













Multi-mount cylinder——MD, MK Series

Product series

Series name		Acting type	Bore size	Collocation of sensor switch	
				CS1-G	DS1-G
Double acting type: MD		Double acting	6 10 16 20 25 32		
Double acting no-rotating type: MK					
Double rod type: MDD					
Double rod no-rotating type: MKD					
Adjustable stroke type: MDJ		Single acting			
Adjustable stroke no-rotating type: MKJ					
Single acting type: MSD					
Single acting no-rotating type: MSK					
Single acting type: MTD		Single acting			
Single acting no-rotating type: MTK					
Page	290	293		403	

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 μm 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.

Criteria for selection: Cylinder thrust

Unit: Newton(N)

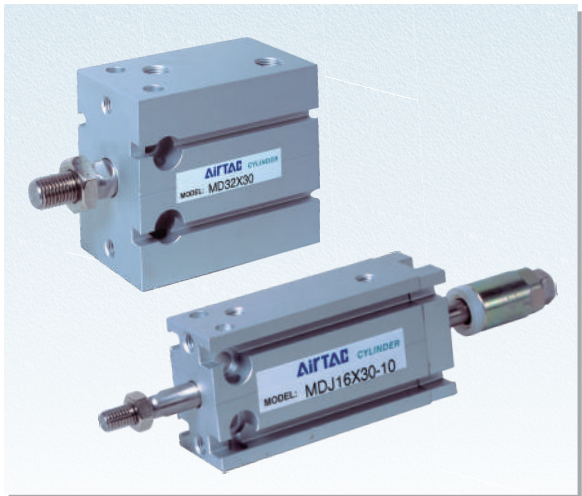
Bore size (mm)	Rod size (mm)	Acting type	Pressure area (mm ²)	Operating pressure(MPa)						
				0.1	0.2	0.3	0.4	0.5	0.6	0.7
6	3	Single acting	Push side	28.3	-	1.5	2.9	4.3	5.7	7.2
			Pull side	21.2	-	0.8	1.5	2.2	2.9	3.6
		Double acting	Push side	28.3	2.8	5.7	8.5	11.3	14.1	17.0
			Pull side	21.2	2.1	4.2	6.4	8.5	10.6	12.7
10	4	Single acting	Push side	78.5	-	3.9	7.9	11.8	15.8	19.7
			Pull side	66.0	-	1.4	4.1	6.8	9.5	12.2
		Double acting	Push side	78.5	7.9	15.7	23.6	31.4	39.3	47.1
			Pull side	66.0	6.6	13.2	19.8	26.4	33.0	39.6
16	6	Single acting	Push side	201.1	-	10.1	30.2	50.3	70.4	90.5
			Pull side	172.8	-	8.7	25.9	43.2	60.5	77.8
		Double acting	Push side	201.1	20.1	40.2	60.3	80.4	100.5	120.6
			Pull side	172.8	17.3	34.6	51.8	69.1	86.4	103.7
20	8	Single acting	Push side	314.2	-	15.7	47.1	78.6	110.0	141.4
			Pull side	263.9	-	13.2	39.6	66.0	92.3	118.7
		Double acting	Push side	314.2	31.4	62.8	94.2	125.7	157.1	188.5
			Pull side	263.9	26.4	52.8	79.2	105.6	131.9	158.3
25	10	Single acting	Push side	490.9	-	24.7	73.8	122.8	179.1	221.0
			Pull side	412.3	-	20.7	61.9	103.1	144.4	185.6
		Double acting	Push side	490.9	49.1	98.2	147.3	196.3	245.4	294.5
			Pull side	412.3	41.2	82.5	123.7	164.9	206.2	247.4
32	12	Single acting	Push side	804.2	-	40.2	120.7	201.1	281.5	361.9
			Pull side	691.2	-	34.7	103.8	173.0	242.1	311.2
		Double acting	Push side	804.2	80.4	160.8	241.3	321.7	402.1	482.5
			Pull side	691.2	69.1	138.2	210.3	276.5	345.6	414.7



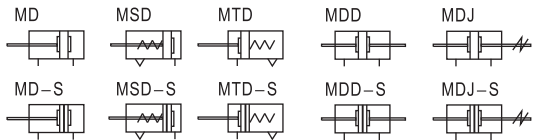
Multi-mount cylinder

MD Series

AIRTAC



Symbol



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°C(Option).

Ordering code

Model can to be changed Ordering code. Example:

Production type: MDJ

Bore size: 32mm

Stroke: 50mm

Adjustable stroke: 30mm

Magnet: With magnet

Thread type: NPT

Model: MDJ-32×50-30-S-T

Ordering code: MDJ 32 S 0050 030 T

Model	Bore size	Thread type	Adjustable stroke	Stroke	Magnet
06: Φ6mm	10: Φ10mm	16: Φ16mm	20: Φ20mm	25: Φ25mm	32: Φ32mm
Blank: Without magnet	S: With magnet	P: PT	T: NPT	G: G	

Specification

Bore size(mm)	6	10	16	20	25	32
Acting type	MD, MDD, MDJ	Double acting				
MSD, MTD	Single acting-Push type, Single acting-Pull type					
Fluid	Air(to be filtered by 40 μ m filter element)					
Operating pressure	Double acting	0.1~1.0MPa(14~145psi)				
Single acting	0.2~1.0MPa(28~145psi)					
Proof pressure	1.5MPa(215psi)					
Temperature °C	-20~80					
Speed range mm/s	Double acting: 30~500					Single acting: 50~500
Stroke tolerance	+1.0 0					
Cushion type	Bumper					
Port size ①	M5 × 0.8					1/8"

① PT thread, NPT thread and G thread are available. Add) Refer to P403~426 for detail of sensor switch.

Stroke

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

Explain of model

Model	MD -32 × 30 -S-P	MDD -32 × 30 -S-P	MDJ -32 × 30-30-S-P
Model	MD: Multi-mount cylinder(Double acting type)	MDD: Multi-mount cylinder(Double rod type)	MDJ: Multi-mount cylinder(Adjustable stroke type)
Bore size	6 10 16 20 25 32		
Stroke	Refer to stroke table for details		
Thread type	P: PT T: NPT G: G		
Magnet	Blank: Without magnet S: With magnet		
Adjustable stroke			Model: Adjustable stroke MDJ: 10: 10mm 20: 20mm 30: 30mm Others: No this code

① When the thread is standard, the code is blank.



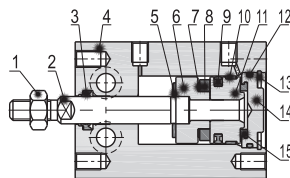
Multi-mount cylinder



MD Series

Inner structure and material of major parts

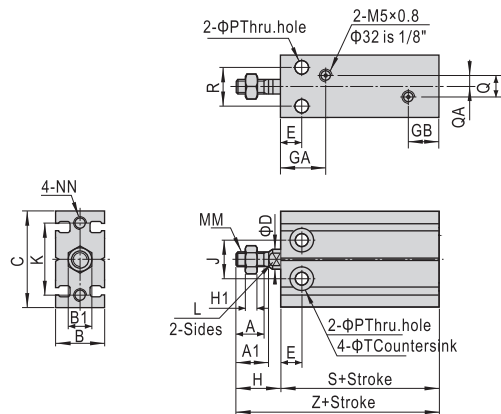
MD-S



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

Dimensions

MD



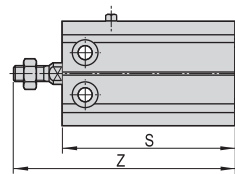
Bore size\Item	A	A1	B	B1	C	D	E	GA	GB	H	H1	J	K	L	MM	NN
6	7	8	16.5	5.5	22	3	7	14	10	13	2.4	10	17	-	M3 × 0.5	M3 × 0.5Dp:5
10	10	11	16.5	7	24	4	7	15.5	10	16	2.2	11	18	-	M4 × 0.7	M3 × 0.5Dp:5
16	11	12.5	20	8	32	6	7	14.5	10	16	4	14	25	5	M5 × 0.8	M4 × 0.7Dp:5
20	12	14	26	10	40	8	9	19	11	19	5	16	30	6	M6 × 1.0	M5 × 0.8Dp:7.5
25	15.5	18	32	12	50	10	10	21.5	8.5	23	6	20	38	8	M8 × 1.25	M5 × 0.8Dp:8
32	19.5	22	40	17	62	12	11	23	12.5	27	6	24	48	10	M10 × 1.25	M6 × 1.0Dp:9

Bore size\Item	P	Q	QA	R	T	S		Z	
						Without magnet	With magnet	Without magnet	With magnet
6	3.2	-	-	7	6Dp:5	33	33	46	46
10	3.2	-	-	9	6Dp:5.6	36	36	52	52
16	4.5	3	1.5	12	7.6Dp:6.5	30	40	46	56
20	5.5	9	4.5	16	9.3Dp:8	36	46	55	65
25	5.5	12	6	20	9.3Dp:9	40	50	63	73
32	6.6	13	4.5	24	11Dp:11.5	42	52	69	79

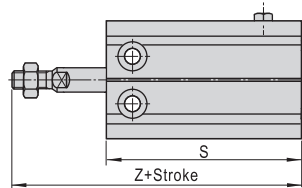


MD, MK

MSD



MTD



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

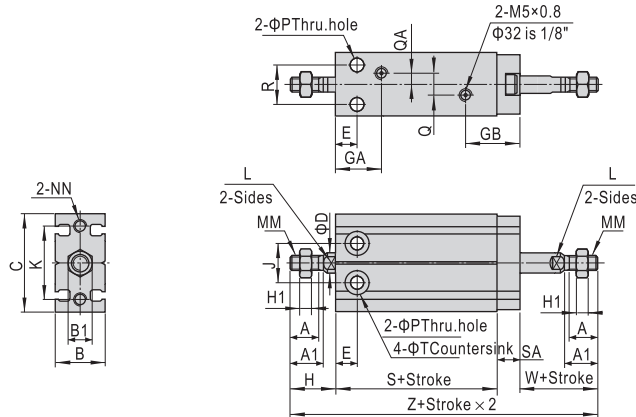
Remark) The unmarked dimension is the same as MD standard type.

Multi-mount cylinder



MD Series

MDD



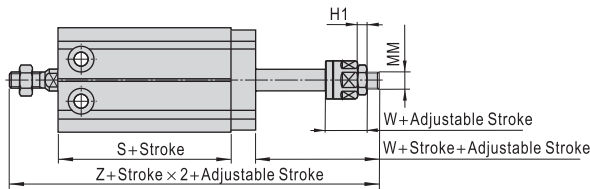
Bore size\Item	A	A1	B	B1	C	D	E	GA	GB	H	H1	J	K	L	P	Q	MM	NN
6	7	8	16.5	5.5	22	3	7	14	16	13	2.4	10	17	-	3.2	-	M3 × 0.5	M3 × 0.5Dp:5
10	10	11	16.5	7	24	4	7	15.5	16	16	2.4	11	18	-	3.2	-	M4 × 0.7	M3 × 0.5Dp:5
16	11	12.5	20	8	32	6	7	14.5	17.5	16	4	14	25	5	4.5	3	M5 × 0.8	M4 × 0.7Dp:5
20	12	14	26	10	40	8	9	19	20	19	5	16	30	6	5.5	9	M6 × 1.0	M5 × 0.8Dp:7.5
25	15.5	18	32	12	50	10	10	21.5	17.5	23	6	20	38	8	5.5	12	M8 × 1.25	M5 × 0.8Dp:8
32	19.5	22	40	17	62	12	11	23	22.5	27	6	24	48	10	6.6	13	M10 × 1.25	M6 × 1.0Dp:9

Bore size\Item	QA	R	SA	T	W	S		Z	
						Without magnet	With magnet	Without magnet	With magnet
6	-	7	6	6Dp:5	13	38	38	70	70
10	-	9	6	6Dp:5.6	16	36	36	74	74
16	1.5	12	7.5	7.6Dp:6.5	16	30	40	69.5	79.5
20	4.5	16	9	9.3Dp:8	19	36	46	83	93
25	6	20	9	9.3Dp:9	23	40	50	95	105
32	4.5	24	10	11Dp:11.5	27	42	52	106	116



MD, MK

MDJ



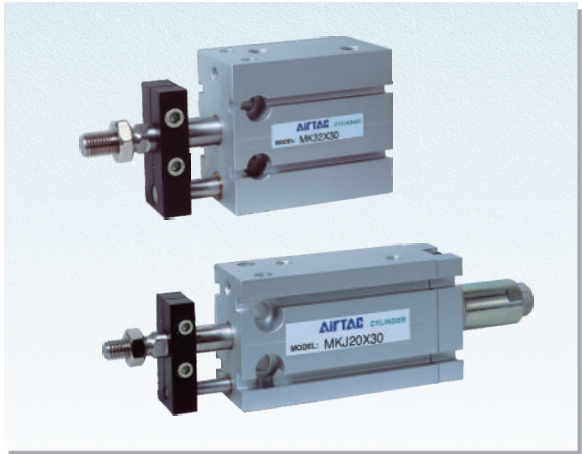
Bore size\Item	MM	H1	W	S		Z	
				Without magnet	With magnet	Without magnet	With magnet
6	M3 × 0.5	2.4	13	38	38	70	70
10	M4 × 0.7	2.2	14.7	36	36	72.7	72.7
16	M5 × 0.8	4	17	30	40	70.5	80.5
20	M6 × 1.0	5	21	36	46	85	95
25	M8 × 1.25	6	25	40	50	97	107
32	M10 × 1.25	6	27	42	52	106	116

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

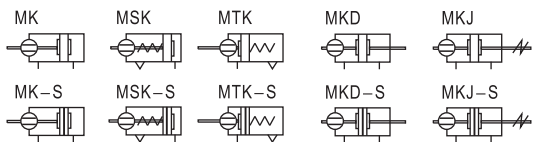


Multi-mount cylinder

MK Series



Symbol



Product feature

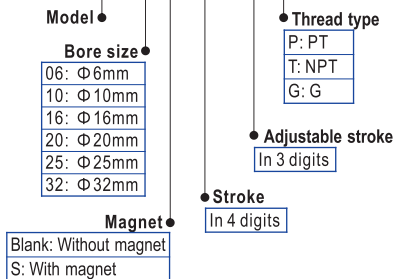
1. Manufactured by our enterprise.
2. There are several fixation ways for the cylinder, and also convenient to install and use.
3. Several cylinders can be assembled together to effectively save the installation space.
4. The guide precision of piston rod is high and no additional lubricant is needed.
5. Fixed 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 guarantee the normal operation of cylinder at 150°C.(Option).

Ordering code

Model can to be changed Ordering code. Example:
Production type: MKJ
Bore size: 32mm
Stroke: 50mm
Adjustable stroke: 30mm
Magnet: With magnet
Thread type: NPT

Model: MKJ -32 × 50 -30-S-T

Ordering code: MKJ 32 S 0050 030 T



Specification

Bore size(mm)		6	10	16	20	25	32
Acting type	MK, MKD, MKJ	Double acting					
	MSK, MTK	Single acting-Push type, Single acting-Pull type					
Fluid		Air(to be filtered by 40 μ m filter element)					
Operating pressure	Double acting	0.1~1.0MPa(14~145psi)					
	Single acting	0.2~1.0MPa(28~145psi)					
Proof pressure		1.5MPa(215psi)					
Temperature °C		-20~80					
Speed range mm/s		Double acting: 30~500			Single acting: 50~500		
Stroke tolerance		+1.0 0					
Cushion type		Bumper					
Port size ①		M5 × 0.8					1/8"

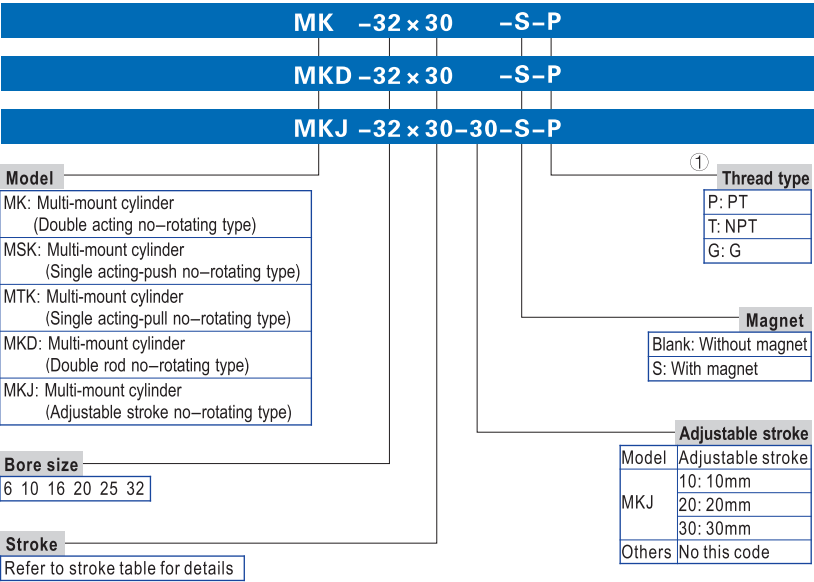
① PT thread, NPT thread and G thread are available. Add) Refer to P403~426 for detail of sensor switch.

Stroke

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

Explain of model



① When the thread is standard, the code is blank.



MD, MK



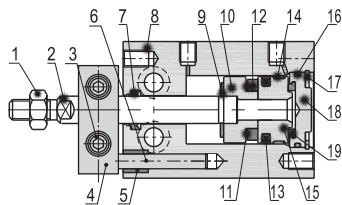
Multi-mount cylinder



MK Series

Inner structure and material of major parts

MK-S



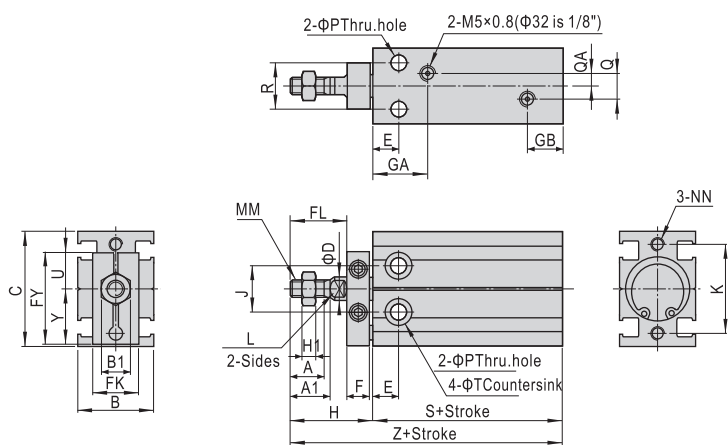
NO.	Item	Material
1	Rod nut	Carbon steel
2	Piston rod	Stainless steel
3	Screw	Carbon steel
4	No-rotating plate	Aluminum alloy
5	Bushing	Brass
6	Fixed rod	Stainless steel
7	Rod packing	NBR
8	Body	Aluminum alloy
9	Bumper	TPU
10	Magnet holder	Aluminum alloy
11	Magnet washer	NBR
12	Magnet	Sintered metal(Neodymium-iron-boron)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



MD,MK

Dimensions

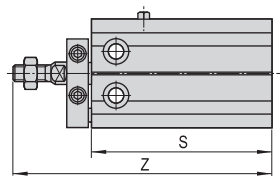
MK



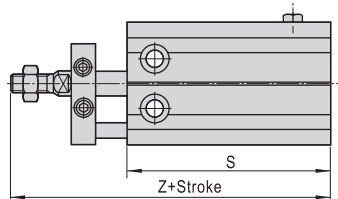
Bore size\Item	A	A1	B	B1	C	D	E	F	FL	FK	FY	GA	GB	H	H1	J	K	L	Y	P	R
6	7	8	16.5	5.5	22	3	7	8	9	11	19	14	10	18	2.4	10	17	-	10.9	3.2	7
10	10	11	16.5	7	24	4	7	8	12	13	20.5	15.5	10	21	2.2	11	18	-	11.9	3.2	9
16	11	12.5	20	8	32	6	7	8	17	13	26.5	14.5	10	26	4	14	25	5	15.9	4.5	12
20	12	14	26	10	40	8	9	8	20	16	32	19	11	29	5	16	30	6	19.8	5.5	16
25	15.5	18	32	12	50	10	10	10	22	19	40	21.5	8.5	33	6	20	38	8	24.8	5.5	20
32	19.5	22	40	17	62	12	11	12	29	24	49	23	12.5	42	6	24	48	10	30.8	6.6	24

Bore size\Item	MM	NN	Q	QA	T	U	S	Without magnet Z	With magnet S	Z
6	M3 × 0.5	M3 × 0.5Dp:5	—	—	6Dp:5	8.1	33	51	33	51
10	M4 × 0.7	M3 × 0.5Dp:5	—	—	6Dp:5.6	8.6	36	57	36	57
16	M5 × 0.8	M4 × 0.7Dp:5	3	1.5	7.6Dp:6.5	10.6	30	56	40	66
20	M6 × 1.0	M5 × 0.8Dp:7.5	9	4.5	9.3Dp:8	12.2	36	65	46	75
25	M8 × 1.25	M5 × 0.8Dp:8	12	6	9.3Dp:9	15.2	40	73	50	83
32	M10 × 1.25	M6 × 1.0Dp:9	13	4.5	11Dp:11.5	18.2	42	84	52	94

MSK



MTK



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

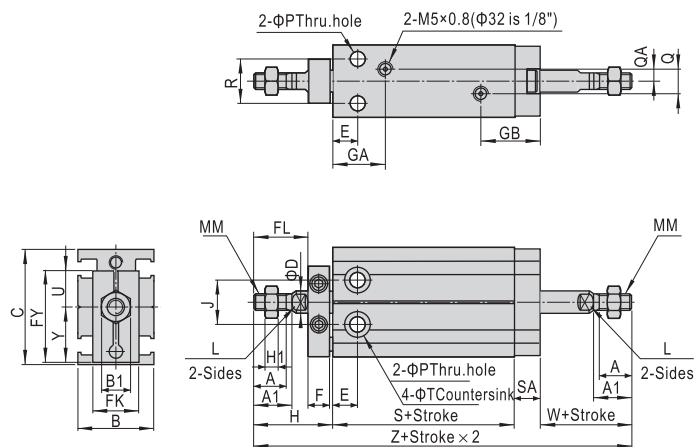
Remark) The unmarked dimension is the same as MK standard type.



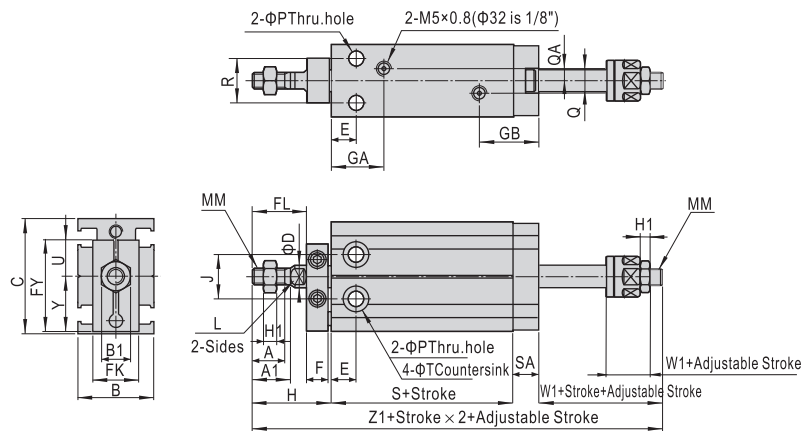
Multi-mount cylinder
MK Series



MKD



MKJ



MD, MK

Bore size\Item	A	A1	B	B1	C	D	E	F	FL	FK	FY	GA	GB	H	H1	J	L	P	Y
6	7	8	16.5	5.5	22	3	7	8	9	11	19	14	16	18	2.4	10	-	3.2	10.9
10	10	11	16.5	7	24	4	7	8	12	13	20.5	15.5	16	21	2.2	11	-	3.2	11.9
16	11	12.5	20	8	32	6	7	8	17	13	26.5	14.5	17.5	26	4	14	5	4.5	15.9
20	12	14	26	10	40	8	9	8	20	16	32	19	20	29	5	16	6	5.5	19.8
25	15.5	18	32	12	50	10	10	10	22	19	40	21.5	17.5	33	6	20	8	5.5	24.8
32	19.5	22	40	17	62	12	11	12	29	24	49	23	22.5	42	6	24	10	6.6	30.8

Bore size\Item	MM	Q	QA	R	SA	T	U	W	W1	Without magnet			With magnet		
										S	Z	Z1	S	Z	Z1
6	M3 × 0.5	-	-	7	6	6Dp:5	8.1	13	13	38	75	75	38	75	75
10	M4 × 0.7	-	-	9	6	6Dp:5.6	8.6	16	14.7	36	79	77.7	36	79	77.7
16	M5 × 0.8	3	1.5	12	7.5	7.6Dp:6.5	10.6	16	17	30	79.5	80.5	40	89.5	90.5
20	M6 × 1.0	9	4.5	16	9	9.3Dp:8	12.2	19	21	36	93	95	46	103	105
25	M8 × 1.25	12	6	20	9	9.3Dp:9	15.2	23	25	40	105	107	50	115	117
32	M10 × 1.25	13	4.5	24	10	11Dp:11.5	18.2	27	27	42	121	121	52	131	131

