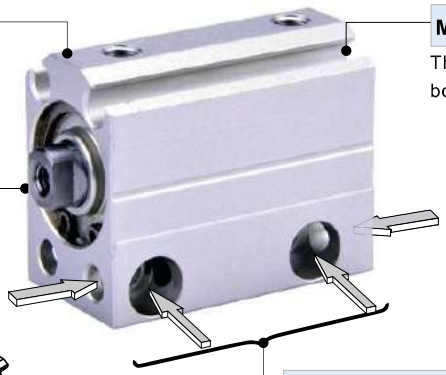
Compendium of MU Series

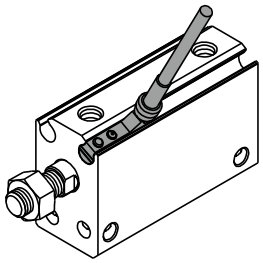
Seven bore size are available

Bore size: 4, 6, 8, 10, 12, 16, 20

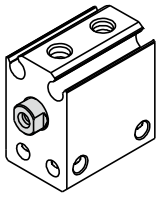


Magnetic switch slots around the cylinder body

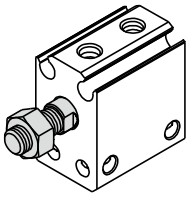
There are magnetic switch slots around the cylinder body convenient to install inducting switch.



Two kinds of rod type



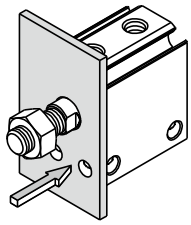
Female thread



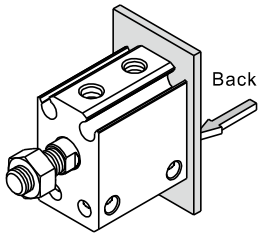
Male thread

Mounted from 4 directions

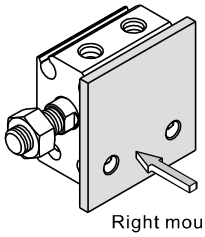
Cylinder can be mounted from 4 directions, and convenient to install and use.



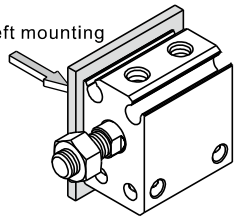
Front mounting



Back mounting



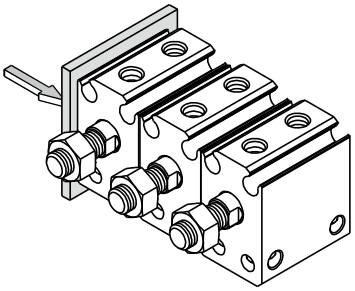
Right mounting



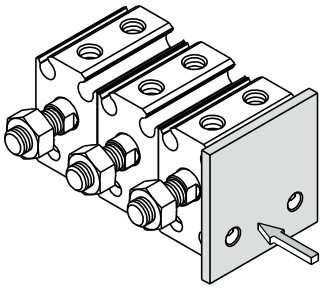
Left mounting

Mounted side by side

Multitudinous cylinder can be mounted side by side to save space.



Mounted side by side from left



Mounted side by side from right

Criteria for selection: Cylinder thrust

Unit：Newton(N)

Bore size	Rod size	Acting type		Pressure area(mm^2)	Operating pressure(MPa) 0.1	0.2	0.3	0.4	0.5	0.6	0.7
4	2	Single acting_push		12.6	-	0.3	1.6	2.8	4.1	5.3	6.6
		Double acting	Push side	12.6	1.3	2.5	3.8	5.0	6.3	7.6	8.8
			Pull side	9.4	0.9	1.9	2.8	3.8	4.7	5.6	6.6
6	4	Single acting_push		28.3	-	-	5.1	7.9	10.7	13.5	16.4
		Double acting	Push side	28.3	-	5.7	8.5	11.3	14.2	17.0	19.8
			Pull side	15.7	-	3.1	4.7	6.3	7.9	9.4	11.0
8	5	Single acting_push		50.3	-	-	8.3	13.4	18.4	23.4	28.5
		Double acting	Push side	50.3	-	10.1	15.1	20.1	25.2	30.2	35.2
			Pull side	30.6	-	6.1	9.2	12.2	15.3	18.4	21.4
10	6	Single acting_push		78.5	-	8.7	16.5	24.4	32.2	40.1	47.9
		Double acting	Push side	78.5	1.3	15.7	23.6	31.4	39.3	47.1	55.0
			Pull side	50.3	0.9	10.1	15.1	20.1	25.2	30.2	35.2
12	6	Single acting_push		113.1	-	13.6	24.9	36.2	47.5	58.9	70.2
		Double acting	Push side	113.1	11.3	22.6	33.9	45.2	56.5	67.9	79.2
			Pull side	84.8	8.5	17.0	25.4	33.9	42.4	50.9	59.4
16	8	Single acting_push		201.1	-	27.0	47.1	67.2	87.3	107.4	127.5
		Double acting	Push side	201.1	20.1	40.2	60.3	80.4	100.5	120.6	140.7
			Pull side	150.8	15.1	30.2	45.2	60.3	75.4	90.5	105.6
20	10	Single acting_push		314.2	-	36.8	68.2	99.7	131.1	162.5	193.9
		Double acting	Push side	314.2	31.4	62.8	94.2	125.7	157.1	188.5	219.9
			Pull side	236.5	23.7	47.1	70.7	94.2	117.8	141.4	164.9

Installation and application

1. When load changes in the work, the cylinder with abundant output capacity shall be selected.
2. Relative cylinder with high temperature resistance or corrosion resistance shall be chosen under the condition of high temperature or corrosion.
3. Necessary protection measure shall be taken in the environment with higher humidity, much dust or water drops, oil dust and welding dregs.
4. Dirty substances in the pipe must be eliminated before cylinder is connected with pipeline to prevent the entrance of particles into the cylinder.
5. The medium used by cylinder shall be filtered to 40μm or below.
6. As both of the front cover and piston of the cylinder are short, typically too large stroke can not be selected.
7. Anti-freezing measure shall be adopted under low temperature environment to prevent moisture freezing.
8. The cylinder shall avoid the influence of side load in operation to maintain the normal work of cylinder and extend the service life.
9. If the cylinder is dismantled and stored for a long time, please conduct anti-rust treatment to the surface. Anti-dust caps shall be added in air inlet and outlet ports. The front and back cover can not be dismantled, which shall be especially noticed.

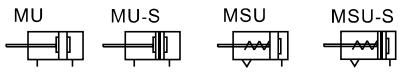
MU Series

Specification

Bore size(mm)		4	6	8	10	12	16	20
Acting type		MU：Double acting MSU：Single acting_Pull type						
Fluid		Air(to be filtered by 40μm filter element)						
Operating pressure	Double acting	0.15~0.7MPa(22~100psi)						
	Single acting	0.3~0.7MPa(44~100psi)			0.2~0.7MPa(29~100psi)			
Proof pressure		1.2MPa(175psi)						
Temperature ℃		-20~70						
Speed range mm/s		Double acting：30~500 Single acting：50~500						
Stroke tolerance		$^{+1.0}_{0}$						
Cushion type		No				Bumper		
Port size		M3×0.5				M5×0.8		

Add) Refer to P353 for detail of sensor switch.

Symbol



Stroke

Bore size (mm)		Standard stroke (mm)	Max.std stroke
4	Double acting	4 6 8 10 15 20	20
	Single acting	4 6	6
6	Double acting	4 6 8 10 15 20 25 30	30
	Single acting	4 6 8	8
8	Double acting	4 6 8 10 15 20 25 30	30
	Single acting	4 6 8 10	10
10	Double acting	4 6 8 10 15 20 25 30	30
	Single acting	4 6 8 10	10
12	Double acting	5 10 15 20 25 30 35 40 45 50	50
	Single acting	5 10	10
16	Double acting	5 10 15 20 25 30 35 40 45 50	50
	Single acting	5 10	10
20	Double acting	5 10 15 20 25 30 35 40 45 50	50
	Single acting	5 10	10

Note) 1. Please contact the company for other special strokes.
2. The dimensions of non-std stroke cylinder has the same dimensions as the next longer stroke std. stroke cylinder. e.g. 23mm stroke cylinder has the same dimensions of 25 std. stroke cylinder.

Product feature

1. JIS standard is implemented.
2. Cylinder can be mounted from 4 directions, and convenient to install and use.
3. Multitudinous cylinder can be mounted side by side to save space.
4. The front end of the cylinder is designed with boss. Centering can be done easily.
5. The internal diameter of the body is treated with rolling followed by the treatment of hard anodizing, forming an excellent abrasion resistance and durability.
6. With magnet type is of the feature of position sensing.
7. There are magnetic switch slots around the cylinder body, which is convenient to install inducting switch.
8. The seal of piston adopts heterogeneous two-way seal structure. It has compact dimension and the function of grease reservation.

Ordering code

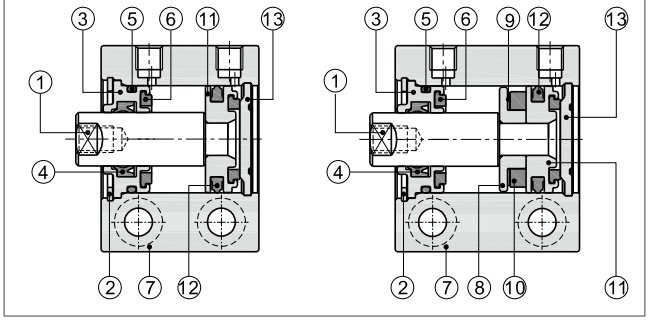
MU □ 12×10 S □
MSU □ 12×10 S □

① ② ③ ④ ⑤ ⑥

①Model	②Body mounted type	③Bore size	④Stroke	⑤Magnet	⑥Rod type
MU: Mini free mount cylinder (double acting) MSU: Mini free mount cylinder (single acting-push)	No this code	4 6 8 10	Refer to stroke table for details	No this code(Without magnet) Blank: Without magnet S: With magnet	Blank: No thread; B: Male thread Blank: Female thread B: Male thread
	Blank: Transverse mounting R: Axial mounting	12 16 20			

Inner structure and material of major parts

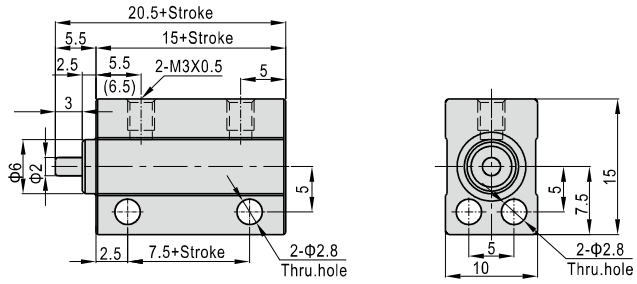
MU12 MU12-S



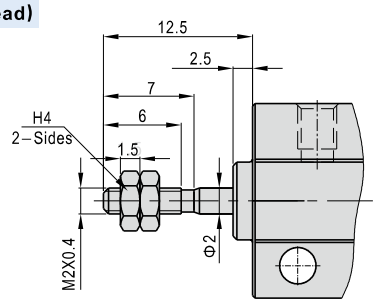
NO.	Item	Material
1	Piston rod	Stainless steel or Carbon steel with 20 μ m chrome plated
2	C clip	Spring steel
3	Front cover	Aluminum alloy
4	Front cover packing	NBR
5	O-ring	NBR
6	Bumper	TPU
7	Body	Aluminum alloy
8	Magnet holder	Brass(Φ12)/Aluminum alloy(Others)
9	Magnet washer	NBR
10	Magnet	Sintered metal (Neodymium-iron-boron)
11	Piston	Brass(Φ12,16)/Aluminum alloy(Others)
12	Piston seal	NBR
13	Back cover	No(Φ12,16)/Aluminum alloy

Dimensions

Φ4

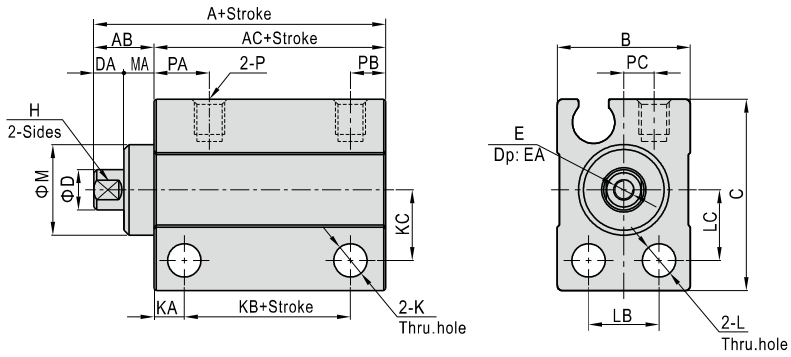


Φ4(Male thread)



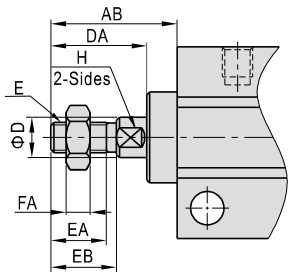
[Note] The value in the "( )" is single-acting type's value.

Φ6~Φ10



Bore size\Item	A	AC	KB	A	AC	KB	AB	B	C	D		DA	E	EA	H	K	KA	KC	L	LB	LC	M	MA	P	PA	PB	PC
	With magnet			Without magnet						MU	MSU																
6	24	18	11.5	19	13	6.5	6	13	19	4	3.5	3	M2.5×0.45	5	3.5	3.3	3	7	3.3	7	7	9	3	M3×0.5	5.5	3.5	3
8	24	18	11.5	19	13	6.5	6	13	21	5		3	M3×0.5	6	4	3.3	3	8	3.3	7	8	11	3	M3×0.5	5.5	3.5	3
10	24	18	11.5	19	13	6.5	6	13.5	22	6		3	M3×0.5	6	5	3.3	3	8.5	3.3	7	8.5	12	3	M3×0.5	5.5	3.5	3.5

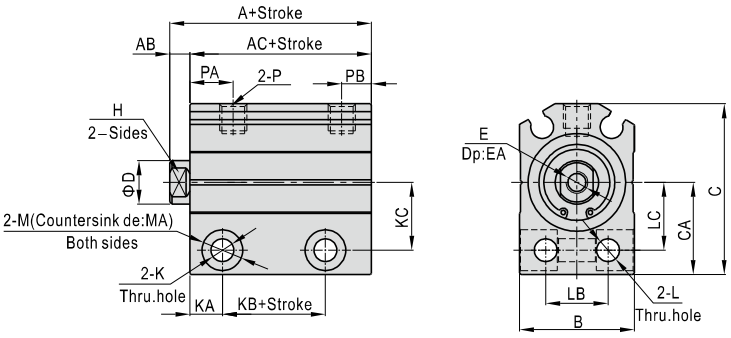
Φ6~Φ10(Male thread)



Bore size\Item	AB	D(MU)	D(MSU)	DA	E	EA	EB	FA	H
6	12.5	4	3.5	9.5	M3×0.5	5.5	6.5	2.4	3.5
8	14.5	5	5	11.5	M4×0.7	7	8.5	3	4
10	16.5	6	6	13.5	M5×0.8	9	10.5	4	5

[Note] The unmarked dimensions are the same as Female type.

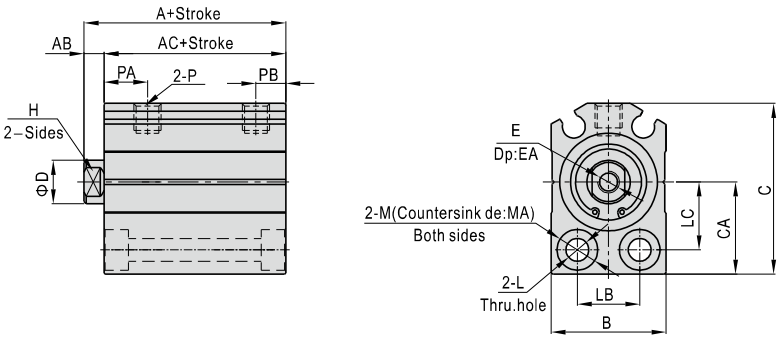
Φ12~Φ20(Transverse mounted)



Bore size\Item	A	AC	KB	A	AC	KB	AB	B	C	CA	D	E	EA	H	K	KA	KC	L	LB	LC	M	MA	P	PA	PB
	With magnet			Without magnet																					
12	25.5(30.5)	22(27)	8.5(13.5)	20.5(25.5)	17(22)	3.5(8.5)	3.5	17	28.5	15.5	6	M3×0.5	6	5	4.3	6	11	4.3	8	11	7.5	7	M5×0.8	7.5	5
16	27(32)	23.5(28.5)	9(14)	22(27)	18.5(23.5)	4(9)	3.5	21	31.5	17	8	M4×0.7	8	6	4.3	6	12.5	4.3	11.5	12.5	7.5	7	M5×0.8	8	5.5
20	29(34)	24.5(29.5)	10.5(15.5)	24(29)	19.5(24.5)	5.5(10.5)	4.5	25	38.5	21	10	M5×0.8	7	8	5.5	7	15.5	5.5	13.5	15.5	9	9	M5×0.8	9	5.5

[Note] The value in the "( )" are single-acting type's value.

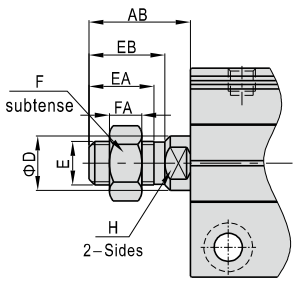
Φ12~Φ20(Axial mounted)



Bore size\Item	A	AC	A	AC	AB	B	C	D	CA	E	EA	H	L	LB	LC	M	MA	P	PA	PB
	With magnet		Without magnet																	
12	25.5(30.5)	22(27)	20.5(25.5)	17(22)	3.5	17	28.5	6	15.5	M3×0.5	6	5	4.3	8	11	7.5	4.5	M5×0.8	7.5	5
16	27(32)	23.5(28.5)	22(27)	18.5(23.5)	3.5	21	31.5	8	17	M4×0.7	8	6	4.3	11.5	12.5	7.5	4.5	M5×0.8	8	5.5
20	29(34)	24.5(29.5)	24(29)	19.5(24.5)	4.5	25	38.5	10	21	M5×0.8	7	8	5.5	13.5	15.5	9	5.5	M5×0.8	9	5.5

[Note] The value in the "( )" are single-acting type's value.

Φ12~Φ20(Male thread)



Bore size\Item	AB	D	E	EA	EB	F	FA	H
12	14	6	M5×0.8	9	10.5	8	4	5
16	15.5	8	M6×1.0	10	12	10	5	6
20	18.5	10	M8×1.25	12	14	12	6	8

[Note] The unmarked dimensions are the same as Female type.

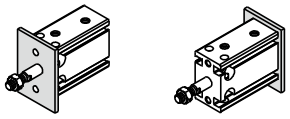
Compendium of MD\MK Series

Six bore size are available

Bore size: 6, 10, 16, 20, 25, 32

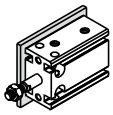
Mounted from 6 directions

Cylinder can be mounted from 6 directions, and convenient to install and use.

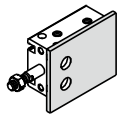


Front mounting

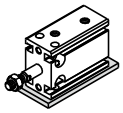
Back mounting



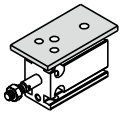
Left mounting



Right mounting



Bottom mounting



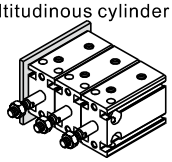
Up mounting

Magnetic switch slots around the cylinder body

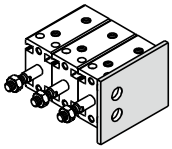
There are magnetic switch slots around the cylinder body convenient to install inducting switch.

Mounted side by side

Multitudinous cylinder can be mounted side by side to save space.



Mounted side by side from left



Mounted side by side from right

Multi-type cylinder

MD: Multi-mount cylinder (Double acting type)	
MSD: Multi-mount cylinder (Single acting-push type)	
MTD: Multi-mount cylinder (Single acting-pull type)	
MDD: Multi-mount cylinder (Double rod type)	
MDJ: Multi-mount cylinder (Adjustable stroke type)	
MK: Multi-mount cylinder (Double acting no-rotating type)	
MSK: Multi-mount cylinder (Single acting-push no-rotating type)	
MTK: Multi-mount cylinder (Single acting-pull no-rotating type)	
MKD: Multi-mount cylinder (Double rod no-rotating type)	
MKJ: Multi-mount cylinder (Adjustable stroke no-rotating type)	

Criteria for selection: Cylinder thrust

Unit: Newton(N)

Bore size	Rod size	Acting type		Pressure area(mm^2)	Operating pressure(MPa)						
					0.1	0.2	0.3	0.4	0.5	0.6	0.7
6	3	Single acting	Push side	28.3	-	1.5	2.9	4.3	5.7	7.2	8.6
			Pull side	21.2	-	-	0.8	1.5	2.2	2.9	3.6
		Double acting	Push side	28.3	2.8	5.7	8.5	11.3	14.1	17.0	19.8
			Pull side	21.2	2.1	4.2	6.4	8.5	10.6	12.7	14.8
10	4	Single acting	Push side	78.5	-	3.9	7.9	11.8	15.8	19.7	23.7
			Pull side	66.0	-	1.4	4.1	6.8	9.5	12.2	14.9
		Double acting	Push side	78.5	7.9	15.7	23.6	31.4	39.3	47.1	55.0
			Pull side	66.0	6.6	13.2	19.8	26.4	33.0	39.6	46.2
16	6	Single acting	Push side	201.1	-	10.1	30.2	50.3	70.4	90.5	110.6
			Pull side	172.8	-	8.7	25.9	43.2	60.5	77.8	95.1
		Double acting	Push side	201.1	20.1	40.2	60.3	80.4	100.5	120.6	140.7
			Pull side	172.8	17.3	34.6	51.8	69.1	86.4	103.7	121.0
20	8	Single acting	Push side	314.2	-	15.7	47.1	78.6	110.0	141.4	172.8
			Pull side	263.9	-	13.2	39.6	66.0	92.3	118.7	145.1
		Double acting	Push side	314.2	31.4	62.8	94.2	125.7	157.1	188.5	219.9
			Pull side	263.9	26.4	52.8	79.2	105.6	131.9	158.3	184.7
25	10	Single acting	Push side	490.9	-	24.7	73.8	122.8	179.1	221.0	270.1
			Pull side	412.3	-	20.7	61.9	103.1	144.4	185.6	226.8
		Double acting	Push side	490.9	49.1	98.2	147.3	196.3	245.4	294.5	343.6
			Pull side	412.3	41.2	82.5	123.7	164.9	206.2	247.4	288.6
32	12	Single acting	Push side	804.2	-	40.2	120.7	201.1	281.5	361.9	442.4
			Pull side	691.2	-	34.7	103.8	173.0	242.1	311.2	380.3
		Double acting	Push side	804.2	80.4	160.8	241.3	321.7	402.1	482.5	563.0
			Pull side	691.2	69.1	138.2	207.3	276.5	345.6	414.7	483.8

Installation and application

1. When load changes in the work, the cylinder with abundant output capacity shall be selected.
2. Relative cylinder with high temperature resistance or corrosion resistance shall be chosen under the condition of high temperature or corrosion;
3. Necessary protection measure shall be taken in the environment with higher humidity, much dust or water drops, oil dust and welding dregs.
4. Dirty substances in the pipe must be cleared away before cylinder is connected with pipeline to prevent the entrance of particles into the cylinder.
5. The medium used by cylinder shall be filtered to 40 μ m or below.
6. As both of the front cover and piston of the cylinder are short, typically too large stroke can not be selected.
7. Anti-freezing measure shall be adopted under low temperature environment to prevent moisture freezing.
8. The cylinder shall avoid the influence of side load in operation maintain the normal work of cylinder and extend the service life.
9. If the cylinder is dismantled and stored for a long time, pay attention to conduct anti-rust treatment to the surface. Anti-dust caps shall be added in air inlet and outlet ports.

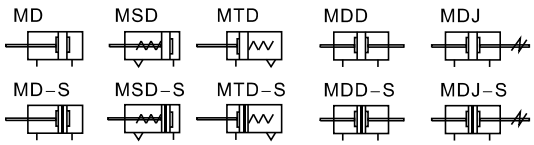
MD Series

Specification

Bore size(mm)		6	10	16	20	25	32
Acting type	MD/MDD/MDJ	Double acting					
	MSD/MTD	Single acting					
Fluid		Air(to be filtered by 40μm filter element)					
Operating pressure	Double acting	0.15~1.0MPa(22~145psi)					
	Single acting	0.2~1.0MPa(28~145psi)					
Proof pressure		1.5MPa(215psi)					
Temperature ℃		-20~70					
Speed range mm/s		Double acting: 30~500 Single acting: 50~500					
Stroke tolerance		$^{+1.0}_{0}$					
Cushion type		Bumper					
Port size [Note]		M5×0.8					1/8"

[Note1] PT thread, G thread are available.
Add) Refer to P353 for detail of sensor switch.

Symbol



Stroke

Bore size (mm)		Standard stroke (mm)	Max.std stroke
6	Double acting	5 10 15 20 25 30 35	35
	Single acting	5 10 15 20	20
10	Double acting	5 10 15 20 25 30 35	35
	Single acting	5 10 15 20	20
16	Double acting	5 10 15 20 25 30 40 50	50
	Single acting	5 10 15 20	20
20	Double acting	5 10 15 20 25 30 40 50 60	60
	Single acting	5 10 15 20	20
25	Double acting	5 10 15 20 25 30 40 50 60	60
	Single acting	5 10 15 20	20
32	Double acting	5 10 15 20 25 30 40 50 60	60
	Single acting	5 10 15 20	20

Note) 1. Please contact the company for other special strokes.
2. The dimensions of non-std stroke cylinder has the same dimensions as the next longer stroke std. stroke cylinder. e.g. 23mm stroke cylinder has the same dimensions of 25 std. stroke cylinder.

Product feature

1. Manufactured by our enterprise.
2. There are several ways to fix the cylinder and it is convenient to install and use.
3. Several cylinders can be assembled together to effectively save the installation space.
4. The guide precision of piston rod is high and no additional lubricant is needed.
5. Cylinders of various specifications are optional.
6. The seal material with high temperature resistance is adopted to guarantee the normal operation of cylinder at 150℃(Option).

Ordering code

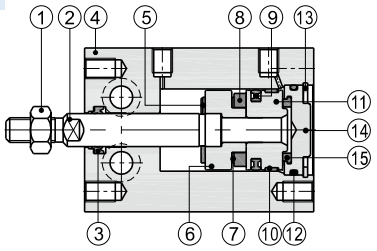
MD 32×30 S □
MDD32×30 S □
MDJ 32×30-30 S □
① ② ③ ④ ⑤ ⑥

①Model	②Bore size	③Stroke	④Adjustable stroke	⑤Magnet	⑥Thread type [Note1]
MD: Multi-mount cylinder(Double acting type)	6 10 16 20 25 32	Refer to stroke table for details	No this code	Blank: Without magnet S: With magnet	Blank: PT G: G
MSD: Multi-mount cylinder(Single acting-push type)					
MTD: Multi-mount cylinder(Single acting-pull type)					
MDD: Multi-mount cylinder(Double rod type)					
MDJ: Multi-mount cylinder(Adjustable stroke type)			10 20 30		

[Note1] Standard thread is blank here.

Inner structure and material of major parts

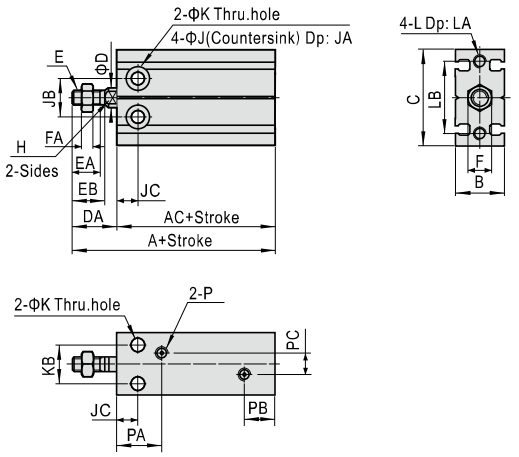
MD-S



NO.	Item	Material	NO.	Item	Material
1	Rod nut	Carbon steel	9	Piston seal	NBR
2	Piston rod	Stainless steel	10	Wear ring	Wear resistant material
3	Rod packing	NBR	11	Piston	Aluminum alloy
4	Body	Aluminum alloy	12	O-ring	NBR
5	Bumper	TPU	13	C-clip	Spring steel
6	Magnet holder	Aluminum alloy	14	Back cover	Aluminum alloy
7	Magnet washer	NBR	15	Bumper	TPU
8	Magnet	Sintered metal(Neodymium-iron-boron)			

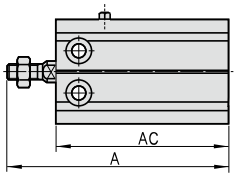
Dimensions

MD

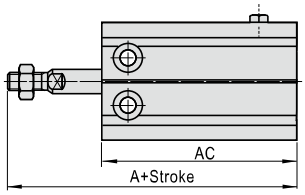


Bore size\Item	Without magnet		With magnet		B	C	D	DA	E	EA	EB	F	FA	H	J	JA	JB	JC	K	KB	L	LA	LB	P	PA	PB	PC
	A	AC	A	AC																							
6	46	33	46	33	16.5	22	3	13	M3×0.5	7	8	5.5	2.5	-	6	5	10	7	3.3	7	M3×0.5	5	17	M5×0.8	14	10	–
10	52	36	52	36	16.5	24	4	16	M4×0.7	10	11	7	2	-	6	5.5	11	7	3.3	9	M3×0.5	5	18	M5×0.8	15.5	10	–
16	46	30	56	40	20	32	6	16	M5×0.8	11	12.5	8	4	5	7.5	6.5	14	7	4.5	12	M4×0.7	5	25	M5×0.8	14.5	10	3
20	55	36	65	46	26	40	8	19	M6×1.0	12	14	10	5	6	9.5	8	16	9	5.5	16	M5×0.8	7.5	30	M5×0.8	19	9.5	9
25	63	40	73	50	32	50	10	23	M8×1.25	15.5	18	12	6	8	9.5	9	20	10	5.5	20	M5×0.8	8	38	M5×0.8	21.5	8.5	12
32	69	42	79	52	40	62	12	27	M10×1.25	19.5	22	17	6	10	11	11.5	24	11	6.5	24	M6×1.0	9	48	1/8"	23	12.5	13

MSD



MTD

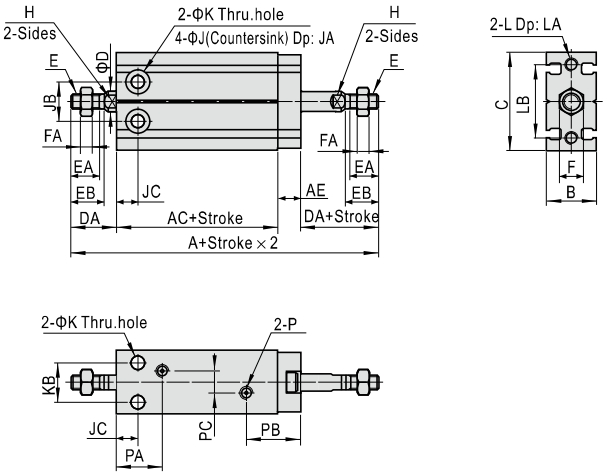


Item	A(Without magnet)				A(With magnet)				AC(Without magnet)				AC(With magnet)			
Bore size\Stroke	5St	10St	15St	20St	5St	10St	15St	20St	5St	10St	15St	20St	5St	10St	15St	20St
6	56	61	71	76	56	61	71	76	43	48	58	63	43	48	58	63
10	62	67	77	82	62	67	77	82	46	51	61	66	46	51	61	66
16	61	66	81	86	71	76	91	96	45	50	65	70	55	60	75	80
20	70	75	90	95	80	85	100	105	51	56	71	76	61	66	81	86
25	78	83	98	103	88	93	108	113	55	60	75	80	65	70	85	90
32	84	89	104	109	94	99	114	119	57	62	77	82	67	72	87	92

Remark) The unmarked dimension is the same as MD standard type.

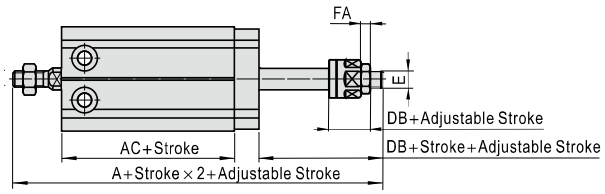
MD Series

MDD



Bore size\Item	Without magnet		With magnet		AE	B	C	D	DA	E	EA	EB	F	FA	H	J	JA	JB	JC	K	KB	L	LA	LB	P	PA	PB	PC
	A	AC	A	AC																							
6	70	38	70	38	6	16.5	22	3	13	M3×0.5	7	8	5.5	2.5	-	6	5	10	7	3.3	7	M3×0.5	5	17	M5×0.8	14	16	–
10	74	36	74	36	6	16.5	24	4	16	M4×0.7	10	11	7	2	-	6	5.5	11	7	3.3	9	M3×0.5	5	18	M5×0.8	15.5	16	–
16	69.5	30	79.5	40	7.5	20	32	6	16	M5×0.8	11	12.5	8	4	5	7.5	6.5	14	7	4.5	12	M4×0.7	5	25	M5×0.8	14.5	17.5	3
20	83	36	93	46	9	26	40	8	19	M6×1.0	12	14	10	5	6	9.5	8	16	9	5.5	16	M5×0.8	7.5	30	M5×0.8	19	18.5	9
25	95	40	105	50	9	32	50	10	23	M8×1.25	15.5	18	12	6	8	9.5	9	20	10	5.5	20	M5×0.8	8	38	M5×0.8	21.5	17.5	12
32	106	42	116	52	10	40	62	12	27	M10×1.25	19.5	22	17	6	10	11	11.5	24	11	6.5	24	M6×1.0	9	48	1/8"	23	22.5	13

MDJ

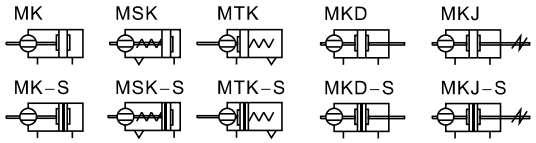


Bore size\Item	A(Without magnet)	A(With magnet)	AC(Without magnet)	AC(With magnet)	DB	E	FA
6	70	70	38	38	13	M3×0.5	2.5
10	73	73	36	36	15	M4×0.7	2
16	70.5	80.5	30	40	17	M5×0.8	4
20	85	95	36	46	21	M6×1.0	5
25	97	107	40	50	25	M8×1.25	6
32	106	116	42	52	27	M10×1.25	6

Remark) The unmarked dimension is the same as MD standard type.

MK Series

Symbol



Product feature

1. Manufactured by our enterprise.
2. There are several fixation ways for the cylinder, and also convenient to install and use.
3. Several cylinders can be assembled together to effectively save the installation space.
4. The guide precision of piston rod is high and no additional lubricant is needed.
5. Fixated block is attached to piston rod, which prevents it from rotating.
6. Various cylinders are available for your choice.
7. The seal material with high temperature resistance is adopted to guaranteethe normal operation of cylinder at 150℃(Option).

Specification

Bore size(mm)		6	10	16	20	25	32
Acting type	MK/MKD/MKJ	Double acting					
	MSK/MTK	Single acting					
Fluid		Air(to be filtered by 40 μ m filter element)					
Operating pressure	Double acting	0.15~1.0MPa(22~145psi)					
	Single acting	0.2~1.0MPa(28~145psi)					
Proof pressure		1.5MPa(215psi)					
Temperature ℃		-20~70					
Speed range mm/s		Double acting: 30~500 Single acting: 50~500					
Stroke tolerance		$^{+1.0}_{0}$					
Cushion type		Bumper					
Port size [Note]		M5×0.8					1/8"

[Note1] PT thread, G thread are available.
Add) Refer to P353 for detail of sensor switch.

Stroke

Bore size (mm)		Standard stroke (mm)	Max.std stroke
6	Double acting	5 10 15 20 25 30 35	35
	Single acting	5 10 15 20	20
10	Double acting	5 10 15 20 25 30 35	35
	Single acting	5 10 15 20	20
16	Double acting	5 10 15 20 25 30 40 50	50
	Single acting	5 10 15 20	20
20	Double acting	5 10 15 20 25 30 40 50 60	60
	Single acting	5 10 15 20	20
25	Double acting	5 10 15 20 25 30 40 50 60	60
	Single acting	5 10 15 20	20
32	Double acting	5 10 15 20 25 30 40 50 60	60
	Single acting	5 10 15 20	20

Note) 1. Please contact the company for other special strokes.
2. The dimensions of non-std stroke cylinder has the same dimensions as the next longer stroke std. stroke cylinder. e.g. 23mm stroke cylinder has the same dimensions of 25 std. stroke cylinder.

Ordering code

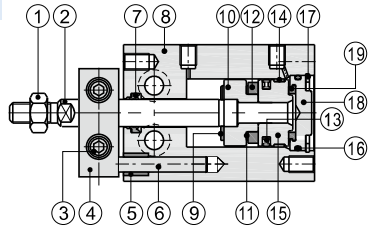
MK 32×30 S □
MKD 32×30 S □
MKJ 32×30-30 S □
① ② ③ ④ ⑤ ⑥

①Model	②Bore size	③Stroke	④Adjustable stroke	⑤Magnet	⑥Thread type [Note1]
MK: Multi-mount cylinder(Double acting no-rotating type)	6 10 16 20 25 32	Refer to stroke table for details	No this code	Blank: Without magnet S: With magnet	Blank: PT G: G
MSK: Multi-mount cylinder(Single acting-push no-rotating type)					
MTK: Multi-mount cylinder (Single acting-pull no-rotating type)					
MKD: Multi-mount cylinder(Double rod no-rotating type)					
MKJ: Multi-mount cylinder(Adjustable stroke no-rotating type)			10 20 30		

[Note1] Standard thread is blank here.

Inner structure and material of major parts

MK-S

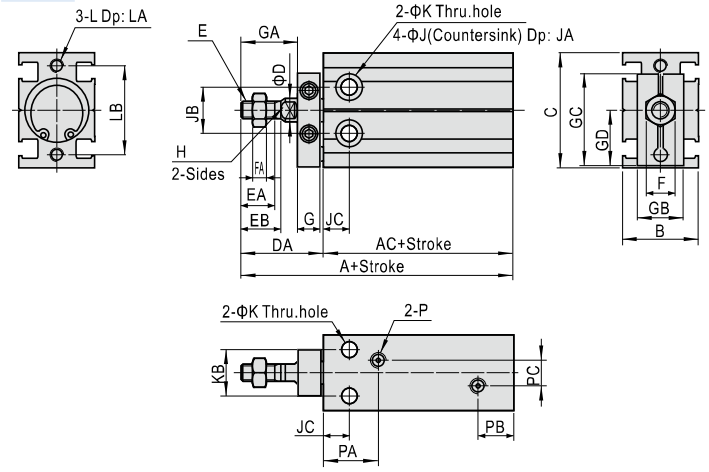


NO.	Item	Material	NO.	Item	Material
1	Rod nut	Carbon steel	11	Magnet washer	NBR
2	Piston rod	Stainless steel	12	Magnet	Sintered metal(Neodymium-iron-boron)
3	Screw	Carbon steel	13	Piston seal	NBR
4	No-rotating plate	Aluminum alloy	14	Wear ring	Wear resistant material
5	Bushing	Brass	15	Piston	Aluminum alloy
6	Fixed rod	Stainless steel	16	O-ring	NBR
7	Rod packing	NBR	17	C-clip	Spring steel
8	Body	Aluminum alloy	18	Back cover	Aluminum alloy
9	Bumper	TPU	19	Bumper	TPU
10	Magnet holder	Aluminum alloy			

MK Series

Dimensions

MK

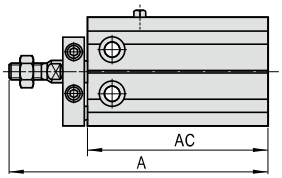


Bore size\Item	Without magnet		With magnet		B	C	D	DA	E
	A	AC	A	AC					
6	51	33	51	33	16.5	22	3	18	M3×0.5
10	57	36	57	36	16.5	24	4	21	M4×0.7
16	56	30	66	40	20	32	6	26	M5×0.8
20	65	36	75	46	26	40	8	29	M6×1.0
25	73	40	83	50	32	50	10	33	M8×1.25
32	84	42	94	52	40	62	12	42	M10×1.25

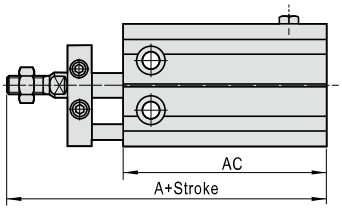
Bore size\Item	EA	EB	F	FA	G	GA	GB	GC	GD	H	J	JA
6	7	8	5.5	2.5	8	9	11	19	10.9	-	6	5
10	10	11	7	2	8	12	13	20.5	11.9	-	6	5.5
16	11	12.5	8	4	8	17	13	26.5	15.9	5	7.5	6.5
20	12	14	10	5	8	20	16	32	19.8	6	9.5	8
25	15.5	18	12	6	10	22	19	40	24.8	8	9.5	9
32	19.5	22	17	6	12	29	24	49	30.8	10	11	11.5

Bore size\Item	JB	JC	K	KB	L	LA	LB	P	PA	PB	PC
6	10	7	3.3	7	M3×0.5	5	17	M5×0.8	14	10	–
10	11	7	3.3	9	M3×0.5	5	18	M5×0.8	15.5	10	–
16	14	7	4.5	12	M4×0.7	5	25	M5×0.8	14.5	10	3
20	16	9	5.5	16	M5×0.8	7.5	30	M5×0.8	19	9.5	9
25	20	10	5.5	20	M5×0.8	8	38	M5×0.8	21.5	8.5	12
32	24	11	6.5	24	M6×1.0	9	48	1/8"	23	12.5	13

MSK



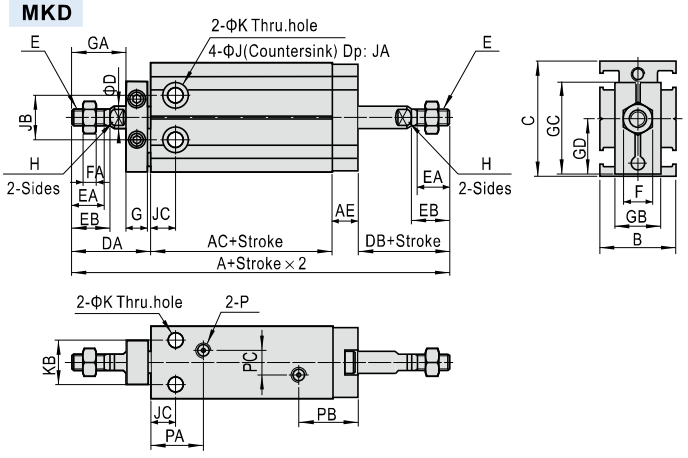
MTK



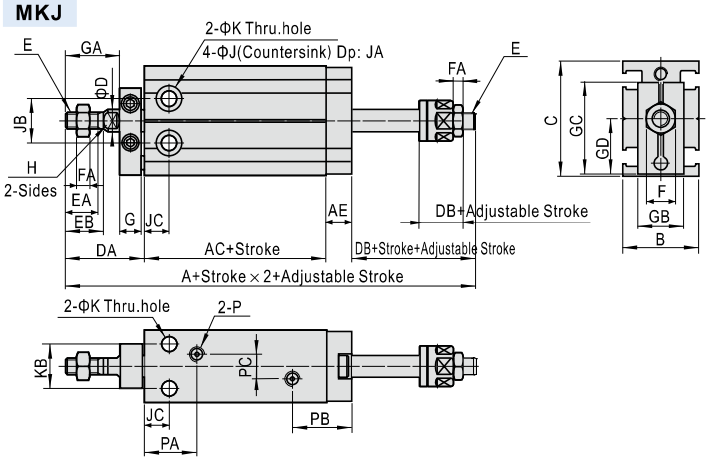
Item	A(Without magnet)				A(With magnet)				AC(Without magnet)				AC(With magnet)			
Bore size\Stroke	5St	10St	15St	20St	5St	10St	15St	20St	5St	10St	15St	20St	5St	10St	15St	20St
6	61	66	76	81	61	66	76	81	43	48	58	63	43	48	58	63
10	67	72	82	87	67	72	82	87	46	51	61	66	46	51	61	66
16	71	76	91	96	81	86	101	106	45	50	65	70	55	60	75	80
20	80	85	100	105	90	95	110	115	51	56	71	76	61	66	81	86
25	88	93	108	113	98	103	118	123	55	60	75	80	65	70	85	90
32	99	104	119	124	109	114	129	134	57	62	77	82	67	72	87	92

Remark) The unmarked dimension is the same as MK standard type.

MKD



MKJ



Bore size\Item	A(Without magnet)		A(With magnet)		AC (Without magnet)	AC (With magnet)	AE	B	C	D	DA	DB		E
	MKD	MKJ	MKD	MKJ								MKD	MKJ	
6	75	75	75	75	38	38	6	16.5	22	3	18	13	13	M3×0.5
10	79	78	79	78	36	36	6	16.5	24	4	21	16	14.7	M4×0.7
16	79.5	80.5	89.5	90.5	30	40	7.5	20	32	6	26	16	17	M5×0.8
20	93	95	103	105	36	46	9	26	40	8	29	19	21	M6×1.0
25	105	107	115	117	40	50	9	32	50	10	33	23	25	M8×1.25
32	121	121	131	131	42	52	10	40	62	12	42	27	27	M10×1.25

Bore size\Item	EA	EB	F	FA	G	GA	GB	GC	GD	H	J	JA	JB	JC	K	KB	P	PA	PB	PC
6	7	8	5.5	2.5	8	9	11	19	10.9	-	6	5	10	7	3.3	7	M5×0.8	14	16	–
10	10	11	7	2	8	12	13	20.5	11.9	-	6	5.5	11	7	3.3	9	M5×0.8	15.5	16	–
16	11	12.5	8	4	8	17	13	26.5	15.9	5	7.5	6.5	14	7	4.5	12	M5×0.8	14.5	17.5	3
20	12	14	10	5	8	20	16	32	19.8	6	9.5	8	16	9	5.5	16	M5×0.8	19	18.5	9
25	15.5	18	12	6	10	22	19	40	24.8	8	9.5	9	20	10	5.5	20	M5×0.8	21.5	17.5	12
32	19.5	22	17	6	12	29	24	49	30.8	10	11	11.5	24	11	6.5	24	1/8"	23	22.5	13

Compendium of MPG Series

Five bore size are available

Bore size: 6, 8, 10, 12, 16

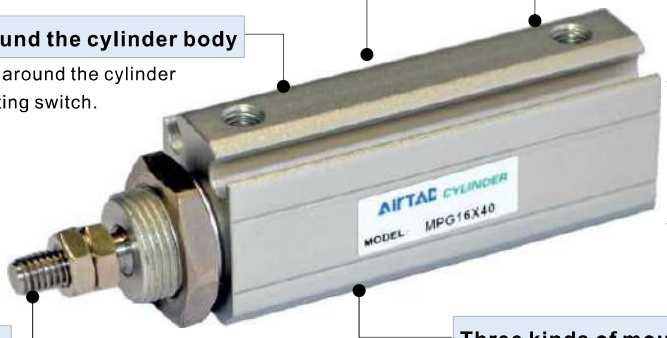
Multi-type cylinder

MPG: Standard plate cylinder (double acting)

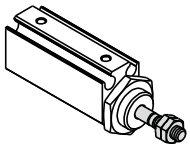
MPGH: Hinge mounting type cylinder (double acting)

Magnetic switch slots around the cylinder body

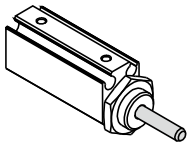
There are magnetic switch slots around the cylinder body convenient to install inducting switch.



Two kinds of rod type

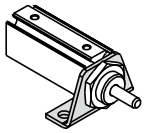


Male thread

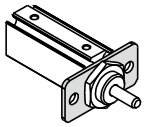


No thread

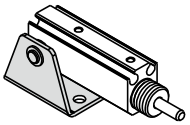
Three kinds of mounting type



LB Type

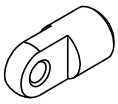


FA Type

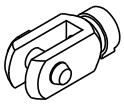


SDB Type

Four kinds of cylinder joints



I Knuckle



Y Knuckle

FC Rubber bumper (flat head)

RC Rubber bumper (ball head)

Criteria for selection: Cylinder thrust

Unit：Newton(N)

Model	Bore size	Rod size	Acting type		Pressure area(mm^2)	Operating pressure(MPa)						
						0.1	0.2	0.3	0.4	0.5	0.6	0.7
MPG MPGH	6	3	Double acting	Push side	28.3	2.8	5.7	8.5	11.3	14.2	17.0	19.8
				Pull side	21.2	2.1	4.2	6.4	8.5	10.6	12.7	14.8
	8	4	Double acting	Push side	50.3	5.0	10.1	15.1	20.1	25.2	30.2	35.2
				Pull side	37.7	3.8	7.5	11.3	15.1	18.9	22.6	26.4
	10	4	Double acting	Push side	78.5	7.9	15.7	23.6	31.4	39.3	47.1	55.0
				Pull side	65.9	6.6	13.2	19.8	26.4	33.0	39.5	46.1
	12	6	Double acting	Push side	113.0	11.3	22.6	33.9	45.2	56.5	67.8	79.1
				Pull side	84.7	8.5	17.0	25.4	33.9	42.4	50.8	59.3
	16	6	Double acting	Push side	201.0	20.1	40.2	60.3	80.4	100.5	120.6	140.7
				Pull side	172.7	17.3	34.5	51.8	69.1	86.4	103.6	120.9

Installation and application

1. When load changes in the work, the cylinder with abundant output capacity shall be selected.
2. Relative cylinder with high temperature resistance or corrosion resistance shall be chosen under the condition of high temperature or corrosion.
3. Necessary protection measure shall be taken in the environment with higher humidity, much dust or water drops, oil dust and welding dregs.
4. Dirty substances in the pipe must be eliminated before cylinder is connected with pipeline to prevent the entrance of particles into the cylinder.
5. The medium used by cylinder shall be filtered to 40 μ m or below.
6. As both of the front cover and piston of the cylinder are short, typically too large stroke can not be selected.
7. Anti-freezing measure shall be adopted under low temperature environment to prevent moisture freezing.
8. The cylinder shall avoid the influence of side load in operation to maintain the normal work of cylinder and extend the service life.
9. If the cylinder is dismantled and stored for a long time, please conduct anti-rust treatment to the surface. Anti-dust caps shall be added in air inlet and outlet ports. The front and back cover can not be dismantled, which shall be especially noticed.

MPG Series

Specification

Bore size(mm)	6	8	10	12	16
Acting type	Double acting				
Fluid	Air(to be filtered by 40μm filter element)				
Operating pressure	0.15~0.7MPa(22~100psi)				
Proof pressure	1.2MPa(175psi)				
Mounting type	Basic、FA、LB、SDB				
Temperature ℃	-20~70				
Speed range mm/s	30~500				
Stroke tolerance	$^{+1.0}_{0}$				
Cushion type	Bumper				
Port size	M3×0.5			M5×0.8	

Add) Refer to P353 for detail of sensor switch.

Symbol

Stroke

Bore size (mm)	Standard stroke (mm)	Max.std stroke
6	5 10 15 20 25	25
8	5 10 15 20 25 30 35 40	40
10	5 10 15 20 25 30 35 40	40
12	5 10 15 20 25 30 35 40	40
16	5 10 15 20 25 30 35 40	40

[Note] Please contact the company for other special strokes.

Product feature

1. It is compact, small size and light weight. It is easy to install and dismantle.
2. The guide precision of piston rod is high and no additional lubricant is needed.
3. Advanced rubber coating process is applied to the back cover.
4. Mounting accessories with various specifications are optional.
5. With magnet type is of the feature of position sensing.
6. There are magnetic switch slots around the cylinder body, which is convenient to install inducting switch.
7. Cylinders of various specifications are optional.

Ordering code

MPG 10×30 S N □

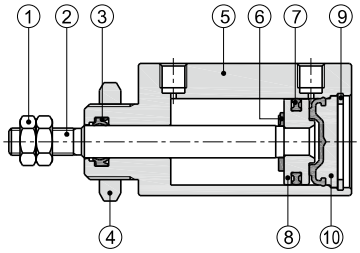
MPGH 10×30 S N □

① ② ③ ④ ⑤ ⑥

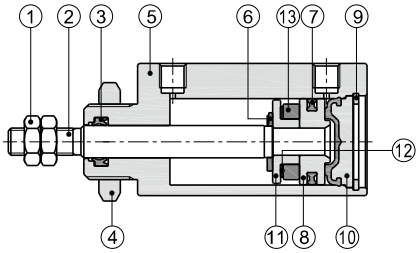
①Model	②Bore size	③Stroke	④Magnet	⑤Rod type	⑥Mounting type
MPG: Standard plate cylinder (double acting)	6 8 10 12 16	Refer to stroke table for details	Blank: Without magnet S: With magnet	Blank: Male thread N: No thread	Blank: No accessories LB: LB type FA: FA type
MPGH: Hinge mounting type cylinder (double acting)					Blank: No accessories SDB: SDB type

Inner structure and material of major parts

MPG(Φ8~Φ16)



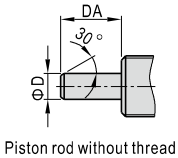
MPG-S(Φ8~Φ16)



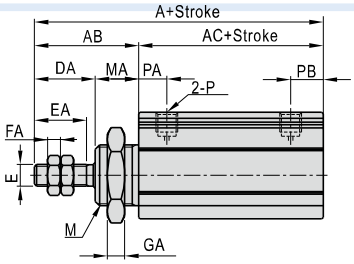
NO.	Item	Material
1	Rod nut	Stainless steel
2	Piston rod	Stainless steel
3	Front cover packing	NBR
4	Front cover nut	Carbon steel
5	Body	Aluminum alloy
6	Bumper	TPU
7	Piston	Aluminum alloy(Φ16) Brass(Others)
8	Piston seal	NBR
9	clip	Spring steel
10	Back cover	Aluminum alloy & Rubber
11	Magnet holder	Stainless steel(Φ6)/Brass(Φ8~Φ12) Aluminum alloy(Φ16)
12	Magnet washer	NBR
13	Magnet	Sintered metal (Neodymium-iron-boron)

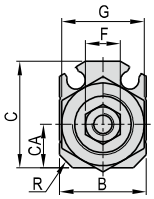
Dimensions

MPG/MPG-S



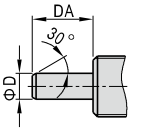
Piston rod without thread



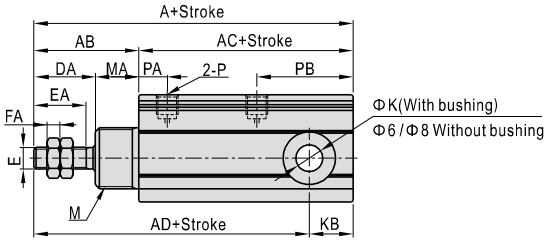


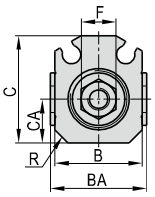
Bore size\Item	A	AC	A	AC	AB	B	C	CA	D	DA	E	EA	F	FA	G	GA	M	MA	P	PA	PB	R
	Without magnet		With magnet																			
6	33	16	38	21	17	14	16.5	6	3	9	M3×0.5	7	5.5	2.4	13	4	M10×1.0	8	M3×0.5	5.5	6.5	2
8	38	18	43	23	20	14.5	17.5	7	4	12	M4×0.7	10	7	3	17	4	M12×1.0	8	M3×0.5	6	7	2
10	39.5	19.5	44.5	24.5	20	15	19	7	4	12	M4×0.7	10	7	3	17	4	M12×1.0	8	M3×0.5	6	7	2.5
12	43.5	19.5	48.5	24.5	24	17	21.5	8.5	6	14	M5×0.8	12	8	3	19	4	M14×1.0	10	M5×0.8	6.5	7.5	2.5
16	43.5	19.5	48.5	24.5	24	20	24.5	10	6	14	M5×0.8	12	8	3	19	4	M14×1.0	10	M5×0.8	6.5	7.5	3

MPGH/MPGH-S



Piston rod without thread

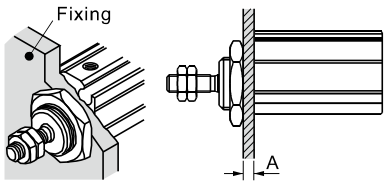




Bore size\Item	A	AC	AD	A	AC	AD	AB	B	BA	C	CA	D	DA	E	EA	F	FA	K	KB	M	MA	P	PA	PB	R
	Without magnet			With magnet																					
6	38	21	34	43	26	39	17	14	–	16.5	6	3	9	M3×0.5	7	5.5	2.4	$3^{+0.05}_{0}$	4	M10×1.0	8	M3×0.5	5.5	11.5	2
8	46	26	41	51	31	46	20	14.5	–	17.5	7	4	12	M4×0.7	10	7	3	$4^{+0.05}_{0}$	5	M12×1.0	8	M3×0.5	6	15	2
10	50.5	30.5	44	55.5	35.5	49	20	15	17	19	7	4	12	M4×0.7	10	7	3	$5^{+0.065}_{0}$	6.5	M12×1.0	8	M3×0.5	6	18	2.5
12	58	34	48	63	39	53	24	17	19	21.5	8.5	6	14	M5×0.8	12	8	3	$6^{+0.065}_{0}$	10	M14×1.0	10	M5×0.8	6.5	22	2.5
16	58	34	48	63	39	53	24	20	22	24.5	10	6	14	M5×0.8	12	8	3	$6^{+0.065}_{0}$	10	M14×1.0	10	M5×0.8	6.5	22	3

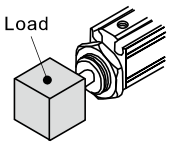
Installation and application

1. Select the plate width and tightening torque of the front cover thread according to the table below:



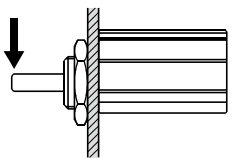
Bore size	Front cover thread	Maximum allowable torque(N.m)	Maximum width(A)
6	M10×1.0	12.5	4
8	M12×1.0	21.0	4
10	M12×1.0	21.0	4
12	M14×1.0	34.0	5
16	M14×1.0	34.0	5

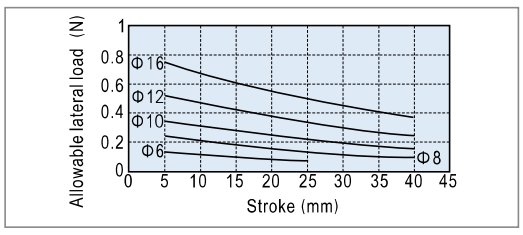
2. The extra torque produced by the load at the piston rod end cannot exceed the allowable value specified in the table below. Otherwise may cause damage to the cylinder or reduce the service life.



Bore size	Piston rod thread	Maximum allowable torque(N.m)
6	M3×0.5	0.3
8	M4×0.7	0.8
10	M4×0.7	0.8
12	M5×0.8	1.6
16	M5×0.8	1.6

3. Allowable Rod End Lateral Load





List for ordering code of accessories

Accessories / Bore size	Mounting accessories			Knuckle				Sensor switch	
	LB	FA	SDB	FC	RC	I	Y	CMSH	DMSH(S)
6	F-MPG6LB	F-MPG6FA	F-MPG6SDB	F-MPG6FC	F-MPG6RC	F-M3×050I	F-M3×050Y	CMSH	DMSH(S)
8	F-MPG10LB	F-MPG10FA	F-MPG8SDB	F-MPG10FC	F-MPG10RC	F-M4×070I	F-M4×070Y		
10			F-MPG10SDB						
12	F-MPG16LB	F-MPG16FA	F-MPG12SDB	F-MPG16FC	F-MPG16RC	F-M5×080I	F-M5×080Y		
16			F-MPG16SDB						

Accessory selection

Accessories / Cylinder model		Mounting accessories [Note1]			Knuckle[Note2]				Sensor switch	
		LB	FA	SDB	I	Y	FC	RC	CMSH	DMSH(S)
MPG	No magnet	●	●	×	●	●	●	●	×	×
	With magnet	●	●	×	●	●	●	●	●	●
MPGH	No magnet	×	×	●	●	●	●	●	×	×
	With magnet	×	×	●	●	●	●	●	●	●

Material of accessories

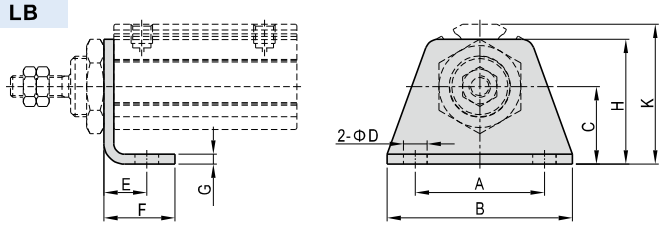
Accessories / Bore size	Mounting accessories			Knuckle			
	LB	FA	SDB	I	Y	FC	RC
6~16	△	△	△	◇	◇	□	□

△——SPCC; □——POM; ◇——Carbon steel

[Note1] SDB is attached with relevant PIN.
[Note2] Please refer to P349~352 for knuckle detail.

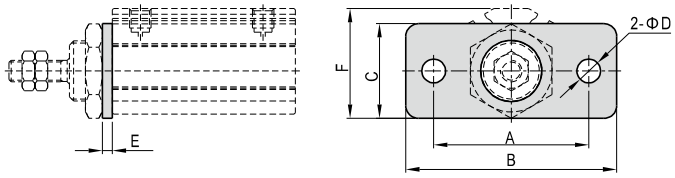
Dimensions

LB



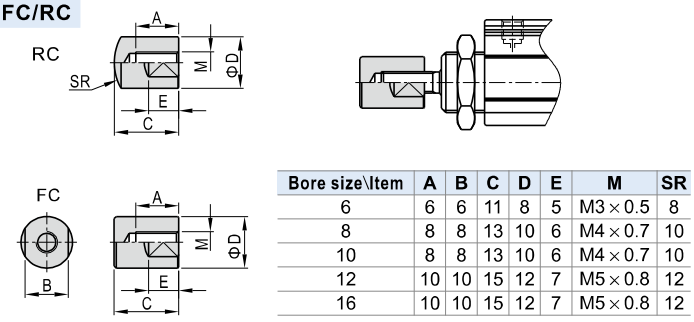
Bore size\Item	A	B	C	D	E	F	G	H	K
6	20	28	11	3.4	6.5	10.5	1.5	19	21.5
8	24	33	13	4.5	7	12	1.5	22	23.5
10	24	33	13	4.5	7	12	1.5	22	25
12	30	43	18	5.5	10	16.5	2.5	29	31
16	30	43	18	5.5	10	16.5	2.5	29	32.5

FA



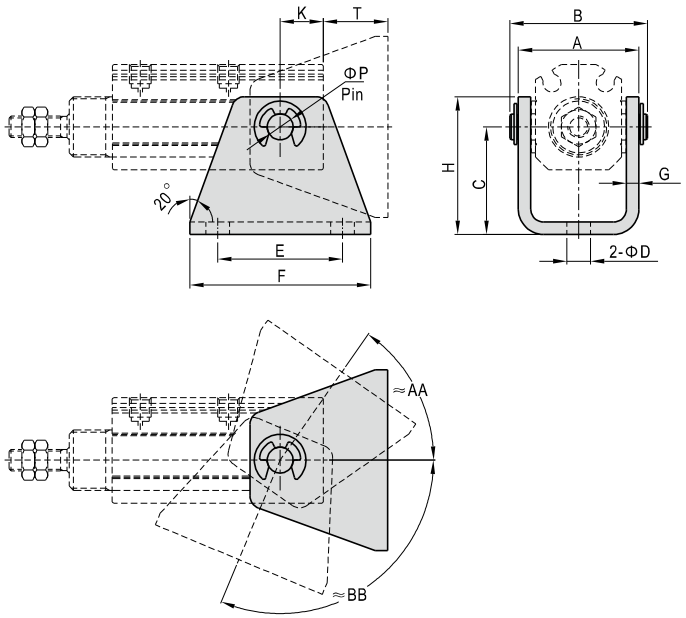
Bore size\Item	A	B	C	D	E	F
6	24	32	16	3.4	1.5	18.5
8	28	37	18	4.5	1.5	19.5
10	28	37	18	4.5	1.5	21
12	36	49	22	5.5	2.5	24
16	36	49	22	5.5	2.5	25.5

FC/RC



Bore size\Item	A	B	C	D	E	M	SR
6	6	6	11	8	5	M3×0.5	8
8	8	8	13	10	6	M4×0.7	10
10	8	8	13	10	6	M4×0.7	10
12	10	10	15	12	7	M5×0.8	12
16	10	10	15	12	7	M5×0.8	12

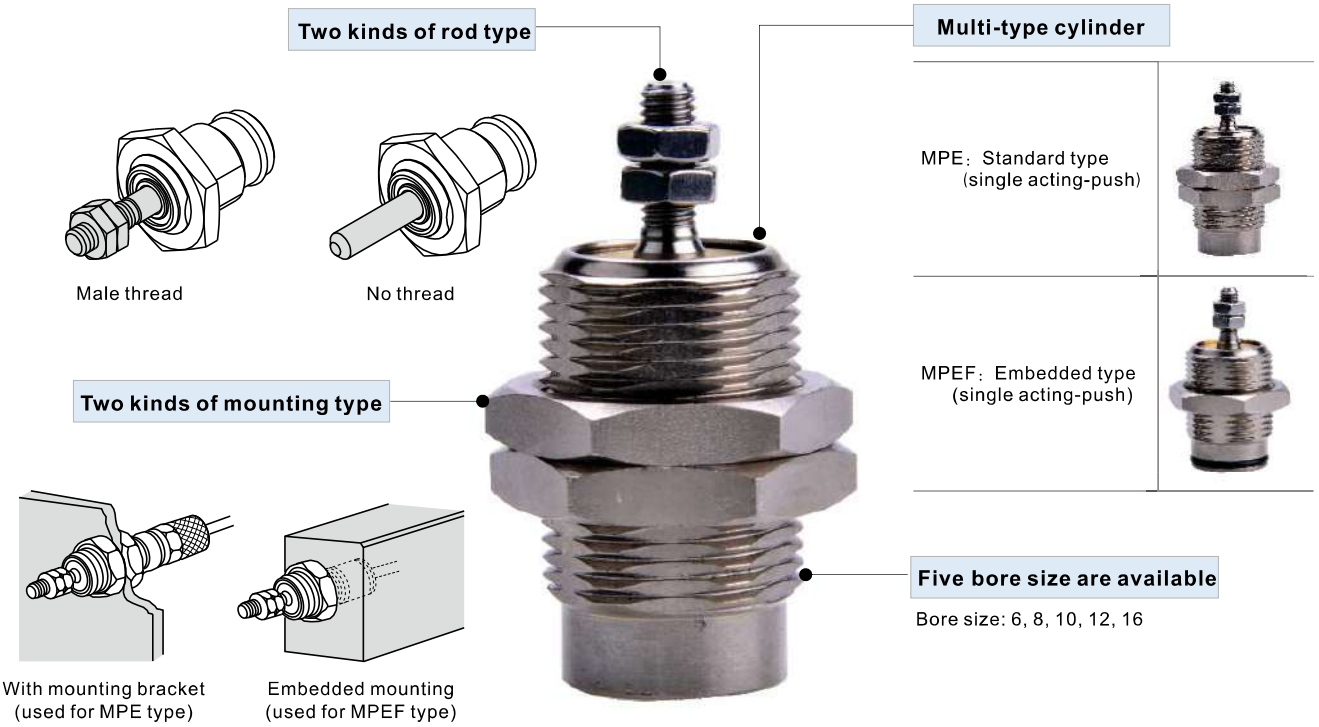
SDB



Bore size\Item	A	AA*	B	BB*	C	D	E	F	G	H	K	T	P
6	18.5	55°	21.5	110°	16	3.4	18	26	1.5	20	4	12	3
8	19	55°	23	110°	18	4.5	21	30	1.5	23	5	13	4
10	20.5	65°	24.1	110°	20	4.5	24	33	1.5	25.5	6.5	13.5	5
12	25	55°	29	110°	25	5.5	26	39	3	32	10	15	6
16	28	55°	32	110°	25	5.5	29	42	3	32	10	15	6

*Note: AA and BB are for reference only.
Specific value depends on the actual situation.

Compendium of MPE Series



Criteria for selection: Cylinder thrust

Unit：Newton(N)

Model	Bore size	Rod size	Acting type		Pressure area(mm^2)	Operating pressure(MPa)						
						0.1	0.2	0.3	0.4	0.5	0.6	0.7
MPE MPEF	6	3	Single acting	Push side	28.3	-	1.8	4.6	7.4	10.3	13.1	15.9
				Pull side	21.2				1.6			
	8	4	Single acting	Push side	50.3	-	4.8	9.8	14.8	19.9	24.9	29.9
				Pull side	37.7				2.7			
	10	5	Single acting	Push side	78.5	-	9.4	17.3	25.1	33.0	40.8	48.7
				Pull side	58.9				2.8			
	12	6	Single acting	Push side	113.0	-	13.3	24.6	35.9	47.2	58.5	69.8
				Pull side	84.7				3.45			
	16	6	Single acting	Push side	201.0	-	29.4	49.5	69.6	89.7	109.8	129.9
				Pull side	172.7				4.8			

Installation and application

1. When load changes in the work, the cylinder with abundant output capacity shall be selected.
2. Relative cylinder with high temperature resistance or corrosion resistance shall be chosen under the condition of high temperature or corrosion.
3. Necessary protection measure shall be taken in the environment with higher humidity, much dust or water drops, oil dust and welding dregs.
4. Dirty substances in the pipe must be eliminated before cylinder is connected with pipeline to prevent the entrance of particles into the cylinder.
5. The medium used by cylinder shall be filtered to 40 μ m or below.
6. As both of the front cover and piston of the cylinder are short, typically too large stroke can not be selected.
7. Anti-freezing measure shall be adopted under low temperature environment to prevent moisture freezing.
8. The cylinder shall avoid the influence of side load in operation to maintain the normal work of cylinder and extend the service life.
9. If the cylinder is dismantled and stored for a long time, please conduct anti-rust treatment to the surface. Anti-dust caps shall be added in air inlet and outlet ports. The front and back cover can not be dismantled, which shall be especially noticed.

MPE Series

Specification

Bore size(mm)	6	8	10	12	16
Acting type	Single acting				
Fluid	Air(to be filtered by 40μm filter element)				
Operating pressure	0.2~0.7MPa(28~100psi)		0.15~0.7MPa(22~100psi)		
Proof pressure	1.2MPa(175psi)				
Mounting type	Embedded type, End inlet type				
Temperature ℃	-20~70				
Speed range mm/s	50~500				
Stroke tolerance	$^{+1.0}_{0}$				
Cushion type	No cushion				
Port size	M5×0.8				

Symbol

Stroke

Bore size (mm)	Standard stroke (mm)	Max.std stroke
6	5 10 15	15
8	5 10 15	15
10	5 10 15	15
12	5 10 15	15
16	5 10 15	15

[Note] Please contact the company for other special strokes.

Product feature

1. It is compact, small and light.
2. Multi cylinders can be integrated to save room.
3. Mounting accessories are not necessary.
4. Cylinders of various specifications are optional.

Ordering code

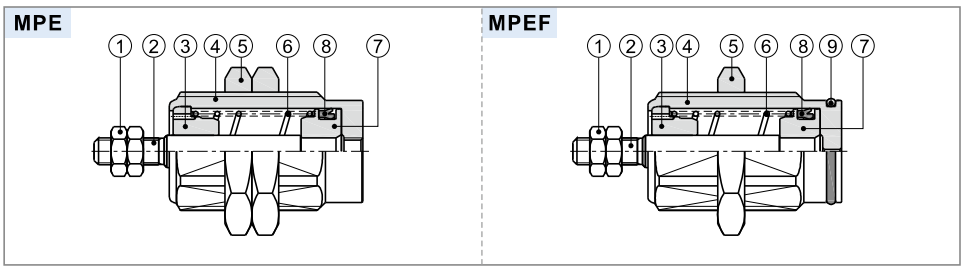
MPE 16×15 N

MPEF 16×15 N

① ② ③ ④

①Model	②Bore size	③Stroke	④Rod type
MPE：Standard type (single acting-push)	6 8 10 12 16	Refer to stroke table for details	Blank: Male thread N: No thread
MPEF：Embedded type (single acting-push)			

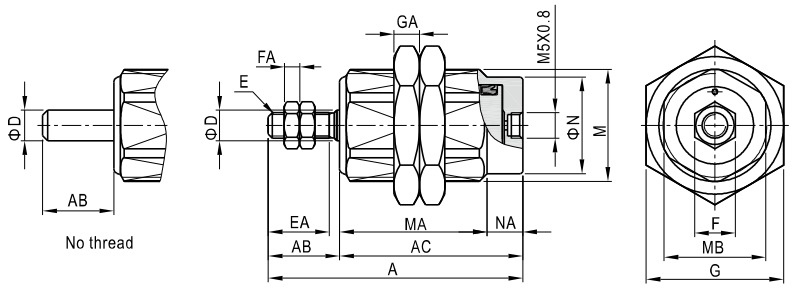
Inner structure and material of major parts



NO.	Item	Material
1	Rod nut	Stainless steel
2	Piston rod	Stainless steel
3	Front cover	Brass
4	Body	Brass (nickel-plated)
5	Body nut	Carbon steel
6	Spring	Spring steel
7	Piston	Stainless steel
8	Piston seal	NBR
9	O-ring	NBR

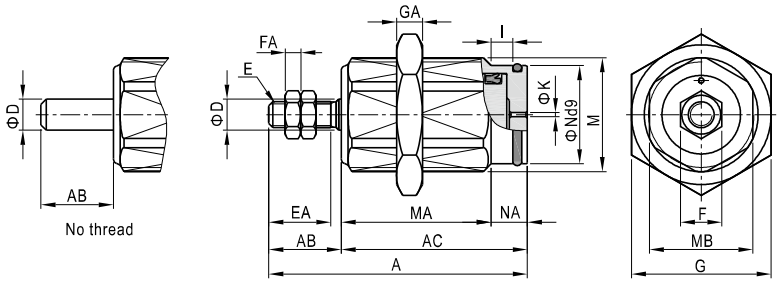
Dimensions

MPE

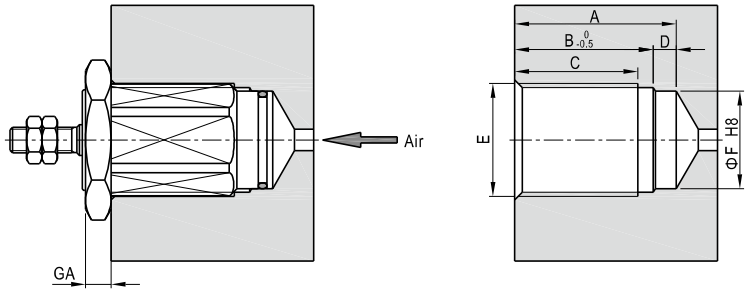


Bore size\Item	A			AB	AC			MA			D	E	EA	F	FA	G	GA	M	MB	N	NA
Stroke	5St	10St	15St		5St	10St	15St	5St	10St	15St											
6	30.5	37.5	44.5	9	21.5	28.5	35.5	15.5	22.5	29.5	3	M3×0.5	7	5.5	2.4	14	4	M10×1.0	9	8.5	6
8	34.5	41.5	48.5	12	22.5	29.5	36.5	16.5	23.5	30.5	4	M4×0.7	10	7	3	17	4	M12×1.0	11	10	6
10	35	42	49	12	23	30	37	17	24	31	5	M4×0.7	10	7	3	19	4	M16×1.5	14	12	6
12	37.5	43.5	49.5	12	25.5	31.5	37.5	19.5	25.5	31.5	6	M5×0.8	10	8	3	24	5	M18×1.5	16	15	6
16	40.5	46.5	52.5	14	26.5	32.5	38.5	19.5	25.5	31.5	6	M5×0.8	12	8	3	27	5	M22×1.5	20	19	7

MPEF



Bore size\Item	A			AB	AC			MA			D	E	EA	F	FA	G	GA	I	M	MB	N	NA	K
Stroke	5St	10St	15St		5St	10St	15St	5St	10St	15St													
6	28	35	42	9	19	26	33	13	20	27	3	M3×0.5	7	5.5	2.4	14	4	2.5	M10×1.0	9	8.5	6	0.6
8	32	39	46	12	20	27	34	14	21	28	4	M4×0.7	10	7	3	17	4	2.5	M12×1.0	11	10	6	0.8
10	32.5	39.5	46.5	12	20.5	27.5	34.5	14	21	28	5	M4×0.7	10	7	3	19	4	2.5	M16×1.5	14	12	6.5	1
12	35	41	47	12	23	29	35	16.5	22.5	28.5	6	M5×0.8	10	8	3	24	5	2.7	M18×1.5	16	15	6.5	1.3
16	38	44	50	14	24	30	36	17	23	29	6	M5×0.8	12	8	3	27	5	2.7	M22×1.5	20	19	7	1.7

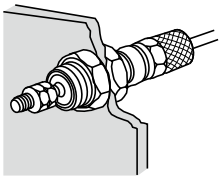


Bore size\Item	A			B			C			D	E	F	GA
Stroke	5St	10St	15St	5St	10St	15St	5St	10St	15St				
6	14.5	21.5	28.5	11	18	25	8.5	15.5	22.5	3.5	M10×1.0	8.5	4
8	15	22	29	11.5	18.5	25.5	9	16	23	3.5	M12×1.0	10	4
10	15.5	22.5	29.5	12	19	26	9	16	23	3.5	M16×1.5	12	4
12	17	23	29	13.5	19.5	25.5	10.5	16.5	22.5	3.5	M18×1.5	15	5
16	18	24	30	14	20	26	11	17	23	4	M22×1.5	19	5

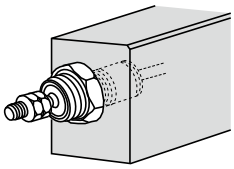
[Note] Size E and F must be concentric.

Mounting and use

1. Select applicable cylinder model and mounting method according to actual situation:



With mounting bracket (used for MPE type)



Embedded mounting (used for MPEF type)

2. MPE series are single acting cylinders. No load is allowed at the piston rod when it is on the retraction state.

3. The force of the spring of the cylinder is for retraction of the piston rod only. The piston rod may not retract to the bottom end if there's any load.

4. Make sure the rod end lateral load is allowable. Otherwise may cause damage to the cylinder or reduce the service life.