8	46.5	7	12	39	M14 x 1.5	21.5	42.5	M32 x 2	1/4	11	88	18	177	188

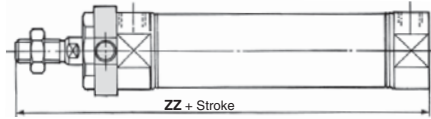
* Clevis pin and retaining ring (cotter pin for bore size $\phi 40$) are shipped together.

Rod Side Trunnion Style (U)

CM2XU –



Boss-cut style



Bore size (mm)	A	AL	B ₁	B ₂	D	E	F	FL	G	H	H ₁	I	K	KA	MM	N	NA	NN	P
20	18	15.5	13	26	8	20 ⁰ _{-0.0333}	13	10.5	8	41	5	28	5	6	M8 x 1.25	15	24	M20 x 1.5	1/8
25	22	19.5	17	32	10	26 ⁰ _{-0.0333}	13	10.5	8	45	6	33.5	5.5	8	M10 x 1.25	15	30	M26 x 1.5	1/8
32	22	19.5	17	32	12	26 ⁰ _{-0.0333}	13	10.5	8	45	6	37.5	5.5	10	M10 x 1.25	15	34.5	M26 x 1.5	1/8
40	24	21	22	41	14	32 ⁰ _{-0.0333}	16	13.5	11	50	8	46.5	7	12	M14 x 1.5	21.5	42.5	M32 x 2	1/4

Bore size (mm)	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

* Mounting bracket is supplied with the product.

Boss-cut Style (mm)

Bore size (mm)	ZZ
20	103
25	107
32	109
40	138

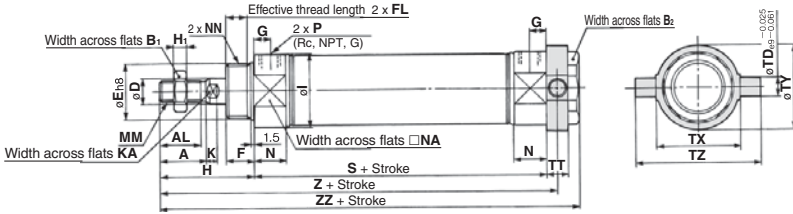
- REA
- REB
- REC
- CQY
- CQX
- MQ
- RHC
- RZQ

- D-□
- X□

Series CM2X

Head Side Trunnion Style (T)

CM2XT –



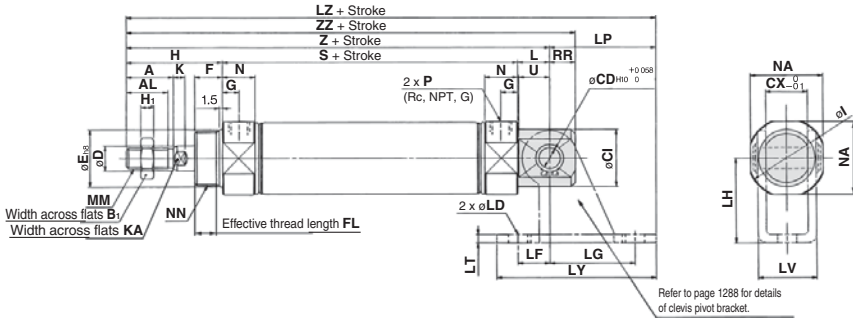
Bore size (mm)	A	AL	B ₁	B ₂	D	E	F	FL	G	H	H ₁	I	K	KA	MM	N	NA	NN	P
20	18	15.5	13	26	8	20 ⁰ _{-0.033}	13	10.5	8	41	5	28	5	6	M8 x 1.25	15	24	M20 x 1.5	1/8
25	22	19.5	17	32	10	26 ⁰ _{-0.033}	13	10.5	8	45	6	33.5	5.5	8	M10 x 1.25	15	30	M26 x 1.5	1/8
32	22	19.5	17	32	12	26 ⁰ _{-0.033}	13	10.5	8	45	6	37.5	5.5	10	M10 x 1.25	15	34.5	M26 x 1.5	1/8
40	24	21	22	41	14	32 ⁰ _{-0.039}	16	13.5	11	50	8	46.5	7	12	M14 x 1.5	21.5	42.5	M32 x 2	1/4

Bore size (mm)	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

* Mounting bracket is supplied with the product.

Clevis Integrated Style (E)

CM2XE –



(mm)

Bore size (mm)	A	AL	B ₁	CD	CI	CX	D	E	F	FL	G	H	H ₁	I	K	KA	L	MM	N	NA	NN
20	18	15.5	13	8	20	12	8	20 ^{-0.033}	13	10.5	8	41	5	28	5	6	12	M8 x 1.25	15	24	M20 x 1.5
25	22	19.5	17	8	22	12	10	26 ^{-0.033}	13	10.5	8	45	6	33.5	5.5	8	12	M10 x 1.25	15	30	M26 x 1.5
32	22	19.5	17	10	27	20	12	26 ^{-0.033}	13	10.5	8	45	6	37.5	5.5	10	15	M10 x 1.25	15	34.5	M26 x 1.5
40	24	21	22	10	33	20	14	32 ^{-0.039}	16	13.5	11	50	8	46.5	7	12	15	M14 x 1.5	21.5	42.5	M32 x 2

(mm)

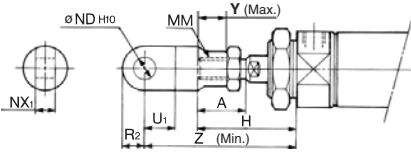
Bore size (mm)	P	RR	S	U	Z	ZZ
20	1/8	9	62	11.5	115	124
25	1/8	9	62	11.5	119	128
32	1/8	12	64	14.5	124	136
40	1/4	12	88	14.5	153	165

- REA
- REB
- REC
- RY
- CX
- MQ
- RHC
- RZQ

- D
- X

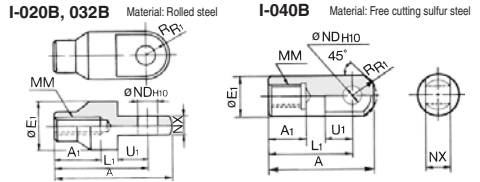
Accessory Bracket Dimensions

Single Knuckle Joint (mm)



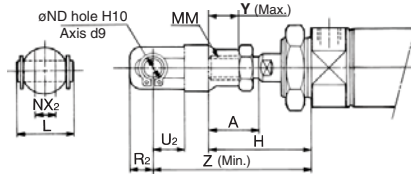
Bore size (mm)	A	H	MM	ND _{H10}	NX ₁	U ₁	R ₂	Y	Z
20	18	41	M8 x 1.25	9 ^{+0.058} / ₀	9 ^{+0.1} / _{-0.2}	14	10	11	66
25, 32	22	45	M10 x 1.25	9 ^{+0.058} / ₀	9 ^{+0.1} / _{-0.2}	14	10	14	69
40	24	50	M14 x 1.5	12 ^{+0.070} / ₀	16 ^{+0.1} / _{-0.3}	20	14	13	92

Single Knuckle Joint (mm)



Part no.	Applicable bore size (mm)	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

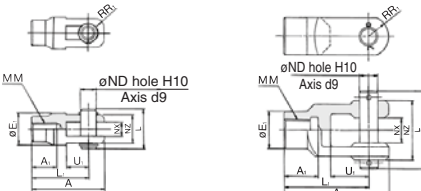
Double Knuckle Joint (mm)



Bore size (mm)	A	H	L	MM	ND	NX ₂	R ₂	U ₂	Y	Z
20	18	41	25	M8 x 1.25	9	9 ^{+0.2} / _{-0.1}	10	14	11	66
25, 32	22	45	25	M10 x 1.25	9	9 ^{+0.2} / _{-0.1}	10	14	14	69
40	24	50	49.7	M14 x 1.5	12	16 ^{+0.3} / _{-0.1}	13	25	13	92

Double Knuckle Joint (mm)

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

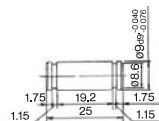


Part no.	Applicable bore size (mm)	A	A ₁	E ₁	L	L ₁	MM	ND	NX	NZ	R ₁	U ₁	Applicable pin part number	Retaining ring Cotter pin size
Y-020B	20	46	16	20	25	36	M8 x 1.25	9	9 ^{+0.2} / _{-0.1}	18	5	14	CDP-1	Type C 9 for axis
Y-032B	25, 32	48	18	20	25	38	M10 x 1.25	9	9 ^{+0.2} / _{-0.1}	18	5	14	CDP-1	Type C 9 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 18 L

* Clevis pin and retaining ring (cotter pin for ø40) are attached.

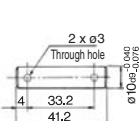
Double Clevis Pin/Material: Carbon steel (mm)

Bore size: ø20, ø25, ø32
CDP-1



Retaining ring: Type C9 for axis

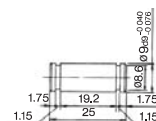
Bore size: ø40
CDP-2



Cotter pin ø3 x 18 L

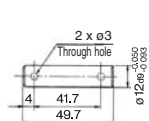
Double Knuckle Pin/Material: Carbon steel (mm)

Bore size: ø20, ø25, ø32
CDP-1



Retaining ring: Type C9 for axis

Bore size: ø40
CDP-3



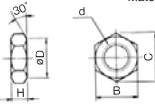
Cotter pin ø3 x 18 L

* Retaining rings (copper pins for ø40) are included.

* Retaining rings (copper pins for ø40) are included.

Rod End Nut (mm)

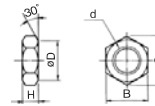
Material: Carbon steel



Part no.	Applicable bore size (mm)	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)

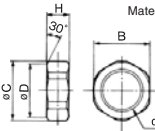
Material: Carbon steel



Part no.	Applicable bore size (mm)	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)

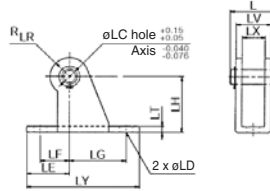
Material: Carbon steel



Part no.	Applicable bore size (mm)	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

Clevis Pivot Bracket (For CM2XE) (mm)

Material: Rolled steel plate



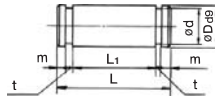
Part no.	Applicable bore size (mm)	L	LC	LD	LE	LF	LG	LH	LR	LT	LX	LY	LV	Applicable pin part no.
CM-E020B	20, 25	24.5	8	6.8	22	15	30	30	10	3.2	12	59	18.4	CD-S02
CM-E032B	32, 40	34	10	9	25	15	40	40	13	4	20	75	28	CD-S03

Note 1) Clevis bracket pins and retaining rings are included.

Note 2) It cannot be used for single clevis style (CM2C) and double clevis style (CM2D).

Clevis Pin (For CM2XE) (mm)

Material: Carbon steel



Part no.	Applicable bore size (mm)	D _{d9}	d	L	L ₁	m	t	Applicable retaining ring part no.
CD-S02	20, 25	8 ^{+0.040} _{-0.076}	7.6	24.5	19.5	1.6	0.9	Type C 8 for axis
CD-S03	32, 40	10 ^{+0.040} _{-0.076}	9.6	34	29	1.35	1.15	Type C 10 for axis

Note) Retaining rings are included.

Regarding mounting bracket, accessory made of stainless steel (Some are not available.), refer to page 2048 for -XB12, External stainless steel cylinder.

Refer to Best Pneumatics No.2 for pivot brackets.

REA

REB

REC

□Y

□X

MQ

RHC

RZQ

D-□

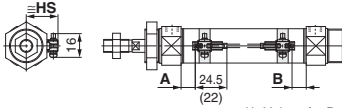
-X□

Auto Switch Mounting 1

Auto Switch Proper Mounting Position (Detection at Stroke End) and Its Mounting Height

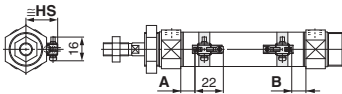
Reed auto switch

D-A9□



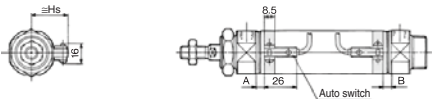
(): Values for D-A96
A and B are the dimensions from the end of the head cover/rod cover to the end of the auto switch.

D-A9□V

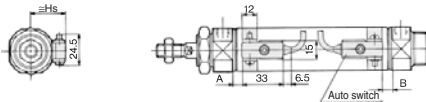


A and B are the dimensions from the end of the head cover/rod cover to the end of the auto switch.

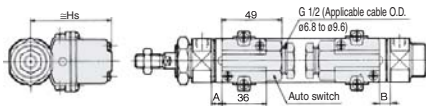
D-C7/C8



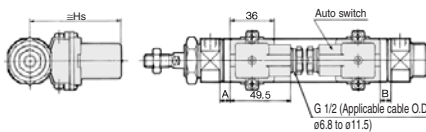
D-B5/B6/B59W



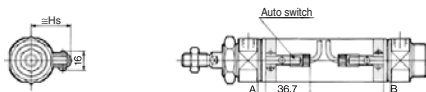
D-A33A/A34A



D-A44A

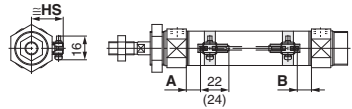


D-C73C/C80C



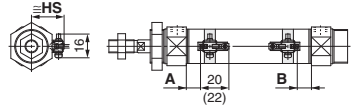
Solid state auto switch

D-M9□
D-M9□W
D-M9□A



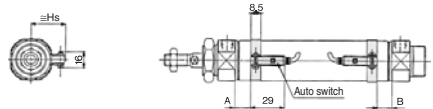
(): Values for D-M9□A
A and B are the dimensions from the end of the head cover/rod cover to the end of the auto switch.

D-M9□V
D-M9□WV
D-M9□AV

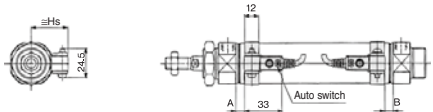


(): Values for D-M9□AV
A and B are the dimensions from the end of the head cover/rod cover to the end of the auto switch.

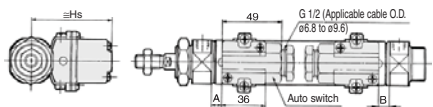
D-H7□/H7□W/H7NF



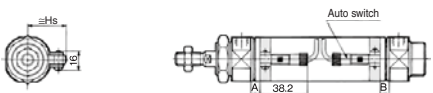
D-G5NT



D-G39A/K39A



D-H7C



Auto Switch Proper Mounting Position (Detection at Stroke End) and Its Mounting Height

Auto Switch Proper Mounting Position

(mm)

Auto switch model Bore size (mm)	D-M9□(V) D-M9□W(V) D-M9□A(V)		D-A9□(V)		D-B5□ D-B64		D-C7□ D-C80 D-C73C D-C80C		D-B59W		D-A3□A D-G39A D-K39A D-A44A		D-H7□ D-H7C D-H7□W D-H7NF		D-G5NT	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
20	11	9.5	7	5.5	1	0	7	6	4	3	0.5	0	6	5	2.5	1.5
25	10	10	6	6	1	0	7	6	4	3	0.5	0	6	5	2.5	1.5
32	11.5	10.5	7.5	6.5	2	1	8	7	5	4	1.5	0.5	7	6	3.5	2.5
40	17.5	15.5	13.5	11.5	7	6	13	12	10	9	6.5	5.5	12	11	8.5	7.5

Note) Adjust the auto switch after confirming the operating conditions in the actual setting.

Auto Switch Mounting Height

(mm)

Auto switch model Bore size (mm)	D-M9□V D-M9□WV D-M9□AV D-A9□V	D-B5□ D-B64 D-B59W D-G5NT D-H7C	D-C7□ D-C80 D-H7□ D-H7□W D-H7NF	D-C73C D-C80C	D-A3□A D-G39A D-K39A	D-A44A
	Hs	Hs	Hs	Hs	Hs	Hs
20	23.5	25.5	22.5	25	60	69.5
25	26	28	25	27.5	62.5	72
32	29.5	31.5	28.5	31	66	75.5
40	33.5	35.5	32.5	35	70	79.5

REA

REB

REC

C□Y

C□X

MQ

RHC

RZQ

D-□

-X□

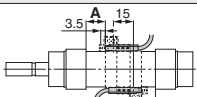
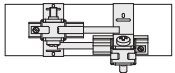
Auto Switch Mounting 2

Minimum Auto Switch Mounting Stroke

Auto switch model	No. of auto switch mounted				
	1 pc.	2 pcs.		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...) ^{Note 3)}	$55 + 35 (n-2)$ (n = 2, 3, 4, 5...)
D-M9□W	10	20	55	$20 + 35 \frac{(n-2)}{2}$ (n = 2, 4, 6...) ^{Note 3)}	$55 + 35 (n-2)$ (n = 2, 3, 4, 5...)
D-M9□A	10	25	60	$25 + 35 \frac{(n-2)}{2}$ (n = 2, 4, 6...) ^{Note 3)}	$60 + 35 (n-2)$ (n = 2, 3, 4, 5...)
D-A9□	5	15	50	$15 + 35 \frac{(n-2)}{2}$ (n = 2, 4, 6...) ^{Note 3)}	$50 + 35 (n-2)$ (n = 2, 3, 4, 5...)
D-M9□V	5	20	35	$20 + 35 \frac{(n-2)}{2}$ (n = 2, 4, 6...) ^{Note 3)}	$35 + 35 (n-2)$ (n = 2, 3, 4, 5...)
D-A9□V	5	15	25	$15 + 35 \frac{(n-2)}{2}$ (n = 2, 4, 6...) ^{Note 3)}	$25 + 35 (n-2)$ (n = 2, 3, 4, 5...)
D-M9□WV D-M9□AV	10	20	35	$20 + 35 \frac{(n-2)}{2}$ (n = 2, 4, 6...) ^{Note 3)}	$35 + 35 (n-2)$ (n = 2, 3, 4, 5...)
D-C7□ D-C80	10	15	50	$15 + 45 \frac{(n-2)}{2}$ (n = 2, 4, 6...) ^{Note 3)}	$50 + 45 (n-2)$ (n = 2, 3, 4, 5...)
D-H7□ D-H7□W D-H7NF	10	15	60	$15 + 45 \frac{(n-2)}{2}$ (n = 2, 4, 6...) ^{Note 3)}	$60 + 45 (n-2)$ (n = 2, 3, 4, 5...)
D-C73C D-C80C D-H7C	10	15	65	$15 + 50 \frac{(n-2)}{2}$ (n = 2, 4, 6...) ^{Note 3)}	$65 + 50 (n-2)$ (n = 2, 3, 4, 5...)
D-B5□/B64 D-G5NT	10	15	75	$15 + 50 \frac{(n-2)}{2}$ (n = 2, 4, 6...) ^{Note 3)}	$75 + 55 (n-2)$ (n = 2, 3, 4, 5...)
D-B59W	15	20	75	$20 + 50 \frac{(n-2)}{2}$ (n = 2, 4, 6...) ^{Note 3)}	$75 + 55 (n-2)$ (n = 2, 3, 4, 5...)
D-A3□A/G39A D-K39A/A44A	10	35	100	$35 + 30 (n-2)$ (n = 2, 3, 4, 5...)	$100 + 100 (n-2)$ (n = 2, 3, 4, 5...)

Note 3) When "n" is an odd number, an even number that is one larger than this odd number is used for the calculation.

Note 1) Auto switch mounting

Auto switch model	With 2 auto switches	
	Different surfaces	Same surface
	 <p>Correct auto switch mounting position is 3.5 mm from the back face of the switch holder.</p>	 <p>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.</p>
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 styles other than those in Note 1.

Operating Range

Auto switch model	(mm)			
	20	25	32	40
D-A9□(V)	6	6	6	6
D-M9□(V) D-M9□W(V) D-M9□A(V)	3.5	3	3.5	3
D-C7□/C80 D-C73C/C80C	7	8	8	8
D-B5□/B64 D-A3□A/A44A	8	8	9	9

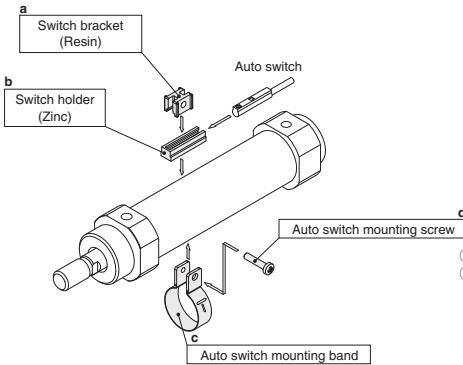
Auto switch model	(mm)			
	20	25	32	40
D-B59W	12	12	13	13
D-H7□/H7□W D-G5NT/H7NF	4	4	4.5	5
D-H7C	7	8.5	9	10
D-G39A/K39A	8	9	9	9

* Since this is a guideline including hysteresis, not meant to be guaranteed. (Assuming approximately ±30% dispersion)
There may be the case it will vary substantially depending on an ambient environment.

Auto Switch Mounting Bracket Part No.

Auto switch model	Bore size (mm)			
	ø20	ø25	ø32	ø40
D-M9□(V) D-M9□W(V) D-A9□(V)	Note 1) BM5-020	Note 1) BM5-025	Note 1) BM5-032	Note 1) BM5-040
D-M9□A(V)	Note 2) BM5-020S	Note 2) BM5-025S	Note 2) BM5-032S	Note 2) BM5-040S
D-C7□/C80 D-C73C/C80C D-H7□ D-H7□W D-H7NF	BM2-020	BM2-025	BM2-032	BM2-040
D-B5□/B64 D-B59W D-G5NT D-G5NB	BA2-020	BA2-025	BA2-032	BA2-040
D-A3□A/A44A D-G39A/K39A	BM3-020	BM3-025	BM3-032	BM3-040

- Note 1) Set part number which includes the auto switch mounting band (BM2-□□□A) and the holder kit (BJ5-1/Switch bracket: Transparent).
 Since the switch bracket (made from nylon) is 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) Set part number which includes the auto switch mounting band (BM2-□□□AS) and the holder kit (BJ4-1/Switch bracket: White).
- Note 3) For the D-M9□A (V) type auto switch, do not install the switch bracket on the indicator light.



- ① BJ□-1: A set of a and b in the figure.
 ② BM2-□□□A(S): A set of c and d in the figure.
 Band (c) is mounted so that the projected part is on the internal side (contact side with the tube).
 BJ4-1 (Switch bracket: White)
 BJ5-1 (Switch bracket: Transparent)

Other than the applicable auto switches listed in "How to Order", the following auto switches can be mounted. For detailed specifications, refer to pages 1893 to 2007.

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

- * With pre-wired connector is available for solid state auto switches. For details, refer to pages 1960 to 1961.
- * Normally closed (NC = b contact), solid state auto switches (D-F9G, F9H type) are also available. For details, refer to page 1911.
- * Wide range detection type, solid state auto switches (D-G5NB type) are also available. Refer to page 1953 for details.

REA
 REB
 REC
 CQY
 CQX
 MQ
 RHC
 RZQ

D-□
 -X□