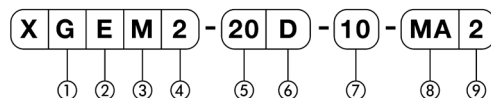


X□7 Series

Compact Air Cylinder/Double Rod Type

∅10, ∅16, ∅20, ∅25, ∅32, ∅40, ∅50, ∅63, ∅80, ∅100

Ordering Instructions



① Magnet

C: No magnet (switch unavailable)

G: Cylinder with switch available with built-in magnet

② Mounting holes

No symbol: Through holes (Standard)

E : Female thread

③ Piston rod end spec.

No symbol: Female threaded (Standard)

M : Male threaded

④ Action

7: Double-acting, double rod

⑤ Bore(mm)

10: ∅10 40: ∅40

16: ∅16 50: ∅50

20: ∅20 63: ∅63

25: ∅25 80: ∅80

32: ∅32 100: ∅100

⑥ Damper

No symbol: No damper

D : Built-in damper

⑦ Stroke(mm)

Refer to Standard Strokes.

⑧ Provision of rod cap

No symbol	No switch		M type Reed switch
MA	MA-1	(AC100V, DC24V)	
MB	MD-1	(DC24V)	
MC	MD-3	(DC5, 6V)	
MD	MR	(AC, DC5~110V)	
ME	MA-2L	(AC110V)	M type Proximity switch
MF	MA-2H	(AC220V)	
MG	MT-3	(DC5~30V)	
MH	MT-3U	(DC5~30V)	
MJ	MT-2	(DC24V)	
MK	MT-2U	(DC24V)	

⑨ Number of switch

No symbol: No switch

2 : with 2 units

1 : with 1 unit

Model No. of Switch Mounting Bracket

Bore(mm)	M type switch
∅10	X10-MJ
∅16	X16-MJ
∅20, ∅25, ∅32, ∅40, ∅50	X20-MJ
∅63, ∅80, ∅100	X63-MJ

Model No. of Packing Kit

Bore(mm)	Packing Kit
∅10	X710-PS
∅16	X716-PS
∅20	X720-PS
∅25	X725-PS
∅32	X732-PS
∅40	X740-PS
∅50	X750-PS
∅63	X763-PS
∅80	X780-PS
∅100	X7100-PS



Specifications

Action	Unit		Double-acting
Fluid			Non-lubricated air/ Lubricated air
Pressure range	Ø 10~ Ø50	MPa (kg/cm ²)	0.1~0.7 (1.0~7.1)
	Ø 63~ Ø100		0.05~0.7 (0.5~7.1)
Temperature range	°C		5~60
Piston speed range	mm/s		50~500
Cushion			unavailable
Piston stroke allowance	mm		+1.0 0
Mounting			basic

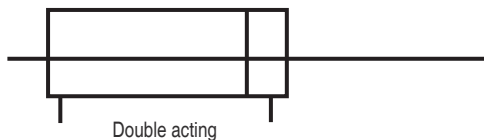
Standard Stroke

(Unit: mm)

Action	Bore	Standard Stroke	Max. Stroke
Double-acting	Ø10	5, 10	30 (25)
	Ø16		
	Ø20	5, 10, 15, 20, 25, 30, 35, 40, 45, 50	100 (95)
	Ø25		
	Ø32		
	Ø40		
	Ø50	10, 25, 30, 40, 50	150 (140)
	Ø63		
	Ø80		
	Ø100		

Note : Value within bracket is the maximum stroke with gasket

JIS Label



Value shown in this catalog is shown in SI unit. However, value within this output table is in generic unit. Use the following formula to convert to SI unit :

$$\text{Pressure } Y(\text{MPa}) = X(\text{kgf/cm}^2) \times 9.80665 \times 10^{-2}$$

$$\text{Force } Y(\text{N}) = X(\text{kgf}) \times 9.80665$$

Model With Switch

M Type Reed Switch Lead With Wire



Model No.	Rated voltage(V)	Rated current range(mA)	Pilot lamp (Lights up at ON)	Application
MA-1	AC110	5~45	○	Relay PLC
	DC24	5~45		
MD-1	DC24	25~65	○	Relay
MD-3	DC5,6	Max.50(Inductive load) Max.300(Resistive load)	○	IC circuit
MR	AC 5~110 DC	Max.50(Inductive load) Max.300(Resistive load)		Relay PLC
MA-2L	AC110	5~150	○	Relay
MA-2H	AC220	5~150	○	Relay

Note: The MA-2L is the same as the MA-1 except that MA-2L is also equipped with protective circuit SS-2L.
The MA-2H is the same as the MA-1 except that MA-2H is also equipped with protective circuit SS-2H.

Mounting screw

- When mounting the compact cylinder with switch
XG ※※-10
- For others, simply use standard mounting screws.

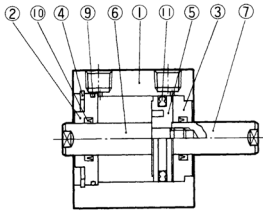
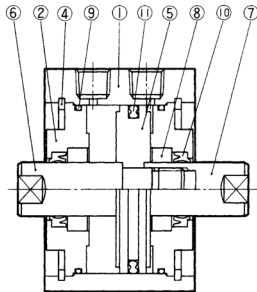
M Type Proximity Switch Lead With Wire



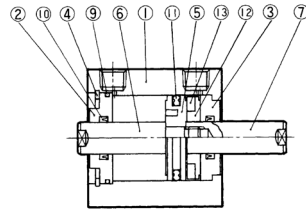
Model No.	Rated voltage (V)	Rated current range(mA)	Pilot lamp (Lights up at ON)	Application
MT-2 MT-2U	DC24 (DC10~30)	5~100	○	Relay PLC
MT-3 MT-3U	DC5~30	5~200	○	Relay PLC IC circuit

Minimum Stroke with M Type Switch (Unit: mm)

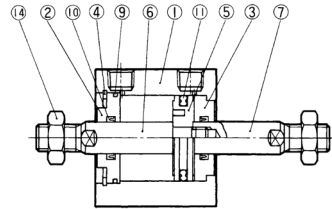
Bore	Number of switches	
	With 2 units	With 1 unit
Ø10	10	5
Ø16		
Ø20		
Ø25		
Ø32		
Ø40		
Ø50		
Ø63		
Ø80		
Ø100		

Double-acting $\phi 10 \sim \phi 50$ Double-acting $\phi 63 \sim \phi 100$ 

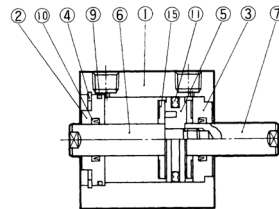
With switch



External threaded rod end



With built-in damper



List of Parts

No.	Name	No.	Name	No.	Name
1	Body	6	Axis A	11	Piston seal
2	Rod cover	7	Axis B	12	Magnet holder
3	End cover	8	Bearing	13	Magnet
4	C clip	9	Bushing gasket	14	Rod end nut
5	Piston	10	Rod packing	15	Damper

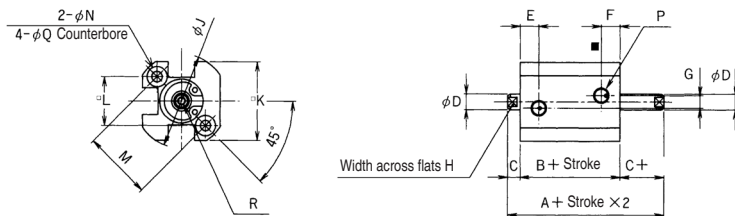
Packing List

No.	Name	Bore (mm)									
		$\phi 10$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$
9	Bushing gasket	SO-013-7	IN-15	IN-18	SO-015-25	SO-015-29	KG-40	KG-50	IN-56	IN-75	IN-95
10	Rod packing	MYN-5	MYN-6	MYN-8	MYN-10A	MYN-12	MYN-16	MYN-20	PDU-20	PDU-25	PDU-30
11	Piston packing	PSD-10	PSD-16	PSD-20	PSD-25	PSD-32	PSD-40	PSD-50	PSD-63	PSD-80	PSD-100

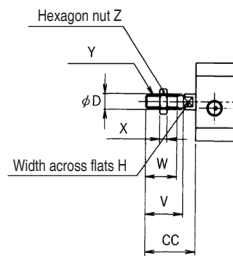
Note : Seal repair and assembly kits are also available for purchase.

Double-acting $\varnothing 10$, $\varnothing 16$ / X $\square$ 7

(Unit: mm)



Male threaded rod end



Damper

For damper, please add 5mm each to dimensions A and B.

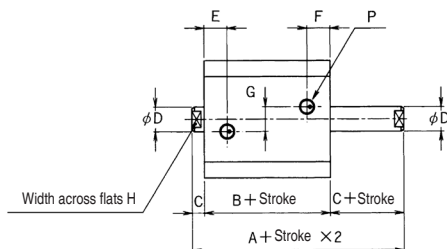
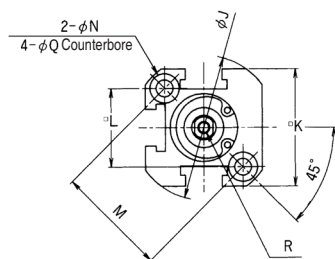
Model No.	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q
$\varnothing 10$	30 40	22 32	4	5	6	6	4	4	30	25	15.6	22	3.4	M5×0.8	6.5 depth 4
$\varnothing 16$	31.5 41.5	23.5 33.5	4	6	6.5	6.5	6	5	38	30	20	28.3	3.4	M5×0.8	6.5 depth 4

Model No.	R	CC	V	W	X	Y	Z
$\varnothing 10$	M2.6×0.45 depth 5	16	12	10	2.4	M4×0.7	7
$\varnothing 16$	M3×0.5 depth 5	16	12	10	2.4	M4×0.7	7

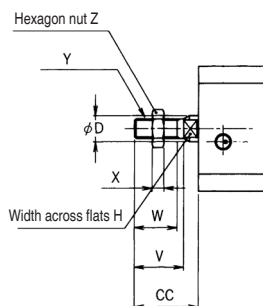
- Dimensions A and B: Upper value displayed is without magnet
Lower value displayed is with magnet
- Non-standard stroke: Longer than the standard lengths available at increment of 5 mm
- 5 mm stroke with magnet: Same dimensions as 10 mm stroke length

Double-acting $\varnothing 20$, $\varnothing 25$, $\varnothing 32$ / X□7

(Unit: mm)



Male threaded rod end



Damper

For damper, please add 5mm each to dimensions A and B.

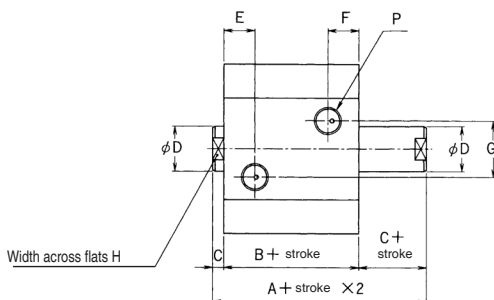
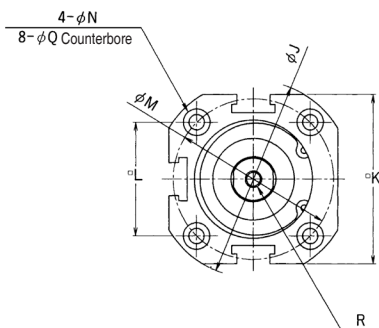
Model No.	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q
$\varnothing 20$	29 34	21 26	4	8	7.5	7.5	8	6	47	38	25.5	36	5.5	M5×0.8	9.5 depth 5.5
$\varnothing 25$	30.5 35.5	22.5 27.5	4	10	8	8	8	8	52	43	28	39.6	5.5	M5×0.8	9.5 depth 5.5
$\varnothing 32$	33 38	25 30	4	12	9.5	9.5	15	10	60	51	34	48	5.5	Rc(PT) $\frac{1}{8}$	9.5 depth 5.5

Model No.	R	CC	V	W	X	Y	Z
$\varnothing 20$	M4×0.7 depth 6	19.5	15	13	3.6	M6×1	10
$\varnothing 25$	M5×0.8 depth 10	21	16	14	5	M8×1.25	13
$\varnothing 32$	M6×1 depth 11	22.5	17	15	6	M10×1.25	17

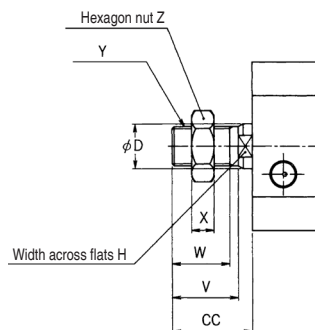
- Dimensions A and B: Upper value displayed is without magnet
Lower value displayed is with magnet
Please add 1mm to Size A and B for cylinders with no magnet and stroke greater than 60mm, or cylinders with magnet and stroke of 55mm.
- Non-standard stroke: For over standard stroke range, please follow the 5mm unit.
- 5mm stroke with magnet: the same size as 10mm stroke length.

Double-acting $\varnothing 40$, $\varnothing 50$ / X□7

(Unit: mm)



Male threaded rod end



Damper

For damper, please add 5mm each to dimensions A and B.

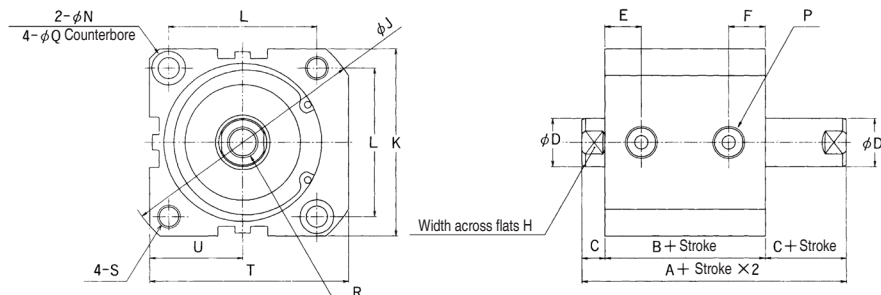
Model No.	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q
$\varnothing 40$	36 41	28 33	4	16	11	11	20	14	70	60	40.3	57	5.5	Rc(PT)1/8	9.5 depth 5.5
$\varnothing 50$	38 43	30 35	4	20	11.5	11.5	20	17	80	70	47.4	67	6.6	Rc(PT)1/2	11 depth 6.5

Model No.	R	CC	V	W	X	Y	Z
$\varnothing 40$	M6×1 depth 11	28.5	23.5	20.5	8	M14×1.5	22
$\varnothing 50$	M8×1.25 depth 13	33.5	28.5	26	11	M18×1.5	27

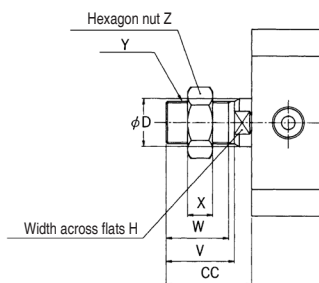
- Dimensions A and B: Upper value displayed is without magnet
Lower value displayed is with magnet
Please add 1mm to Size A and B for cylinders with no magnet and stroke greater than 60mm, or cylinders with magnet and stroke of 55mm.
- Non-standard stroke: For over standard stroke range, please follow the 5mm unit.
- 5mm stroke with magnet: the same size as 10mm stroke length.

Double-acting $\varnothing 63$, $\varnothing 80$, $\varnothing 100$ / X□7

(Unit: mm)



Male threaded rod end



Damper

For damper, please add 10mm each to dimensions A and B.

Model No.	A	B	C	D	E	F	G	H	J	K	L	N	P	Q
$\varnothing 63$	66 76	46 56	10	20	18	18	20	17	102	76	60	9	Rc(PT)¼	14 depth 9
$\varnothing 80$	77.5 87.5	53.5 63.5	12	25	19	19	26	22	130	97	77	11	Rc(PT)½	17.5 depth 11
$\varnothing 100$	91 101	63 73	14	30	24.5	24.5	26	27	154	115	94	11	Rc(PT)¾	17.5 depth 11

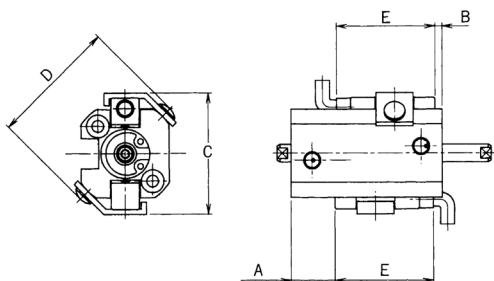
Model No.	R	S	T	U	CC	V	W	X	Y	Z
$\varnothing 63$	M10×1.5 depth 15	M10×1.5 depth 15	83	38	36	28.5	26	11	M18×1.5	27
$\varnothing 80$	M16×2 depth 21	M12×1.75 depth 20	103.5	48.5	44.5	35.5	32.5	13	M22×1.5	32
$\varnothing 100$	M20×2.5 depth 27	M14×2 depth 20	122.5	57.5	46.5	35.5	32.5	16	M26×1.5	41

- Dimensions A and B: Upper value displayed is without magnet
Lower value displayed is with magnet
- Non-standard stroke: For over standard stroke range, please follow the 10mm unit.

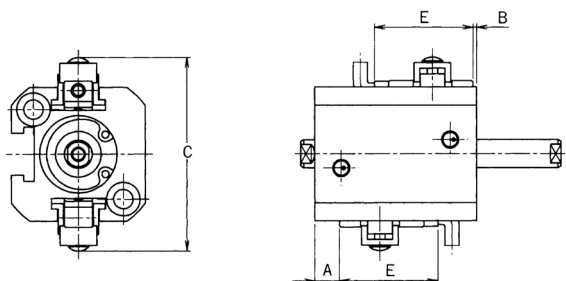
Switch installation position: M type switch/XG

(Unit: mm)

Ø10, Ø16



Ø20, Ø25, Ø32



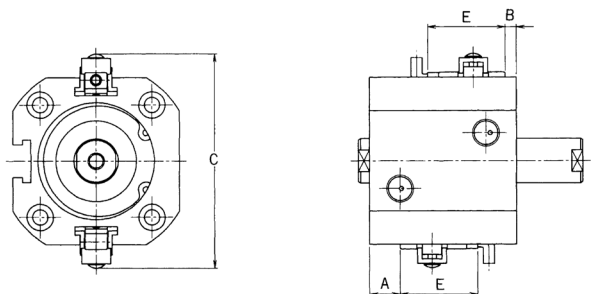
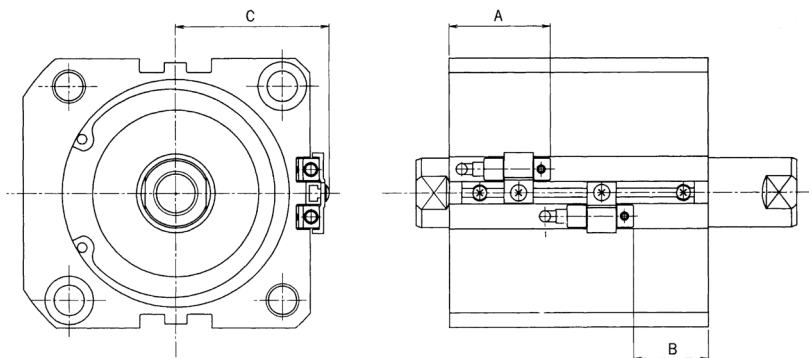
Action	M type reed switch				M type proximity switch			
	A	B	C	D	A	B	C	D
Ø10	6.5	7	37	37	10	10.5	37	37
Ø16	6.5	9.5	40	45	10	13	40	45
Ø20	7	1	54	—	10.5	4.5	54	—
Ø25	8.5	1.5	59	—	12	5	59	—
Ø32	9.5	2.5	67	—	12	6	67	—

Switch	E
M type reed switch	28
M type proximity switch	26.5 (24)

Note : the parenthesized dimension is of the MT-*U type.

Switch installation position: M type switch/XG

(Unit: mm)

 $\varnothing 40$, $\varnothing 50$

 $\varnothing 63$, $\varnothing 80$, $\varnothing 100$


Action	M type reed switch			M type proximity switch		
	A	B	C	A	B	C
$\varnothing 40$	11	4	76	14.5	7.5	76
$\varnothing 50$	12.5	4.5	86	16	8	86
$\varnothing 63$	34	22	47.5	30.5	25.5	47.5
$\varnothing 80$	36.5	27	56.5	33	30.5	56.5
$\varnothing 100$	42	31	67	38.5	34.5	67

Switch	E
M type reed switch	28
M type proximity switch	26.5 (24)

Note : the parenthesized dimension is of the MT-*U type.