purelogic
research & development

PNEUMATIC

PRODUCT CATALOG

purelogic research & development

Pneumatic cylinder

Directional valve

Solenoid valve

FRL

purelogic research & development

FRL

Pneumatic accessory

Pneumatic Cylinder

3 Points positioning and precisely machined head caps and pistons done ьy imported 3-0 CNC machine, fundamentally solved tradtional pneumatic cylinder working proьlems of climblng and quivering, which makes E • MC pneumatic cylinder enjoy very dependaьle and staьle excellent quality. As one of the most professional manufacturers in China, E • MC has widest pneumatic cylinder category and the best quality. With over 20 years' experience in designing all kinds of pneumatic cylinders, we have developed and provided a lot of customized cylinders to many famous companies in the wor1d, which makes E • MC quality accepted widely. E • MC R&D team always devote to studying and creating for pneumatic cylinder, we'Il develop more and more cylinders and push the pneumatic cylinder industry forward together with you.

Installation and use of pneumatic cylinder

1.Check the component before using to see if any damage in transportation
2.Choose pneumatic cylinder with sufficient output force if the loader is same
3.Choose pneumatic cylinder supporting high temperature if it's required, take anti-frozen measures to avoid water frozen in system in cold environment
4.Clean sundries in tubing before connection to pneumatic cylinder and the working medium should be treated by 25μm filteration
5.Try to avoid any possibility to work with lateral loader, this could elongate life cycle of the pneumatic cylinder
6.Protect the pneumatic cylinder with anti-rust measures if it's in long time free condition, and cover the air ports with anti-dust cap.

Attention points

1.Please fix filter as near the direction control valve as possible, to remove the iron rust, water in the tube.
2.Please use the tube, such as nickle plated tube, nylon tube, and rubber tube etc, when the cylinder used in corrosion situation.
3.Please confirm whether the cross section of the tube between cylinder & directional control valve has the valid section which is stipulated by the stated piston speed.
4.Please remove the iron rust (smear metal etc) by compressed air before fixing it.
5.Please avoid the sealing belt, sticking agent etc, when connecting with components.
6.Please keep the load which is added on the piston rod acting on the axial state all the time

After use

1.The most suitable temperature is 5–60 ℃ when using the cylinder . Please consider the sealing material if the temperature exceed 60℃ . And if it below 5℃ , please avoid freezing due to the moisture in the circuit. It may bring accidents.
2.Please avoid using the cylinder in the corroding & danger environment, otherwise it will bring damage or can't run well. Please contact us if you insist on using them in such operational environment.
3.It is required that the compressed air must be clean and less moisture.
4.The purpose of the cushion is to avoid the impact from the piston and end cover at the end of the stroke by using the compressibility of the air which can absorb the kinetic energy of the moving part.
5.The cushion has already been adjusted before delivery. For the difference of the loads, you can adjust the needle valve by turning right to strengthen buffer while the left is to weaken it.
6.Please avoid using the cylinder directly under the cutting compound, refrigerant, bug dust and spatter turnings etc.

Other statement

1.It may bring the damage for the cylinder if you use the cylinder under the not–allowed big inertia occasion.
2.Please don't beat the cylinder barrel. It is the reason for the cylinder not running well once there are scars on the barrel.
3.Please install the cylinder on the horizontal plane . If the mounting surface is not horizontal, it also can't run well .
4.Please note that it sometimes can bring negative pressure of inertia in the cylinder due to the inertia of external force ,which can make the inside sealing washer be disengaged and result in outside leakage.

Air cylinder theory force table

$$F = P \times A$$

- A — Actual piston working area (mm^2)
- P — Working pressure (Mpa)
- F — Theoretical force of cylinder (N)

Air cylinder theory force table

Bore Size(mm)		32		40		50		63		80		100		125		160		200	
OD of rod(mm)		12		16		20		20		25		25		32		40		40	
Acting type		Double acting		Double acting		Double acting		Double acting		Double acting		Double acting		Double acting		Double acting		Double acting	
		Push force	Pull force	Push force	Pull force	Push force	Pull force	Push force	Pull force	Push force	Pull force	Push force	Pull force	Push force	Pull force	Push force	Pull force	Push force	Pull force
Actual working area (mm²)		804	690	1256	1055	1963	1649	3117	2803	5026	4536	7853	7362	12272	11468	20106	18849	31416	30157
Working pressure (Mpa)	0.1	80.4	69.0	125.6	105.5	196.3	164.9	311.7	280.3	502.6	453.6	785.3	736.2	1227.2	1146.8	2010.6	1884.9	3141.1	3015.7
	0.2	160.8	138.0	251.2	211.0	392.6	329.8	623.4	560.6	1005.2	907.2	1570.6	1472.4	2454.4	2293.6	4021.2	3769.8	6283.2	6031.4
	0.3	241.2	207.0	376.8	316.5	588.9	494.7	935.1	840.9	1507.8	1360.8	2355.9	2208.6	3681	3440.4	6031.8	5654.7	9424.8	9047.1
	0.4	321.6	276.0	502.4	422.0	785.2	659.6	1246.8	1121.2	2010.4	1814.4	3141.2	2944.8	4908.8	4587.2	8042.4	7539.6	12566.4	12062.8
	0.5	402.0	345.0	628.0	527.5	981.5	824.5	1558.5	1401.5	2513.0	2268.0	3926.5	3681.0	6136.0	5734.0	10053.0	9424.5	15708.0	15078.5
	0.6	482.4	414.0	753.6	633.0	1177.8	989.4	1870.2	1681.8	3015.6	2721.6	4711.8	4417.2	7363.2	6880.8	12063.6	11309.4	18849.6	18094.2
	0.7	562.8	483.0	879.2	738.5	1374.1	1154.3	2181.9	1962.1	3518.2	3175.2	5497.1	5153.4	8590.4	8027.6	14074.2	13194.3	21991.2	21109.9
	0.8	643.2	552.0	1004.8	844.0	1570.4	1319.2	2493.6	2242.4	4020.8	3628.8	6282.4	5889.6	9817.6	9174.4	16084.8	15079.2	25132.8	24125.6
	0.9	723.6	621.0	1130.4	949.5	1766.7	1484.1	2805.3	2522.7	4523.4	4082.4	7067.7	6625.8	11044.8	10321.2	18095.4	16964.1	28274.4	27141.3

Air cylinder theory force table

$$F = P \times A - F_0$$

- F_0 — Force of spring (N)
- A — Actual piston working area (mm^2)
- P — Working pressure (Mpa)
- F — Theoretical force of cylinder (N)

Bore Size(mm)		8		10		12		16		20		25	
OD of rod(mm)		4		4		6		6		8		8	
Acting type		Double acting		Double acting		Double acting		Double acting		Double acting		Double acting	
		Push force	Pull force	Push force	Pull force	Push force	Pull force	Push force	Pull force	Push force	Pull force	Push force	Pull force
Actual working area (mm²)		50.24	37.68	78.5	65.94	113.04	84.78	200.96	172.70	314.00	263.76	490.63	412.13
Working pressure (Mpa)	0.1	5.02	3.77	7.85	6.59	11.30	8.48	20.10	17.27	31.40	26.38	49.06	41.21
	0.2	10.5	7.54	15.70	13.19	22.61	16.96	40.19	34.54	62.80	52.75	98.13	82.43
	0.3	15.07	11.30	23.55	19.78	33.91	25.13	60.29	51.81	94.20	79.13	147.19	123.64
	0.4	20.10	15.07	31.40	26.38	45.22	33.91	80.38	69.08	125.60	105.50	196.25	164.85
	0.5	25.12	18.80	39.25	32.97	56.52	42.39	100.48	86.35	157.00	131.88	245.31	206.06
	0.6	30.14	22.61	47.10	39.56	67.82	50.87	120.58	103.63	188.40	158.26	294.38	247.28
	0.7	35.17	26.38	54.95	46.16	79.13	59.35	140.67	120.89	219.80	184.63	343.44	3175.2
	0.8	40.16	30.16	62.80	52.72	90.40	67.80	160.80	138.16	251.20	211.04	392.48	329.68
	0.9	45.18	33.93	70.65	59.31	101.70	76.32	180.90	155.43	282.60	237.42	441.54	370.89

FVBC/FXBC Series IS06431/IS015552 Standard Cylinder

FVBC FXBC

FVBC-S FXBC-S

How to Order?

Series No.	Cushion Type	Type No.	Bore	X	Stroke	–	Adjustable stroke	–	Magnet No.	–	Seal material	–	Mounting type	–	Thread type
FVB: Square type barrel FXB: Mickey mouse barrel	C: Air cushion	Blank: Basic type D: Double shaft type J: Double shaft and adjustable stroke type	32 40 50 63 80 100		25 50 75 …		10 20 30 40 50 75 100		Blank: No Magnet S: With Magnet		Blank: TPU seal		Blank: No CA CB CR LB FA FB IJ YJ YCJ BJ FD		Blank: G P: PT T: NPT

Order Example:

FVBC series, double shaft air cylinder, Bore 40mm, stroke 50mm, with magnet, TPU seal material, CA mounting accessory, NPT thread.

ERP code is: FVBCD 40X50–S–CA–T

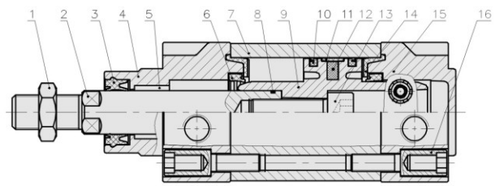
Note: If cylinder with several different mounting accessories, please use this sequential coding: CA/CB/CR/LB/FA/FB/IJ/YJ/BJ/FD

Specifications

Bore Size (mm)	32	40	50	63	80	100
Acting type	Double Acting					
Working medium	Clean Air(25 μ m filteration)					
Working pressure (MPa)	0.1~1.0					
Guaranteed pressure (MPa)	1.5					
Working temperature (℃)	–20~80(Dry air)					
Speed range (mm/s)	50~800					
Cushion type	Adjustable Cushion					
Cushion stroke (mm)	27		30		36	
Mounting type	LB FA FB CA CB CR					
Port size	G1/8	G1/4		G3/8		G1/2

Bore (mm)	Standard stroke (mm)	Max. stroke (mm)
32	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500	2000
40	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800	2000
50~100	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	2000

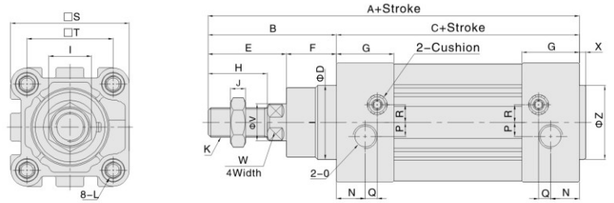
Internal Structure



NO.	Part name	Material
1	Nut	Carbon steel
2	Piston rod	S45C hard chrome carbon steel
3	Piston rod seal	TPU
4	Head cover	Aluminum alloy
5	Self lubricating bearing	Bronze powder
6	Cushion seal	TPU
7	Barrel	Aluminum alloy
8	O–ring	NBR
9	Piston	Aluminum alloy
10	Piston seal	TPU
11	Wear ring	PTFE
12	Magnet	Plastic
13	Hexagon screw	Carbon steel
14	Cushion pad	TPU
15	Rear cover	Aluminum alloy
16	Bolt	Carbon steel

Main dimensions

FVBC

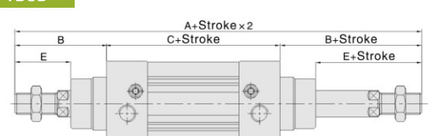


(mm)

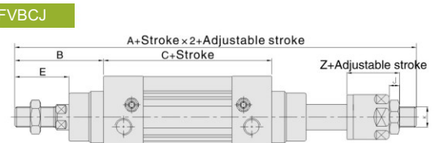
Bore/Sign	A	B	C	D	E	F	G	H	I	J	K	L	N	O	P	Q	R	S	T	V	W	X	Z
32	142	48	94	30	29	19	27.5	22	17	6	M10x1.25	M6	13	G1/8	5.5	6	6	46.5	32.5	12	10	3	30
40	159	54	105	35	33	21	32	24	17	7	M12x1.25	M6	17	G1/4	6	7.5	8.5	54	38	16	13	3.5	35
50	175	69	106	40	42	27	31	32	23	8	M16x1.5	M8	15.5	G1/4	7.5	6.5	9.5	64	46.5	20	17	3.5	40
63	190	69	121	45	42	27	33	32	23	8	M16x1.5	M8	16.5	G3/8	7.5	7.5	11.5	75	56.5	20	17	4	45
80	214	86	128	45	53	33	33	40	26	10	M20x1.5	M10	16.5	G3/8	8	8.5	12.5	93	72	25	22	4	45
100	229	91	138	55	55	36	37	40	26	10	M20x1.5	M10	19.5	G1/2	10	7	12	110	89	25	22	4	55

Note:With magnet and without magnet,the dimensions are same.

FVBCD



FVBCJ



Bore/Sign	A	A1	B	C	E	Z	J	K
32	190	188	48	94	29	27	6	M10x1.25
40	213	208	54	105	33	28	7	M12x1.25
50	244	231	69	106	42	29	8	M16x1.5
63	259	246	69	121	42	29	8	M16x1.5
80	300	282.5	86	128	53	35.5	10	M20x1.5
100	320	300.5	91	138	55	35.5	10	M20x1.5

Note: 1. With magnet and without magnet, the dimensions are same.
2. Not marked dimension is same as FVBC standard type.
3. FXBC series dimensions is same as FVBC.

VBC/LBC Series IS06431/IS015552 Standard Cylinder

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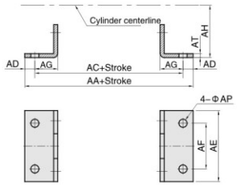
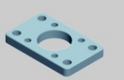
Dimension of Mounting Accessories

Dimension of LB type

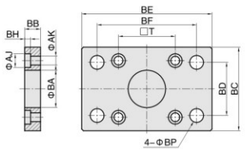
Model\Sign	AA	AC	AD	AE	AF	AG	AH	AP	AT
FJ–VBC32LB	158	142	8	47	32	24	32	7	4
FJ–VBC40LB	179	161	9	53	36	28	36	9	4
FJ–VBC50LB	190	170	10	65	45	32	45	9	5
FJ–VBC63LB	209	185	12	75	50	32	50	9	5
FJ–VBC80LB	248	210	19	95	63	41	63	12.5	6
FJ–VBC100LB	258	220	19	115	75	41	71	14.5	6

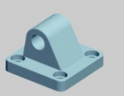




Dimension of FA/FB type

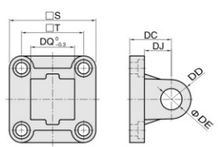
Model\Sign	AJ	AK	BA	BB	BC	BD	BE	BF	BH	BP	T
FJ–VBC32FA	11	7	30.5	10	47	32	80	64	4.5	7	32.5
FJ–VBC40FA	11	7	35.5	10	53	36	90	72	4.5	9	38
FJ–VBC50FA	14	9	40.5	12	65	45	110	90	5.5	9	46.5
FJ–VBC63FA	14	9	45.5	12	75	50	125	100	5.5	9	56.5
FJ–VBC80FA	17	11	45.5	16	95	63	154	126	7	12.5	72
FJ–VBC100FA	17	11	55.5	16	115	75	186	150	7	14.5	89





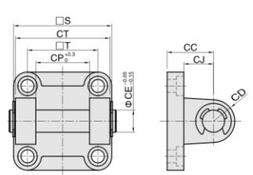
Dimension of CA type

Model\Sign	S	T	DC	DD	DE	DJ	DQ
FJ–VBC32CA	47	32.5	22	9	10	13	25.8
FJ–VBC40CA	53	38	25	12	12	16	27.8
FJ–VBC50CA	65	46.5	27	12	12	17	31.8
FJ–VBC63CA	75	56.5	32	15	16	22	39.7
FJ–VBC80CA	95	72	36	15	16	22	49.7
FJ–VBC100CA	115	89	41	20	20	27	59.7



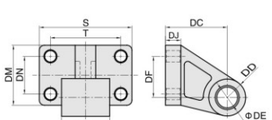
Dimension of CB type

Model\Sign	CC	CD	CE	CJ	CP	CT	S	T
FJ–VBC32CB	22	9	10	13	26	45	47	32.5
FJ–VBC40CB	25	12	12	16	28	52	53	38
FJ–VBC50CB	27	12	12	17	32	60	65	46.5
FJ–VBC63CB	32	15	16	22	40	70	75	56.5
FJ–VBC80CB	36	15	16	22	50	90	95	72
FJ–VBC100CB	41	20	20	27	60	110	115	89

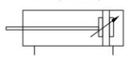


Dimensions of CR type

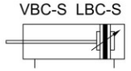
Model\Sign	S	T	DC	DD	DE	DF	DJ	DQ	DM	DN
FJ–VBC32CR	51	38	32	10	10	21	8	25.8	31	18
FJ–VBC40CR	54	41	36	11	12	24	10	27.8	35	22
FJ–VBC50CR	65	50	45	13	12	33	12	31.8	45	30
FJ–VBC63CR	67	52	50	15	16	37	12	39.7	50	35
FJ–VBC80CR	86	66	63	15	16	47	14	49.7	60	40
FJ–VBC100CR	96	76	71	19	20	55	15	59.7	70	50



VBC LBC



VBC-S LBC-S



How to Order ?

Series No	Cushion Type	Type No.	Bore	X	Stroke	–	Adjustable stroke	–	Magnet No.	–	Seal material	–	Mounting type	–	Thread type
VB: Mickey mouse barrel LB: Round barrel	C: Air cushion	Blank: Basic type D: Double shaft type J: Double shaft and adjustable stroke type	32 40 50 63 80 … 320		25 50 75 …		10 20 30 40 50 75 100		Blank: No Magnet S: With Magnet		Black: TPU seal		Blank: No CA CB IJ CR YJ LB YCJ FA BJ FB FD		Blank: G P: PT T: NPT

Order Example:

VBC series, double shaft air cylinder, Bore 40mm, stroke 50mm, with magnet, TPU seal material, CA mounting accessory, NPT thread.

ERP code is: VBCD 40X50–S–CA–T

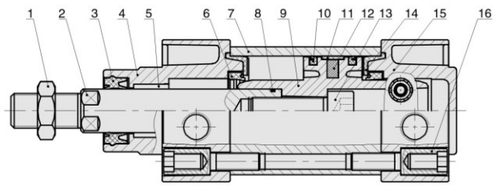
Note: If cylinder with several different mounting accessories, please use this sequential coding: CA/CB/CR/LB/FA/FB/IJ/YJ/BJ/FD

Specifications

Bore Size (mm)	32	40	50	63	80	100	125	160	200	250
Acting type	Double Acting									
Working medium	Clean Air(25 μ m filteration)									
Working pressure (MPa)	0.1~1.0									
Guaranteed pressure (MPa)	1.5									
Working temperature (℃)	–20~80(Dry air)									
Speed range (mm/s)	50~800									
Cushion type	Adjustable Cushion									
Cushion stroke (mm)	27		30		36		34	35	42	50
Mounting type	LB FA FB CA CB CR									
Port size	G1/8	G1/4		G3/8		G1/2		G3/4		G1

Bore (mm)	Standard stroke (mm)	Max. stroke (mm)
32	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500	2000
40	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800	2000
50~250	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	2000

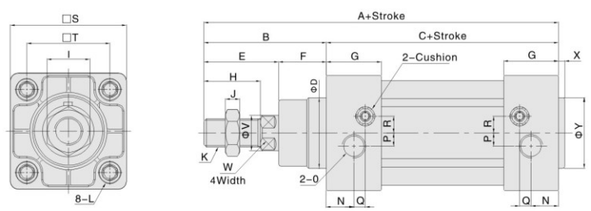
Internal Structure



NO.	Part name	Material
1	Nut	Carbon steel
2	Piston rod	S45C hard chrome carbon steel
3	Piston rod seal	TPU
4	Head cover	Aluminum alloy
5	Self lubricating bearing	Bronze powder
6	Cushion seal	TPU
7	Barrel	Aluminum alloy
8	O–ring	NBR
9	Piston	Aluminum alloy
10	Piston seal	TPU
11	Wear ring	PTFE
12	Magnet	Plastic
13	Hexagon screw	Carbon steel
14	Cushion pad	TPU
15	Rear cover	Aluminum alloy
16	Bolt	Carbon steel

Main dimensions

VBC

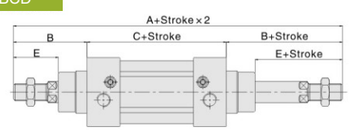


(mm)

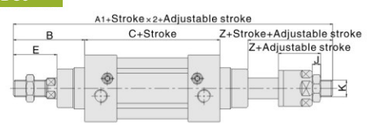
Bore/Sign	A	B	C	D	E	F	G	H	I	J	K	L	N	O	P	Q	R	S	T	V	W	X	Y
32	142	48	94	30	29	19	27.5	22	17	6	M10x1.25	M6	13	G1/8	5.5	6	6	47	32.5	12	10	3	30
40	159	54	105	35	33	21	32	24	17	7	M12x1.25	M6	17	G1/4	6	7.5	8.5	53	38	16	13	3.5	35
50	175	69	106	40	42	27	31	32	23	8	M16x1.5	M8	15.5	G1/4	7.5	6.5	9.5	65	46.5	20	17	3.5	40
63	190	69	121	45	42	27	33	32	23	8	M16x1.5	M8	16.5	G3/8	7.5	7.5	11.5	75	56.5	20	17	4	45
80	214	86	128	45	53	33	33	40	26	10	M20x1.5	M10	16.5	G3/8	9	7.5	13.5	95	72	25	22	4	45
100	229	91	138	55	55	36	37	40	26	10	M20x1.5	M10	18.5	G1/2	9.5	8.5	13.5	115	89	25	22	4	55
125	279	119	160	60	74	45	46	54	41	13.5	M27x2.0	M12	23	G1/2	14	12	14	140	110	32	27	–	–
160	332	152	180	65	94	58	50	72	55	18	M36x2.0	M16	25	G3/4	15	12	20	180	140	40	36	–	–
200	347	167	180	75	110	57	50	72	55	18	M36x2.0	M16	25	G3/4	–	–	–	220	175	40	36	–	–
250	391	191	200	90	124	67	52	84	65	21	M42x2.0	M20	26.5	G1	20.5	7.5	21	270	220	50	45	10	90

Note:With magnet and without magnet,the dimensions are same.

VBCD



VBCJ



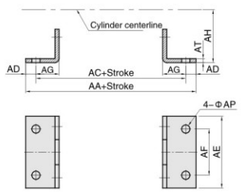
Bore/Sign	A	A1	B	C	E	Z	J	K
32	190	188	48	94	29	27	6	M10x1.25
40	213	208	54	105	33	28	7	M12x1.25
50	244	231	69	106	42	29	8	M16x1.5
63	259	246	69	121	42	29	8	M16x1.5
80	300	282.5	86	128	53	35.5	10	M20x1.5
100	320	300.5	91	138	55	35.5	10	M20x1.5
125	398	372.5	119	160	74	35	13.5	M27x2.0
160	484	448	152	180	94	40	18	M36x2.0
200	514	462	167	180	100	40	18	M36x2.0
250	582	–	191	200	124	–	–	–

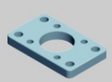
Note: 1. With magnet and without magnet, the dimensions are same.
2. Not marked dimension is same as VBC standard type.
3. LBC series dimensions is same as VBC.

Dimension of Mounting Accessories

Dimension of LB type

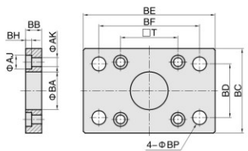
Model\Sign	AA	AC	AD	AE	AF	AG	AH	AP	AT
FJ–VBC32LB	158	142	8	47	32	24	32	7	4
FJ–VBC40LB	179	161	9	53	36	28	36	9	4
FJ–VBC50LB	190	170	10	65	45	32	45	9	5
FJ–VBC63LB	209	185	12	75	50	32	50	9	5
FJ–VBC80LB	248	210	19	95	63	41	63	12.5	6
FJ–VBC100LB	258	220	19	115	75	41	71	14.5	6
FJ–VBC125LB	290	250	20	140	90	45	90	16.5	8
FJ–VBC160LB	340	300	20	180	115	60	115	18.5	10
FJ–VBC200LB	380	320	30	220	135	70	135	24	12

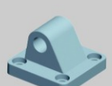




Dimension of FA/FB type

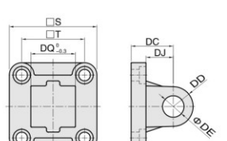
Model\Sign	AJ	AK	BA	BB	BC	BD	BE	BF	BH	BP	T
FJ–VBC32FA	11	7	30.5	10	47	32	80	64	4.5	7	32.5
FJ–VBC40FA	11	7	35.5	10	53	36	90	72	4.5	9	38
FJ–VBC50FA	14	9	40.5	12	65	45	110	90	5.5	9	46.5
FJ–VBC63FA	14	9	45.5	12	75	50	125	100	5.5	9	56.5
FJ–VBC80FA	17	11	45.5	16	95	63	154	126	7	12.5	72
FJ–VBC100FA	17	11	55.5	16	115	75	186	150	7	14.5	89
FJ–VBC125FA	19	13	60.5	20	140	90	224	180	8	16.5	110
FJ–VBC160FA	25	17	65.5	20	180	115	280	230	10.5	18.5	140
FJ–VBC200FA	25	17	75.5	25	220	135	320	270	10.5	24	175





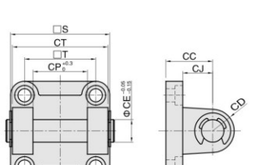
Dimension of CA type

Model\Sign	S	T	DC	DD	DE	DJ	DQ
FJ–VBC32CA	47	32.5	22	9	10	13	25.8
FJ–VBC40CA	53	38	25	12	12	16	27.8
FJ–VBC50CA	65	46.5	27	12	12	17	31.8
FJ–VBC63CA	75	56.5	32	15	16	22	39.7
FJ–VBC80CA	95	72	36	15	16	22	49.7
FJ–VBC100CA	115	89	41	20	20	27	59.7
FJ–VBC125CA	140	110	50	25	25	33	69.7
FJ–VBC160CA	180	140	55	30	30	35.5	89.7
FJ–VBC200CA	220	175	60	30	30	36	89.7



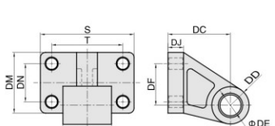
Dimension of CB type

Model\Sign	CC	CD	CE	CJ	CP	CT	S	T
FJ–VBC32CB	22	9	10	13	26	45	47	32.5
FJ–VBC40CB	25	12	12	16	28	52	53	38
FJ–VBC50CB	27	12	12	17	32	60	65	46.5
FJ–VBC63CB	32	15	16	22	40	70	75	56.5
FJ–VBC80CB	36	15	16	22	50	90	95	72
FJ–VBC100CB	41	20	20	27	60	110	115	89
FJ–VBC125CB	50	25	25	31	70	130	140	110
FJ–VBC160CB	55	30	30	35.5	90	170	180	140
FJ–VBC200CB	60	30	30	36	90	170	220	175



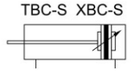
Dimensions of CR type

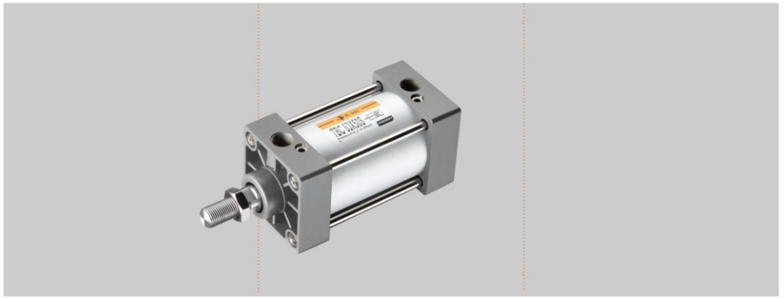
Model\Sign	S	T	DC	DD	DE	DF	DJ	DQ	DM	DN
FJ–VBC32CR	51	38	32	10	10	21	8	25.8	31	18
FJ–VBC40CR	54	41	36	11	12	24	10	27.8	35	22
FJ–VBC50CR	65	50	45	13	12	33	12	31.8	45	30
FJ–VBC63CR	67	52	50	15	16	37	12	39.7	50	35
FJ–VBC80CR	86	66	63	15	16	47	14	49.7	60	40
FJ–VBC100CR	96	76	71	19	20	55	15	59.7	70	50
FJ–VBC125CR	124	94	90	22.5	25	70	20	69.7	90	60



TBC XBC

TBC-S XBC-S





How to Order ?

Series No.	Cushion Type	Type No.	Bore	X	Stroke	–	Adjustable stroke	–	Magnet No.	–	Seal material	–	Mounting type	–	Thread type
TB: round type barrel XB: Mickey mouse barrel	C: Air cushion	Blank: basic type D: Double shaft type J: Double shaft and adjustable type T: Multi-position type	32 40 50 63 80 … 320		25 50 75 …		10 20 30 40 50 75 100		Blank: without magnet S: with magnet		Blank: standard material (NBR seal) V: VITON seal		Blank: No CA CB CR LB FA FB IJ YJ YCJ BJ ….		Blank: G P: PT T: NPT

Order Example:

TBC series, double shaft air cylinder, bore 40mm, stroke 50mm, with magnet, NBR seal, CA mounting accessory, NPT thread.
EPR code is: TBC40X50-S-CA-B-T
Note: If cylinder with several different mounting accessories, please use this sequential coding: CA/CB/CR/LB/FA/FB/IJ/YJ/BJ/FD

Product Features

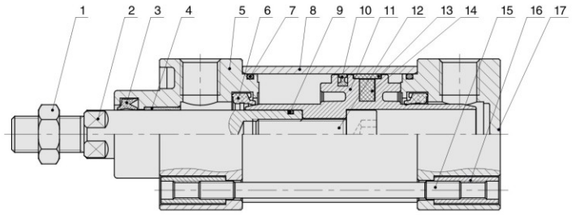
* Provided with adjustable cushion on both end covers to make sure the cylinder works very smoothly, safely and with low noise.
* With self lubricating bearing, the piston rod is lubrication free.
* Magnet and sufficient fixing styles are available.

Specifications

Bore Size (mm)	32	40	50	63	80	100	125	160	200	250	320
Acting type	Double Acting										
Working medium	Clean Air(25 μ m filteration)										
Working pressure (MPa)	0.1~1.0										
Guaranteed pressure (MPa)	1.5										
Working temperature (℃)	-20~80(Dry air)										
Speed range (mm/s)	50~800										
Cushion type	Adjustable Cushion										
Cushion stroke (mm)	25		24		30		24.5	28	42	50	39
Mounting type	LB FA FB CA CB CR TC TCM										
Port size	G1/8	G1/4		G3/8		G1/2			G3/4	G1	

Bore (mm)	Standard stroke (mm)	Max. stroke (mm)
32	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500	2000
40	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800	2000
50~250	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	2000

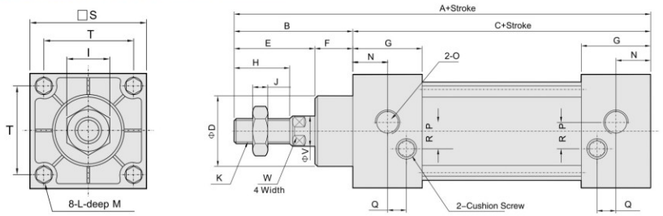
Internal structure



NO.	Part name	Material
1	Nut	Carbon steel
2	Piston rod	S45C hard chrome carbon steel
3	Piston rod seal	NBR
4	Self lubricating bearing	Bronze powder
5	Head cover	Aluminum alloy
6	Cushion seal	NBR
7	O-ring	NBR
8	Barrel	Aluminum alloy
9	O-ring	NBR
10	Piston seal	NBR
11	Piston	Aluminum alloy
12	Hexagon screw	Carbon steel
13	Wear ring	PTFE
14	Magnet	Plastic
15	Tie rod	Carbon steel
16	Tie rod nut	Carbon steel
17	Rear cover	Aluminum alloy

Main Dimensions

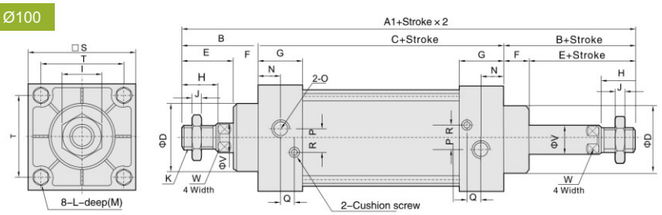
TBC Ø32 — Ø100



Bore/Sign	A	B	C	D	E	F	G	H	I	J	K	L
32	140	47	93	25	32	15	27.5	22	17	6	M10×1.25	M6×1
40	142	49	93	29	34	15	27.5	24	17	7	M12×1.25	M6×1
50	150	57	93	35	42	15	27.5	32	23	8	M16×1.5	M6×1
63	153	57	96	35.5	42	15	27.5	32	23	8	M16×1.5	M8×1.25
80	182	75	107	47	54	21	33	40	26	10	M20×1.5	M10×1.5
100	188	75	113	47	54	21	33	40	26	10	M20×1.5	M10×1.5

Bore/Sign	M	N	O	P	Q	R	S	T	V	W
32	9.5	13.7	G 1/8	3.5	7.5	7	45	33	12	10
40	9.5	13.5	G 1/4	6	7.5	9	50	37	16	14
50	9.5	13.5	G 1/4	8.5	8.2	9	62	47	20	17
63	9.5	13.5	G 3/8	7	6.5	8.5	75	56	20	17
80	10	16.5	G 3/8	7	8	10	94	70	25	22
100	10	16.5	G 1/2	7.5	8	13	112	84	25	22

TBCD Ø32 — Ø100



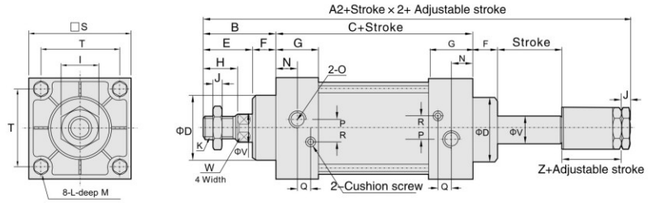
Bore/Sign	A1	B	C	D	E	F	G	H	I	J	K	L
32	187	47	93	25	32	15	27.5	22	17	6	M10×1.25	M6×1
40	191	49	93	29	34	15	27.5	24	17	7	M12×1.25	M6×1
50	207	57	93	35	42	15	27.5	32	23	8	M16×1.5	M6×1
63	210	57	96	35.5	42	15	27.5	32	23	8	M16×1.5	M8×1.25
80	257	75	107	47	54	21	33	40	26	10	M20×1.5	M10×1.5
100	263	75	113	47	54	21	33	40	26	10	M20×1.5	M10×1.5

Bore/Sign	M	N	O	P	Q	R	S	T	V	W
32	9.5	13.7	G 1/8	3.5	7.5	7	45	33	12	10
40	9.5	13.5	G 1/4	6	7.5	9	50	37	16	14
50	9.5	13.5	G 1/4	8.5	8.2	9	62	47	20	17
63	9.5	13.5	G 3/8	7	6.5	8.5	75	56	20	17
80	10	16.5	G 3/8	7	8	10	94	70	25	22
100	10	16.5	G 1/2	7.5	8	13	112	84	25	22

Note: 1. With magnet and without magnet, the dimensions are same.
2. XBC series dimensions is same as TBC.

Main Dimensions

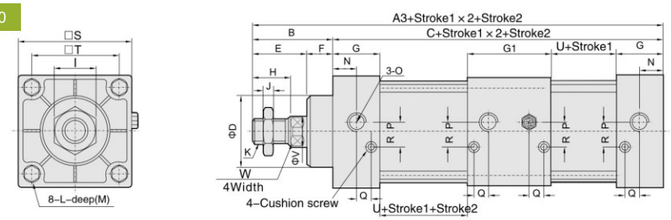
TBCJ Ø32 — Ø100



Bore/Sign	A2	B	C	D	E	F	G	H	I	J	K	L
32	182	47	93	25	32	15	27.5	22	17	6	M10×1.25	M6×1
40	185	49	93	29	34	15	27.5	24	17	7	M12×1.25	M6×1
50	194	57	93	35	42	15	27.5	32	23	8	M16×1.5	M6×1
63	197	57	96	35.5	42	15	27.5	32	23	8	M16×1.5	M8×1.25
80	238	75	107	47	54	21	33	40	26	10	M20×1.5	M10×1.5
100	244	75	113	47	54	21	33	40	26	10	M20×1.5	M10×1.5

Bore/Sign	M	N	O	P	Q	R	S	T	V	W	Z
32	9.5	13.7	G 1/8	3.5	7.5	7	45	33	12	10	21
40	9.5	13.5	G 1/4	6	7.5	9	50	37	16	14	21
50	9.5	13.5	G 1/4	8.5	8.2	9	62	47	20	17	23
63	9.5	13.5	G 3/8	7	6.5	8.5	75	56	20	17	23
80	10	16.5	G 3/8	10	8	10	94	70	25	22	29
100	10	16.5	G 1/2	7.5	8	13	112	84	25	22	29

TBCT Ø32 — Ø100

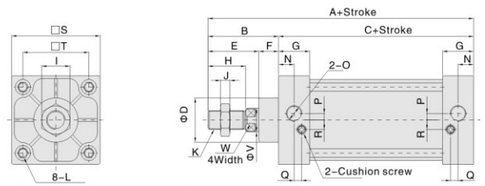


Bore/Sign	A3	B	C	D	E	F	G	G1	H	I	J	K	L
32	233	47	186	25	32	15	27.5	55	22	17	6	M10×1.25	M6×1
40	235	49	186	29	34	15	27.5	55	24	17	7	M12×1.25	M6×1
50	243	57	186	35	42	15	27.5	55	32	23	8	M16×1.5	M6×1
63	249	57	192	35.5	42	15	27.5	55	32	23	8	M16×1.5	M8×1.25
80	296	75	221	47	54	21	33	73	40	26	10	M20×1.5	M10×1.5
100	308	75	233	47	54	21	33	73	40	26	10	M20×1.5	M10×1.5

Bore/Sign	M	N	O	P	Q	R	S	T	V	U	W
32	9.5	13.7	G 1/8	3.5	7.5	7	45	33	12	38	10
40	9.5	13.5	G 1/4	6	8.2	9	50	37	16	38	14
50	9.5	13.5	G 1/4	8.5	8.2	9	62	47	20	38	17
63	9.5	13.5	G 3/8	7	6.5	8.5	75	56	20	41	17
80	10	16.5	G 3/8	10	8	10	94	70	25	41	22
100	10	16.5	G 1/2	7.5	8	13	112	84	25	47	22

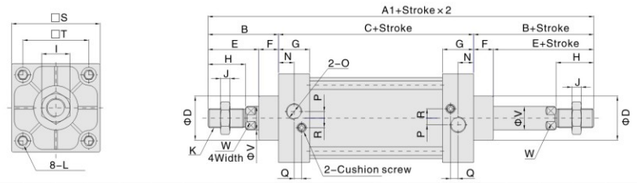
Note: 1. With magnet and without magnet, the dimensions are same.
2. XBC series dimensions is same as TBC.

TBC Ø125 — Ø320



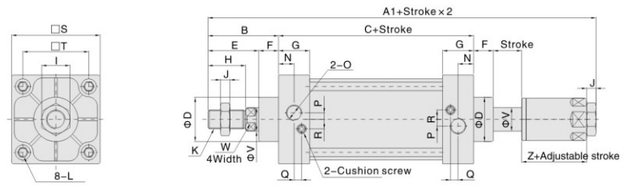
Bore/Sign	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	V	W
125	234	110	124	55	80	30	34	54	41	13.5	M27x2	M12x25	19	17	G1/2	14	7	14	140	110	32	27
160	307	135	172	65	100	35	50	72	55	18	M36x2	M16x35	25	25	G1/2	15	12	20	180	140	40	36
200	335	155	180	75	98	57	50	72	55	18	M36x2	M16x35	25	25	G3/4	/	/	/	220	175	40	36
250	401	191	210	90	124	67	52	84	64	20	M42x2	M20x50	30	26.5	G1	20.5	7.5	21	270	220	50	45
320	448	220	228	110	139	81	52	96	64	24	M48x2	M20x50	27.5	26	G1	0	/	/	340	270	63	57

TBCD Ø125 — Ø250



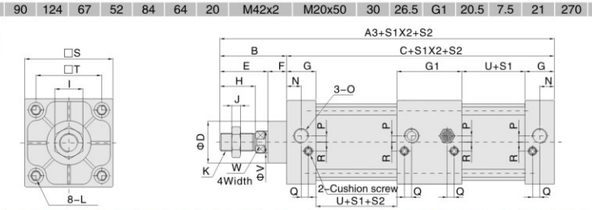
Bore/Sign	A1	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	V	W
125	344	110	124	55	80	30	34	54	41	13.5	M27x2	M12x25	19	17	G1/2	14	7	14	140	110	32	27
160	442	135	172	65	100	35	50	72	55	18	M36x2	M16x35	25	25	G1/2	15	12	20	180	140	40	36
200	490	155	180	75	98	57	50	72	55	18	M36x2	M16x35	25	25	G3/4	/	/	/	220	175	40	36
250	582	191	200	90	124	67	52	84	65	21	M42x2	M20x50	30	26.5	G1	20.5	7.5	21	270	220	50	45

TBCJ Ø125 — Ø250



Bore/Sign	A2	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	V	W	Z
125	312.5	110	124	55	80	30	34	54	41	13.5	M27x2	M12x25	19	17	G1/2	14	7	14	140	110	32	27	35
160	400	135	172	65	100	35	50	72	55	18	M36x2	M16x35	25	25	G1/2	15	12	20	180	140	40	36	40
200	450	155	180	75	98	57	50	72	55	18	M36x2	M16x35	25	25	G3/4	/	/	/	220	175	40	36	40
250	534	191	200	90	124	67	52	84	64	20	M42x2	M20x50	30	26.5	G1	20.5	7.5	21	270	220	50	45	55

TBCT Ø125



Bore/Sign	A3	B	C	D	E	F	G	G1	H	I	J	K	L	M	N	O	P	Q	R	S	T	V	U	W
125	370	110	260	55	80	30	34	80	54	41	13.5	M27x2	M12x25	19	17	G1/2	14	7	14	140	110	32	56	27

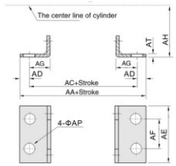
Note: XBC dimensions is same as TBC, if want to order TBCT 160 or larger, pls contact us.

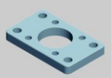
Dimension of Mounting Accessories

LB dimension

Model \ Sign	AA	AC	AD	AE	AF	AG	AH	AP	AT
FJ-TBC32LB	153	134	10.5	50	33	19.5	28	9	3
FJ-TBC40LB	169	140	14.5	57	36	23.5	30	12	3
FJ-TBC50LB	173	149	11.5	68	47	28.5	36.5	12	3
FJ-TBC63LB	184	158	13	80	56	32	41	12	3
FJ-TBC80LB	199	167	16	97	70	29	49	14	4
FJ-TBC100LB	209	173	18	112.5	84	30	57	14	4

Note: TBC125 bore more accessory attachment borrow VBC cylinder.

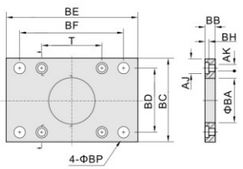


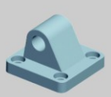


FA/FB dimension

Model \ Sign	BA	BB	BC	BD	BE	BF	BH	AJ	AK	BP	T
FJ-TBC32FA	29	10	48	33	73	58	7	11	7	7	33
FJ-TBC40FA	32	11	52	36	84	70	8	11	7	7	37
FJ-TBC50FA	39	10	64	47	105	86	5.5	11	7	9	47
FJ-TBC63FA	39	12	73	56	116	98	8.5	14	9	9	56
FJ-TBC80FA	48	16	92.5	70	143	119	11	17	11	11	70
FJ-TBC100FA	49	15	113.5	84	162	138	10.5	17.5	11	11	84

Note: TBC125 bore more accessory attachment borrow VBC cylinder.

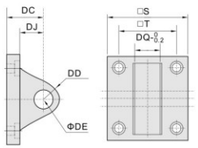




CA dimension

Model \ Sign	S	T	DC	DD	DE	DJ	DQ
FJ-TBC32CA	48	33	34	14	12	24	16
FJ-TBC40CA	49.5	37	34	14	14	23.5	20
FJ-TBC50CA	62	47	33.5	15	14	22	20
FJ-TBC63CA	74	56	34	14	14	24	20
FJ-TBC80CA	93	70	48	18	20	34.5	32
FJ-TBC100CA	110	84	48	19	20	33	32

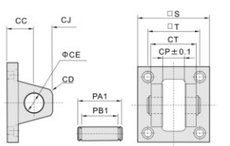
Note: TBC125 bore more accessory attachment borrow VBC cylinder.



CB dimension

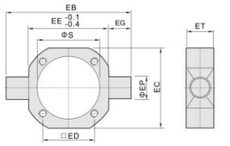
Model \ Sign	CC	CD	CE	CJ	CP	CT	S	T
FJ-TBC32CB	19	5	12	13	16.3	31	46.5	33
FJ-TBC40CB	19	5	14	13	20.3	44	50	37
FJ-TBC50CB	19	3	14	15	20.3	52	62	47
FJ-TBC63CB	19	3	14	11.5	20.3	52	73	56
FJ-TBC80CB	32	8	20	18.5	32.3	64	93	70
FJ-TBC100CB	32	8	20	19.5	32.3	64	110.5	84

Note: TBC125 bore more accessory attachment borrow VBC cylinder.



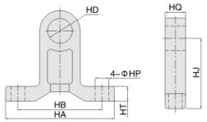
TC dimension

Model \ Sign	EB	EC	ED	EE	EG	EP	ET	S
FJ-TBC32TC	88.5	53	33	55	16	16	30.5	38
FJ-TBC40TC	113	63	37	63	25	25	32	45.5
FJ-TBC50TC	127	76	47	75	26	25	30	56.5
FJ-TBC63TC	141	89	56	88	26	25	32	69.5
FJ-TBC80TC	164	105	70	113	25	25	35	88
FJ-TBC100TC	182	131	84	132	25	25	42	107.5
FJ-TBC125TC	210.5	154	110	154	28	30	40	134.5
FJ-TBC160TC	270	202	140	202	33	32	38	172
FJ-TBC200TC	320	251	175	251	36	32	49	218

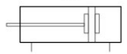


TCM dimension

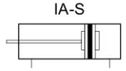
Model \ Sign	HA	HB	HD	HP	HT	HQ	HJ
FJ-TBC32TCM	110.5	80	16	12	13	21.5	51
FJ-TBC40/50/63TCM	111.5	80	25.5	12	10.5	21	50.5
FJ-TBC80/100TCM	110	85	25.5	14	15	20.5	71
FJ-TBC125TCM	148	110	30	14	28.5	28.5	83.5
FJ-TBC160TCM	190	140	32	22	24	32	109
FJ-TBC200TCM	201	150	32	22	29	34	156.5



IA



IA-S



How to Order ?

Series No	Cushion Type	Type No	Bore	X	Stroke	—	Adjustable stroke	—	Magnet No	—	Tail type	—	Mounting type	—	Thread type
IA: Stainless steel barrel	C: Air Cushion Blank: Rubber Cushion	Blank: Basic type D: Double shaft type J: Double shaft and adjustable stroke type SA: Single action extend type SB: Single action return type	8 10 12 16 20 25		25 50 75 ...		10 20 30 40 50 75 100		Blank: No Magnet S: With Magnet		Blank: Swiveling tail U: Flat tail CM: Round tail		Blank: No LB FA SDB TC IJ YJ BJ		Blank: G P: PT T : NPT

Order Example:

IA series, Double shaft and adjustable stroke type, air cushion, Bore 20mm, stroke 25mm, Adjustable stroke 20, with magnet, NO Mounting type, Round tail, PT thread.
ERP code is: IACJ20*25-20-S-CM-P
Note: If cylinder with several different mounting accessories, please use this sequential coding: LB/FA/SDB /IJ/YJ/BJ

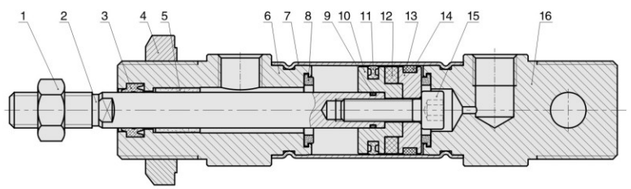
Specifications

Bore size(mm)	8	10	12	16	20	25
Acting type	Double Acting/Single Acting					
Working medium	Clean Air(25 μ m filteration)					
Working pressure (MPa)	0.1~0.7(Double Acting) / 0.2~0.7(Single Acting)				0.1~1.0(Double Acting) / 0.2~1.0(Single Acting)	
Guaranteed pressure (MPa)	1.5					
Working temperature (℃)	-20~80(Dry air)					
Speed range (mm/s)	10~1000					
Cushion type	Bumper			Bumper(Standard) / Air cushion(Adjustable cushion)		
Barrel material	Stainless steel					
Mounting type	LB FA SDB					
Port size	M5 × 0.8				G1/8	

Stroke

Bore (mm)		Standard stroke (mm)	Max. stroke (mm)
Double Acting	8	25 50 75 100 125 150	200
	10	25 50 75 100 125 150 175 200	200
	12	25 50 75 100 125 150 175 200 225 250	500
	16	25 50 75 100 125 150 175 200 225 250 300 350 400 500	500
	20~25	25 50 75 100 125 150 175 200 225 250 300 350 400 500	800
Single Acting	8	10 15 20 25 30 40 50	50
	10	10 15 20 25 30 40 50	50
	12	10 15 20 25 30 40 50	50
	16	10 15 20 25 30 40 50 60 75 80 100	100
	20~25	10 15 20 25 30 40 50 60 75 80 100 125 150	150

Internal Structure

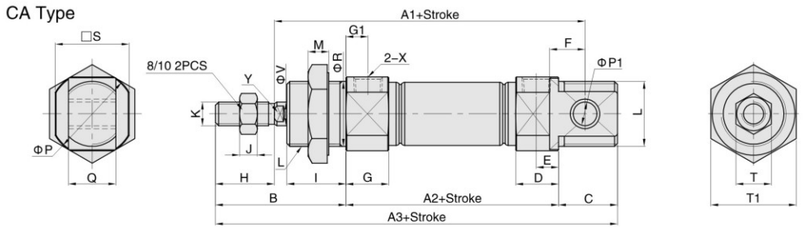


NO.	Part name	Material
1	Nut	Carbon steel
2	Piston rod	S45C hard chrome carbon steel
3	Piston rod seal	NBR
4	Nut	Carbon steel
5	Self lubricating bearing	Bronze powder
6	Head cover	Aluminum alloy
7	Barrel	Stainless Steel
8	Anti-bump cushion	TPU
9	O-ring	NBR
10	Piston	Aluminum alloy
11	Piston seal	NBR
12	Magnet	Plastic
13	Magnet base	Carbon steel
14	Wear ring	PTFE
15	Hexagon screw	Carbon steel
16	Rear cover	Aluminum alloy

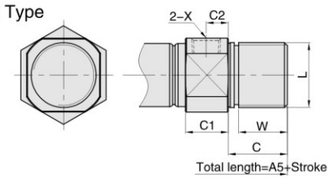
Main dimensions

IA Ø8 — Ø25

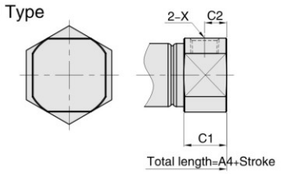
CA Type



CM Type



U Type



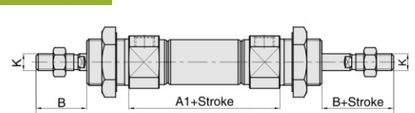
(mm)

Bore\Sign	A1	A2	A3	A4	A5	B	C	C1	C2	D	E	F	G	G1	H	I	J	K	L	M	P	P1	Q	R	S
8	64	46	86	74	–	28	12	9.5	5	9.5	5	6	11.5	7	12	12	3	M4X0.7	M12X1.25	7	17	4	8	12	15
10	64	46	86	74	–	28	12	9.5	5	9.5	5	6	11.5	7	12	12	3	M4X0.7	M12X1.25	7	17	4	8	12	15
12	75	50	105	88	105	38	17	10	5	10	5	9	12	7	16	17	5	M6X1.0	M16X1.5	6	19.7	6	12	16	18.3
16	82	56	111	94	111	38	17	10.5	5.5	10.5	5.5	9	12.5	7	16	17	5	M6X1.0	M16X1.5	6	22	6	12	16	20
20	95	62	126	106	126	44	20	14.5	7.5	14.5	7.5	12	14.5	7.5	20	20	6	M8X1.25	M22X1.5	7	29	8	16	22	25
25	104	65	137	115	137	50	22	16	8	16	8	12	16	8	22	22	6	M10X1.25	M22X1.5	7	33.5	8	16	22	30

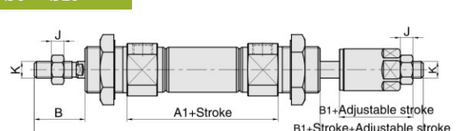
Bore\Sign	T	T1	X	V	W	Y
8	7	17	M5X0.8	4	–	–
10	7	17	M5X0.8	4	–	–
12	10	22	M5X0.8	6	15	5
16	10	22	M5X0.8	6	15	5
20	12	29	1/8"	8	18	6
25	17	29	1/8"	10	18.5	8

Note: With magnet and without magnet, the dimensions are same.

IAD Ø8 — Ø25



IAJ Ø8 — Ø25



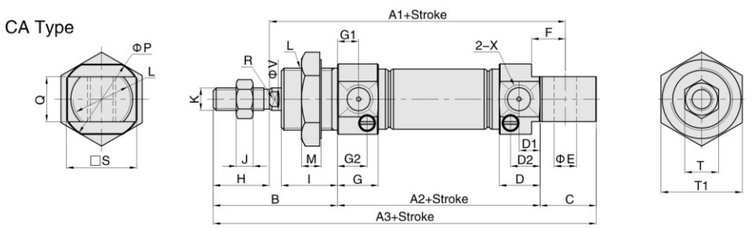
Bore\Sign	A	A1	A2	B	B1	J	K
8	104	48	102.7	16	14.7	3	M4X0.7
10	104	48	102.7	16	14.7	3	M4X0.7
12	128	52	128	21	21	5	M6X1.0
16	134	58	134	21	21	5	M6X1.0
20	150	62	151	24	25	6	M8X1.25
25	165	65	164	28	27	6	M10X1.25

Note: Unlabeled the same size as standard type.

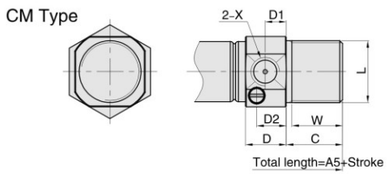
Main dimensions

IAC Ø16 — Ø25

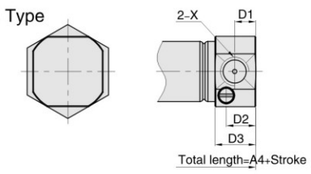
CA Type



CM Type



U Type



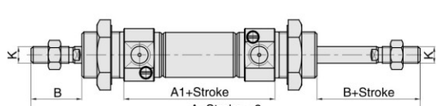
(mm)

Bore\Sign	A1	A2	A3	A4	A5	B	C	D	D1	D2	D3	E	F	G	G1	G2	H	I	J	K	L	M	P	Q	R
16	82	56	111	94	111	38	17	12	6	9	12	6	9	12.5	7	9.5	16	17	5	M6X1.0	M16X1.5	6	22	12	5
20	95	62	126	106	126	44	20	14.5	7.5	11	14.5	8	12	14.5	7.5	11	20	20	6	M8X1.25	M22X1.5	7	29	16	6
25	104	65	137	115	137	50	22	16	8	12.5	16	8	12	16	8	12.5	22	22	6	M10X1.25	M22X1.5	7	33.5	16	8

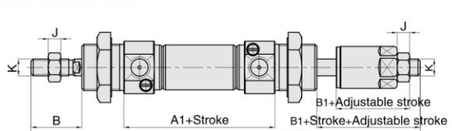
Bore\Sign	S	T	T1	X	V	W
16	20	10	22	M5X0.8	6	15
20	25	12	29	1/8"	8	18
25	30	17	29	1/8"	10	20

Note: With magnet and without magnet, the dimensions are same.

IACD Ø16 — Ø25



IACJ Ø16 — Ø25

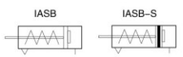


Bore\Sign	A	A1	A2	B	B1	J	K
16	134	58	134	21	21	5	M6X1.0
20	150	62	151	24	25	6	M8X1.25
25	165	65	164	28	27	6	M10X1.25

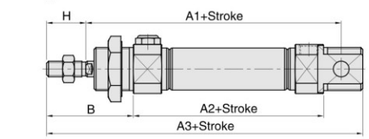
Note: Unlabeled the same size as standard type.

Main dimensions

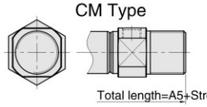
IASB Ø12 — Ø25



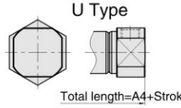
CA Type



CM Type

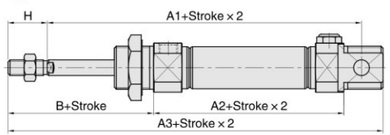


U Type

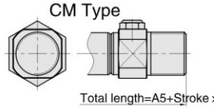


IASA Ø12 — Ø25

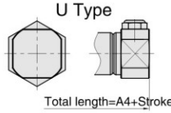
CA Type



CM Type



U Type

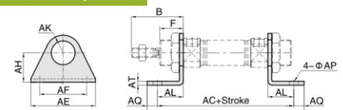


Bore\Sign	A1			A2			A3			A4			A5			B	H
	0~50	51~100	101~150	0~50	51~100	101~150	0~50	51~100	101~150	0~50	51~100	101~150	0~50	51~100	101~150		
12	100	–	–	75	–	–	130	–	–	113	–	–	130	–	–	38	16
16	107	132	–	81	106	–	136	161	–	119	144	–	136	161	–	38	16
20	120	145	170	87	112	137	151	176	201	131	156	181	151	176	201	44	20
25	129	154	179	90	115	140	162	187	212	140	165	190	162	187	212	50	22

Note: Unlabeled the same size as standard type.

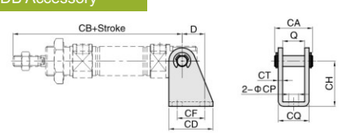
Accessory dimensions

LB Accessory



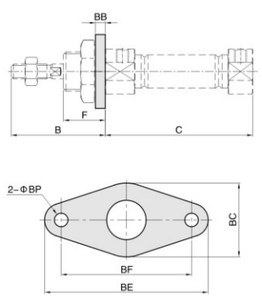
Model\Sign	AA	AC	AE	AF	AH	AK	AL	AP	AQ	AT	B	F
FJ-IA12LB	88	76	42	32	20.5	12.5	13	6	6	4	38	17
FJ-IA16LB	94	82	42	32	20.5	12.5	13	6	6	4	38	17
FJ-IA20LB	114	98	54	40	22.5	20	18	7	8	4	44	20
FJ-IA25LB	117	101	54	40	22.5	20	18	7	8	4	50	22

SDB Accessory



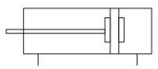
Model\Sign	D	Q	CA	CB	CD	CF	CH	CP	CQ	CT
FJ-IA12SDB	13	12.1	21.5	91	25	15	27	5.5	17.1	2.5
FJ-IA16SDB	13	12.1	21.5	98	25	15	27	5.5	17.1	2.5
FJ-IA20SDB	16	16.1	29	115	32	20	30	6.6	24.1	4
FJ-IA25SDB	16	16.1	29	126	32	20	30	6.6	24.1	4

FA Accessory

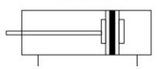


Model\Sign	B	C	BB	BC	BE	BF	F
FJ-IA12FA	38	50	4	30	53	40	17
FJ-IA16FA	38	56	4	30	53	40	17
FJ-IA20FA	44	62	5	40	66	50	20
FJ-IA25FA	50	65	5	40	66	50	22

RAL



RAL-S



How to Order ?

Series No	Cushion Type	Type No	Bore	X	Stroke	–	Adjustable stroke	–	Magnet No	–	Tail type	–	Mounting type	–	Thread type
RAL	C: Air cushion Blank: Rubber cushion	Blank: Basic type D: Double shaft type J: Double shaft and adjustable stroke type SA: Single action extend type SB: Single action return type	16 20 25 32 40		25 50 75 …		10 20 30 40 50 75 100		Blank: No Magnet S: With Magnet		Blank: Swiveling tail U: Flat tail CM: Round tail		Blank: No LB FA SDB IJ YJ BJ		Blank: G P: PT T: NPT

Order Example:

RAL series, Double shaft and adjustable stroke type, air cushion, Bore 32mm, stroke 25mm, Adjustable stroke 20, with magnet, No Mounting type, Round tail, PT thread.
ERP code is: RALCJ32*25-20-S-CM-P
Note: If cylinder with several different mounting accessories, pls with this sequential coding: LB/FA/SDB /IJ/YJ/BJ

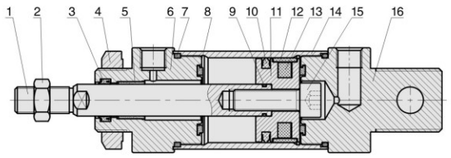
Specifications

Bore size(mm)	16	20	25	32	40
Acting type	Double Acting/Single Acting				
Working medium	Clean Air(25 μ m filteration)				
Working pressure (MPa)	0.1~0.7(Double Acting) 0.2~0.7(Single Acting)	0.1~1.0(Double Acting) / 0.2~1.0(Single Acting)			
Guaranteed pressure (MPa)	1.5				
Working temperature (℃)	-20~80(Dry air)				
Speed range (mm/s)	50~800				
Cushion type	Bumper / Air cushion				
Barrel material	Aluminum alloy				
Mounting type	LB FA SDB				
Port size	M5 × 0.8	G1/8			

Stroke

Bore (mm)		Standard stroke (mm)	Max. stroke (mm)
Double Acting	16~20	25 50 75 80 100 125 150 160 175 200 250 300	800
	25~40	25 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500	1500
Single Acting	16	25 50 75 100	100
	20~40	25 50 75 100 125 150	150

Internal Structure

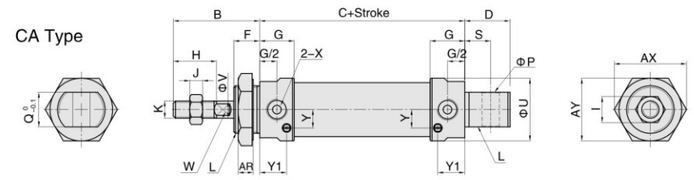


NO.	Part name	Material
1	Piston rod	S45C hard chrome carbon steel
2	Nut	Carbon steel
3	Piston rod seal	NBR
4	Nut	Carbon steel
5	Self lubricating bearing	Bronze powder
6	Head cover	Aluminum alloy
7	O–ring	NBR
8	Anti–bump cushion	TPU
9	O–ring	NBR
10	Piston seal	NBR
11	Piston	Aluminum alloy
12	Wear ring	PTFE
13	Magnet	Plastic
14	Barrel	Aluminum alloy
15	Hexagon screw	Carbon steel
16	Rear cover	Aluminum alloy

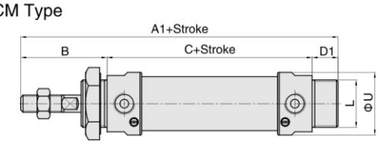
Main dimensions

RAL Ø16 — Ø40

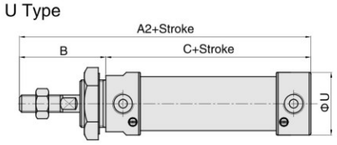
CA Type



CM Type



U Type



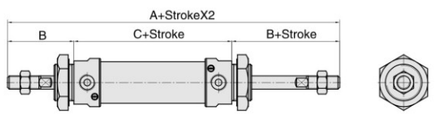
(mm)

Bore\Sign	A1	A2	B	C	D	D1	F	G	H	I	J	K	L	P	Q	S	U	V	W	X	AR	AX	AY	Y	Y1
16	102	92	36	54	16	10	14	11	16	10	5	M6X1.0	M16X1.5	6	12	7	20	6	5	M5X0.8	6	25	22	6.3	8
20	122	110	40	70	21	12	12	16	20	12	6	M8X1.25	M22X1.5	8	16	12	29	8	6	1/8"	7	33	29	8.5	12.5
25	128	114	44	70	21	14	14	16	22	17	6	M10X1.25	M22X1.5	8	16	12	34	10	8	1/8"	7	33	29	10	12.5
32	128	114	44	70	27	14	14	16	22	17	6	M10X1.25	M24X2.0	10	16	15	39.5	12	10	1/8"	8	37	32	12	12
40	152	138	46	92	27	14	14	22	24	17	7	M12X1.25	M30X2.0	12	20	15	49.5	16	14	1/8"	9	47	41	16	18

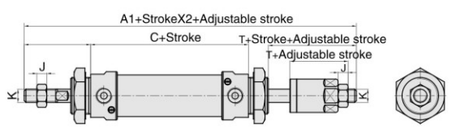
Note: With magnet and without magnet, the dimensions are same.

Main dimensions

RALD Ø16 — Ø40



RALJ Ø16 — Ø40

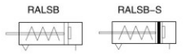


Bore\Sign	A	A1	B	C	J	K	T
16	128	127	36	56	5	M6X1.0	21
20	150	147	40	70	6	M8X1.25	25
25	158	155	44	70	6	M10X1.25	27
32	158	155	44	70	6	M10X1.25	27
40	184	180	46	92	7	M12X1.25	28

Note: Unlabeled the same size as standard type.

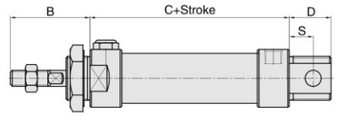
Main dimensions

RALSB Ø16 — Ø40

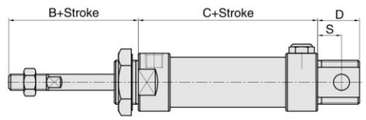


RALSA Ø16 — Ø40

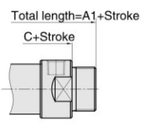
CA Type



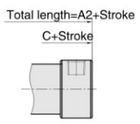
CA Type



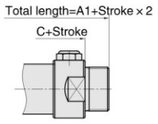
CM Type



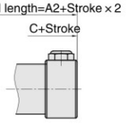
U Type



CM Type

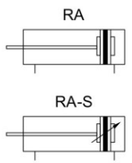


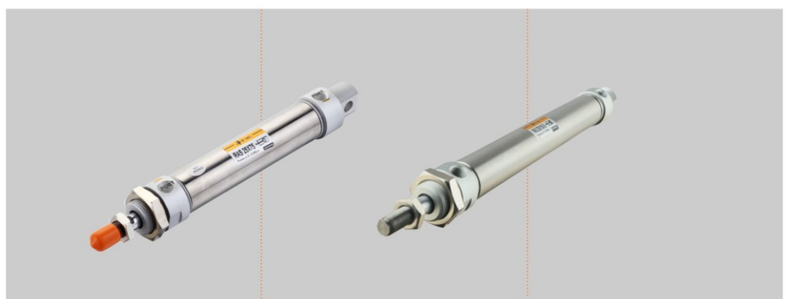
U Type



Bore\Sign	A1			A2			C			B	D	S
	0~50	51~100	101~150	0~50	51~100	101~150	0~50	51~100	101~150			
16	127	152	–	117	142	–	81	106	–	36	14	7
20	147	172	197	135	160	185	95	120	145	40	21	12
25	153	178	203	139	164	189	95	120	145	44	21	12
32	153	178	203	139	164	189	95	120	145	44	27	15
40	177	202	227	163	188	213	117	142	167	46	27	15

Note: Unlabeled the same size as standard type.





How to Order ?

Series No	Cushion Type	Type No	Bore	X	Stroke	–	Adjustable stroke	–	Magnet No	–	Tail type	–	Mounting type	–	Thread type
RA	C: Air cushion Blank: Rubber cushion	Blank: Basic type D: Double shaft type J: Double shaft and adjustable stroke type SA: Single action extend type SB: Single action return type	16 20 25 32 40		25 50 75 …		10 20 30 40 50 75 100		S: With Magnet		Blank: Swiveling tail U: Flat tail CM: Round tail		Blank: No LB FA SDB IJ YJ BJ ….		Blank: G P: PT T: NPT

Order Example:

RA series, Double shaft and adjustable stroke type, air cushion, Bore 32mm, stroke 25mm, Adjustable stroke 20, with magnet, NO Mounting type, Round tail, PT thread.
ERP code is: RACJ32*25–20–S–CM–P
Note: 1. If cylinder with several different mounting accessories, pls with this sequential coding: LB/FA/SDB /IJ/YJ/BJ
2. RA series always with magnet.

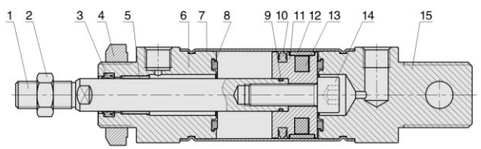
Specifications

Bore size(mm)	16	20	25	32	40
Acting type	Double Acting/Single Acting				
Working medium	Clean Air(25 μ m filteration)				
Working pressure (MPa)	0.1~0.7(Double Acting) 0.2~0.7(Single Acting)	0.1~1.0(Double Acting) / 0.2~1.0(Single Acting)			
Guaranteed pressure (MPa)	1.5				
Working temperature (℃)	–20~80(Dry air)				
Speed range (mm/s)	50~800				
Cushion type	Bumper	Bumper(Standard) / Air cushion(Adjustable cushion)			
Barrel material	Stainless steel				
Mounting type	LB FA SDB				
Port size	M5 × 0.8	G1/8			

Stroke

Bore (mm)		Standard stroke (mm)	Max. stroke (mm)
Double Acting	16	25 50 75 80 100 125 150 160 175 200	500
	20~40	25 50 75 80 100 125 150 160 175 200 250 300	800
Single Acting	16	25 50 75 100	100
	20~40	25 50 75 100	150

Internal Structure

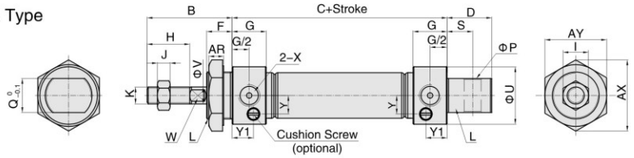


NO.	Part name	Material
1	Piston rod	S45C hard chrome carbon steel
2	Nut	Carbon steel
3	Piston rod seal	NBR
4	Nut	Carbon steel
5	Self lubricating bearing	Bronze powder
6	Head cover	Aluminum alloy
7	Barrel	Stainless Steel
8	Anti–bump cushion	TPU
9	O–ring	NBR
10	Piston seal	NBR
11	Piston	Aluminum alloy
12	Wear ring	PTFE
13	Magnet	Plastic
14	Hexagon screw	Carbon steel
15	Rear cover	Aluminum alloy

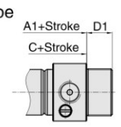
Main dimensions

RA Ø16 — Ø40

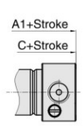
CA Type



CM Type



U Type



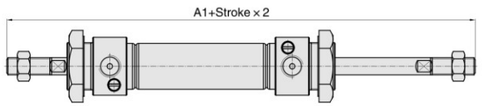
(mm)

Bore\Sign	A1	B	C	D	D1	F	G	H	I	J	K	Y1	L	P	Q	S	U	V	W	X	AX	AY	Y
16	98	38	60	16	16	16	10	16	10	5	M6X1.0	7	M16X1.5	6	12	9	21	6	5	M5X0.8	25	22	6.5
20	116	40	76	21	12	12	16	20	12	6	M8X1.25	12.5	M22X1.5	8	16	12	27	8	6	1/8"	33	29	8
25	120	44	76	21	14	14	16	22	17	6	M10X1.25	12.5	M22X1.5	8	16	12	30	10	8	1/8"	33	29	10
32	120	44	76	27	14	14	16	22	17	6	M10X1.25	12	M24X2.0	10	16	15	35	12	10	1/8"	37	32	12
40	122	46	76	27	14	14	17	24	17	7	M12X1.25	13	M30X2.0	12	20	15	42	16	14	1/8"	47	41	16

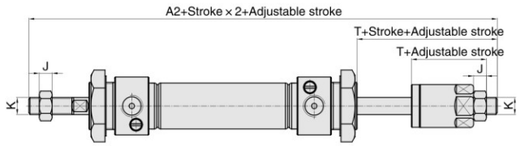
Note: With magnet and without magnet, the dimensions are same.

Main dimensions

RAD Ø16 — Ø40



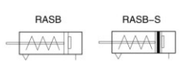
RAJ Ø16 — Ø40



Bore\Sign	A1	A2	J	K	T
16	136	135	5	M6X1.0	21
20	156	153	6	M8X1.25	25
25	164	161	6	M10X1.25	27
32	164	161	6	M10X1.25	27
40	168	164	7	M12X1.25	28

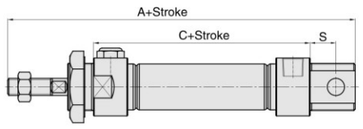
Note: Unlabeled the same size as standard type.

RASB Ø16 — Ø40

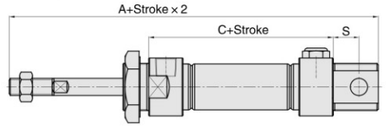


RASA Ø16 — Ø40

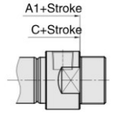
CA Type



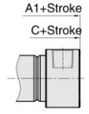
CA Type



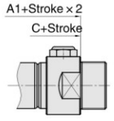
CM Type



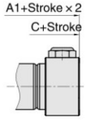
U Type



CM Type



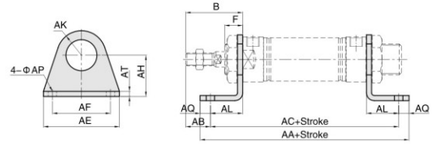
U Type



Bore\Sign	A			A1			C			S
	0-50	51-100	101-150	0-50	51-100	101-150	0-50	51-100	101-150	
16	139	164	–	123	148	–	85	110	–	9
20	162	187	212	141	166	191	101	126	151	12
25	166	191	216	145	170	195	101	126	151	12
32	172	197	222	145	170	195	101	126	151	15
40	174	199	224	147	172	197	101	126	151	15

Note: Unlabeled the same size as standard type.

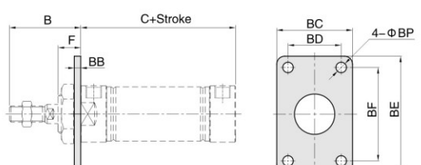
Dimensions of LB Type



Model\Sign	B		F		AA		AA(RALSB)			AA(RASB)			AB	
	RAL	RA	RAL	RA	RAL	RA	0-50	51-100	101-150	0-50	51-100	101-150	RAL	RA
FJ-RA16LB	36	38	14	16	96	100	121	146	–	125	150	–	22	24
FJ-RA20LB	40	40	12	12	118	124	143	168	193	149	174	199	24	24
FJ-RA25LB	44	44	14	14	118	124	143	168	193	149	174	199	28	28
FJ-RA32LB	44	44	14	14	138	144	163	188	213	169	194	219	18	18
FJ-RA40LB	46	46	14	14	162	146	187	212	237	171	196	221	19	19

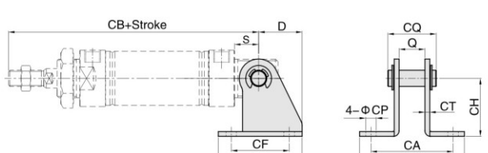
Model\Sign	AC		AC(RALSB)			AC(RASB)			AE	AF	AH	AK	AL	AP	AQ	AT
	RAL	RA	0-50	51-100	101-150	0-50	51-100	101-150								
FJ-RA16LB	84	88	109	134	–	113	138	–	44	32	20	14	14	5.5	6	3
FJ-RA20LB	102	108	127	152	177	133	158	183	54	40	25	17	16	6.5	8	3
FJ-RA25LB	102	108	127	152	177	133	158	183	54	40	25	17	16	6.5	8	3
FJ-RA32LB	122	128	147	172	197	153	178	203	59	45	32	19	26	6.5	8	3
FJ-RA40LB	146	130	171	196	221	155	180	205	64	50	36	23	27	6.5	8	3

Dimensions of FA Type



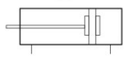
Model\Sign	B		C		C(RALSB)			C(RASB)			BB	BC	BD	BE	BF	BP	F	
	RAL	RA	RAL	RA	0-50	51-100	101-150	0-50	51-100	101-150							RAL	RA
FJ-RA16FA	36	38	56	60	81	106	–	85	110	–	3	26	–	52	40	5.5	14	16
FJ-RA20FA	40	40	70	76	95	120	145	101	126	151	4	33	–	64	50	6.5	12	12
FJ-RA25FA	44	44	70	76	95	120	145	101	126	151	4	33	–	64	50	6.5	14	14
FJ-RA32FA	44	44	70	76	95	120	145	101	126	151	4	47	33	72	58	6.5	14	14
FJ-RA40FA	46	46	92	76	117	142	167	101	126	151	4	50	36	84	70	6.5	14	14

Dimensions of SDB type

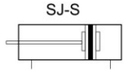


Model\Sign	D	S		Q	CA	CB		CB(RALSB)			CB(RASB)			CD	CE	CF	CH	CP	CQ	CT
		RAL	RA			RAL	RA	0-50	51-100	101-150	0-50	51-100	101-150							
FJ-RA16SDB	18	7	9	12.1	42.1	99	107	124	149	–	132	157	–	36	55.1	24	25.5	5.5	22.5	3
FJ-RA20SDB	24.5	12	12	16.1	51.1	122	128	147	172	197	153	178	203	48	66.1	32	32	6.5	27	3
FJ-RA25SDB	24.5	12	12	16.1	51.1	122	132	147	172	197	157	182	207	48	66.1	32	32	6.5	27	3
FJ-RA32SDB	27	15	15	16.1	50.1	126	135	151	176	201	160	185	210	52	65.1	36	35.5	6.5	27.5	3
FJ-RA40SDB	27	15	15	20.1	52.1	129	137	154	179	204	162	187	212	56	69.1	40	40	6.5	32.5	3

SJ



SJ-S



How to Order?

Series code	Type code	Bore	X	Stroke	–	Adjustable stroke	–	Magnet code	–	Tail type	–	Mounting type	–	Thread type
SJ	Blank: basic type D: Double-shaft type J: Double-shaft,adjustable stroke type SA: Single acting spring extend SB: Single acting spring return	6 10 16		25 50 75 ...		10 20 30 40 50 75 100		Blank: No magnet S: with Magnet		Blank: Radial intake type R: Axial intake type CB: Double U-type		Blank: No LB FA IJ YJ CJ:T-type Seat		Blank: G P: PT T : NPT

Order Example:
SJ series cylinder, basic type,6mm bore, 25mm stroke, with magnet, horizontal tail type, no bracket, ERP code is: SJ6x25-S-R
Note: There are many mounting types, you can chose LB/FA/CJ/IJ/YJ

Specifications

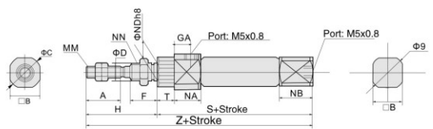
Bore size(mm)	6	10	16
Acting type	Double Acting/Single Acting		
Working medium	Clean Air(25 μ m filteration)		
Working pressure (MPa)	0.1~0.7(Double Acting) / 0.2~0.7(Single Acting)		
Guaranteed pressure (MPa)	1.05		
Working temperature (℃)	-20~80(Dry air)		
Speed range (mm/s)	50~800		
Cushion type	Bumper		
Barrel material	Stainless steel		
Mounting type	LB FA CJ IJ YJ		
Port size	M5×0.8		

Bore (mm)		Standard stroke (mm)	Max. stroke (mm)
Double Acting	6	15 30 45 60	60
	10~16	15 30 45 60 75 100 125 150	300
Single Acting	6~10	15 30 45 60	60
	16	15 30 45 60 75 100 125 150	150

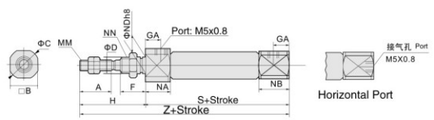
Main Dimensions

SJ Ø6 — Ø16

SJ: Φ6



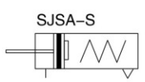
SJ:Φ10. Φ16



Bore	A	B	C	D	F	GA	GB	H	MM	NA	NB	ND h8	NN	S	T	Z
6	15	12	14	3	8	14.5	–	28	M3×0.5	16	7	6	M6×1.0	49	3	77
10	15	12	14	4	8	8	5	28	M4×0.7	12.5	9.5	8	M8×1.0	46	–	74
16	15	18	20	5	8	8	5	28	M5×0.8	12.5	9.5	10	M10×1.0	47	–	75

SJSA Ø6 — Ø16

SJSA-S



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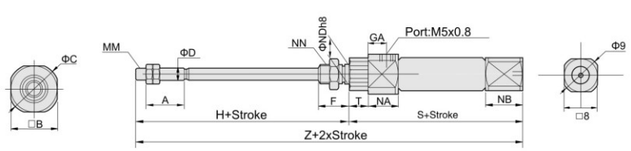

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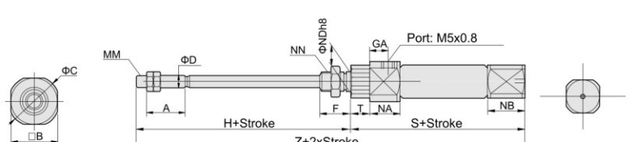


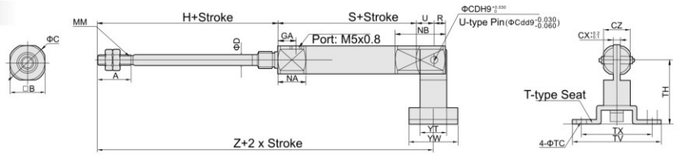
Bore	A	B	C	D	F	GA	H	MM	NN	NA	NB	ND h8	T	*S 5~15	*S 16~30	*S 31~45	*S 46~60	*S 61~75	*S 76~100	*S 101~125	*S 126~150	*Z 5~15	*Z 16~30	*Z 31~45	*Z 46~60	*Z 61~75	*Z 76~100	*Z 101~125	*Z 126~150
6	15	15	14	3	8	14.5	28	M3x0.5	M6x1	16	3	$6^{0}_{-0.018}$	3	46.5 (51.5)	55.5 (60.5)	59.5 (64.5)	73.5 (78.5)	–	–	–	–	74.5 (79.5)	83.5 (88.5)	87.5 (92.5)	101.5 (106.5)	–	–	–	–
10	15	12	14	4	8	8	28	M4x0.7	M8x1	12.5	5.5	$8^{0}_{-0.022}$	–	48.5	56	68	80	–	–	–	–	76.5	84	96	108	–	–	–	–
16	15	18.3	20	5	8	8	28	M5x0.8	M10x1	12.5	5.5	$10^{0}_{-0.022}$	–	48.5	57	69	81	87	111	129	141	76.5	85	97	109	115	139	157	169

*( )Size with magnet

Main Dimensions

Double U-type pin spring extend type

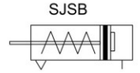
Φ10. Φ16



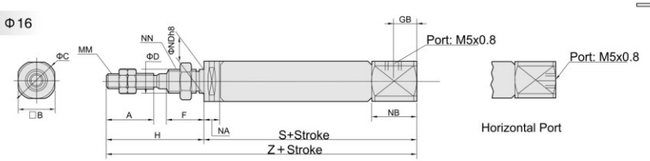
Bore	A	B	C	CD (cd)	cx	cz	D	GA	H	MM	NA	NB	R	U	S 5~15	S 16~30	S 31~45	S 46~60	S 61~75	S 76~100	S 101~125	S 126~150	Z 5~15	Z 16~30	Z 31~45	Z 46~60	Z 61~75	Z 76~100	Z 101~125	Z 126~150
10	15	12	14	3.3	3.2	12	4	8	28	M4X0.7	12.5	18.5	5	8	48.5	56	68	80	–	–	–	–	84.5	92	104	116	–	–	–	–
16	15	18.3	20	5	6.5	18.3	5	8	28	M5X0.8	12.5	23.5	8	10	48.5	57	69	81	87	111	129	141	86.5	95	107	119	125	149	167	179

SJSB Ø6 — Ø16

SJSB



SJSB: Φ6. Φ10. Φ16

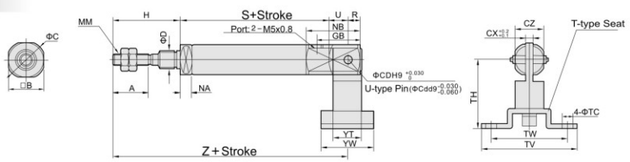


Bore	A	B	C	D	F	GB	H	MM	NA	NB	NDh8	NN	*S 5~15	*S 16~30	*S 31~45	*S 46~60	*S 61~75	*S 76~100	*S 101~125	*S 126~150	*Z 5~15	*Z 16~30	*Z 31~45	*Z 46~60	*Z 61~75	*Z 76~100	*Z 101~125	*Z 126~150
6	15	8	9	3	8	–	28	M3X0.5	3	7	$6^{0}_{-0.018}$	M6X1	34.5 (39.5)	43.5 (48.5)	47.5 (52.5)	61.5 (66.5)	–	–	–	–	62.5 (67.5)	71.5 (76.5)	75.5 (80.5)	89.5 (94.5)	–	–	–	–
10	15	12	14	4	8	5	28	M4X0.7	5.5	9.5	$8^{0}_{-0.022}$	M8X1	45.5	53	65	77	–	–	–	–	73.5	81	93	105	–	–	–	–
16	15	18	20	5	8	5	28	M5X0.8	5.5	9.5	$10^{0}_{-0.022}$	M10X1	45.5	54	66	78	84	108	126	138	73.5	82	94	106	112	136	154	166

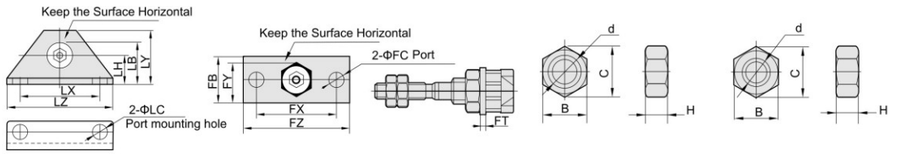
* Size with magnet

Double U-type pin spring return type

Φ10. Φ16



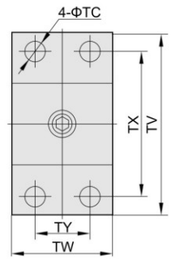
Bore	A	B	C	CD (cd)	CX	CZ	D	GB	H	MM	NA	NB	R	U	S 5~15	S 16~30	S 31~45	S 46~60	S 61~75	S 76~100	S 101~125	S 126~150	Z 5~15	Z 16~30	Z 31~45	Z 46~60	Z 61~75	Z 76~100	Z 101~125	Z 126~150
10	15	12	14	3.3	3.2	12	4	18	20	M4X0.7	5.5	22.5	5	8	45.5	53	65	77	–	–	–	–	73.5	81	93	105	–	–	–	–
16	15	18.3	20	5	6.5	18.3	5	23	20	M5X0.8	5.5	27.5	8	10	45.5	54	66	78	84	108	126	138	75.5	84	96	108	114	138	156	168



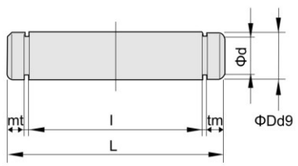
Foot base | Flange | Body nut | Rod nut

Bore	Foot base Part No	LB	ΦLC	LH	LX	LY	LZ	Flange Part No	FB	Φfc	FX	FY	FZ	FT	Body nut Part No	B	C	D	H	Rod nut Part No	B	C	D	H
6	CJ-L006B	15	4.5	9	24	16.5	32	CJ-F006B	13	4.5	24	14	32	1.6	SNJ-006B	8	9.2	M6X1	4	NTJ-006A	5.5	6.4	M3X0.5	2.4
10	CJ-L010B	15	4.5	9	24	16.5	32	CJ-F010B	13	4.5	24	14	32	1.6	SNJ-010B	11	12.7	M8X1	4	NTJ-010A	7	8.1	M4X0.7	3.2
16	CJ-L016B	23	5.5	14	33	25	42	CJ-F016B	19	5.5	33	20	42	2.3	SNJ-016B	14	16.2	M10X1	4	NTJ-016A	8	9.2	M5X0.8	4

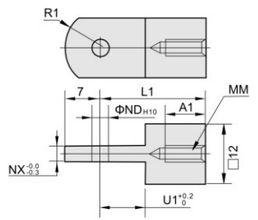
T type Seat



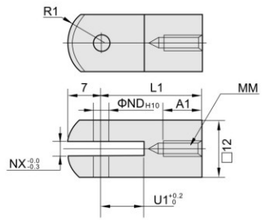
Double U-type Pin



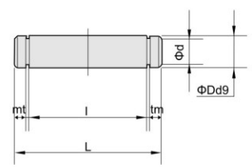
Bore	T type Seat Part No	TC	TC^{H10}	TH	TK	TN	TT	TU	TV	TW	TX	TY	Double U-type Pin Part No	ϕDd9	ϕd	L	l	m	t
10	CJ-T010B	4.5	$3.3^{+0.048}_{0}$	29	18	3.1	2	9	40	22	32	12	CD-J010	$3.3^{-0.03}_{-0.06}$	3	15.2	12.2	1.2	0.3
16	CJ-T016B	5.5	$5^{+0.048}_{0}$	35	20	6.4	2.3	14	48	28	38	16	CD-Z015	$5^{-0.03}_{-0.06}$	4.8	22.7	18.3	1.5	0.7



I Type Single Elbow Fitting



Y Type Double Elbow Fitting

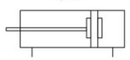


Elbow Fitting pin

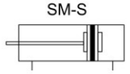
Bore	I type single elbow fitting Part No	A1	ϕ ND^{H10}	L1	MM	U1	NX	R1	Y type double elbow fitting Part No	A1	ϕ ND^{H10}	L1	MM	U1	NX	R1	Elbow fitting end Part No	ϕDd9	ϕd	L	l	m	t
10	I-J010B	8	$3.3^{+0.048}_{0}$	21	M4X0.7	9	3.1	8	Y-J010B	8	$3.3^{+0.048}_{0}$	21	M4X0.7	10	3.2	8	IY-J010	$3.3^{-0.03}_{-0.06}$	16.2	3	12.2	1.7	0.3
16	I-J016B	8	$5^{+0.048}_{0}$	25	M5X0.8	14	6.4	12	Y-J016B	11	$5^{+0.048}_{0}$	21	M5X0.8	10	6.5	12	IY-J015	$5^{-0.03}_{-0.06}$	16.6	4.8	12.2	1.5	0.7

SM series stainless steel Mini cylinder

SM



SM-S



How to Order?

Series code	Cushion type	Type code	Bore	X	Stroke	–	Adjustable stroke	–	Magnet code	–	Tail type	–	Mounting type	–	Thread type
SM	C: Air cushion Blank: Rubber cushion	Blank: Basic type D: Double –shaft type J: Double –shaft,adjustable stroke type SA: Single acting spring extend SB: Single acting spring return	20 25 32 40		25 50 75 …		10 20 30 40 50 75 100		Blank: No magnet S: with Magnet		Blank: Swiveling tail U: Flat tail CM: Round tail		Blank:No bracket LB FA SDB IJ YJ		Blank: G P: PT T : NPT

Order Example:

SM series double shaft adjustable stroke cylinder, air cushion, bore 32mm, stroke 25mm, adjustable stroke 20mm. with magnet, no bracket, round tail, PT thread.
ERP code is: SMCJ32x25–20–S–CM–P
Note: There are many mounting types, you can chose LB/FA/SDB/IJ/YJ

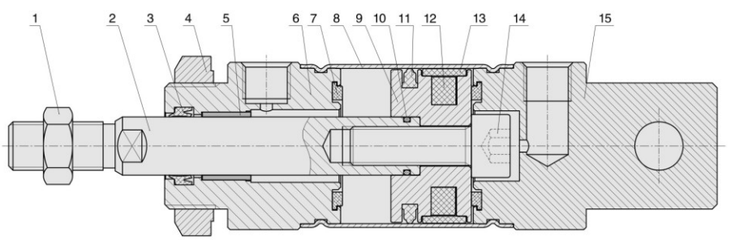
Specifications

Bore size(mm)	20	25	32	40
Acting type	Double Acting/Single Acting			
Working medium	Clean Air(25 μ m filteration)			
Working pressure (MPa)	0.1~1.0(Double Acting) / 0.2~1.0(Single Acting)			
Guaranteed pressure (MPa)	1.5			
Working temperature (℃)	–20~80(Dry air)			
Speed range (mm/s)	50~800			
Cushion type	Bumper			
Barrel material	Stainless steel			
Mounting type	LB FA SDB IJ YJ			
Port size	G1/8"			G1/4"

Stroke

Bore (mm)		Standard stroke (mm)	Max. stroke (mm)
Double Acting	20	10 15 20 25 30 40 50 60 75 80 100 125 150 160 175 200 250 300 400 500	600
	25~40	10 15 20 25 30 40 50 60 75 80 100 125 150 160 175 200 250 300 400 500 600	700
Single Acting	20	10 15 20 25 30 40 50 60 75 80 100 125 150	150
	25~40	10 15 20 25 30 40 50 60 75 80 100 125 150	150

Internal structure

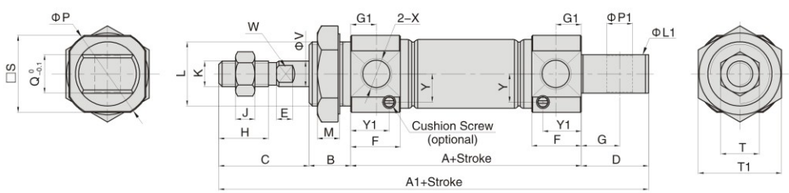


NO.	Part name	Material
1	Nut	Carbon steel
2	Piston rod	S45C hard chrome carbon steel
3	Piston rod seal	NBR
4	Nut	Carbon steel
5	Self lubricating bearing	Bronze powder
6	Head cover	Aluminum alloy
7	Anti–bump cushion	TPU
8	Barrel	Stainless Steel
9	Piston	Aluminum alloy
10	O–ring	NBR
11	Piston seal	NBR
12	Magnet	Plastic
13	Wear ring	PTFE
14	Hexagon screw	Carbon steel
15	Rear cover	Aluminum alloy

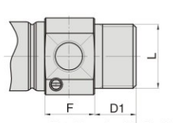
Main dimensions

SM Ø20 — Ø40

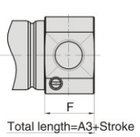
CA Type



CM Type



U Type



(mm)

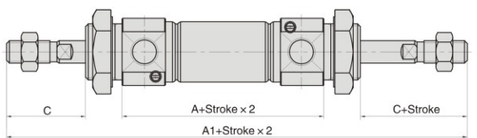
Bore\Sign	V	W	Y	Y1
20	8	6	8.8	12
25	10	8	10	11.5
32	12	10	12	11
40	16	14	16	18

Bore\Sign	A	A1	A2	A3	B	C	D	D1	E	F	G	G1	H	J	K	L	L1	M	P	P1	Q	S	T	T1	X
20	62	124	116	103	13	28	21	13	5	15.5	12	8	15.5	6	M8X1.25	M20X1.5	20	7	28	8	12	24	12	26	1/8"
25	62	128	120	107	13	32	21	13	5.5	15	12	8	19.5	6	M10X1.25	M26X1.5	22	8	33.5	8	12	30	17	32	1/8"
32	64	136	122	109	13	32	27	13	5.5	15	15	8	19.5	6	M10X1.25	M26X1.5	26	8	37.5	10	20	34.5	17	32	1/8"
40	88	165	154	138	16	34	27	16	7	22	15	11	21	8	M14X1.5	M32X2.0	32	10	46.5	10	20	42.5	19	41	1/4"

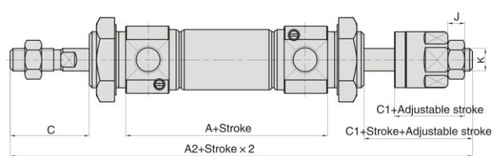
Note: With magnet and without magnet, the dimensions are same.

Main dimensions

SMD Ø20 — Ø40



SMJ Ø20 — Ø40

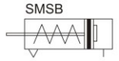


Bore\Sign	A	A1	A2	C	C1	J	K
20	62	144	141	28	25	6	M8X1.25
25	62	152	147	32	27	6	M10X1.25
32	64	154	149	32	27	6	M10X1.25
40	88	188	184	34	30	8	M14X1.5

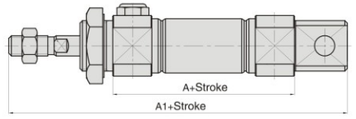
Note: Unlabeled the same size as standard type.

SMSB Ø20 — Ø40

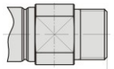
SMSB



CA Type



CM Type

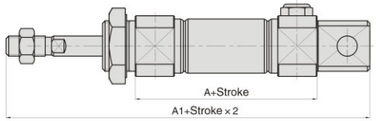


U Type

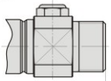
SMSA Ø20 — Ø40

SMSA

CA Type



CM Type



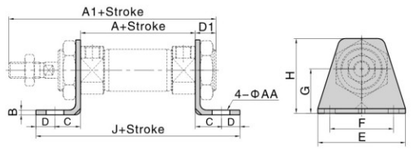
U Type

Bore\Sign	A			A1			A2			A3		
	0~50	51~100	110~150	0~50	51~100	110~150	0~50	51~100	110~150	0~50	51~100	110~150
20	87	112	137	149	174	199	141	166	191	128	153	178
25	87	112	137	153	178	203	145	170	195	132	157	182
32	89	114	139	161	186	211	147	172	197	134	159	184
40	113	138	163	190	215	240	179	204	229	163	188	213

Note: Unlabeled the same size as standard type.

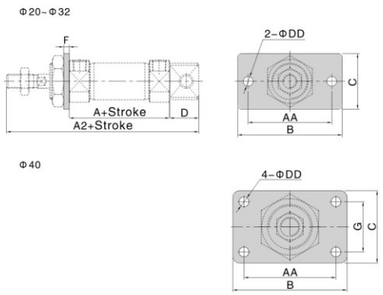
Accessory dimensions

LB Accessory



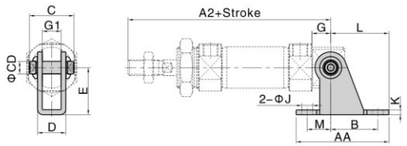
Bore\Sign	A	A1	AA	B	C	D	D1	E	F	G	H	J
20	62	116	7	3	20	8	13	55	40	25	40	118
25	62	120	7	3	20	8	13	55	40	28	47	118
32	64	122	7	3	20	8	13	55	40	28	47	120
40	88	154	7	3	23	10	16	75	55	30	54	154

FA Accessory



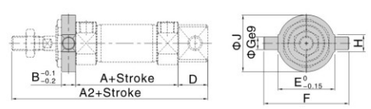
Bore\Sign	A	A2	AA	B	C	D	DD	F	G
20	62	124	60	75	34	21	7	4	–
25	62	128	60	75	40	21	7	4	–
32	64	136	60	75	40	27	7	4	–
40	88	165	66	82	52	27	7	5	36

SDB Accessory



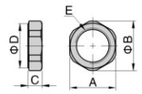
Bore\Sign	A2	AA	B	C	D	E	G	G1	H	K	J	L	M
20	115	59	30	32	18.1	30	12	12.1	8	3	6.8	37	15
25	119	59	30	32	18.1	30	12	12.1	8	3	6.8	37	15
32	124	75	40	44	28.1	40	15	20.1	10	4	9	50	15
40	153	75	40	44	28.1	40	15	20.1	10	4	9	50	15

TC Accessory

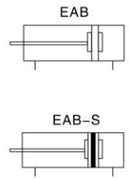


Bore\Sign	A	A2	B	D	E	F	G	H	J
20	62	124	10	21	32	52	8	12	32
25	62	128	10	21	40	60	9	12	40
32	64	136	10	27	40	60	9	12	40
40	88	165	11	27	53	77	10	14	53

TC Locking nut



Bore\Sign	A	B	C	D	E
20	26	28	8	25	M20×1.5
25	32	34	8	31	M26×1.5
32	32	34	8	31	M26×1.5
40	41	45	10	40	M32×2.0



How to Order?

Series No.		Bore	X	Stroke	–	Magnet code	–	Mounting type	–	Mounting accessory	–	Thread type
EAB		16 20 25 …		25 50 75 …		Blank: Without magnet S: With magnet		E: Side mounting F: Front mounting		Blank: No IJ YJ …		Blank: G P: PT T: NPT

Order Example:

EAB series cylinder, bore 50mm, stroke 25mm, side mounting, with magnet, no mounting accessory, G thread.
ERP code is: EAB 50X25−S−E

Specifications

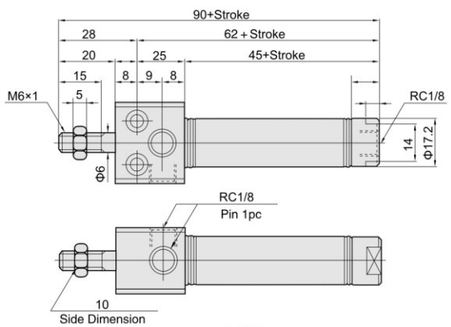
Bore (mm)	16	20	25	35	40	50	63
Acting Type	Double Acting						
Working Medium	Clean air (25 μm filteration)						
Mounting type	basic type, foot type, flange type, single U−ring type						
Working pressure (MPa)	0.1~0.9					0.05~0.7	
Guaranteed pressure (MPa)	1.35					1.05	
Working temperature (℃)	−20~80(Dry air)						
Speed range (mm/s)	30~700					30~500	
Cushion type	Fixed (Rubber Cushion)					Adjustable (Stroke 15mm)	
Oil supply	No Change						
Port size	G1/8					G1/4	

Bore & Stroke

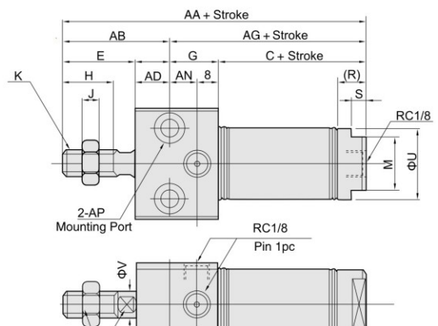
Bore (mm)	Standard Stroke(mm)	Standard Max. stroke(mm)	Non−standard Max. stroke(mm)
16	15 25 75 100	100	300
20	25 50 75 100 125 150	150	500
25	25 50 75 100 125 150 200	200	
32	25 50 75 100 125 150 200	200	
40	25 50 75 100 125 150 200 250 300	300	
50	25 50 75 100 150 200 300	300	
63	25 50 75 100 150 200 300	300	

Main Dimensions of Side Mounting

ϕ16 EAB 16 × Stroke–2

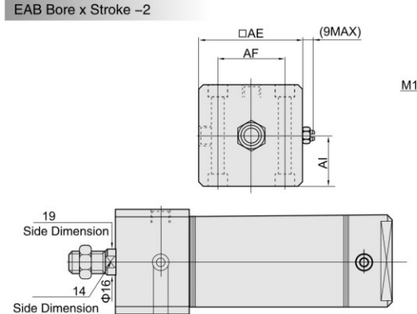


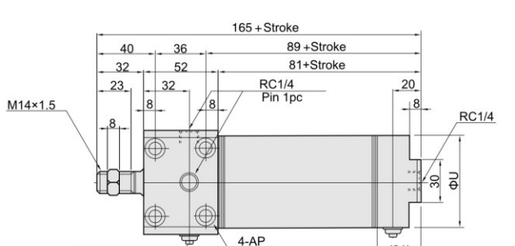
ϕ20 – ϕ40 EAB Bore × Stroke–2



Bore	C	E	G	H	I	J	K	M	R	S	U	V	W	AA	AB	AD	AE	AF	AG	AH	AI	AN	AP
20	53	23	28	15	12	5	M8X1	17	10	5	21.4	8	6	104	34	11	38	22	70	28	14	9	Φ6.62 Port Φ11 Depth 6.5
25	53	26	30	18	14	6	M10X1.25	19	10	5	26.4	10	8	109	38	12	42	26	71	30	15	10	Φ6.62 Port Φ11 Depth 6.5
32	54	31	36	23	14	6	M10X1.25	22	11	6	33.6	12	10	121	45	14	54	34	76	36	18	14	Φ9.2 Port Φ14 Depth 8.6
40	60	31	44	23	19	8	M14X1.5	22	13	6	41.6	16	14	135	48	17	68	46	87	44	22	19	Φ11.2 Port Φ17.5 Depth 10.8

ϕ50 – ϕ63 EAB Bore x Stroke –2

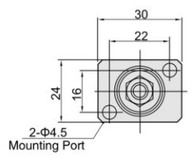


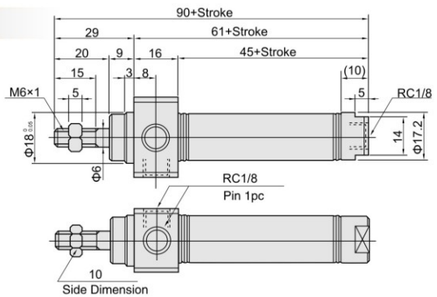


Bore	U	AE	AF	AI	AP
50	52	62	44	31	Φ6.6 Port Φ11 Depth 6.5
63	65.4	74	48	37	Φ9.2 Port Φ14 Depth 6.5

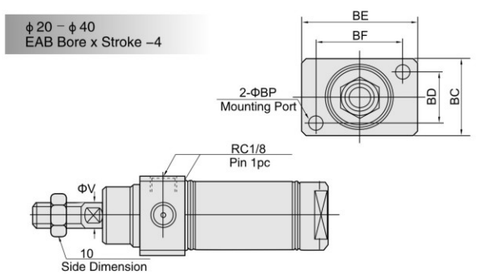
Main Dimensions of Front Mounting

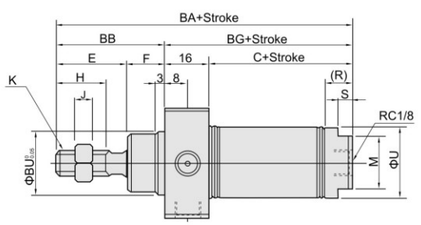
ϕ16 EAB 16x Stroke –4





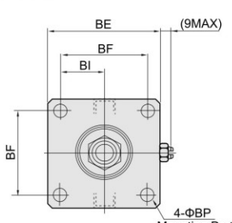
ϕ20 – ϕ40 EAB Bore x Stroke –4

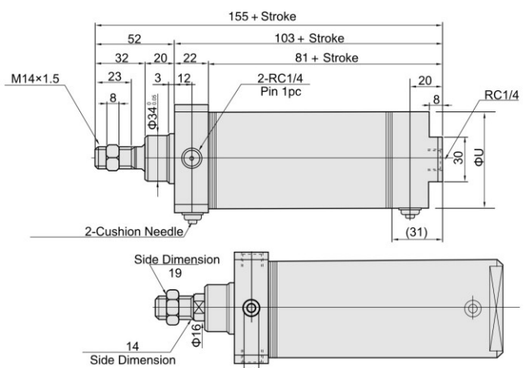




Bore	C	E	F	H	I	J	K	M	R	S	U	V	W	BA	BB	BC	BD	BE	BF	BG	BP	BU
20	53	23	12	15	12	5	M8X1	17	10	5	21.4	8	6	104	35	28	18	38	28	69	5.5	22
25	53	26	14	18	14	6	M10X1.25	19	10	5	26.4	10	8	109	40	30	20	42	32	69	5.5	24
32	54	31	14	23	14	6	M10X1.25	22	11	6	33.6	12	10	115	45	36	24	54	42	70	5.6	28
40	60	31	14	23	19	8	M14X1.5	22	13	6	41.6	16	14	121	45	44	28	68	52	76	9	34

ϕ50 – ϕ63 EAB Bore x Stroke –4





Bore/Sign	U	BE	BF	BI	BP
50	52	62	48	24	6.6
63	65.4	74	58	29	9

No magnet

With magnet

How to Order?

Series No	Type No	Bore	X	Stroke	–	Adjustable stroke	–	Magnet No	–	Piston Rod thread type	–	Thread type
SE	Blank: Basic type D: Double shaft type J: Double shaft and adjustable stroke type SA: Single acting spring extend SB: Single acting spring return	12 16 20 25 … 100		25 50 75 …		10 20 30 40 50 75 100		Blank: no magnet S: with magnet		Blank: Female thread M:Male thread N: No thread		Blank: G P：PT T：NPT

Order Example:

SE Series single acting spring extend cylinder,40mm bore,30mm stroke,with magnet,femal thread on piston rod,G thread

ERP code is: SESA40X30–S

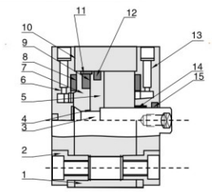
Specifications

Bore size(mm)	12	16	20	25	32	40	50	63	80	100
Acting type	Double Acting/Single Acting									
Working medium	Clean Air(25 μ m filteration)									
Working pressure (MPa)	0.1~1.0(Double Acting) / 0.2~1.0(Single Acting)									
Guaranteed pressure (MPa)	1.5									
Working temperature (℃)	–20~80(Dry air)									
Speed range (mm/s)	30~500									
Cushion type	Bumper									
Barrel material	Aluminum alloy									
Mounting type	LB FA SDB									
Port size	M5×0.8				G1/8					G1/4

Bore (mm)		Standard stroke (mm)	Max. stroke (mm)
Double Acting	12/16	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 125 150 200	200
	20/25	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 125 150 200	200
	32~63	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 125 150 200 300	300
	80/100	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 125 150 200 300	400
Single Acting	12/16	5 10	10
	20/25	5 10 15 20 25	25
	32~63	5 10 15 20 25	25
	80/100	5 10 15 20 25	25

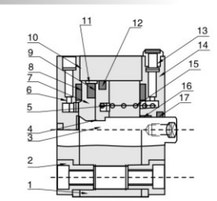
Internal structure

SE–S type



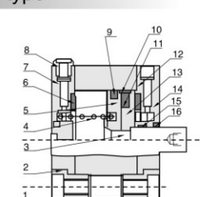
No.	Part name	No.	Part name
1	Barrel	9	Muffler
2	Screw	10	O–ring
3	Piston rod	11	Wear ring
4	O–ring	12	O–ring
5	Piston	13	Head cover
6	Rear cover	14	Self lubrication bearing
7	Magnet base	15	Piston rod seal
8	Anti–bump cushion		

SESB–S type



No.	Part name	No.	Part name
1	Barrel	10	O–ring
2	Screw	11	Wear ring
3	Piston rod	12	O–ring
4	O–ring	13	Muffler
5	Piston	14	Head cover
6	Rear cover	15	Spring
7	Magnet base	16	Self lubrication bearing
8	Anti–bump cushion	17	Piston rod seal
9	Muffler		

SESA–S type

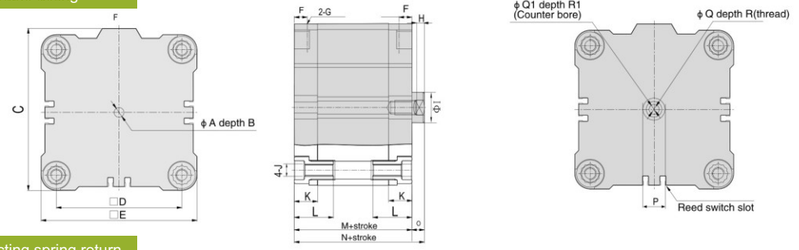


No.	Part name	No.	Part name
1	Barrel	9	O–ring
2	Screw	10	Magnet
3	Piston rod	11	Wear ring
4	Spring	12	O–ring
5	Piston	13	Magnet base
6	Anti–bump cushion	14	Head cover
7	Rear cover	15	Self lubrication bearing
8	Muffler	16	Piston rod seal

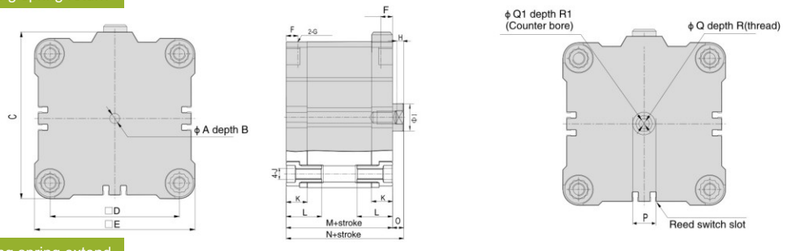
Bore Size(mm)	12	16	20	25	32	40	50	63	80	100
Rear cover	Aluminum alloy									
Piston	Aluminum alloy									
Barrel	Aluminum alloy									
Spring base	Aluminum alloy		POW			Without				
Magnet base	Aluminum alloy									
Head cover	Aluminum alloy									
Anti–bump cushion	TPU									
O–ring	NBR									
O–ring	NBR									
Piston rod	Stainless Steel									
Wear ring	Without					PTFE				
Self lubrication bearing	Without					Composite material				
Spring	AWC									
Magnet	RbFeb					Rubber				

Main Dimensions

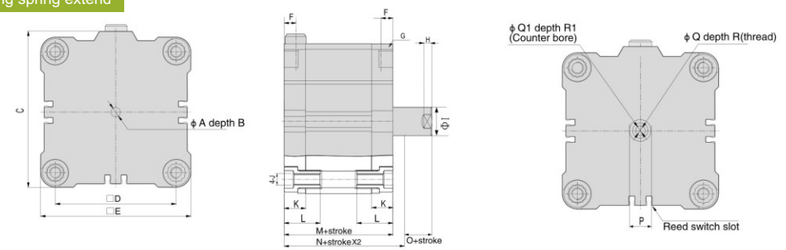
Double acting



Single acting spring return



Single acting spring extend

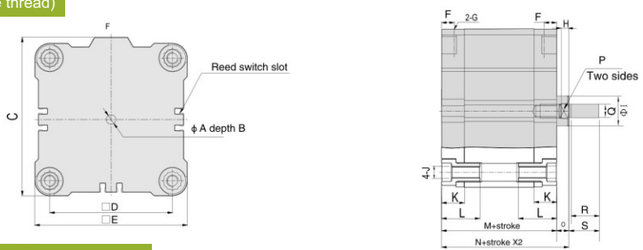


Bore	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	Q1	R	R1
12	6	4	30	18	29	7	M5X0.8	3	6	M4X0.7	11.5	18.5	38	42.5	4.5	5	M3X0.5	3.3	8	1.5
16	6	4	30	18	29	7	M5X0.8	3	8	M4X0.7	11.5	18.5	38	42.5	4.5	6	M4X0.7	4.5	10	1.5
20	6	4	37.5	22	36	7	M5X0.8	3	10	M5X0.8	11.5	18.5	38	42.5	4.5	8	M5X0.8	5.5	12	2
25	6	4	41.5	26	40	7	M5X0.8	4	10	M5X0.8	11.5	18.5	39.5	45	5.5	8	M5X0.8	5.5	12	2
32	6	4	52	32	50	8	PS1/8	4.5	12	M6X1.0	14	21.5	44.5	50.5	6	10	M6X1.0	6.5	14	2.6
40	6	4	62.5	42	60	8	PS1/8	4.5	12	M6X1.0	14	21.5	45.5	52	6.5	10	M6X1.0	6.5	14	2.6
50	6	4	71	50	68	8	PS1/8	5	16	M8X1.25	14	22	45.5	53	7.5	13	M8X1.25	8.5	16	3.3
63	8	4	91	62	87	8	PS1/8	5	16	M10X1.5	15	24.5	50	57.5	7.5	13	M8X1.25	8.5	16	3.3
80	8	4	111	82	107	8.5	PS1/8	5.5	20	M10X1.5	16	27.5	56	64	8	17	M10X1.5	10.5	20	4.7
100	8	4	133	103	128	10.5	PS1/4	7.5	25	M10X1.5	19	32.5	66.5	76.5	10	22	M12X1.75	12.5	24	6.1

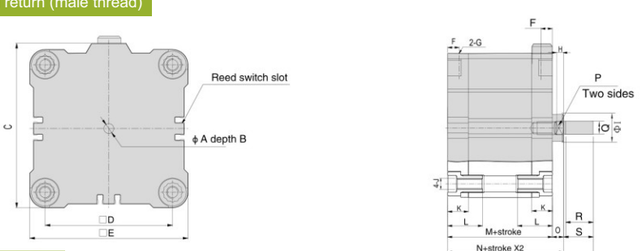
The dimension of the model with magnet is same with the one without magnet

Main Dimensions

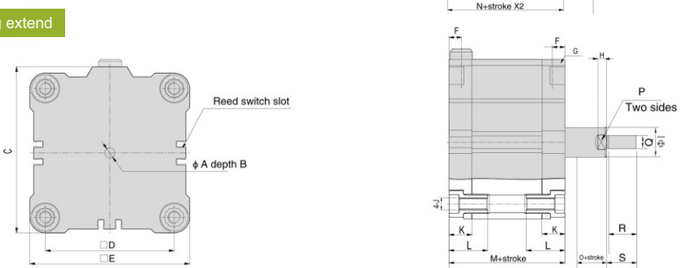
Double acting (male thread)



Single acting spring return (male thread)



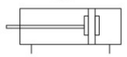
Single acting spring extend



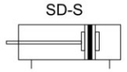
Bore	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
12	6	4	30	18	29	7	M5X0.8	3	6	M4X0.7	11.5	18.5	38	42.5	4.5	5	M6X1.0	14	16
16	6	4	30	18	29	7	M5X0.8	3	8	M4X0.7	11.5	18.5	38	42.5	4.5	6	M8X1.25	18	20
20	6	4	37.5	22	36	7	M5X0.8	3	10	M5X0.8	11.5	18.5	38	42.5	4.5	8	M10X1.25	20	22
25	6	4	41.5	26	40	7	M5X0.8	4	10	M5X0.8	11.5	18.5	39.5	45	5.5	8	M10X1.25	20	22
32	6	4	52	32	50	8	PS1/8	4.5	12	M6X1.0	14	21.5	44.5	50.5	6	10	M10X1.25	20	22
40	6	4	62.5	42	60	8	PS1/8	4.5	12	M6X1.0	14	21.5	45.5	52	6.5	10	M10X1.25	20	22
50	6	4	71	50	68	8	PS1/8	5	16	M8X1.25	14	22	45.5	53	7.5	13	M12X1.25	22	24
63	8	4	91	62	87	8	PS1/8	5	16	M10X1.5	15	24.5	50	57.5	7.5	13	M12X1.25	22	24
80	8	4	111	82	107	8.5	PS1/8	5.5	20	M10X1.5	16	27.5	56	64	8	17	M16X1.5	30	32
100	8	4	133	103	128	10.5	PS1/4	7.5	25	M10X1.5	19	32.5	66.5	76.5	10	22	M20X1.5	28	40

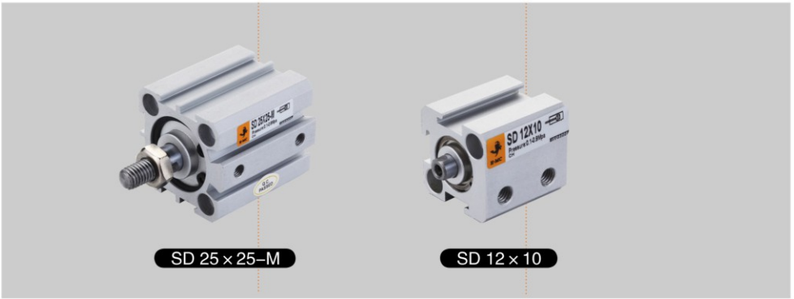
The dimension of the model with magnet is same with the one without magnet

SD



SD-S





How to Order?

Series No	Type No	Bore	X	Stroke	–	Adjustable stroke	–	Magnet No	–	Piston Rod thread type	–	Thread type
SD	Blank: Basic type D: Double shaft type J: Double shaft and adjustable stroke type SA: Single acting spring extend SB: Single acting spring return T: Multi position type W: Double shaft and Multi position type	12 16 20 25 … 100		25 50 75 …		10 20 30 40 50 75 100		Blank: no magnet S: with magnet		Blank: Female thread M: Male thread N: no thread		Blank：G P：PT T：NPT

Order Example:

SD Series single acting spring extend cylinder, 40mm bore, 30mm stroke, with magnet, femal thread on piston rod, G thread

ERP code is: SDSA40X30–S

Specifications

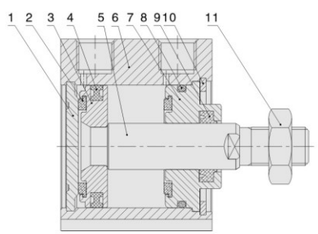
Bore size(mm)		12	16	20	25	32	40	50	63	80	100
Acting type		Double acting Single acting: With Spring Return / With Spring Extend									
Working medium		Air									
Working medium (Bar)	Double acting	1–9									
	Single acting	2–9									
Max. working pressure (Bar)		15									
Working temperature (℃)		–20~80(Dry air)									
Speed range (mm/s)	Double acting	30–500						30–350		30–250	
	Single acting	100–500								–	
Cushion type		Anti–bump cushion									
Port size (mm)		M5x0.8				G 1/8		G 1/4		G 3/8	

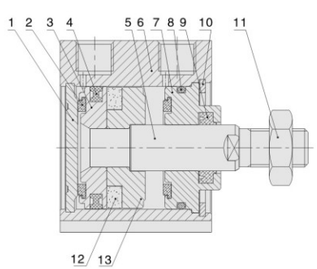
Stroke

Bore (mm)		Standard stroke (mm)	Max. stroke (mm)
Double Acting	12/16	5 10 15 20 25 30 35 40 45 50 55 60	60
	20	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 100 110 120 125 150	150
	25	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 100 110 120 125 150	150
	32~100	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 100 110 120 125 150 175 200	200
Single Acting	12~63	5 10 15 20 25 30	30

Note:The dimensions of non–std stroke cylinder has the same dimensions as the next longer stroke std. stroke cylinder.
e.g. 27mm stroke cylinder has the same dimensions of 30 std. stroke cylinder.

Internal structure





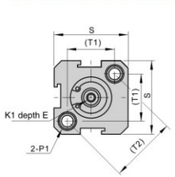
No	Part name
1	Rear cover
2	Anti–bump cushion
3	Piston
4	Piston seal
5	Piston rod
6	Barrel
7	Head cover
8	O–ring
9	Piston rod seal
10	C type retainer ring
11	Nut
12	Magnet
13	Magnet base

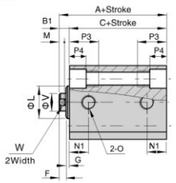
Main Parts Material

Part name	Material
Head cover	Aluminum alloy
Rear cover	Aluminum alloy
Piston	Aluminum alloy
Piston rod	S45C hard chrome carbon steel
Barrel	Stainless Steel
Anti–bump cushion	NBR
O–ring	NBR
Piston seal	NBR
Self lubrication bearing	Composite material
Magnet (optional)	RbFeb
C–ring	Steel
Nut	Carbon steel
Muffler	Cu

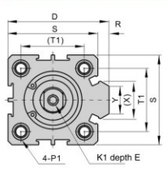
Main Dimensions

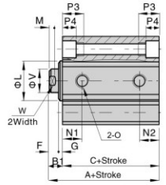
SD Ø12 — Ø16





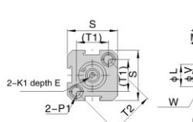
SD Ø20 — Ø100

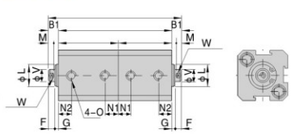




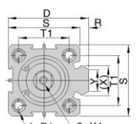
Sign / Bore	A		C		B1	D	E	F	G	K1	L	M	N1		N2		O	P1	P3	P4	R	S	T1	T2	V	W	X	Y
	standard	With magnet	standard	With magnet									St=5	St>5	St=5	St>5												
12	22	32	17	27	5	–	6	4	1	M3X0.5	10.2	3	7.5	7.5	5	5	M5X0.8	Double side:Φ6.5 Thread: M5X0.8 Through Hole: Φ4.2	12	4.5	–	25	16.2	23	6	5	–	–
16	24	34	18.5	28.5	5.5	–	6	4	1.5	M3X0.5	11	3	8	8	5.5	5.5	M5X0.8	Double side:Φ6.5 Thread: M5X0.8 Through Hole: Φ4.2	12	4.5	–	29	19.8	28	6	5	–	–
20	25	35	19.5	29.5	5.5	36	8	4	1.5	M4x0.7	13	3	9	9	5.5	5.5	M5X0.8	Double side:Φ6.5 Thread: M5X0.8 Through Hole: Φ4.2	14	4.5	2	34	24	–	8	6	11.3	10
25	27	37	21	31	6	42	10	4	2	M5X0.8	17	3	9.2	9.2	5.5	5.5	M5X0.8	Double side:Φ8.2 Thread: M6X1.0 Through Hole: Φ4.6	15	5.5	2	40	28	–	10	8	12	10
32	31.5	41.5	24.5	34.5	7	50	12	4.6	2.4	M6X1.0	22	3	9	9	6.5	9	1/8	Double side:Φ8.2 Thread: M6X1.0 Through Hole: Φ4.6	16	5.5	6	44	34	–	12	10	18.3	15
40	33	43	26	36	7	58.5	12	4	3	M8X1.25	28	3	9.5	9.5	7.5	7.5	1/8	Double side:Φ10 Thread: M8X1.25 Through Hole: Φ6.5	20	7.5	6.5	52	40	–	16	14	21.7	16
50	37	47	28	38	9	71.5	15	5	4	M10X1.5	38	3	8	10.5	8	10.5	1/4	Double side:Φ11 Thread: M8X1.25 Through Hole: Φ6.5	25	8.5	9.5	62	48	–	20	17	30	20
63	41	51	32	42	9	84.5	15	5	4	M10X1.5	40	3	9.5	12	9.5	11	1/4	Double side:Φ11 Thread: M8X1.25 Through Hole: Φ6.5	25	8.5	9.5	75	60	–	20	17	28.7	20
80	52	62	41	51	11	104	20	6	5	M14X1.5	45	4	11.5	14.5	11.5	14.5	3/8	Double side:Φ14 Thread: M12X1.75 Through Hole: Φ9.2	25	10.5	10	94	74	–	25	22	36	26
100	63	73	51	61	12	124	20	7	5	M18X1.5	55	4	16	20.5	16	20.5	3/8	Double side:Φ17.5 Thread: M14X2.0 Through Hole: Φ11.3	30	13	10	114	90	–	32	27	35	26

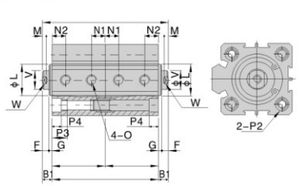
SDW Ø12 — Ø16





SDW Ø20 — Ø100





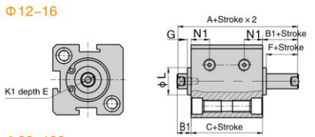
Bore/Sign	Basic Type			With Magnet			B1	D	E	F	G	K1	L	M	N2		N1	
	A	C0	C1	A	C0	C1									S=5	S>5	S=5	S>5
12	44	34	17	64	54	27	5	–	6	4	1	M3x0.5	10.2	3	7.5	7.5	5	5
16	48	37	18.5	68	57	28.5	5.5	–	6	4	1.5	M3x0.5	11	3	8	8	5.5	5.5
20	50	39	19.5	70	59	29.5	5.5	36	8	4	1.5	M4x0.7	13	3	9	9	5.5	5.5
25	54	42	21	74	62	31	6	42	10	4	2	M5x0.8	17	3	9.2	9.2	5.5	5.5
32	63	49	24.5	83	69	34.5	7	50	12	4	2.4	M6x1	22	3	9	9	6.5	9
40	66	52	26	86	72	36	7	58.5	12	4	3	M8x1.25	28	3	9.5	9.5	7.5	7.5
50	74	56	28	94	76	38	9	71.5	15	5	4	M10x1.5	38	3	8	10.5	8	10.5
63	82	64	32	102	84	42	9	84.5	15	5	4	M10x1.5	40	3	9.5	12	9.5	11
80	104	82	41	124	102	51	11	104	20	6	5	M14x1.5	45	4	11.5	14.5	11.5	14.5
100	126	102	51	146	122	61	12	124	20	7	5	M18x1.5	55	4	16	20.5	16	20.5

Bore/Sign	O	X	Y	W	P1	P2	P3	P4	R	S	T1	T2	V
12	M5x0.8	–	–	5	Φ6.5 Thread: M5X0.8 Through Hole: Φ4.2	–	12	4.5	–	25	16.2	23	6
16	M5x0.8	–	–	5	Φ6.5 Thread: M5X0.8 Through Hole: Φ4.2	–	12	4.5	–	29	19.8	28	6
20	M5x0.8	11.3	10	6	Double side:Φ6.5 Thread: M5X0.8 Through Hole: Φ4.2	Double side:Φ6.5 Through Hole:Φ5.2	14	4.5	2	34	24	–	8
25	M5x0.8	12	10	8	Double side:Φ8.2 Thread: M6X1.0 Through Hole: Φ4.6	Double side:Φ8.2 Through Hole:Φ6.2	15	5.5	2	40	28	–	10
32	PT1/8	18.3	15	10	Double side:Φ8.2 Thread: M6X1.0 Through Hole: Φ4.6	Double side:Φ8.2 Through Hole:Φ6.2	16	5.5	6	44	34	–	12
40	PT1/8	21.3	16	14	Double side:Φ10 Thread: M8X1.25 Through Hole: Φ6.5	Double side:Φ10 Through Hole:Φ8.2	20	7.5	6.5	52	40	–	16
50	PT1/4	30	20	17	Double side:Φ11 Thread: M8X1.25 Through Hole: Φ6.5	Double side:Φ11 Through Hole:Φ8.5	25	8.5	9.5	62	48	–	20
63	PT1/4	28.7	20	17	Double side:Φ11 Thread: M8X1.25 Through Hole: Φ6.5	Double side:Φ11 Through Hole:Φ8.5	25	8.5	9.5	75	60	–	20
80	PT3/8	36	26	22	Double side:Φ14 Thread: M12X1.75 Through Hole: Φ9.2	Double side:Φ14 Through Hole:Φ12.3	25	10.5	10	94	74	–	25
100	PT3/8	35	26	27	Double side:Φ17.5 Thread: M14X2 Through Hole: Φ11.3	Double side:Φ17.5 Through Hole:Φ14.2	30	13	10	114	90	–	32

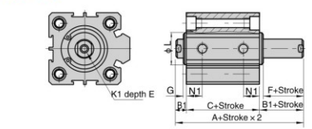
SDD Ø12 — Ø100

Bore	Basic Type		With Magnet		E		B1	F	G	K1	L	N1	
	A	C	A	C	S≤10	S>10						S=5	S>5
12	27	17	37	27	6		5	4	1	M3x0.5	10.2	5.5	6.3
16	29.5	18.5	39.5	28.5	6		5.5	4	1.5	M3x0.5	11	6.5	7.3
20	30.5	19.5	40.5	29.5	8(S=5 6.5)		5.5	4	1.5	M4x0.7	15	7.5	7.5
25	33	21	43	31	10(S=5 7)		6	4	2	M5x0.8	17	8	8
32	38.5	24.5	48.5	34.5	8	12	7	4	3	M6x1	22	8	9
40	40	26	50	36	8	12	7	4	3	M8x1.25	28	8	10
50	46	28	56	38	8	15	9	5	4	M10x1.5	38	8	10.5
63	50	32	60	42	10	15	9	5	4	M10x1.5	40	9.5	11.8
80	63	41	73	51	13	20	11	6	5	M14x1.5	45	11.5	14.5
100	75	51	85	61	18	20	12	7	5	M18x1.5	55	16	20.5

Φ12–16



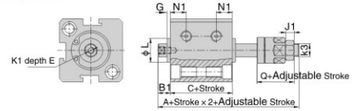
Φ20–100



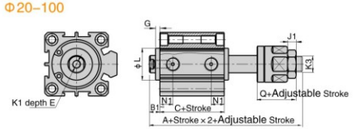
SDJ Ø12 — Ø100

Bore/Sign	Basic Type		With Magnet		E		B1	Q	G	J1	K1	K3	L	N1	
	A	C	A	C	S≤10	S>10								S=5	S>5
12	40	17	50	27	6		5	17	1	4	M3x0.5	M5x0.8	10.2	5.5	6.3
16	42.5	18.5	52.5	28.5	6		5.5	17	1.5	4	M3x0.5	M5x0.8	11	6.5	7.3
20	47.5	19.5	57.5	29.5	8(S=5 6.5)		5.5	21	1.5	5	M4x0.7	M6x1.0	15	7.5	7.5
25	54	21	64	31	10(S=5 7)		6	25	2	6	M5x0.8	M8x1.25	17	8	8
32	61.5	24.5	71.5	34.5	8	12	7	27	3	6	M6x1.0	M10x1.25	22	8	9
40	64	26	74	36	8	12	7	28	3	7	M8x1.25	M14x1.5	28	8	10
50	70	28	80	38	8	15	9	29	4	8	M10x1.5	M18x1.5	38	8	10.5
63	74	32	84	42	10	15	9	29	4	8	M10x1.5	M18x1.5	40	9.5	11.8
80	92.5	41	102.5	51	13	20	11	35.5	5	10	M14x1.5	M20x1.5	45	11.5	14.5
100	110.5	51	120.5	61	18	20	12	42.5	5	13.5	M18x1.5	M26x1.5	55	16	20.5

Φ12–16



Φ20–100

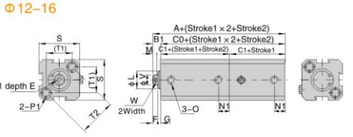


SDT Ø12 — Ø100

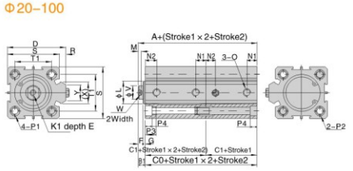
Bore/Sign	Basic Type			With Magnet			B1	D	E	F	G	K1	L	M	N1		N2	
	A	C0	C1	A	C0	C1									S=5	S>5	S=5	S>5
12	39	34	17	59	54	27	5	–	6	4	1	M3×0.5	10.2	3	5	5	7.5	7.5
16	42.5	37	18.5	62.5	57	28.5	5.5	–	6	4	1.5	M3×0.5	11	3	5.5	5.5	8	8
20	44.5	39	19.5	64.5	59	29.5	5.5	36	8	4	1.5	M4×0.7	13	3	5.5	5.5	9	9
25	48	42	21	68	62	31	6	42	10	4	2	M5×0.8	17	3	5.5	5.5	9.2	9.2
32	56	49	24.5	76	69	34.5	7	50	12	4	2.4	M6×1	22	3	6.5	9	9	9
40	59	52	26	79	72	36	7	58.5	12	4	3	M8×1.25	28	3	7.5	7.5	9.5	9.5
50	65	56	28	85	76	38	9	71.5	15	5	4	M10×1.5	38	3	8	10.5	8	10.5
63	73	64	32	93	84	42	9	84.5	15	5	4	M10×1.5	40	3	9.5	11	9.5	12
80	93	82	41	113	102	51	11	104	20	6	5	M14×1.5	45	4	11.5	14.5	11.5	14.5
100	114	102	51	134	122	61	12	124	20	7	5	M18×1.5	55	4	16	20.5	16	20.5

Bore/Sign	O	X	Y	W	P1	P2	P3	P4	R	S	T1	T2	V
12	M5x0.8	–	–	5	Φ6.5 Thread: M5X0.8 Through Hole: Φ4.2	–	12	4.5	–	25	16.2	23	6
16	M5x0.8	–	–	5	Φ6.5 Thread: M5X0.8 Through Hole: Φ4.2	–	12	4.5	–	29	19.8	28	6
20	M5x0.8	11.3	10	6	Double side:Φ6.5 Thread: M5X0.8 Through Hole: Φ4.2	Double side:Φ6.5 Through Hole:Φ5.2	14	4.5	2	34	24	–	8
25	M5x0.8	12	10	8	Double side:Φ8.2 Thread: M6X1.0 Through Hole: Φ4.6	Double side:Φ8.2 Through Hole:Φ6.2	15	5.5	2	40	28	–	10
32	PT1/8	18.3	15	10	Double side:Φ8.2 Thread: M6X1.0 Through Hole: Φ4.6	Double side:Φ8.2 Through Hole:Φ6.2	16	5.5	6	44	34	–	12
40	PT1/8	21.8	16	14	Double side:Φ10 Thread: M8X1.25 Through Hole: Φ6.5	Double side:Φ10 Through Hole:Φ8.2	20	7.5	6.5	52	40	–	16
50	PT1/4	30	20	17	Double side:Φ11 Thread: M8X1.25 Through Hole: Φ6.5	Double side:Φ11 Through Hole:Φ8.5	25	8.5	9.5	62	48	–	20
63	PT1/4	28.7	20	17	Double side:Φ11 Thread: M8X1.25 Through Hole: Φ6.5	Double side:Φ11 Through Hole:Φ8.5	25	8.5	9.5	75	60	–	20
80	PT3/8	36	26	22	Double side:Φ14 Thread: M12X1.75 Through Hole: Φ9.2	Double side:Φ14 Through Hole:Φ12.3	25	10.5	10	94	74	–	25
100	PT3/8	35	26	27	Double side:Φ17.5 Thread: M14X2 Through Hole: Φ11.3	Double side:Φ17.5 Through Hole:Φ14.2	30	13	10	114	90	–	32

Φ12–16

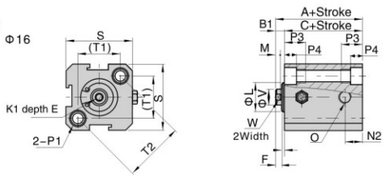


Φ20–100

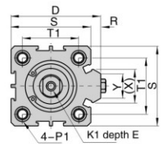


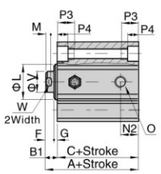
SDSB/SDSA Ø12 — Ø63

SDSB Φ12, Φ16

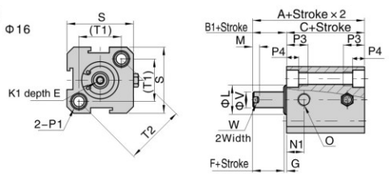


SDSB Φ20–Φ63

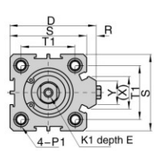


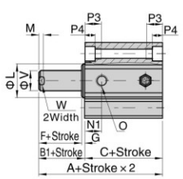


SDSA Φ12, Φ16



SDSA Φ20–Φ63

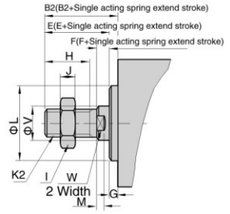




Bore \ Sign	A (standard) St≤10	A (standard) St>10	A (With magnet) St≤10	A (With magnet) St>10	C (standard) St≤10	C (standard) St>10	C (With magnet) St≤10	C (With magnet) St>10	B1	D	E	F	G	K1	L	M	N1	N2
12	32	42	42	52	27	37	37	47	5	–	6	4	1	M3×0.5	10.2	3	7.5	5
16	34	44	44	54	28.5	38.5	38.5	48.5	5.5	–	6	4	1.5	M3×0.5	11	3	8	5.5
20	35	45	45	55	29.5	39.5	39.5	49.5	5.5	36	8	4	1.5	M4×0.7	13	3	9	5.5
25	37	47	47	57	31	41	41	51	6	42	10	4	2	M5×0.8	17	3	9.2	5.5
32	41.5	51.5	51.5	61.5	34.5	44.5	44.5	54.5	7	50	12	4	2.4	M6×1.0	22	3	9	9
40	43	53	53	53	36	46	46	56	7	58.5	12	4	3	M8×1.25	28	3	9.5	7.5
50	47	57	57	67	38	48	48	58	9	71.5	15	5	4	M10×1.5	38	3	10.5	10.5
63	51	61	61	71	42	52	52	62	9	84.5	15	5	4	M10×1.5	40	3	2	11

Bore /Sign	O	R	S	T1	T2	P1	P3	P4	V	W	X	Y
12	M5×0.8	–	25	16.2	23	Double side: Φ6.5 Thread: M5×0.8 Through Hole: Φ4.2	12	4.5	6	5	–	–
16	M5×0.8	–	29	19.8	28	Double side: Φ6.5 Thread: M5×0.8 Through Hole: Φ4.2	12	4.5	6	5	–	–
20	M5×0.8	2	34	24	–	Double side: Φ6.5 Thread: M5×0.8 Through Hole: Φ4.2	14	4.5	8	6	11.3	10
25	M5×0.8	2	40	28	–	Double side: Φ8.2 Thread: M6×1.0 Through Hole: Φ4.6	15	5.5	10	8	12	10
32	PT1/8	6	44	34	–	Double side: Φ8.2 Thread: M6×1.0 Through Hole: Φ4.6	16	5.5	12	10	18.3	15
40	PT1/8	6.5	52	40	–	Double side: Φ10 Thread: M8×1.25 Through Hole: Φ6.5	20	7.5	16	14	21.7	16
50	PT1/8	9.5	62	48	–	Double side: Φ11 Thread: M8×1.25 Through Hole: Φ6.5	25	8.5	20	17	30	20
63	PT1/4	9.5	75	60	–	Double side: Φ11 Thread: M8×1.25 Through Hole: Φ6.5	25	8.5	20	17	28.7	20

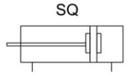
Male thread dimension



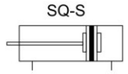
Bore /Sign	B2	E	F	G SDAD/SDAJ	G Others	H	I
12	17	16	4	1	1	10	8
16	17.5	16	4	1.5	1.5	10	8
20	20.5	19	4	1.5	1.5	13	10
25	23	21	4	2	2	15	12
32	25	22	4	3	2.4	15	17
40	35	32	4	3	3	25	19
50	37	33	5	4	4	25	27
63	37	33	5	4	4	25	27
80	40	39	6	5	5	30	32
100	50	45	7	5	5	35	36

Bore /Sign	J	K2	L	M	V	W
12	4	M5×0.8	10.2	3	6	5
16	4	M5×0.8	11	3	6	5
20	5	M6×1.0	13	3	8	6
25	6	M8×1.25	17	3	10	8
32	6	M10×1.25	22	3	12	10
40	8	M14×1.5	28	3	16	14
50	11	M18×1.5	38	3	20	17
63	11	M18×1.5	40	3	20	17
80	13	M22×1.5	45	4	25	22
100	13	M26×1.5	55	4	32	27

SQ



SQ-S



How to Order?

Series No	Mounting type	Type No	Bore	X	Stroke	–	Adjustable stroke	–	Magnet No	–	Piston Rod thread type	–	Thread type
SQ	Blank: Through hole A: Femal thread at both ends	Blank: Basic type D: Double shaft type J: Double shaft and adjustable stroke type SA: Single acting spring extend SB: Single acting spring return	12 16 20 25 … 100		25 50 75 … 100		10 20 30 40 50 75 100		Blank: no magnet S: with magnet		Blank: Female thread M: Male thread N: No thread		Blank: G P: PT T: NPT

Order Example:

SQ Series single acting spring extend cylinder, through hole mounting type, 40mm bore, 30mm stroke, with magnet, femal thread on piston rod, G thread.

ERP code is: SQSA40X30–S

Specifications

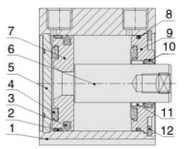
Bore(mm)	12	16	20	25	32	40	50	63	80	100
Acting type	Double Acting/Single acting: With Spring Return / With Spring Extend									
Working medium	Clean Air (25 μm filteration)									
Working pressure (MPa)	0.1~1.0									
Guaranteed pressure (MPa)	1.5									
Working temperature (℃)	–20~80(Dry air)									
Cushion type	Anti–bump cushion									
Tolerance of stroke	+1.0 0									
Lubrication	Not required									
Port size	M5x0.8				G 1/8		G 1/4		G 3/8	

Bore (mm)		Standard stroke (mm)	Max. stroke (mm)
Double Acting	12/16	5 10 15 20 25 30 35 40 45 50 60	50
	20/25	5 10 15 20 25 30 35 40 45 50 60 70 75 80 90 100	100
	32~100	5 10 15 20 25 30 35 40 45 50 60 70 75 80 90 100	100
Single Acting	12/16	5 10 15 20	20
	20~63	5 10 15 20 25 30	30

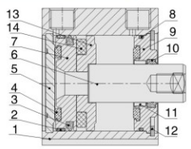
Note: 1. The dimensions of non–std stroke cylinder has the same dimensions as the next longer stroke std. stroke cylinder.
e.g. 27mm stroke cylinder has the same dimensions of 30 std. stroke cylinder.
2. When ordering the stroke is greater than the maximum stroke, please contact the company.

Internal structure

Without magnet



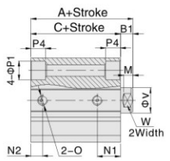
With magnet



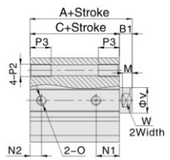
No	Part name
1	Barrel
2	Wear ring
3	Piston seal
4	Anti–bump cushion
5	Rear cover
6	Piston rod
7	Piston
8	O–ring
9	Head cover
10	Piston rod seal
11	Self lubricating bearing
12	C type retainer ring
13	Magnet
14	Magnet base

Main Dimensions

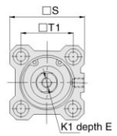
SQ Ø12 — Ø25 (Without magnet)



Through hole type

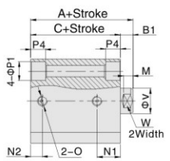


Thread type

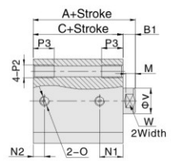


Model / Sign / Bore	Basic Type A St≤50	A St≥60	C St≤50	C St≥60	With Magnet N1	N2	A	C	N1	N2	B1	D	E	M
12	20.5	–	17	–	7.5	5	31.5	28	9	7	3.5	–	6	3.5
16	22	–	18.5	–	8	5.5	34	30.5	9.5	5.5	3.5	–	8	3
20	24	34	19.5	29.5	9	5.5	36	31.5	9.5	5.5	4.5	–	7	4
25	27.5	37.5	22.5	32.5	11	5.5	37.5	32.5	11	5.5	5	–	12	4.5

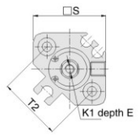
Bore /Sign	K1	O	P1	P2	P3	P4	S	T1	T2	V	W
12	M3x0.5	M5x0.8	6.5	M4x0.7	7	3.5	25	15.5	22	6	5
16	M4x0.7	M5x0.8	6.5	M4x0.7	7	3.5	29	20	28	8	6
20	M5x0.8	M5x0.8	9	M6x1.0	10	7	36	25.5	36	10	8
25	M6x1.0	M5x0.8	9	M6x1.0	10	7	40	28	40	12	10



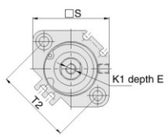
Through hole type



Thread type



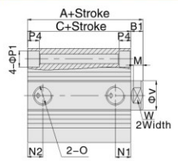
Φ12 (With magent)



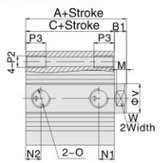
Φ16–Φ25 (With magent)

SQ Ø32 — Ø100

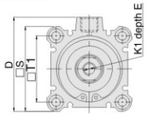
Stroke≤100



Through hole type



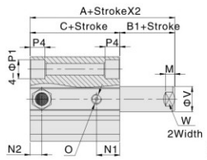
Thread type



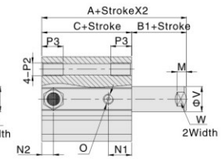
Model / Sign / Bore	Basic Type A St≤50	A St≥60	C St≤50	C St≥60	With Magnet N1	N2	A	C	N1	N2	B1	D	E	M
32	St=5	30	40	23	33	7.5	6.5	40	33	10.5	7.5	7	49.5	13	6
	St>5					10.5	7.5								
40		36.5	46.5	29.5	39.5	11	8	46.5	39.5	11	8	7	57	13	6
50	St=5	38.5	48.5	30.5	40.5	9	9	48.5	40.5	10.5	10.5	8	71	15	6.5
	St>5					10.5	10.5								
63	St=5	44	54	36	46	14	9.5	54	46	15	10.5	8	84	15	6.5
	St>5					15	10.5								
80		53.5	63.5	43.5	53.5	16	14	63.5	53.5	16	14	10	104	20	8.5
100		65	75	53	63	20	17.5	75	63	20	17.5	12	123.5	26	9.5

Bore /Sign	K1	O	P1	P2	P3	P4	S	T1	T2	V	W
32	M8x1.25	PT1/8	9	M6x1.0	10	7	45	34	–	16	14
40	M8x1.25	PT1/8	9	M6x1.0	10	7	53	40	–	16	14
50	M10x1.5	PT1/4	11	M8x1.25	14	8	64	50	–	20	17
63	M10x1.5	PT1/4	14	M10x1.5	18	10.5	77	60	–	20	17
80	M16x2.0	PT3/8	17.5	M12x1.75	22	13.5	98	77	–	25	22
100	M20x2.5	PT3/8	17.5	M12x1.75	22	13.5	117	94	–	32	27

SQSA Ø12 — Ø25 (Without magnet)

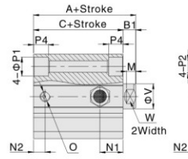


Through hole type

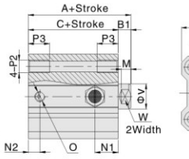


Thread type

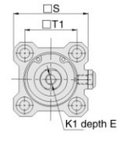
SQSB Ø12 — Ø25 (Without magnet)



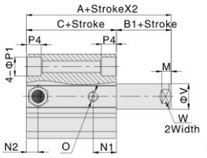
Through hole type



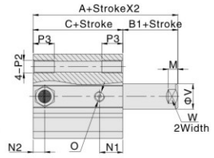
Thread type



SQSA Ø12 — Ø25 (With magnet)

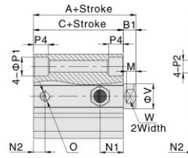


Through hole type

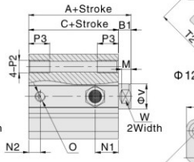


Thread type

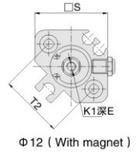
SQSB Ø12 — Ø25 (With magnet)



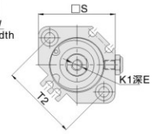
Through hole type



Thread type

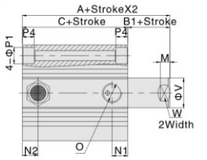


Φ12 (With magnet)

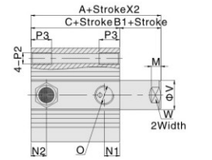


Φ16–Φ25 (With magnet)

SQSA Ø32 — Ø63

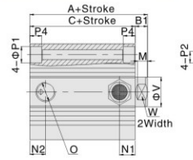


Through hole type

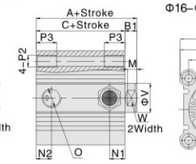


Thread type

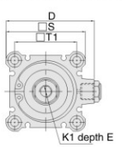
SQSB Ø32 — Ø63



Through hole type



Thread type



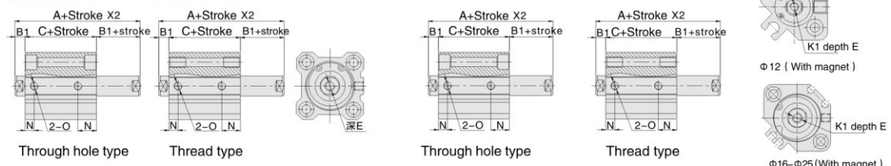
Model / Bore /Sign / Stroke	Basic Type A 5/10	A 15/20	A 25/30	C 5/10	C 15/20	C 25/30	N1	N2	B1	D	E
12	25.5	30.5	–	22	27	–	7.5	5	3.5	–	6
16	27	32	–	23.5	28.5	–	8	5.5	3.5	–	8
20	29	34	39	24.5	29.5	34.5	9	5.5	4.5	–	7
25	32.5	37.5	42.5	27.5	32.5	37.5	11	5.5	5	–	12
32	35	40	45	28	33	38	10.5	7.5	7	49.5	13
40	41.5	46.5	51.5	34.5	39.5	44.5	11	8	7	57	13
50	48.5	53.5	58.5	40.5	45.5	50.5	10.5	10.5	8	71	15
63	54	59	64	46	51	56	15	10.5	8	84	15

Bore /Sign	O	P1	P2	P3	P4
12	M5x0.8	6.5	M4x0.7	7	3.5
16	M5x0.8	6.5	M4x0.7	7	3.5
20	M5x0.8	9	M6x1.0	10	7
25	M5x0.8	9	M6x1.0	10	7
32	PT1/8	9	M6x1.0	10	7
40	PT1/8	9	M6x1.0	10	7
50	PT1/4	11	M8x1.25	14	8
63	PT1/4	14	M10x1.5	18	10.5

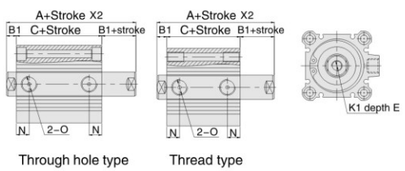
Model / Bore /Sign / Stroke	With Magnet A 5/10	A 15/20	A 25/30	C 5/10	C 15/20	C 25/30	N1	N2	K1
12	36.5	41.5	–	33	38	–	9	7	M3x0.5
16	39	44	–	35.5	40.5	–	9.5	5.5	M4x0.7
20	41	46	51	36.5	41.5	46.5	9.5	5.5	M5x0.8
25	42.5	47.5	52.5	37.5	42.5	47.5	11	5.5	M6x1.5
32	45	50	55	38	43	48	10.5	7.5	M8x1.25
40	51.5	56.5	61.5	44.5	49.5	54.5	11	8	M8x1.25
50	58.5	63.5	68.5	50.5	55.5	60.5	10.5	10.5	M10x1.5
63	64	69	74	56	61	66	15	10.5	M10x1.5

Bore /Sign	M	S	T1	T2	V	W
12	3.5	25	15.5	22	6	5
16	3	29	20	28	8	6
20	4	36	25.5	36	10	8
25	4.5	40	28	40	12	10
32	6	45	34	–	16	14
40	6	53	40	–	16	14
50	6.5	64	50	–	20	17
63	6.5	77	60	–	20	17

SQD Ø12 — Ø25 (Without magnet)



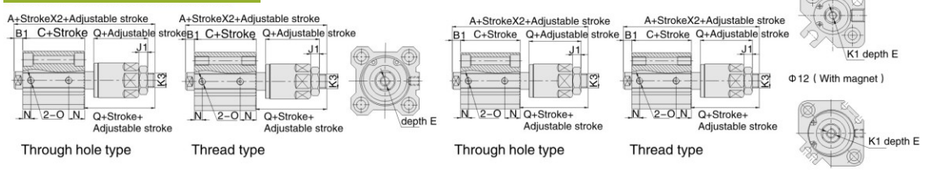
SQD Ø32 — Ø63



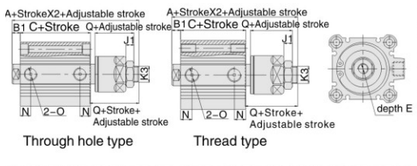
Bore /Sign	A		C		B1	E	N
	standard	With magnet	standard	With magnet			
12	32.2	39.4	25.2	32.4	3.5	6	9
16	33	43	26	36	3.5	8	9.5
20	35	47	26	38	4.5	7	9.5
25	39	49	29	39	5	9.5(St=5)/12(St>5)	11
32	44.5	54.5	30.5	40.5	7	9(St≤10)/13(St>10)	10
40	54	64	40	50	7	11(St≤10)/13(St>10)	13
50	56.5	66.5	40.5	50.5	8	12(St≤10)/15(St>10)	13.5
63	58	68	42	52	8	12(St≤10)/15(St>10)	14.5(St=5)/16(St>5)
80	71	81	51	61	10	14(St≤15)/20(St>15)	16
100	84.5	94.5	60.5	70.5	12	20(St≤25)/26(St>25)	21

Note: Not marked dimensions is same as standard type. Male thread type pls check this page.

SQJ Ø12 — Ø25 (Without magnet)

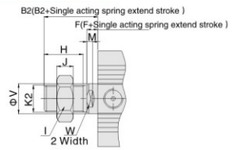


SQJ Ø32 — Ø100



Bore /Sign	A		C		B1	E	N	Q	J1	K3
	standard	With magnet	standard	With magnet						
12	45.2	52.4	25.2	32.4	3.5	6	9	17	4	M5x0.8
16	50	60	26	36	3.5	8	9.5	21	5	M6x1.0
20	55	67	26	38	4.5	7	9.5	25	6	M8x1.25
25	60.5	70.5	29	39	5	9.5(St=5)/12(St>5)	11	27	6	M10x1.25
32	64.9	74.9	30.5	40.5	7	9(St≤10)/13(St>10)	10	28	7	M12x1.25
40	74.5	84.5	40	50	7	11(St≤10)/13(St>10	13	28	7	M12x1.25
50	77	87	40.5	50.5	8	12(St≤10)/15(St>10)	13.5	29	8	M16x1.5
63	78.4	88.4	42	52	8	12(St≤10)/15(St>10)	14.5(St=5)/16(St>5)	29	8	M16x1.5
80	95.8	105.8	51	61	10	14(St≤15)/20(St>15)	16	35.5	10	M20x1.5
100	114.3	124.3	60.5	70.5	12	20(St≤25)/26(St>25)	21	42.5	13.5	M27x2.0

Male type dimension Stroke≤100



Bore /Sign	B2	F	H	I	J	K2	M	V	W
12	14	3.5	9	8	4	M5x0.8	3.5	6	5
16	15.5	3.5	10	10	5	M6x1.0	3	8	6
20	18.5	4.5	12	12	6	M8x1.25	4	10	8
25	22.5	5	15	17	6	M10x1.25	4.5	12	10
32	28.5	5	20.5	19	8	M14x1.5	4	16	14
40	28.5	5	20.5	19	8	M14x1.5	4	16	14
50	33.5	5	26	27	11	M18x1.5	4	20	17
63	33.5	5	26	27	11	M18x1.5	4	20	17
80	43.5	8	32.5	32	13	M22x1.5	6	25	22
100	43.5	8	32.5	36	13	M26x1.5	5.5	32	27

How to Order?

Series No	Mounting type	Bore	X	Stroke	–	Magnet No	–	Thread type
SQM	Blank: Through hole A: Femal thread at both ends (Φ32-Φ100)	12 16 20 25 ... 100		25 50 75 ...		Blank: no magnet S: with magnet		Blank: G P: PT T: NPT

Order Example:
SQM series compact cylinder, through hole mounting type, 32mm bore, 50mm stroke, with magnet, G thread.
ERP code is: SQM 32X50-S

Product Features

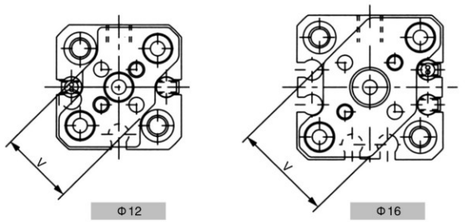
* Installation dimensions same as SQ series.
* Non-return precision is lower than ±0.2°
* Wide bore size from 12mm to 100mm
* Integrated magnet

Specifications

Bore size(mm)	12	16	20	25	32	40	50	63	80	100
Acting type	Double Acting									
Working medium	Clean Air (25μ filteration)									
Min Working pressure (MPa)	0.12	0.1								
Max Working pressure (MPa)	1.0									
Working temperature (℃)	With reed switch: -10℃~+60℃ Without reed switch: 10℃~+70℃									
Cushion type	Rubber cushion									
Stroke tolerance	$^{+1.0}_{0}$ mm									
Speed range	50~500 mm/s						50~300 mm/s			

Main Dimensions

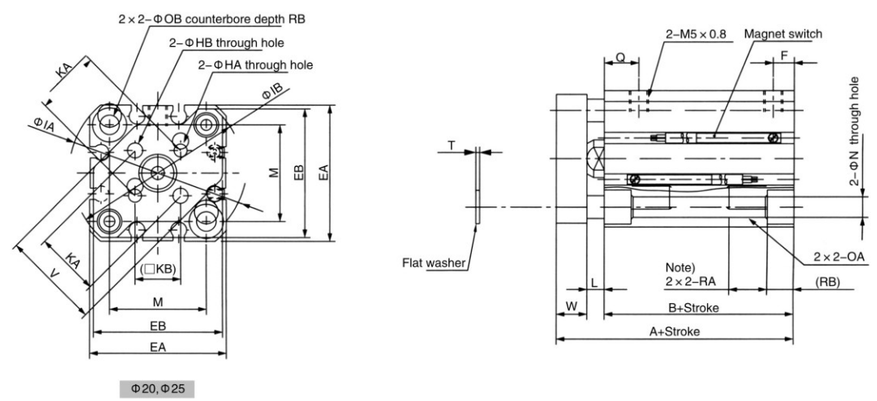
Φ12~Φ25



Φ12 Φ16

Table of standard stroke

Bore (mm)	Standard stroke (mm)
12,16	5,10,15,20,25,30
20,25	5,10,15,20,25,30,35,40,45,50
32,40	5,10,15,20,25,30,35,40,45,50 75,100
50,63 80,100	10,15,20,25,30,35,40,45,50 75,100



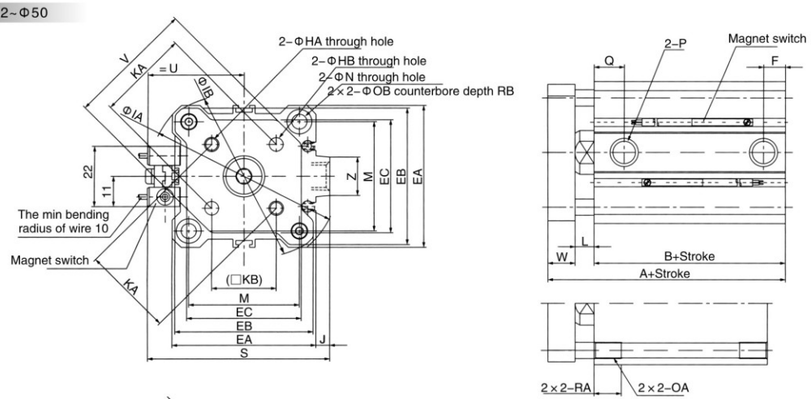
Φ20,Φ25

Bore (mm)	Stroke range (mm)	Without magnet A	Without magnet B	With magnet A	With magnet B	EA	EB	F	HA	OA	HB	IA	IB	KA
12	5~30	26.5	17	31.5	22	25	24	5	M3×0.5	M4×0.7	3	32	31.5	10
16	5~30	26.5	17	31.5	22	29	28	5	M3×0.5	M4×0.7	3	38	37	14
20	5~30	32	19.5	42	29.5	36	34	5.5	M4×0.7	M6×1.0	4	47	45.5	17
25	5~30	35.5	22.5	45.5	32.5	40	28	5.5	M5×0.8	M6×1.0	5	52	50.5	22

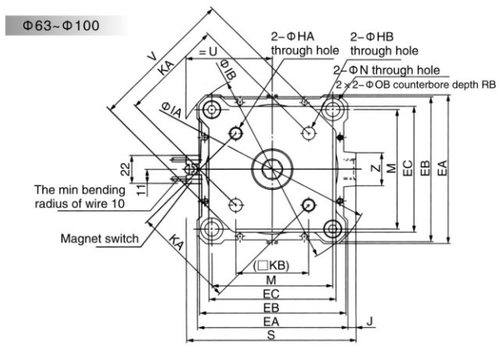
Bore (mm)	KB	L	M	N	OB	Q	RA	RB	T	V	W
12	7.1	3.5	15.5	3.5	6.5	7.5	7	4	0.5	14.9	6
16	9.9	3.5	20	3.5	6.5	7.5	7	4	0.5	20	6
20	12	4.5	25.5	5.4	9	9	10	7	1	26	8
25	15.6	5	28	5.4	9	11	10	7	1	30	8

Main Dimensions

Φ32~Φ50



Φ63~Φ100



Both sides with thread type

Bore (mm)	HA	OA	HB	IA	IB	J	KA
32	M5×0.8	M6×1.0	5	60	58.5	4.5	28
40	M5×0.8	M6×1.0	5	69	67.5	5	33
50	M6×1.0	M8×1.25	6	86	84.5	7	42
63	M6×1.0	M10×1.5	$6^{+0.2}_{0}$	103	100	7	$50^{+0.2}_{0}$
80	M8×1.25	M12×1.75	$8^{+0.2}_{0}$	132	129	6	$65^{+0.2}_{0}$
100	M10×1.5	M12×1.75	$10^{+0.2}_{0}$	156	153	6.5	$80^{+0.2}_{0}$

Bore (mm)	KB	L	M	N	OB	RA	RB	S	U	V	W	Z
32	19.8	7	34	5.5	9	10	7	58.5	31.5	38	10	14
40	23.3	7	40	5.5	9	10	7	66	35	46	10	14
50	29.7	8	50	6.6	11	14	8	80	41	58	12	19
63	35.4	8	60	9	14	18	10.5	93	47.5	69	12	19
80	46	10	77	11	17.5	22	13.5	112.5	57.5	89	14	26
100	56.6	10	94	11	17.5	22	13.5	132.5	67.5	113	16	26

Bore (mm)	Stroke range (mm)	A	B	F	Q	P –	P TN	P TF	With magnet A	With magnet B	With magnet F	With magnet Q	With magnet P –	With magnet P TN	With magnet P TF	EA	EB	EC
32	5	40	23	5.5	11.5	M5×0.8	–	–	50	33	7.5	10.5	Rc1/8	NPT1/8	G1/8	45	43	34.4
	10~50			7.5	10.5	Rc1/8	NPT1/8	G1/8										
	75~100	50	33															
40	5~50	46.5	29.5	8	11	Rc1/8	NPT1/8	G1/8	56.5	39.5	8	11	Rc1/8	NPT1/8	G1/8	52	50	41.4
	75~100	56.5	39.5															
50	10~50	50.5	30.5	10.5	10.5	Rc1/4	NPT1/4	G1/4	60.5	40.5	10.5	10.5	Rc1/4	NPT1/4	G1/4	64	62	53.4
	75~100	60.5	40.5															
63	10~50	56	36	10.5	15	Rc1/4	NPT1/4	G1/4	66	46	10.5	15	Rc1/4	NPT1/4	G1/4	77	74	59.6
	75~100	66	46															
80	10~50	67.5	43.5	12.5	16	Rc3/8	NPT3/8	G3/8	77.5	53.5	12.5	16	Rc3/8	NPT3/8	G3/8	98	95	79.5
	75~100	77.5	53.5															
100	10~50	79	53	13	23	Rc3/8	NPT3/8	G3/8	89	63	13	23	Rc3/8	NPT3/8	G3/8	117	114	99
	75~100	89	63															

How to Order?

Series No	Type No	Bore	X	Stroke	–	Adjustable stroke	–	Magnet No	–	Thread type
EU	Blank: Basic type	6		25		10		Blank: no magnet		Blank：G
EUK	D: Double shaft type	10		50		20		S: with magnet		P：PT
	J: Double shaft and adjustable stroke type	16		75		30				T：NPT
	SA: Single acting spring extend	20		…		40				
	SB: Single acting spring return	…				50				
		32				75				
						100				

Order Example:

EU Series single acting spring return cylinder, 32mm bore, 30mm stroke, with magnet, NPT thread. ERP code is: EUSB 32X30–S–T

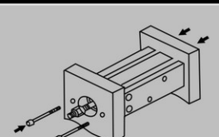
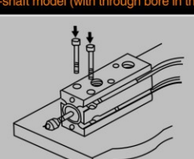
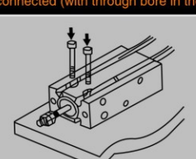
Product Features

* With self–lubricating bearing, the piston rod is lubrication free
* Suitable slot on the cylinder barrel to make it easy for magnetic sensor to fit on
* Compact body and light–weighted
* Magnet is optional

Specifications

Bore(mm)	6	10	16	20	25	32
Acting type	Double acting / Single acting spring return / Single acting spring extend					
Working medium	Clean air (25 μm filteration)					
Working pressure (MPa)	0.1~1.0					
Guaranteed pressure (MPa)	1.5					
Working temperature (℃)	–20~80(Dry air)					
Cushion Type	Rubber Cushion					
Port Size	M5x0.8					G 1/8

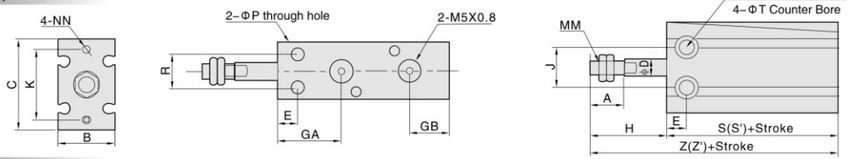
Installation

Parallel–shaft model (body connected)	Vertical–shaft model (with through bore in the body)	Side–connected (with through bore in the body)
		

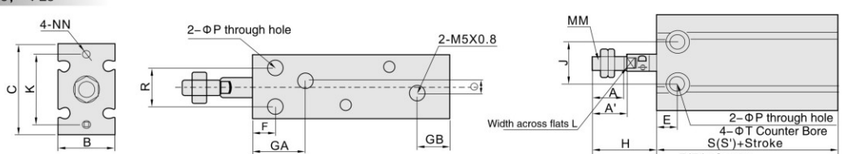
Main Dimensions

Basic type, with magnet (Double acting, single acting spring return/ extend)

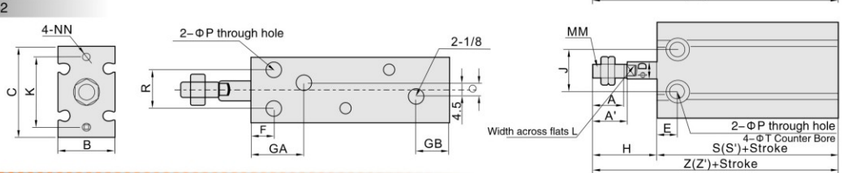
Φ6, Φ10



Φ16, Φ25



Φ32



Common Dimension

Model	A	A'	B	C	ϕD	E	GA	GB	J	K	L	MM	NN	ϕP	Q	R	ϕT
EU6–□	7	–	16.5	22	3	7	15	10	10	17	–	M3x0.5	M3x0.5 Depth 5	3.2	–	7	6 Depth 4.8
EU10–□	10	–	16.5	24	4	7	16.5	10	11	18	–	M4x0.7	M3x0.5 Depth 5	3.2	–	9	6 Depth 5
EU16–□	11	12.5	20	32	6	7	15	10	14	25	5	M5x0.8	M4x0.7 Depth 5	4.5	3	12	7.6 Depth 6.5
EU20–□	12	14	26	40	8	9	20.5	11	16	30	6	M6x1.0	M5x0.8 Depth 8	5.5	9	16	9.5 Depth 8
EU25–□	15.5	18	32	50	10	10	23.5	8.2	20	38	8	M8x1.25	M5x0.8 Depth 8	5.5	12	20	9.5 Depth 9
EU32–□	19.5	22	40	62	12	11	22.5	12.5	24	48	10	M10x1.25	M6x1.0 Depth 9	6.6	13.5	24	11 Depth 11.5

Dimension of Double acting Type

Model	H	Basic Type		With Magnet		
		S	Z	W	S'	Z'
EU6–□	13	33	46	2.5	33	46
EU10–□	16	36	52	1	36	52
EU16–□	16	30	46	0	40	56
EU20–□	19	36	55	1	46	65
EU25–□	23	40	63	–1	50	73
EU32–□	27	42	69	–4	52	79

Dimension of Single acting Spring Return Type

Model	H	Basic Type						With Magnet						
		S			Z			W	S'			Z'		
		5st	10st	15st	5st	10st	15st		5st	10st	15st	5st	10st	15st
EUSB6–□	13	38	43	48	51	56	61	2.5	38	43	48	51	56	61
EUSB10–□	16	41	46	56	57	62	72	1	41	46	56	57	62	72
EUSB16–□	16	35	40	50	51	56	66	0	45	50	60	61	66	76
EUSB20–□	19	41	46	56	60	65	75	1	51	56	66	70	75	85
EUSB25–□	23	45	50	60	68	73	83	–1	55	60	70	78	83	93
EUSB32–□	27	47	52	62	74	79	89	–4	57	62	72	84	89	99

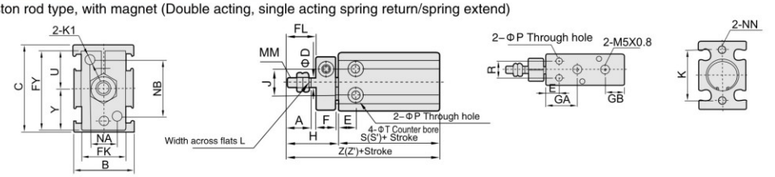
Dimension of Single acting Spring Extend Type

Model	H			Basic Type						With Magnet						
				S			Z			W	S'			Z'		
	5st	10st	15st	5st	10st	15st	5st	10st	15st		5st	10st	15st	5st	10st	15st
EUSA6–□	18	23	28	38	43	48	56	66	76	2.5	38	43	48	56	66	76
EUSA10–□	21	26	31	41	46	56	62	72	87	1	41	46	56	62	72	87
EUSA16–□	21	26	31	45	50	60	66	76	91	0	45	50	60	66	76	91
EUSA20–□	24	29	34	41	46	56	65	75	90	1	51	56	66	75	85	100
EUSA25–□	28	33	38	45	50	60	73	83	98	–1	55	60	70	83	93	108
EUSA32–□	32	37	42	47	52	62	79	89	104	–4	57	62	72	89	99	114

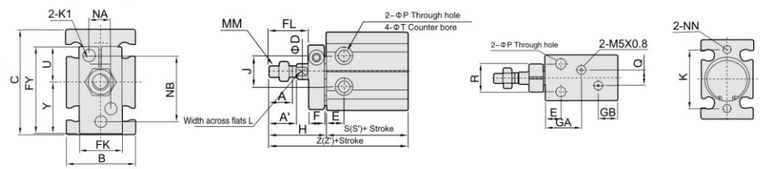
Main Dimensions

No–swivelling piston rod type, with magnet (Double acting, single acting spring return/spring extend)

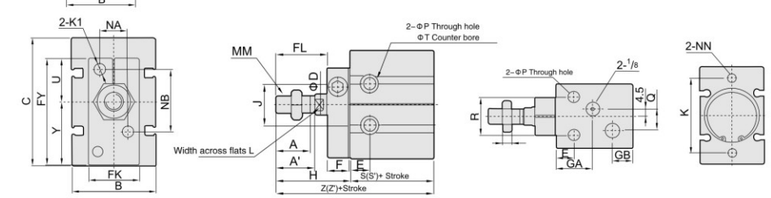
Φ6, Φ10



Φ16, Φ20, Φ25



Φ32



Common Dimension

Model	A	A'	B	C	ΦD	E	F	FL	FK	FY	GA	GB	H	J	K	KI	L	MM	NA	NB	NN	ΦP	Q	R	ΦT	U	Y
EUK6-□	7	–	13	22	3	7	8	9	11	20.5	14.5	10	18	10	17	M3x0.5	–	M3x0.5	6	14	M3x0.5 Depth 5	3.4	–	7	6 Depth 4.8	10	10.5
EUK10-□	10	–	15	24	4	7	8	12	12	22	15.5	10	21	11	18	M3x0.5	–	M4x0.7	7	15	M3x0.5 Depth 5	3.4	–	9	6 Depth 5	10.5	11.5
EUK16-□	11	12.5	20	32	6	7	8	17	13	28	16.5	11.5	26	14	25	M4x0.7	5	M5x0.8	6	18	M4x0.7 Depth 5	4.5	4	12	7.6 Depth 6.5	12.5	15.5
EUK20-□	12	14	26	40	8	9	8	20	16	33	19	12.5	29	16	30	M4x0.7	6	M6x1.0	8	20	M5x0.8 Depth 8	5.5	9	16	9.5 Depth 8	13.5	19.5
EUK25-□	15.5	18	32	50	10	10	10	22	20	43.5	21	13	33	20	38	M5x0.8	8	M8x1.25	10	28	M5x0.8 Depth 8	5.5	9	20	9.5 Depth 9	19	24.5
EUK32-□	19.5	22	40	62	12	11	12	29	24	51.5	22	13	42	24	48	M5x0.8	10	M10x1.25	12	32	M6x1.0 Depth 9	6.6	13.5	24	11 Depth 11.5	21	30.5

Dimension of Double acting Type

Model	H	Basic Type		With Magnet		
		S	Z	W	S'	Z'
EUK6-□	18	33	51	2.5	33	51
EUK10-□	21	36	57	1	36	57
EUK16-□	26	30	56	0	40	66
EUK20-□	29	36	65	1	46	75
EUK25-□	33	40	73	–1	50	83
EUK32-□	42	42	84	–4	52	94

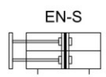
Dimension of Single acting Spring Return Type

Model	H	Basic Type						With Magnet						
		S			Z			W	S'			Z'		
		5st	10st	15st	5st	10st	15st		5st	10st	15st	5st	10st	15st
EUKSB6-□	18	38	43	48	56	61	66	2.5	38	43	48	56	61	66
EUKSB10-□	21	41	46	56	62	67	77	1	41	46	56	62	67	77
EUKSB16-□	26	35	40	50	61	66	76	0	45	50	60	71	76	86
EUKSB20-□	29	41	46	56	70	75	85	1	51	56	66	80	85	95
EUKSB25-□	33	45	50	60	78	83	93	–1	55	60	70	88	93	103
EUKSB32-□	42	47	52	62	89	94	104	–4	57	62	72	99	104	114

Dimension of Single acting Spring Extend Type

Model	H			ΦT	U	Y	Basic Type						With Magnet						
							S			Z			W	S'			Z'		
	5st	10st	15st				5st	10st	15st	5st	10st	15st		5st	10st	15st	5st	10st	15st
EUKSA6-□	23	28	33	6 Depth 4.8	10	10.5	38	43	48	61	71	81	2.5	38	43	48	61	71	81
EUKSA10-□	26	31	36	6 Depth 5	10.5	11.5	41	46	56	67	77	92	1	41	46	56	67	77	92
EUKSA16-□	31	36	41	7.6 Depth 6.5	12.5	15.5	35	50	60	76	86	101	0	45	50	60	76	86	101
EUKSA20-□	34	39	44	9.5 Depth 8	13.5	19.5	41	46	56	75	85	100	1	51	56	66	85	95	110
EUKSA25-□	38	43	48	9.5 Depth 9	19	24.5	45	50	60	83	93	108	–1	55	60	70	93	103	118
EUKSA32-□	47	52	57	11 Depth 11.5	21	30.5	47	52	62	94	104	119	–4	57	62	72	104	114	129

EN-S



How to Order?

Series No	Bore	X	Stroke	–	Magnet No	–	Thread type
EN	10 16 20 … 32		25 50 75 …		S : With Magnet		Blank: G P : PT T : NPT

Order Example:

EN series double shaft cylinder, Bore 32mm, stroke 30mm, with magnet, PT thread. ERP code is: EN32X30–S–P

Product Features

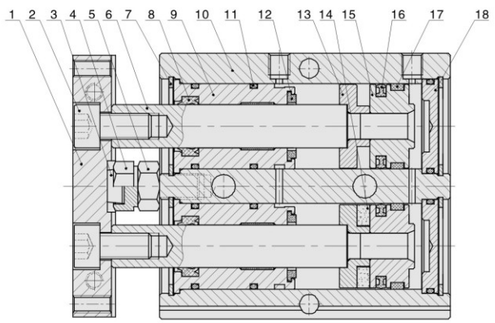
* Double shaft provide good anti–bend performance and guarantee long life cycle and correct direction
* Suitable slot is designed for manetic sensor and fixing
* Embedding mounting and no need other brackets, room saving
* Easy to assemble and easy to maintain

Specifications

Bore(mm)	10	16	20	25	32
Acting type	Double acting				
Working medium	Clean air (25 μm filteration)				
Working pressure (MPa)	0.1~1.0				
Guaranteed pressure (MPa)	1.5				
Working temperature (℃)	–20~80(Dry air)				
Speed range (mm/s)	30~500				
Adjusting stroke (mm)	–10~0				
Cushion type	Absorb shocks gasket				
No–return precision	±0.4°	±0.3°			
Port Size	M5x0.8				G 1/8

Bore (mm)	Standard stroke (mm)	Max. stroke (mm)
10	10 20 30 40 50 60 70 80 90 100	100
16~32	10 20 30 40 50 60 70 80 90 100 125 150 175 200	200

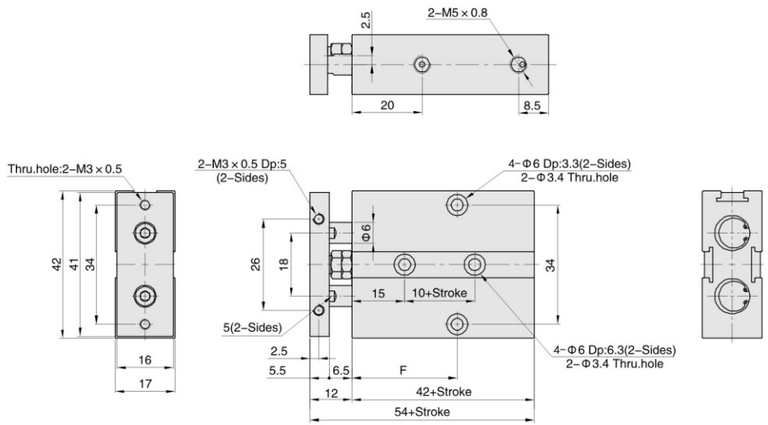
Internal structure



NO.	Part name	Material
1	Fixing plate	Aluminum alloy
2	Nut	Carbon steel
3	Bumper	POM
4	Adjustable nut	Carbon steel
5	Screw	Carbon steel
6	Piston rod	S45C hard chrome carbon steel
7	C clip	Spring steel
8	Wiper seal	NBR
9	Head cover	Aluminum alloy
10	Body	Aluminum alloy
11	O-ring	NBR
12	Anti-bump cushion	TPU
13	Magnet holder	Aluminum alloy
14	Magnet	Plastic
15	Piston	Aluminum alloy
16	Piston seal	NBR
17	Wear ring	PTFE
18	Rear cover	Aluminum alloy

Main Dimensions (mm)

EN Ø10

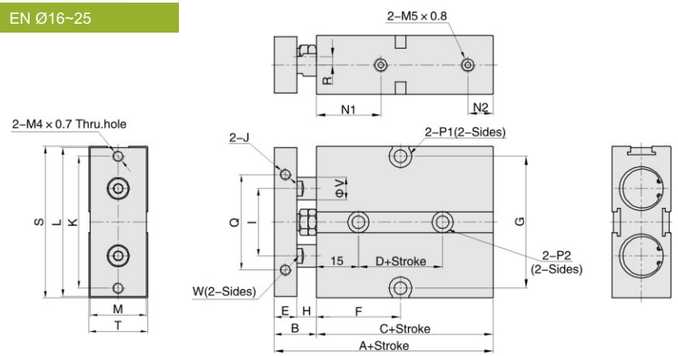


(mm)

Bore\Sign	10	20	30	40	50	60	70	80	90	100
F	30	30	35	40	45	50	55	60	65	70

Main Dimensions (mm)

EN Ø16~25

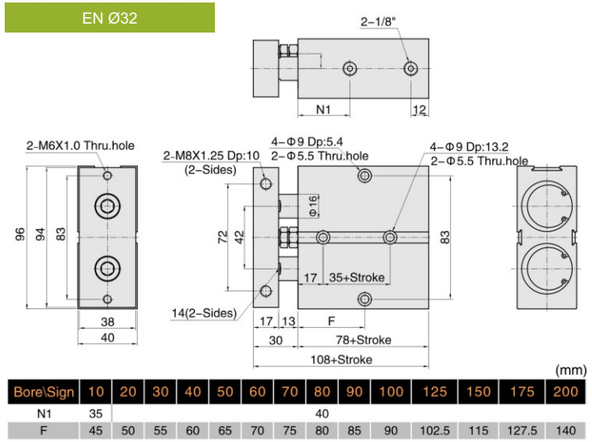


(mm)

Bore\Sign	A	B	C	D	E	F												G	H	I	K
						10	20	30	40	50	60	70	80	90	100	125	150	175	200				
16	68	15	53	20	8	30	35	40	45	50	55	60	65	70	75	87.5	100	112.5	125	47	7	24	47
20	78	20	58	20	10	35	35	40	45	50	55	60	65	70	75	87.5	100	112.5	125	55	10	28	55
25	81	19	62	30	10	40	40	45	50	55	60	65	70	75	80	92.5	105	117.5	130	66	9	34	66

Bore\Sign	J	L	M	N1	N2	P1	P2	Q	R	S	T	V	W
16	M4×0.7 Dp:5	53	20	23	9	Φ8 Dp:4.5 ; Thru.hole:Φ4.5	Φ7.5 Dp:7.3 ; Thru.hole:Φ4.5	34	3	54	21	8	6
20	M4×0.7 Dp:5	61	24	28	9	Φ8 Dp:4.5 ; Thru.hole:Φ4.5	Φ7.5 Dp:7.5 ; Thru.hole:Φ4.5	44	3.5	62	25	10	8
25	M4×0.7 Dp:6	72	29	33	9	Φ8 Dp:4.5 ; Thru.hole:Φ4.5	Φ7.5 Dp:7.5 ; Thru.hole:Φ4.5	56	6	73	30	12	10

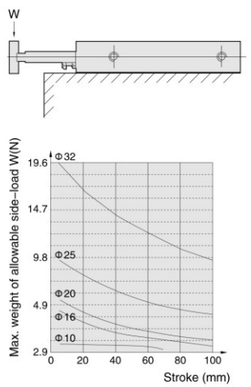
EN Ø32



(mm)

Bore\Sign	10	20	30	40	50	60	70	80	90	100	125	150	175	200
N1	35							40						
F	45	50	55	60	65	70	75	80	85	90	102.5	115	127.5	140

Max. weight of allowable side-load



EXS–S

How to Order?

Series No	Type No	Bore	X	Stroke	–	Magnet No	–	Thread type
EXS	M: slide bearing	6 10 12 16 20 …		25 50 75 …		S: with magnet		Blank: G P: PT T: NPT

Order Example:
EXS series, Linear Bearing type, Bore 6mm, stroke 30mm ERP code is: EXSL6X30–S
Note: The cylinder's bore and stroke, mounting accessories details according to drawings.

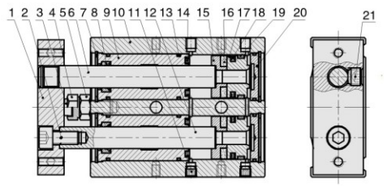
Specifications

Bore(mm)		6	10	16	20	25	32
Acting type		Double acting					
Working Medium		Clean air (25 μm filteration)					
Working Pressure (MPa)		0.1~1.0					
Guaranteed Pressure (MPa)		1.5					
Working Temperature (℃)		–20~80(Dry air)					
Cushion type		Both Ends Cushion					
Structure		Double Power					
Lubrication		Not required					
Adjustable Cushion		Return Stroke 0⁻–5mm					
Bearing		Slide Bearing type / Linear Bearing type					
No–rotating accuracy	Slide Bearing type	±0.1°	±0.15°	±0.13°	±0.11°	±0.1°	±0.08°
	Linear Bearing type	±0.1°	±0.1°	±0.07°	±0.06°	±0.05°	±0.04°
Port Size		M5x0.8				G1/8	

Bore (mm)	Standard stroke (mm)	Max. stroke (mm)
6	10 20 30 40 50	50
10	10 20 25 30 40 50 60 70 75 80 90 100	100
16~32	10 20 25 30 40 50 60 70 75 80 90 100 125 150 175 200	200

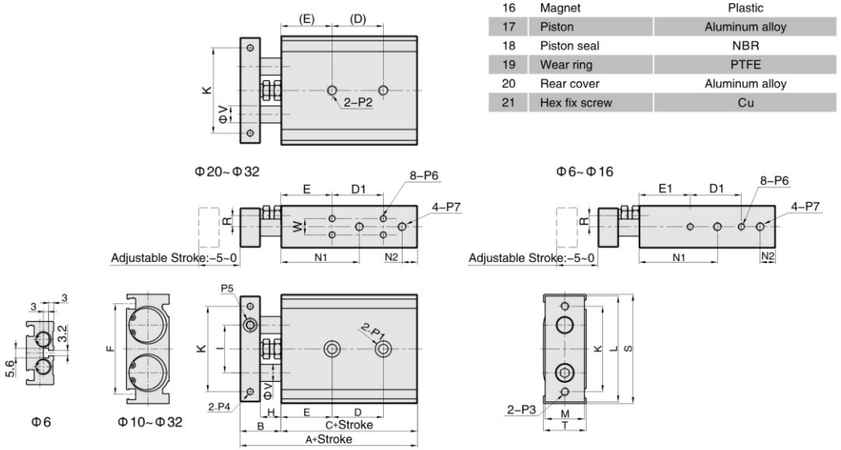
Note:The dimensions of non–std stroke cylinder has the same dimensions as the next longer stroke std. stroke cylinder.
e.g. 27mm stroke cylinder has the same dimensions of 30 std. stroke cylinder.

Internal structure



NO.	Part name	Material
1	Fixing plate	Aluminum alloy
2	Nut	Carbon steel
3	Bumper	POM
4	Adjustable nut	Carbon steel
5	Screw	Carbon steel
6	Piston rod	S45C hard chrome carbon steel
7	C clip	Spring steel
8	Wiper seal	NBR
9	Head cover	Aluminum alloy
10	Body	Aluminum alloy
11	Hex fix screw	Cu
12	Piston rod	S45C hard chrome carbon steel
13	O–ring	NBR
14	Anti–bump cushion	TPU
15	Magnet holder	Aluminum alloy
16	Magnet	Plastic
17	Piston	Aluminum alloy
18	Piston seal	NBR
19	Wear ring	PTFE
20	Rear cover	Aluminum alloy
21	Hex fix screw	Cu

Main Dimensions



(mm)

Bore\Sign	A	B	C	D D1 10~25	D D1 30~50	D D1 60~80	D D1 90~100	D D1 125	D D1 150	D D1 175	D D1 200	E	E1	F	H	I	K	L	M	N1	N2	R
				D=10+Stroke/2 D1=13+Stroke																		
6	58.5	13.5	45		–	–	–	–	–	–		13	10	25.8	8	16	28	35	14	24.5	6.5	4.5
10	72	17	55	30	40	50	60	–	–	–	–	20	20	36.5	9	20	35	44	15	30	8	3.5
16	79	19	60	25	35	45	55	65	75	145	145	30	30	47.5	9	25	45	56	18	38	8	5
20	94	24	70	30	40	60	60	80	80	100	100	30	–	53	12	28	50	62	23	46	9	6.5
25	96	24	72	30	40	60	60	80	80	100	100	30	–	64	12	35	60	78	28	43	9	9
32	112	30	82	40	50	70	70	90	90	110	110	30	–	76	14	44	75	96	36	53	10	11.5

Bore\Sign	S	T	V	W	P1	P2	P3	P4	P5	P6	P7
6	37	16	4	–	Φ6.5 Dp:3.3;Thru.hole:Φ3.4	–	M3X0.5	M3X0.5	M3X0.5	M3X0.5 Dp:4.5	M5X0.8
10	46	17	6	–	Φ6.5 Dp:3.3;Thru.hole:Φ3.4	M4X0.7 Dp:7	M4X0.7	M3X0.5	M5X0.8	M3X0.5 Dp:5	M5X0.8
16	58	20	8	–	Φ8 Dp:4.4;Thru.hole:Φ4.3	M5X0.8 Dp:8	M5X0.8	M4X0.7	M6X1.0	M4X0.7 Dp:5	M5X0.8
20	64	25	10	9.5	Φ9.5 Dp:5.3;Thru.hole:Φ5.2	M6X1.0 Dp:10	M5X0.8	M4X0.7 Dp:6	M8X1.25	M4X0.7 Dp:7	M5X0.8
25	80	30	12	13	Φ11 Dp:6.3;Thru.hole:Φ6.8	M8X1.25 Dp:12	M6X1.0	M5X0.8 Dp:7.5	M8X1.25	M5X0.8 Dp:7	1/8"
32	98	38	16	20	Φ11 Dp:6.3;Thru.hole:Φ6.8	M8X1.25 Dp:12	M6X1.0	M5X0.8 Dp:8	M10X1.5	M5X0.8 Dp:7	1/8"

EXSW–S

How to Order?

Series No	Type No	Bore	X	Stroke	–	Magnet No	–	Thread type
EXSW	M：slide bearing	6 10 12 16 20 …		25 50 75 …		S：with magnet		Blank：G P：PT T：NPT

Order Example:
EXSW series, Slide Bearing type, Bore 6mm, stroke 30mm ERP code is: EXSWM6X30–S

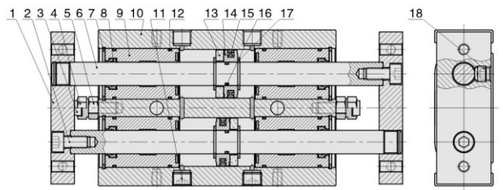
Specifications

Bore(mm)	6	10	16	20	25	32
Acting type	Double Acting					
Working medium	Clean Air(25 μ m filteration)					
Working pressure (MPa)	0.1~1.0					
Guaranteed pressure (MPa)	1.5					
Working temperature (℃)	–20~80(Dry air)					
Speed range (mm/s)	30~500					
Cushion type	Bumper					
Stroke tolerance(mm)	$^{+1.0}_{0}$					
Adjustable stroke(mm)	–5~0					
Non–rotating tolerance	± 0.1°	± 0.05°			± 0.03°	
Port size	M5 × 0.8				G1/8	

Bore (mm)	Standard stroke (mm)	Max. stroke (mm)
6	10 20 30 40 50	50
10	10 20 25 30 40 50 60 70 75 80 90 100	100
16~32	10 20 25 30 40 50 60 70 75 80 90 100 125 150 175 200	200

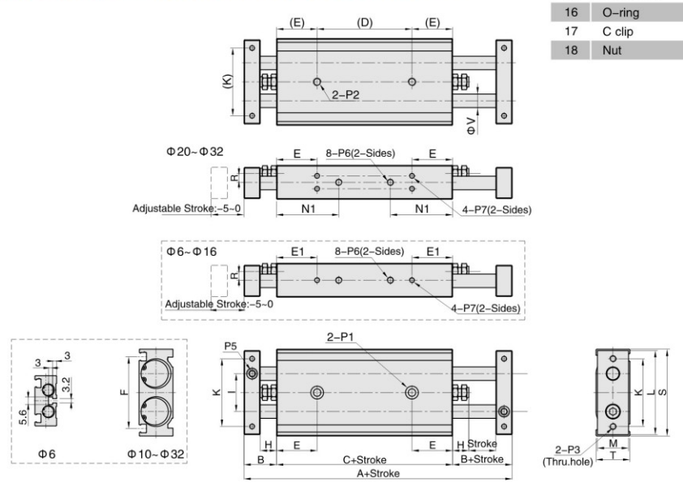
Note:The dimensions of non–std stroke cylinder has the same dimensions as the next longer stroke std. stroke cylinder.
e.g. 27mm stroke cylinder has the same dimensions of 30 std. stroke cylinder.

Internal structure



NO.	Part name	Material
1	Fixing plate	Aluminum alloy
2	Nut	Carbon steel
3	Bumper	POM
4	Adjustable nut	Carbon steel
5	Screw	Carbon steel
6	Piston rod	S45C hard chrome carbon steel
7	C clip	Spring steel
8	Wiper seal	NBR
9	Head cover	Aluminum alloy
10	Body	Aluminum alloy
11	Hex fix screw	Cu
12	O–ring	NBR
13	Magnet	Plastic
14	Piston	Aluminum alloy
15	Piston seal	NBR
16	O–ring	NBR
17	C clip	Spring steel
18	Nut	Carbon steel

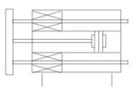
Main Dimensions



(mm)

Bore\Sign	A	B	C	E	E1	F	H	I	K	L	M	N1	R	S	T	V	W
6	83	13.5	56	13	10	25.8	8	16	28	35	14	24.5	4.5	37	16	4	–
10	116	17	82	20	20	36.5	9	20	35	44	15	30	3.5	46	17	6	–
16	133	19	95	30	30	47.5	9	25	45	56	18	38	5	58	20	8	–
20	158	24	110	30	–	53	12	28	50	62	23	46	6.5	64	25	10	9.5
25	160	24	112	30	–	64	12	35	60	78	28	43	9	80	30	12	13
32	193	30	133	30	–	76	14	44	75	96	36	53	11.5	98	38	16	20

Bore\Sign	P1	P2	P3	P4	P5	P6	P7
6	Φ6.5 Dp:3.3;Thru.hole:Φ3.4	–	M3X0.5	M3X0.5	M3X0.5	M3X0.5 Dp:4.5	M5X0.8
10	Φ6.5 Dp:3.3;Thru.hole:Φ3.4	M4X0.7 Dp:7	M4X0.7	M3X0.5	M5X0.8	M3X0.5 Dp:5	M5X0.8
16	Φ8 Dp:4.4;Thru.hole:Φ4.3	M5X0.8 Dp:8	M5X0.8	M4X0.7	M6X1.0	M4X0.7 Dp:5	M5X0.8
20	Φ9.5 Dp:5.3;Thru.hole:Φ5.2	M6X1.0 Dp:10	M5X0.8	M4X0.7 Dp:6	M8X1.25	M4X0.7 Dp:7	M5X0.8
25	Φ11 Dp:6.3;Thru.hole:Φ6.8	M8X1.25 Dp:12	M6X1.0	M5X0.8 Dp:7.5	M8X1.25	M5X0.8 Dp:7	1/8"
32	Φ11 Dp:6.3;Thru.hole:Φ6.8	M8X1.25 Dp:12	M6X1.0	M5X0.8 Dp:8	M10X1.5	M5X0.8 Dp:7	1/8"



How to Order?

Series No	Type No	Bore	X	Stroke	–	Magnet No	–	Thread type
SG	L: Linear bearing M: slide bearing	12 16 20 ...		25 50 75 ...		S: with magnet		Blank: G P: PT T: NPT

Order Example:
SG series, linear bearing, bore 20mm, stroke 30mm, EPR code is: SGL20X30-S

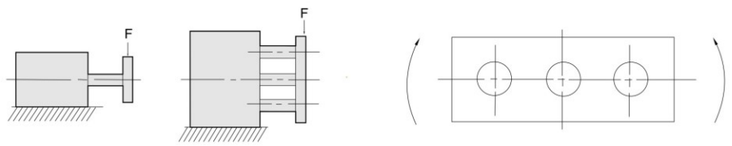
Specifications

Bore(mm)		12	16	20	25	32	40	50	63
Acting type		Double acting							
Working medium		Clean air (25 μm filteration)							
Working pressure (MPa)		0.1~1.0							
Guaranteed pressure (MPa)		1.5							
Working temperature (℃)		-20~80(Dry air)							
Piston speed (mm/s)		30~500							
Cushion		Rubber cushion							
Tolerance of stroke (mm)		$\pm^{1.5}_{0}$							
Bearing		Slide bearing / Linear bearing							
No-rotating precision	Slide bearing	±0.08°		±0.07°		±0.06°		±0.05°	
	Linear bearing	±0.10°		±0.09°		±0.08°		±0.06°	
Port Size		M5x0.8		G 1/8				G 1/4	

Bore (mm)	Standard stroke (mm)	Max. stroke (mm)
12	10 20 25 30 40 50 60 70 75 80 90 100 125 150	150
16	10 20 25 30 40 50 60 70 75 80 90 100 125 150 175 200	200
20/25	20 25 30 40 50 60 70 75 80 90 100 125 150 175 200 225 250	250
32~63	25 30 40 50 60 70 75 80 90 100 125 150 175 200 225 250	250

Note:The dimensions of non-std stroke cylinder has the same dimensions as the next longer stroke std. stroke cylinder.
e.g. 27mm stroke cylinder has the same dimensions of 30 std. stroke cylinder.

Permit Load and Torque

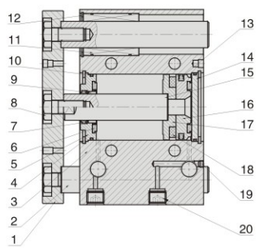


Torque：T(N.m)

Bore(mm)	Model	Max Side Load F(N) Stroke(mm) 10	20	25	30	40	50	75	100	125	150	175	200
12	SGM	24	19	–	17	14	13	26	22	–	–	–	–
	SGL	37	27	–	22	35	30	23	18	–	–	–	–
16	SGM	38	31	–	27	23	21	37	32	–	–	–	–
	SGL	54	40	–	32	54	47	35	28	–	–	–	–
20	SGM	–	49	–	43	38	35	87	75	66	59	54	49
	SGL	–	58	–	48	101	90	70	58	62	54	48	43
25	SGM	–	69	–	60	54	49	116	100	88	79	71	65
	SGL	–	82	–	68	132	118	93	77	80	70	62	55
32	SGM	–	–	203	–	–	164	182	159	142	127	116	106
	SGL	–	–	191	–	–	157	164	144	203	186	171	158
40	SGM	–	–	203	–	–	164	182	159	142	127	116	106
	SGL	–	–	190	–	–	157	163	144	203	185	171	158
50	SGM	–	–	296	–	–	245	273	241	216	195	179	164
	SGL	–	–	208	–	–	173	223	199	264	242	224	207
63	SGM	–	–	296	–	–	245	273	241	216	195	179	164
	SGL	–	–	206	–	–	171	221	196	262	240	221	205

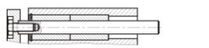
Bore(mm)	Model	Max Torque F(N) Stroke(mm) 10	20	25	30	40	50	75	100	125	150	175	200
12	SGM	0.39	0.32	–	0.27	0.24	0.21	0.43	0.36	–	–	–	–
	SGL	0.61	0.45	–	0.35	0.58	0.50	0.37	0.29	–	–	–	–
16	SGM	0.69	0.58	–	0.49	0.43	0.38	0.69	0.58	–	–	–	–
	SGL	0.99	0.74	–	0.59	0.99	0.86	0.65	0.52	–	–	–	–
20	SGM	–	1.05	–	0.93	0.83	0.75	1.88	1.63	1.44	1.28	1.16	1.06
	SGL	–	1.26	–	1.03	2.17	1.94	1.52	1.25	1.34	1.17	1.03	0.93
25	SGM	–	1.76	–	1.55	1.38	1.25	2.96	2.57	2.26	2.02	1.83	1.67
	SGL	–	2.11	–	1.75	3.37	3.02	2.38	1.97	2.05	1.78	1.58	1.41
32	SGM	–	–	6.35	–	–	5.13	5.69	4.97	4.42	3.98	3.61	3.31
	SGL	–	–	5.95	–	–	4.89	5.11	4.51	6.34	5.79	5.33	4.93
40	SGM	–	–	7	–	–	5.66	2.27	5.48	4.87	4.38	3.98	3.65
	SGL	–	–	6.55	–	–	5.39	5.62	4.96	6.98	6.38	5.87	5.43
50	SGM	–	–	13	–	–	10.8	12	10.6	9.5	8.6	7.86	7.24
	SGL	–	–	9.17	–	–	7.62	9.83	8.74	11.6	10.7	9.83	9.12
63	SGM	–	–	14.7	–	–	12.1	13.5	11.9	10.7	9.69	8.86	8.16
	SGL	–	–	10.2	–	–	8.48	11	9.74	13	11.9	11	10.2

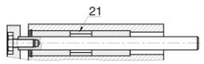
Internal structure



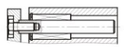
NO.	Part name	Material
1	Fixing plate	Aluminum alloy
2	Leader	Steel
3	Body	Aluminum alloy
4	C clip	Spring steel
5	Head cover	Aluminum alloy
6	Bumper	POM
7	O–ring	NBR
8	Screw	Carbon steel
9	Self lubricating bearing	Bronze powder
10	O–ring	NBR
11	Bearing	
12	C clip	Spring steel
13	Piston seal	NBR
14	Rear cover	Aluminum alloy
15	Piston rod	S45C hard chrome carbon steel
16	Piston	Aluminum alloy
17	Magnet base	Aluminum alloy
18	Magnet	Plastic
19	Nut	Carbon steel
20	Hex fix screw	Cu
21	Spacer	Aluminum alloy

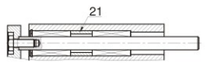
SGL Series





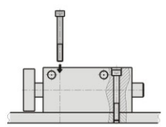
SGM Series



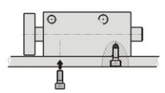


How to mount

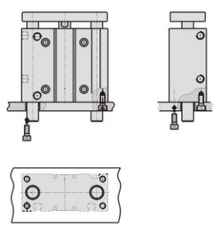
Fixation of screw on top surface



Fixation of screw at bottom surface

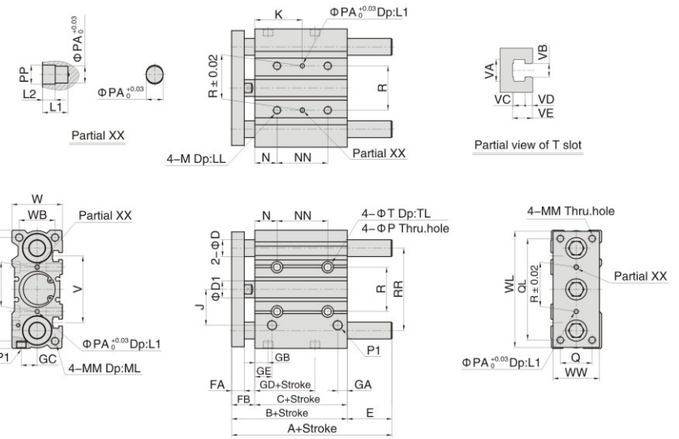


Fixation of screw at back surface



Fixation of T slot at bottom

Main Dimensions

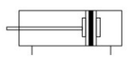


(mm)

Bore\Sign	A				E(SGL)				E(SGM)				NN				K			
	≤30	31~100	101~200	>200	≤30	31~100	101~200	>200	≤50	51~100	101~200	>200	≤30	31~100	101~200	>200	≤30	31~100	101~200	>200
12	42	55	85	–	0	13	43	–	0	13	43	–	20	40	110	–	15	25	60	–
16	46	65	95	–	0	19	49	–	0	19	49	–	24	44	110	–	17	27	60	–
20	53	80	104	122	0	27	51	69	0	27	51	69	24	44	120	200	29	39	77	117
25	53.5	82	104.5	122	0	28.5	51	68.5	0	28.5	51	68.5	24	44	120	200	29	39	77	117
Stroke	≤50	51~100	101~200	>200	≤50	51~100	101~200	>200	≤50	51~100	101~200	>200	≤40	41~100	101~200	>200	≤40	41~100	101~200	>200
32	65	102	118	140	5.5	42.5	58.5	80.5	5.5	42.5	58.5	80.5	24	48	124	200	33	45	83	121
40	66	102	118	140	0	36	52	74	0	36	52	74	24	48	124	200	34	46	84	122
50	76	118	134	161	4	46	62	89	4	46	62	89	24	48	124	200	36	48	86	124
63	77	118	134	161	0	41	57	84	0	41	57	84	28	52	128	200	38	50	88	124

Bore\Sign	B	C	FA	FB	P1	GA	GB	GC	GD	GE	R	RR	N	P	PA	PP	T	TL	M	LL	D1
12	42	29	8	13	M5X0.8	7.5	11	8	13	11	23	41	5	4.3	3	3.5	8	4.5	M5X0.8	10	6
16	46	33	8	13	M5X0.8	8	11	10	15	11	24	46	5	4.3	3	3.5	8	4.5	M5X0.8	10	8
20	53	37	10	16	1/8"	9	10.5	10.5	12.5	10.5	28	54	17	5.2	3	3.5	9.5	5.5	M6X1.0	12	10
25	53.5	37.5	10	16	1/8"	9	11.5	13.5	12.5	11.5	34	64	17	5.2	4	4.5	9.5	5.5	M6X1.0	12	12
32	59.5	37.5	12	22	1/8"	9	12.5	15	7	12.5	42	78	21	6.9	4	4.5	11	7.5	M8X1.25	16	16
40	66	44	12	22	1/8"	10	14	18	13	14	50	86	22	6.9	4	4.5	11	7.5	M8X1.25	16	16
50	72	44	16	28	1/4"	11	12	21.5	9	14	66	110	24	8.7	5	6	14	9	M10X1.5	20	20
63	77	49	16	28	1/4"	13.5	16.5	28	14	16.5	80	124	24	8.7	5	6	14	9	M10X1.5	20	20

Bore\Sign	D(SGL)	D(SGM)	J	W	WA	WB	WL	WW	H	Q	QL	MM	ML	L1	L2	V	VA	VB	VC	VD	VE
12	6	8	18	26	50	18	56	22	58	14	48	M4X0.7	10	6	3	37	7.4	4.4	3.7	2	6.2
16	8	10	19	30	56	22	62	25	64	16	54	M5X0.8	12	6	3	38	7.4	4.4	3.7	2.5	6.7
20	10	12	25	36	72	24	81	30	83	18	70	M5X0.8	13	6	3	44	8.4	5.4	4.5	2.8	7.8
25	12	16	28.5	42	82	30	91	38	93	26	78	M6X1.0	15	6	3	50	8.4	5.4	4.5	3	8.2
32	16	20	34	48	98	34	110	44	112	30	96	M8X1.25	20	6	3	63	10.5	6.5	5.5	3.5	9.5
40	16	20	38	54	106	40	118	44	120	30	104	M8X1.25	20	6	3	72	10.5	6.5	5.5	4	11
50	20	25	47	64	130	46	146	60	148	40	130	M10X1.5	22	8	4	92	13.5	8.5	7.5	4.5	13.5
63	20	25	55	78	142	58	158	70	162	50	130	M10X1.5	22	8	4	110	17.8	11	10	7	18.5



How to Order?

Series No	Bore	X	Stroke	–	Magnet No
EXH	6 10 16 20		5 10 15 …		S： with magnet

Order Example:
EXH series, linear bearing, bore 6mm, stroke 10mm, EPR code is: EXH6X10–S

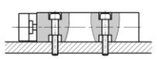
Specifications

Bore(mm)	6	10	16	20
Acting type	Double Acting			
Working medium	Clean Air(25 μ m filteration)			
Working pressure (MPa)	0.15~0.7			
Guaranteed pressure (MPa)	1.05			
Working temperature (℃)	–20~80(Dry air)			
Speed range (mm/s)	50~500			
Cushion type	Bumper			
Stroke tolerance(mm)	$^{+1.0}_{0}$			
Allowable kinetic energy(J)	0.008	0.025	0.05	0.1
Port size	M5 × 0.8			

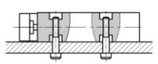
Bore (mm)	Standard stroke (mm)	Max. stroke (mm)
6~20	5 10 15 20 25 30 40 50 60	60

How to mount

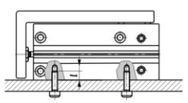
Lateral Mounting (Through Holes)



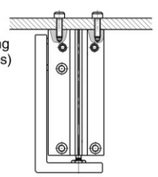
Lateral Mounting (Tapped Holes)



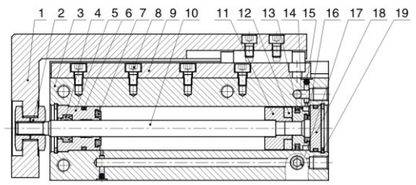
Vertical Mounting (Tapped Holes)



Axial Mounting (Tapped Holes)



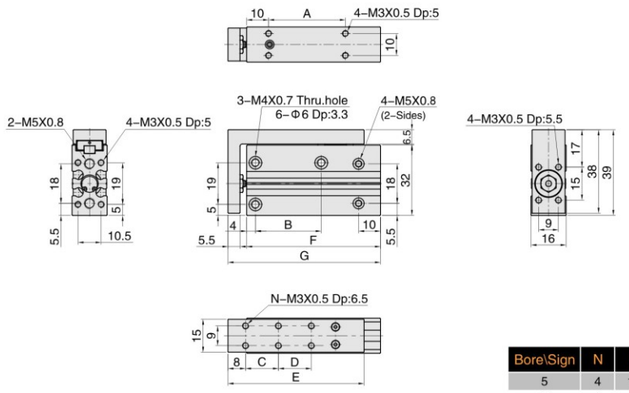
Internal structure



NO.	Part name	Material
1	Stages	Aluminum alloy
2	Locknut	Carbon steel
3	Body	Aluminum alloy
4	Wiper seal	NBR
5	Head cover	Aluminum alloy
6	O–ring	NBR
7	Bumper	TPU
8	Screws	Carbon steel
9	Linear ball slide rail	Stainless steel
10	Piston rod	Stainless steel
11	Magnet seat	Aluminum alloy
12	Magnet	Neodymium iron boron
13	Piston seal	NBR
14	Piston	Aluminum alloy
15	Steel ball	Stainless steel
16	Bumper	TPU
17	Plug	Cu
18	Rear cover	Aluminum alloy
19	C clip	Spring steel

Main Dimensions

EXH Ø6

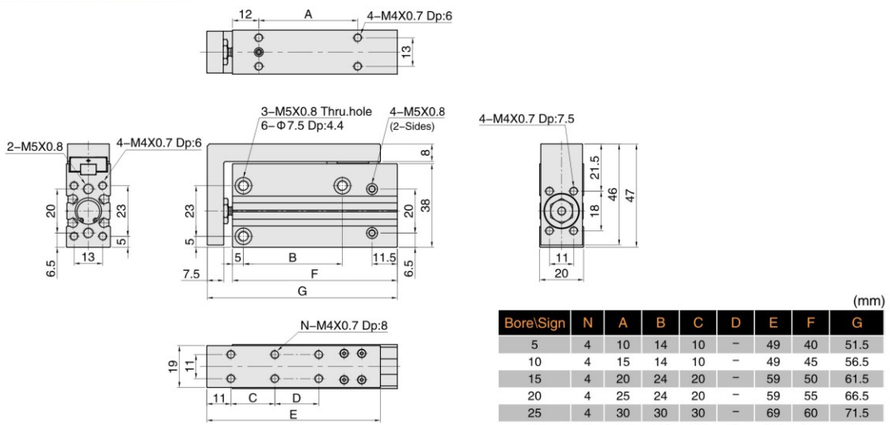


(mm)

Bore\Sign	N	A	B	C	D	E	F	G
5	4	10	14	10	–	42	36	44.5
10	4	15	14	10	–	42	41	49.5
15	4	20	24	20	–	52	46	54.5
20	4	25	24	20	–	52	51	59.5
25	4	30	30	30	–	62	56	64.5
30	4	35	30	30	–	62	61	69.5
40	6	45	45	20	20	72	71	79.5
50	6	55	55	25	25	82	81	89.5
60	6	65	60	30	30	92	91	99.5

Main Dimensions

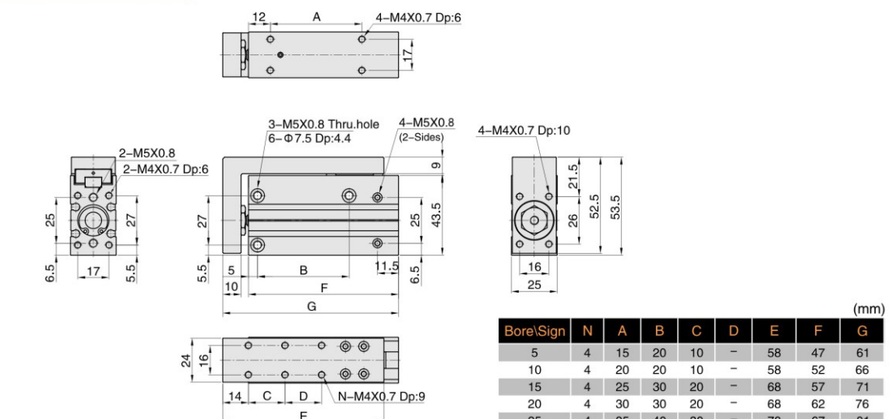
EXH Ø10



(mm)

Bore\Sign	N	A	B	C	D	E	F	G
5	4	10	14	10	–	49	40	51.5
10	4	15	14	10	–	49	45	56.5
15	4	20	24	20	–	59	50	61.5
20	4	25	24	20	–	59	55	66.5
25	4	30	30	30	–	69	60	71.5
30	4	35	30	30	–	69	65	76.5
40	6	45	45	20	20	79	75	86.5
50	6	55	55	25	25	89	85	96.5
60	6	65	60	30	30	99	95	106.5

EXH Ø16

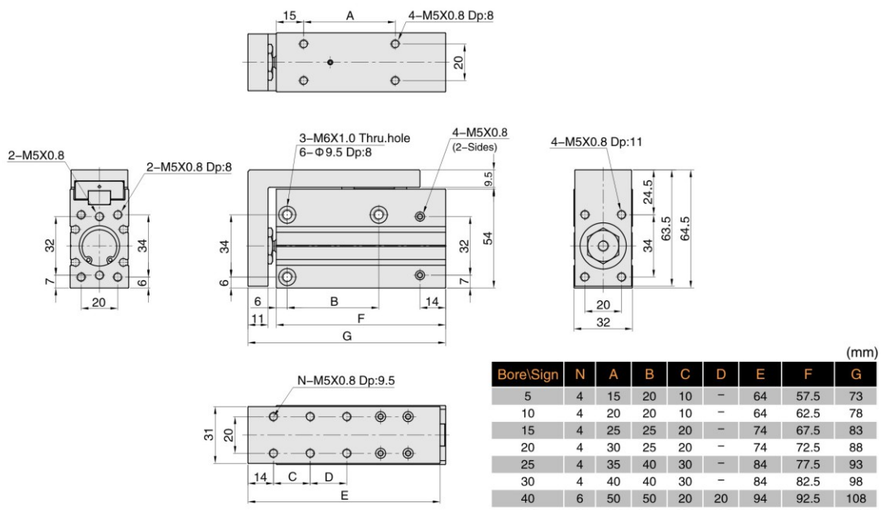


(mm)

Bore\Sign	N	A	B	C	D	E	F	G
5	4	15	20	10	–	58	47	61
10	4	20	20	10	–	58	52	66
15	4	25	30	20	–	68	57	71
20	4	30	30	20	–	68	62	76
25	4	35	40	30	–	78	67	81
30	4	40	40	30	–	78	72	86
40	6	50	50	20	20	88	82	96
50	6	60	60	25	25	98	92	106
60	6	70	60	30	30	108	102	116

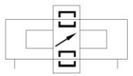
Main Dimensions

EXH Ø20



(mm)

Bore\Sign	N	A	B	C	D	E	F	G
5	4	15	20	10	–	64	57.5	73
10	4	20	20	10	–	64	62.5	78
15	4	25	25	20	–	74	67.5	83
20	4	30	25	20	–	74	72.5	88
25	4	35	40	30	–	84	77.5	93
30	4	40	40	30	–	84	82.5	98
40	6	50	50	20	20	94	92.5	108
50	6	60	70	25	25	104	102.5	118
60	6	70	70	30	30	114	112.5	128



How to Order?

Series No	Type No	Bore	X	Stroke	–	Magnet No	–	Thread Type
SW	Blank: Basic Type S: Slide type L: Ball bushing bearing	6 10 16 20 25 …		25 50 75 …		Blank: without magnet S: with magnet		Blank: G P: PT T: NPT

Order Example:
SW series basic rodless air cylinder, Bore 50mm, stroke 30, with magnet, G thread for basic type, EPR code is: SW50X30–S.
Note: The cylinder's bore and stroke, mounting accessories details according to drawings.

Product Features

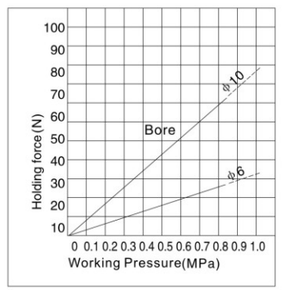
* Basic magnetically coupled rodless cylinder
* Bore sizes: 6, 10, 15, 20, 25, 32, 40, 50&63(mm)
* Strokes from 50mm to 1000mm
* Available with high and low magnetic holding force
* Long life with no external leakage

Specifications

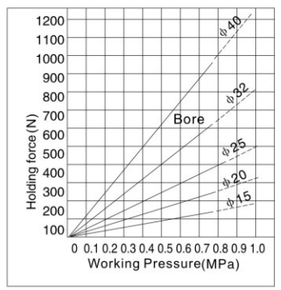
Bore(mm)	6	10	15	20	25	32	40	50	63
Acting Type	Double acting								
Working Medium	Clean air (25 μm filteration)								
Working pressure (MPa)	0.1~0.7								
Guaranteed pressure (MPa)	1.05								
Working temperature (℃)	–20~80(Dry air)								
Piston speed (mm/s)	50–400								
Cushion	Both ends cushion								
Tolerance of stroke (mm)	0 – 250: $+^{1.0}_{0}$, 251 – 1000: $+^{1.4}_{0}$, 1001: $-^{1.8}_{0}$								
Lubrication	Not required								
Port Size	M5x0.8			G 1/8				G 1/4	

Cylinder academic output and magnetic holding force

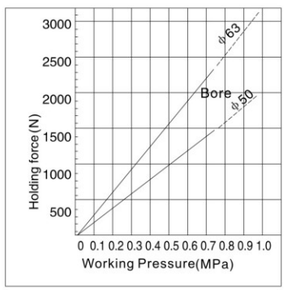
Ø6, Ø10



Ø15, Ø20, Ø25, Ø32, Ø40



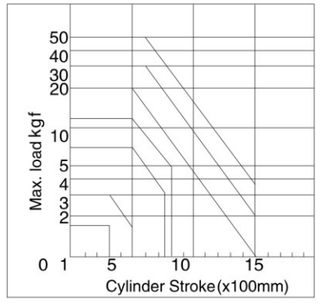
Ø50, Ø63



Bore	Model	Holding force(N)	Pressure of magentic holding force(Bar)	Maxium working pressure wher stopping in the middle of stroke(Bar)
ϕ6	SW6	19.6	7	5.5
ϕ10	SW10	53.9	7	5.5
ϕ15	SW15	137.3	7.9	6.5
ϕ20	SW20	231	7.6	6.5
ϕ25	SW25	362.8	7.5	6.5
ϕ32	SW32	588.4	7.4	6.5
ϕ40	SW40	921.8	7.5	6.5
ϕ50	SW50	1471	7.6	6.5
ϕ63	SW63	2255.5	7.4	6.5

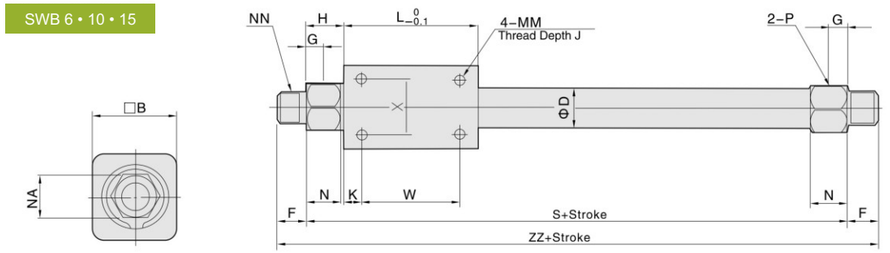
Max. load and stroke

The applied load & stroke relation curve is shown in the diagram, if the load and the center of gravity for the slide block are at the same point.The cylinder should be used in such a way that the load and the slide block center of gravity are as close as possible.



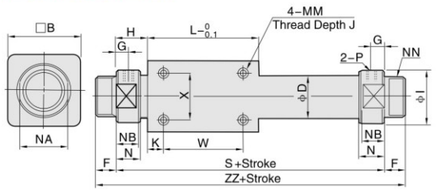
Main Dimensions

SWB 6 • 10 • 15

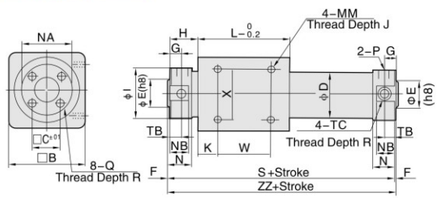


Model	Stroke Range	Port P	ϕD	□B	F	G	H	K	L	N	NA	MMXJ	NN	S	W	X	ZZ
SW6	~300	M5x0.8	7.6	17	9	5	14	5	35	10	14	M3x0.5x4.5	M10x1.0	63	25	10	81
SW10	~500	M5x0.8	12	25	9	5	12.5	4	38	11	14	M3x0.5x4.5	M10x1.0	63	30	16	81
SW15	~1000	M5x0.8	17	35	10	5.5	13	11	57	11	17	M4x0.7x6	M10x1.0	83	35	19	103

SW 20 • 25 • 32 • 40



SW 50 • 63

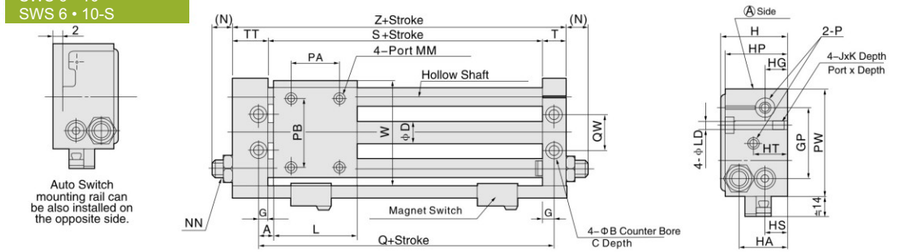


Model	Stroke Range	Port P	□B	□C	ϕD	ϕE(h8)	F	G	H	I	K	L
SW20	~2000	1/8	36	–	22.8	–	13	8	20	28	8	66
SW25	~2000	1/8	46	–	27.8	–	13	8	20.5	34	10	70
SW32	~2000	1/8	60	–	35	–	16	9	22	40	15	80
SW40	~2000	1/4	70	–	43	–	16	11	29	50	16	92
SW50	~2000	1/4	86	32	53	30 0 -0.033	2	14	33	58.2	25	110
SW63	~2000	1/4	100	38	66	32 0 -0.039	2	14	33	72.2	26	122

Model	MMXJ	N	NA	NB	NN	QXR	S	TB	TCXR	W	X	ZZ
SW20	M4x0.7x0.6	15	24	13	M20x1.5	–	106	–	–	50	25	132
SW25	M5x0.8x8	15	30	13	M26x1.5	–	111	–	–	50	30	137
SW32	M6x1.0x8	17	36	15	M26x15	–	124	–	–	50	40	156
SW40	M6x1.0x10	21	46	19	M32x2.0	–	150	–	–	60	40	182
SW50	M8x1.25x12	25	55	23	–	M8x1.25x16	176	14	M12x1.25x7.5	60	60	180
SW63	M8x1.25x12	25	69	23	–	M10x1.5x16	188	14	M14x1.5x11.5	70	70	192

Main Dimensions

SWS 6 • 10
SWS 6 • 10-S

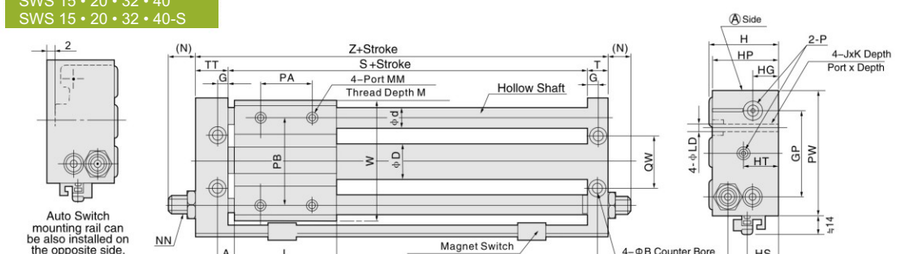


Model	Stroke Range	ϕD	ϕd	A	ϕB	C	HT	G	GP	H	HA	HG	HP	HS	T	JXK	L	LD	M
SWS6 SWS6–S	~300	7.6	8	6	6.5	3	17	5	32	27	19	8	26	8	10	M4x0.7x6.5	40	3.5	6
SWS10 SWS10–S	~500	12	10	7.5	8	4	18	6.5	40	34	25.5	12	33	14	12.5	M5x0.8x9.5	45	4.3	6

Model	MM	NN	(N)	P	*PA	PB	PW	QW	Q	S	TT	Z	W
SWS6 SWS6–S	M4x0.7	M8x1.0	10	M5X0.8	25	25	50	16	52	42	16	68	46
SWS10 SWS10–S	M4x0.7	M8x1.0	9.5	M5X0.8	25	38	60	24	60	47	20.5	80	58

Note: 1. Magnet switch can be also installed at Ⓐ side
2. The dimension of PA is the same with L

SWS 15 • 20 • 32 • 40
SWS 15 • 20 • 32 • 40-S



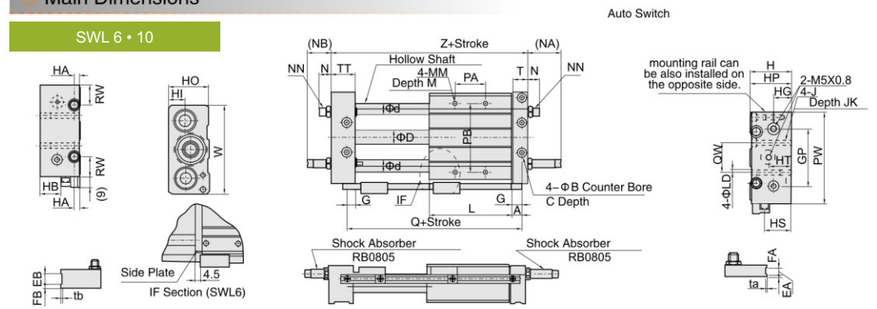
Model	Stroke Range	ϕD	ϕd	A	ϕB	C	HT	G	GP	H	HA	HG	HP	HS	T	JXK	L	LD	M
SWS15 SWS15–S	~750	16.6	12	7.5	9.5	5	21	6.5	52	40	29	13	39	15	12.5	M6x1.0x9.5	60	5.6	8
SWS20 SWS20–S	~1500	21.6	16	10	9.5	5.2	20	8.5	62	46	36	17	45	25.5	16.5	M6x1.0x9.5	70	5.6	10
SWS25 SWS25–S	~1500	26.4	16	10	11	6.5	20	8.5	70	54	40	20	53	23	16.5	M8x1.25x10	70	7	10
SWS32 SWS32–S	~1500	33.6	20	12.5	14	8	24	9.5	86	66	46	24	64	27	18.5	M10x1.5x15	85	8.7	12
SWS40 SWS40–S	~1500	41.6	25	12.5	14	8	25	10.5	104	76	57	25	74	30	20.5	M10x1.5x15	95	8.7	12

Model	MM	NN	(N)	P	*PA	PB	PW	QW	Q	S	TT	Z	W
SWS15 SWS15–S	M5x0.8	M8x1.0	7.5	M5X0.8	30	50	75	30	75	62	22.5	97	72
SWS20 SWS20–S	M6x1.0	M10x1.0	9.5	G 1/8	40	70	90	38	90	73	25.5	115	87
SWS25 SWS25–S	M6x1.0	M14x1.5	11	G 1/8	40	70	100	42	90	73	25.5	115	97
SWS32 SWS32–S	M8x1.25	M20x1.5	11.5	G 1/8	40	75	122	50	110	91	28.5	138	119
SWS40 SWS40–S	M8x1.25	M20x1.5	10.5	G 1/8	65	105	145	64	120	99	35.5	155	142

Note: 1. Magnet switch can be also installed at Ⓐ side
2. The dimension of PA is the same with L

Main Dimensions

SWL 6 • 10

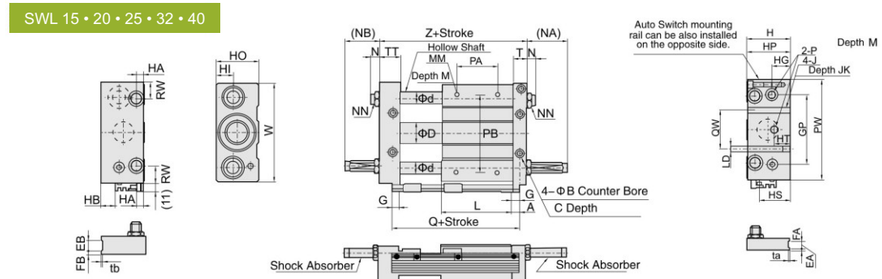


Model	Stroke Range	A	ΦB	C	ΦD	Φd	EA	EB	FA	FB	G	GP	H	HA	HB	HG	HI	HO	HP	HS	HT
SWL6	~300	7	6.5	3	7.6	8	–	–	–	–	6	36	27	6	10	11	9	25	26	14	16
SWL10	~500	8.5	8	4	12	10	6	12	3	5	7.5	50	34	6	17.5	14.5	13.5	33	33	21.5	18

Model	J	JK	L	LD	M	MM	N	(NA)	(NB)	NN	*PA	PB	PW	Q	QW	RW	T	TT	ta	tb	W	Z
SWL6	M4X0.7	6.5	40	3.5	6	M4X0.7	10	30	24	M8X1.0	24	40	60	54	20	12	10	16	–	–	56	68
SWL10	M5X0.8	9.5	68	4.3	8	M4X0.7	9.5	27	19	M8X1.0	30	60	80	85	26	17.5	12.5	20.6	0.5	1.0	77	103

* Dimension center of PA is the same with L.

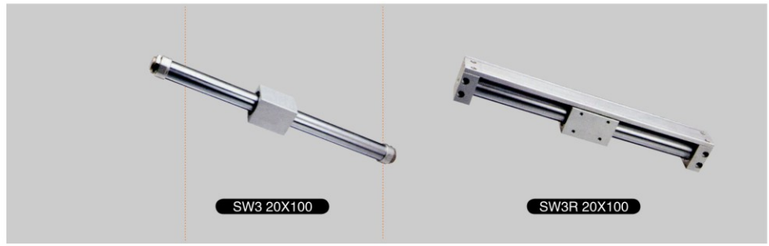
SWL 15 • 20 • 25 • 32 • 40



Model	Stroke Range	A	ΦB	C	ΦD	Φd	EA	EB	FA	FB	G	GP	H	HA	HB	HG	HI	HO	HP	HS	HT	J	JK	L	LD
SWL15	~750	7.5	9.5	5	16.6	12	6	13	3	6	6.5	65	40	6.5	4	16	14	38	39	25	16	M6X1.0	9.5	75	5.6
SWL20	~1500	9.5	9.5	5.2	21.6	16	8	14	4	7	8.5	80	46	9	10	18	16	44	45	31	20	M6X1.0	10	86	5.6
SWL25	~1500	9.5	11	6.5	26.4	16	8	14	4	7	8.5	90	54	9	18	23	21	52	53	39	20	M8X1.25	10	86	7
SWL32	~1500	10.5	14	8	33.6	20	8	16	5	7	9.5	110	66	12	26.5	26.5	24.5	64	64	47.5	25	M10X1.5	15	100	9.2
SWL40	~1500	11.5	14	8	41.6	25	10	10	5	20	10.5	130	78	12	35	30.5	28.5	76	74	56	30	M10X1.5	15	136	9.2

Model	M	MM	(N)	(NA)	(NB)	NN	NN	*PA	PB	PW	Q	QW	RW	T	ta	tb	TT	W	Z	Shock Absorber
SWL15	8	M5X0.8	7.5	27	17	M8X1.0	M5X0.8	45	70	95	90	30	15	12.5	0.5	1.0	22.5	92	112	RB0805
SWL20	10	M6X1.0	10	29	20	M10X1.0	G3/8	50	90	120	105	40	28	16.5	0.5	1.0	25.5	117	130	RB1006
SWL25	10	M6X1.0	11	49	40	M14X1.5	G3/8	60	100	130	105	50	22	16.5	0.5	1.0	25.5	127	130	RB1411
SWL32	12	M8X1.25	11.5	52	42	M20X1.5	G3/8	70	120	160	121	60	33	18.5	0.5	1.0	28.5	157	149	RB2015
SWL40	12	M8X1.25	10.5	51	36	M20X1.5	G1/4	90	140	190	159	84	35	20.5	1.0	1.0	35.5	187	194	RB2015

* Dimension center of PA is the same with L.



How to Order?

Series No	Type No	Connect type	Bore	X	Stroke	–	Switch rail	–	Thread Type
SW3	Blank: Basic Type R: Direct mount type	Blank: Both sides piping G:Centralized piping (Only for SW3R)	15 20 25 32 40		50 100 150 200 …		Blank: Without switch rail S: With switch rail (Only for SW3R)		Blank: G P: PT T: NPT

Order Example:

SW3 series, Basic type, bore 20mm, stroke 100mm, G thread. ERP code is: SW3 20X100

Product Features

* Magnetically coupled rodless cylinder.
* Direct mounting type, with switch rail.
* Maximum operating pressure: 0.7Mpa.
* Ambient temperature:−10° to 60° .
* Variety of auto switch available.

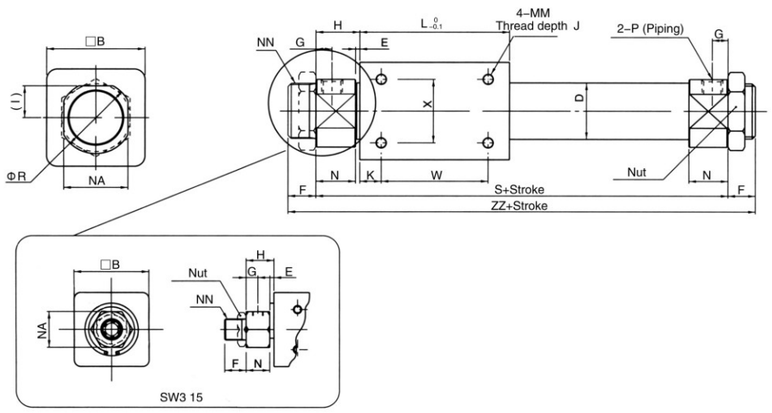
Specifications

Bore size(mm)	15	20	25	32	40
Acting type	Double Acting				
Working medium	Clean Air (25μ filteration)				
Working pressure (MPa)	0.16~0.7		0.15~0.7	0.14~0.7	0.12~0.7
Working temperature (℃)	-20~80(Dry air)				
Speed range (mm/s)	SW3: 5~400; SW3R: 50~500				
Cushion type	Rubber cushion				
Adjusting stroke (mm)	0~250: $^{+1.0}_{0}$; 251~1000: $^{+1.40}_{0}$; 1001: $^{+1.80}_{0}$				
Magnet force (N)	137	231	363	588	922
Port Size	M5x0.8	1/8			

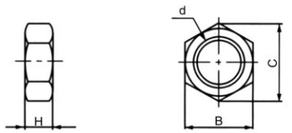
Table of standard stroke

Bore (mm)	Standard stroke (mm)
15	50,100,150,200,250,300,350,400,450,500
20	50,100,150,200,250,300,350,400,450,500 600,700,800
25	
32	
40	50,100,150,200,250,300,350,400,450,500 600,700,800,900,1000

Φ15~Φ40



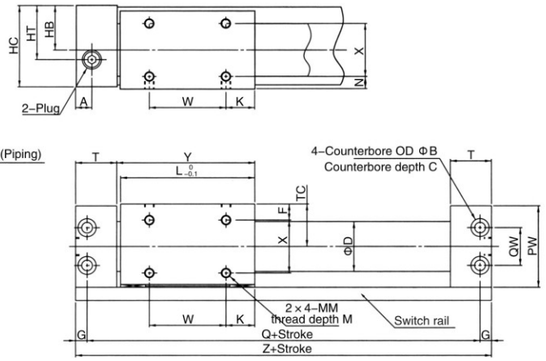
Model	B	D	E	F	G	H	I	J	K	L	MM	N	NA	NN	R	S	W	X	ZZ
SW3 15	35	16.6	3	10	5.5	13	–	6	11	57	M4×0.7	11	17	M10×1	–	83	35	19	103
SW3 20	36	21.6	2	13	7.5	20	12	6	8	66	M4×0.7	18	24	M20×1.5	28	106	50	25	132
SW3 25	46	26.4	2	13	7.5	20.5	15	8	10	70	M5×0.8	18.5	30	M26×1.5	34	111	50	30	137
SW3 32	60	33.6	2	16	8	22	18	8	15	80	M6×1	20	36	M26×1.5	40	124	50	40	156
SW3 40	70	41.6	3	16	11	29	23	10	16	92	M6×1	26	46	M32×2	50	150	60	40	182



Part No	Suitable Bore (mm)	d	H	B	C
SNJ–016B	15	M10×1.0	4	14	16.2
SN–020B	20	M20×1.5	8	26	30
SN–032B	25,32	M26×1.5	8	32	37
SN–040B	40	M32×2.0	10	41	47.3

Main Dimensions

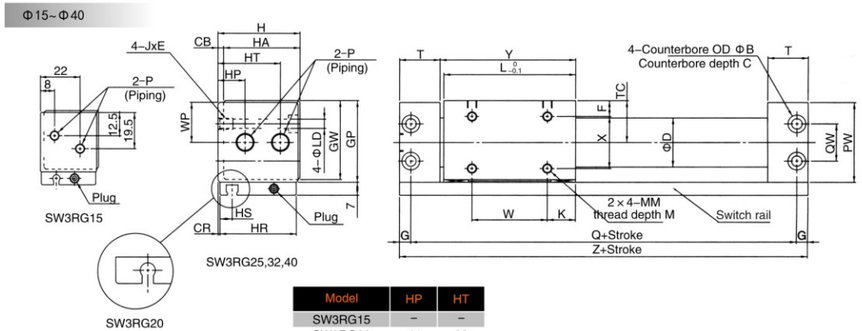
Φ15~Φ40



Model	A	B	C	CB	CR	D	F	G	GP	GW	H	HA	HB	HC	HP	HR	HS	HT	J×E	K
SW3R15	10.5	8	4.2	2	0.5	16.6	8	5	33	31.5	32	30	17	31	17	30	8.5	17	M5×0.8×7	14
SW3R20	9	9.5	5.2	3	1	21.6	9	6	39	37.5	39	36	21	38	24	36	7.5	24	M6×1×8	11
SW3R25	8.5	9.5	5.2	3	1	26.4	8.5	6	44	42.5	44	41	23.5	43	23.5	41	6.5	23.5	M6×1×8	15
SW3R32	10.5	11	6.5	3	1.5	33.6	10.5	7	55	53.5	55	52	29	54	29	51	7	29	M8×1.25×10	13
SW3R40	10	11	6.5	5	2	41.6	13	7	65	63.5	67	62	36	66	36	62	8	36	M8×1.25×10	15

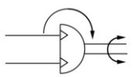
Model	L	LD	M	MM	N	PW	Q	QW	T	TC	W	WP	X	Y	Z
SW3R15	53	4.3	5	M4×0.7	6	32	84	18	19	17	25	16	18	54.5	94
SW3R20	62	5.6	5	M4×0.7	7	38	95	17	20.5	20	40	19	22	64	107
SW3R25	70	5.6	6	M5×0.8	6.5	43	105	20	21.5	22.5	40	21.5	28	72	117
SW3R32	76	7	7	M6×1	8.5	54	116	26	24	28	50	27	35	79	130
SW3R40	90	7	8	M6×1	11	64	134	34	26	33	60	32	40	93	148

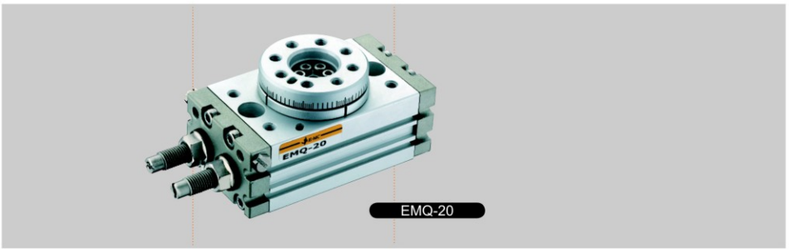
Φ15~Φ40



Model	HP	HT
SW3RG15	–	–
SW3RG20	11	28
SW3RG25	14.5	33.5
SW3RG32	20	41
SW3RG40	25	50

Note: not marked dimensions are same as the both sides piping types.





How to Order?

Series No	Bore	—	Magnet No	—	Cushion Type	—	Thread Type
EMQ	10 20 30 50		S: with magnet (always with magnet)		A: with adjustable angle screw B: with shock absorber		Blank: G P : PT T : NPT

Order Example:
EMQ Series Rotary Cylinder, Bore 30, with adjustable angle screw, G Thread, ERP code is: EMQ30-S-A
Note: Specific Bore and Stroke of the cylinder subject to the drawing.

Product Features

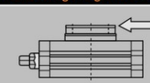
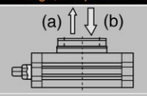
* Max arc length 190°
* Wide bore size from 10mm to 50mm
* Integrated Magnet
* Shock absorber optional for cushion style

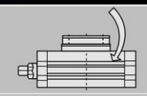
Specifications

Bore Size		10	20	30	50
Acting type		Double acting			
Working medium		Clean air (25μm filteration)			
Max. working Pressure	With adjustable angle screw (MPa)	1.0			
	With shock absorber (MPa)	0.6			
Min. working pressure (MPa)		0.1			
Working temperature(℃)		-20~80(Dry air)			
Cushion		Rubber Cushion (Standard) /Shock Absorber (Optional)			
Allowed Power	With adjustable angle screw	0.007J	0.025J	0.048J	0.081J
	With shock absorber		0.116J		0.294J
Adjustable angle range		0 - 190°			
Max. rotation angle		190°			
Steady swing time range		0.2 - 1.0s / 90°			
		0.2 - 0.7s / 90°			
Piston diameter		Φ15	Φ18	Φ21	Φ25
Port size		M5X0.8		G1/8	

* The max.working pressure of the actuator is restricted by the maximum allowable load of the shock absorber.

Allowed loading range, If the loading weight or the flexual moment is out of range, the precision or the structure will be abnormal.



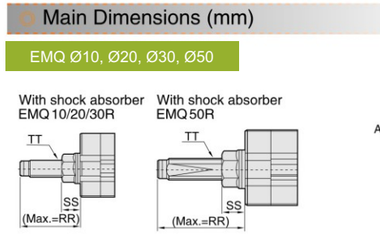
Model	Allowed radial loading weight	(N) Allowed axial loading weight (a)	(N) Allowed axial loading weight (b)	Allowed flexural moment(N.m)
EMQ10□	78	74	78	2.4
EMQ20□	147	137	137	4.0
EMQ30□	196	197	363	5.3
EMQ50□	314	296	451	9.7

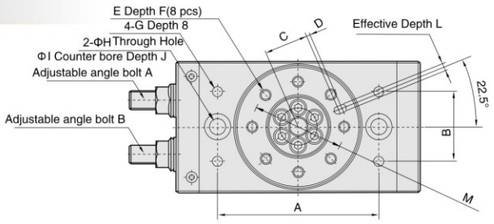
Allowed output torque

Model	Working pressure (Mpa) 0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
EMQ10□	0.18	0.36	0.53	0.71	0.89	1.07	1.25	1.42	1.60	1.78
EMQ20□	0.37	0.73	1.10	1.47	1.84	2.20	2.57	2.93	3.29	3.66
EMQ30□	0.55	1.09	1.64	2.18	2.73	3.19	3.82	4.37	4.91	5.45
EMQ50□	0.93	1.85	2.78	3.71	4.64	5.57	6.50	7.43	8.35	9.28

Main Dimensions (mm)

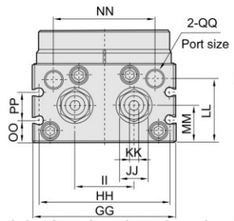
EMQ Ø10, Ø20, Ø30, Ø50

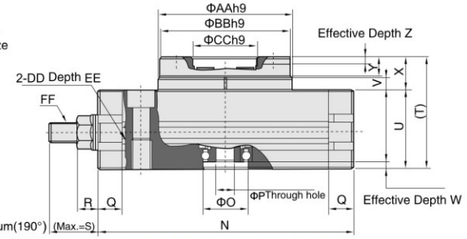




Model	Adjustment angle per rotation of angle adjustment screw or shock absorber
EMQ10□	About 10.2°
EMQ20□	About 7.2°
EMQ30□	About 6.5°
EMQ50□	About 8.2°

Adjustment angle per rotation of angle adjustment screw or shock absorber 1cycle





Note: The maximum dimension is measured when the angle reaches to the maximum(190°)

Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
EMQ10□	60	27	15	2	M5X0.8	8	M5X0.8	6.8	11	6.5	3H9	3.5	32	92	15H9	5	9.5	8.6	17.7	47	34	4.5	3	13	8	4
EMQ20□	76	34	20.5	2	M6X1	10	M6X1	8.6	14	8.5	4H9	4.5	43	117	17H9	9	12	10.6	25	54	37	6.5	2.5	17	10	6
EMQ30□	84	37	23	2	M6X1	10	M6X1	8.6	14	8.5	4H9	4.5	48	127	22H9	9	12	10.6	25	57	40	6.5	3	17	10	4.5
EMQ50□	100	50	26.5	2	M8X1.25	12	M8X1.25	10.5	18	10.5	5H9	5.5	55	152	26H9	10	15.5	14	31.4	66	46	7.5	3	20	12	5

Model	AA	BB	CC	DD	E	F	GG	HH	II	JJ	KK	LL	MM	NN	OO	PP	QQ	RR	SS	TT	油压缓冲器型号
EMQ10□	46	45	20	M8X1.25	12	M8X1	50	45	20	12	4	27.8	15.5	34.5	9	13	M5X0.8	31.5	8.6	M8X1	RBA0805-X692
EMQ20□	61	60	28	M10X1.5	15	M10X1	65	60	27.5	14	5	28.5	16	51	10	12	M5X0.8	34.7	10.6	M10X1	RBA1006-X692
EMQ30□	67	65	32	M10X1.5	15	M10X1	70	65	29	14	5	32	18.5	50	11.5	14	1/8	34.7	10.6	M10X1	RBA1006-X692
EMQ50□	77	75	35	M12X1.75	18	M14X1.5	80	75	38	19	6	37.5	22	63	14.5	15	1/8	51.7	14	M14X1.5	RBA1411-X692

How to Order?

Series No	Mounting Type	Acting Type	Bore	X	Stroke	–	Magnet No	–	Rod end Type	–	Thread Type
ERQ	Blank: through hole (standard) A: Both ends tapped style	Blank: Basic type B: Basic type (with spring) SA: Single acting spring extend	20 32 …		10 20 …		Blank: without magnet S: with manget		Blank: Round bar type K: Chamfered type R: Roller type L: Level roller type (with shock absorber)		Blank: G P : PT T : NPT

Order Example:

ERQ Series Rotary Cylinder, Bore 20, Stroke 10, with magnet, chamfered type, PT Thread, ERP code is: ERQ20X10–S–K–P

Remarks: Specific Bore and Stroke of the cylinder subject to the drawing.

Product Features

* Fixed-height stopper cylinder
* Proven endurance and breakaway characteristics
* Wide rod end styles and magnet for options

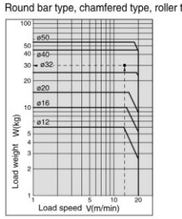
Specifications

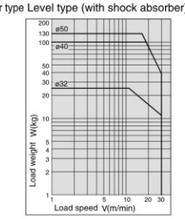
Bore Size(mm)	20	32	40	50
Acting Type	Double acting, Double acting spring loaded, Single acting spring extend			
Working Medium	Clean air (25 μm filteration)			
Rod Ends Type	Round bar type, chamfered type, roller type	Round bar type, chamfered type, roller type, level type (with shock absorber)		
Max. Working pressure (MPa)	1.0			
Guaranteed pressure (MPa)	1.5			
Working temperature (℃)	–20–80 (with magnet switch: max. 60℃)			
Cushion	Both ends rubber cushion			
Stoke tolerance (mm)	$^{+1.4(mm)}_{0}$			
Lubrication	Not Required			
Mounting type	Through hole, both ends female thread			
Port Size	Rc(PT) $^{1}/_{8}$			

* If need lubrication, use the 1turbine oil ISOVG32

Operating ranges by rod end configuration

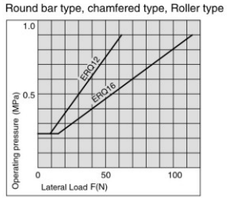
Round bar type, chamfered type, roller type Level type (with shock absorber)

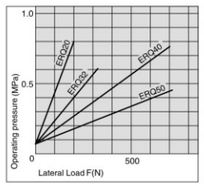




Lateral load & Operating pressure

Round bar type, chamfered type, Roller type

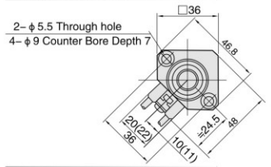


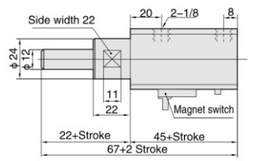


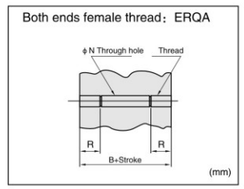
Main Dimensions (mm)

Round bar type

ERQ□Φ20–□□

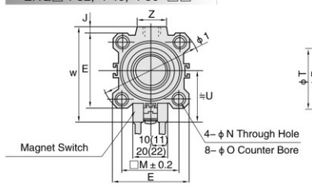


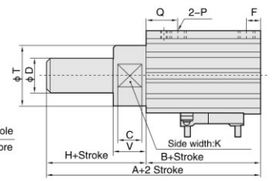




Bore	B	N	O	R
20	45	5.5	M6X1	10
32	48	5.5	M6X1	10
40	52.5	5.5	M6X1	10
50	54	6.6	M8X1.25	14

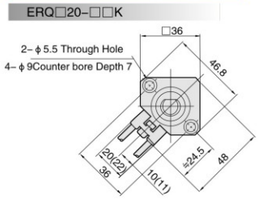
ERQ□Φ32, Φ40, Φ50–□□

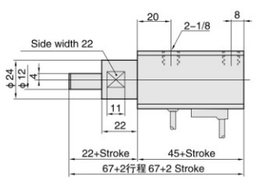


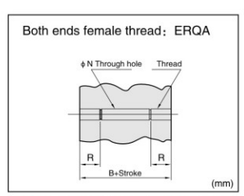


Chamfered type

ERQ□20–□□K

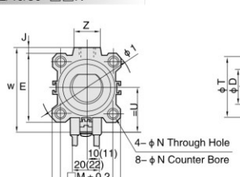


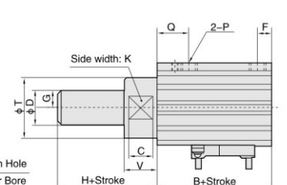




Bore	B	N	O	R
20	45	5.5	M6X1	10
32	48	5.5	M6X1	10
40	52.5	5.5	M6X1	10
50	54	6.6	M8X1.25	14

ERQ□32/40/50–□□K

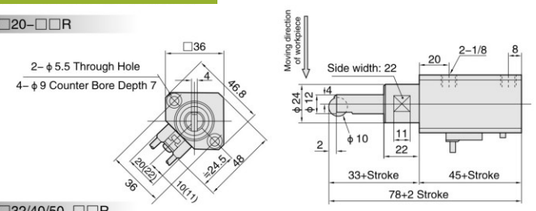




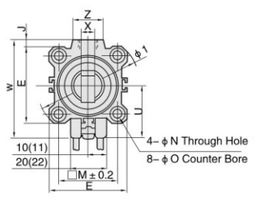
Bore	A	B	C	D	E	F	G	H	I	J	K	M	N	O	P	Q	R	T	U	V	W	Z
32	68	48	15	20	45	7.5	8	20	60	4.5	32	34	5.5	9 Depth 7	1/8	20	10	36	31.5	20	58.5	14
40	80.5	52.5	18	25	52	8	10	28	69	5	41	40	5.5	9 Depth 7	1/8	24.5	10	44	35	28	66	14
50	82	54	21	25	64	8	10	28	86	7	50	50	6.6	11 Depth 8	1/8	24.5	14	56	41	28	80	19

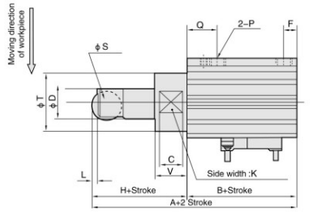
Roller type

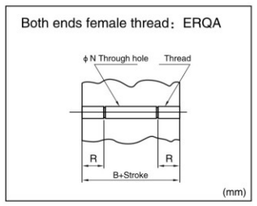
ERQ□20-□□R



ERQ□32/40/50-□□R





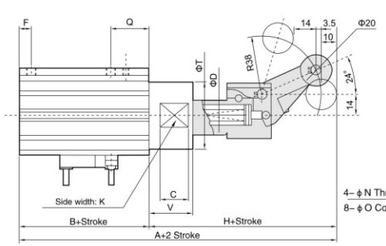


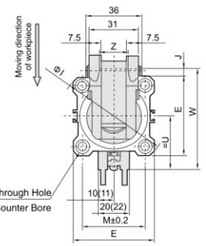
Bore	B	N	O	R
20	45	5.5	M6X1	10
32	48	5.5	M6X1	10
40	52.5	5.5	M6X1	10
50	54	6.6	M8X1.25	14

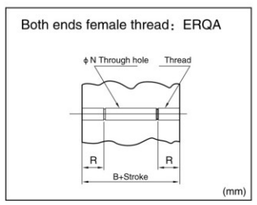
Bore	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Z
32	87	48	15	20	45	7.5	8	39	60	4.5	32	3	34	5.5	9 Depth 7	1/8	20	10	18	36	31.5	20	58.5	8	14
40	105.5	52.5	18	25	52	8	10	53	69	5	41	4	40	5.5	9 Depth 7	1/8	24.5	10	24	44	35	28	66	9	14
50	107	54	21	25	64	8	10	53	86	7	50	4	50	6.6	11 Depth 8	1/8	24.5	14	24	56	41	28	80	9	19

Level type (with shock absorber)

ERQ□40/50-□□L





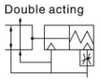


Bore	B	N	O	R
32	48	5.5	M6X1	10
40	52.5	5.5	M6X1	10
50	54	6.6	M8X1.25	14

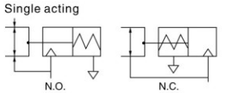
Bore	A	B	C	D	E	F	H	I	J	K	M	N	O	Q	R	T	U	V	W	Z
40	152.5	52.5	18	25	52	8	100	69	5	41	40	5.5	9 Depth 7	24.5	10	44	35	28	66	14
50	154	54	21	25	64	8	100	86	7	50	50	6.6	11 Depth 8	24.5	14	56	41	28	80	19

Parallel type

Double acting



Single acting



How to Order?

Series No.	Acting Type	Bore
SHZ: Parrallel type	Blank: Basic type	10
SHY: Y type	S: Single acting (N.O.)	16
	C: Single acting (N.C.)	...

Order Example:

SHZ Series Air Gripper Cylinder, basic type, Bore 10, Si dust Seal, ERP code is: SHZ10-SI

Note: All series cylinder have Magnet.

Product Features

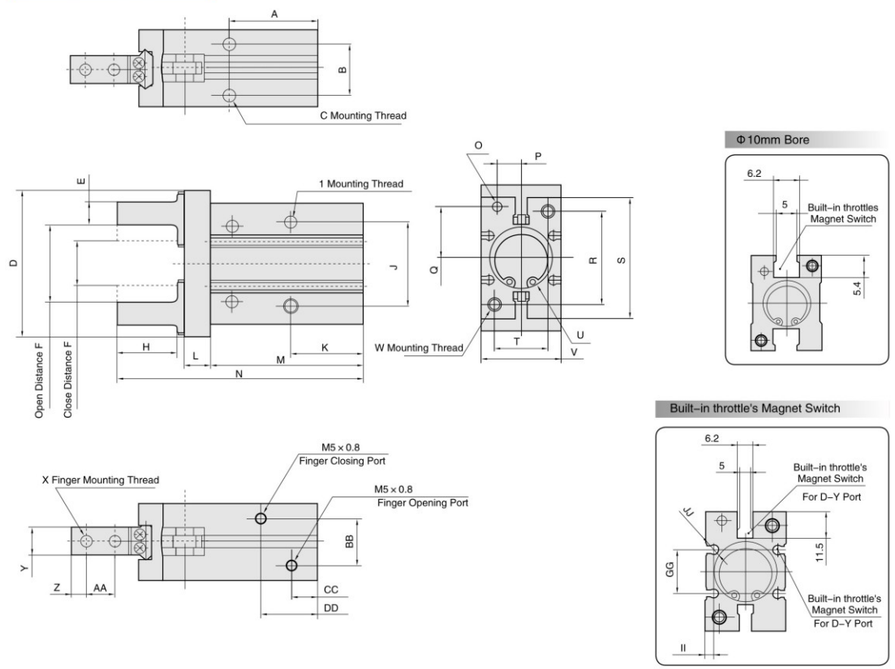
* Complete linear guide trail guarantee high strength and precision
* Variable built-in slot make it easily to mount sensor switch
* Different dusty cap materials are optional

Specification

Bore(mm)		10	16	20	25	32	40
Acting type		Double acting					
		Single acting: Normal open / Normal close					
Working medium		Clean air (25 μ m filteration)					
Guaranteed pressure (MPa)		0.7					
Min. working pressure (MPa)	Double acting	0.15	0.1				
	Single acting	0.3	0.25				
Working temperature (℃)		-20~80(Dry air)					
Repeatability (mm)		± 0.01				± 0.02	
Max. operation frequency (c.p.m)		180				60	
Lubrication		Not Required					
Magnet		always have					
Port size		M3x0.5	M3x0.8				

Main Dimensions (mm)

SHZ Ø10–25



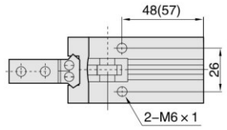
Φ10mm Bore

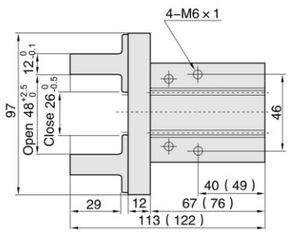
Built–in throttle's Magnet Switch

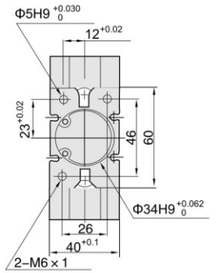
Bore	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
10	27	11.4	M3X0.5Depth 6	29	$4^{0}_{-0.1}$	$15.2^{+2.2}_{0}$	$11.2^{0}_{-0.7}$	12	M3X0.5Depth 5.5	16	23	6	37.8	57	$\Phi 2H9^{+0.025}_{0}$ $\Phi 2H9^{+0.025}_{0}$	Depth 3	5.2 ± 0.02	7.6 ± 0.02	18	23	12
16	30	16	M4X0.7Depth 4.5	38	$5^{0}_{-0.1}$	$20.9^{+2.2}_{0.2}$	$14.9^{0}_{-0.7}$	15	M4X0.7Depth 8	24	24.5	7.5	42.5	67.3	$\Phi 3H9^{+0.025}_{0}$ $\Phi 3H9^{+0.025}_{0}$	Depth 3	6.5 ± 0.02	11 ± 0.02	22	30.6	15
20	35	18.6	M5X0.8Depth 8	50	$8^{0}_{-0.1}$	$26.3^{+2.2}_{0.2}$	$16.3^{0}_{-0.7}$	20	M5X0.8Depth 10	30	29	9.5	52.8	84.8	$\Phi 4H9^{+0.030}_{0}$ $\Phi 4H9^{+0.030}_{0}$	Depth 4	7.5 ± 0.02	16.8 ± 0.02	32	42	18
25	36.5	22	M6X1Depth 10	63	$10^{0}_{-0.1}$	$33.3^{+2.5}_{0.2}$	$19.3^{0}_{-0.8}$	25	M6X1Depth 12	36	30	11	63.6	102.7	$\Phi 4H9^{+0.030}_{0}$ $\Phi 4H9^{+0.030}_{0}$	Depth 4	10 ± 0.02	21.8 ± 0.02	40	52	22

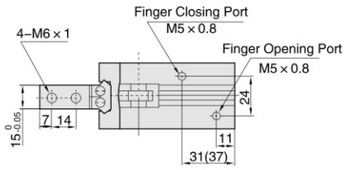
Bore	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	FF	GG	HH	II	JJ
10	$\Phi 11H9^{+0.043}_{0}$ $\Phi 11H9^{+0.043}_{0}$ Depth 2	16.4 ± 0.05	M3X0.5 Depth 6	M2.5X0.45	$5^{0}_{-0.05}$	3	5.7	11	9	19	$9.7^{+2.2}_{0}$	$5.7^{0}_{-0.4}$	–	5.4	–	–
16	$\Phi 17H9^{+0.043}_{0}$ $\Phi 17H9^{+0.043}_{0}$ Depth 2	23.6 ± 0.05	M4X0.7 Depth 8	M3X0.5	$8^{0}_{-0.05}$	4	7	13	7.5	19	$12.6^{+2.2}_{0}$	$6.6^{0}_{-0.4}$	11.6	5.8	2.1	Φ4
20	$\Phi 21H9^{+0.052}_{0}$ $\Phi 21H9^{+0.052}_{0}$ Depth 3	27.6 ± 0.05	M5X0.8 Depth 10	M4X0.7	$10^{0}_{-0.05}$	5	9	15	10	23	$17.2^{+2.2}_{0}$	$7.2^{0}_{-0.4}$	14	9	2.1	Φ4
25	$\Phi 26H9^{+0.052}_{0}$ $\Phi 26H9^{+0.052}_{0}$ Depth 3.5	33.6 ± 0.05	M6X1 Depth 12	M5X0.8	$12^{0}_{-0.05}$	6	12	20	10.7	23.5	$22.8^{+2.5}_{0}$	$8.8^{0}_{-0.4}$	19	11.5	3.5	Φ4

SHZ Ø32

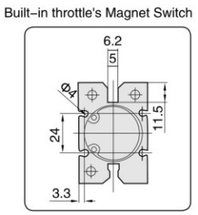




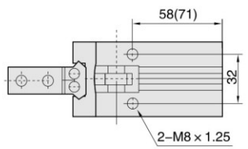


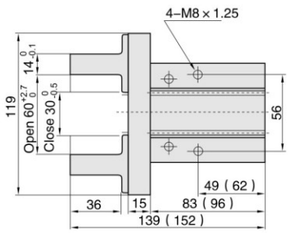


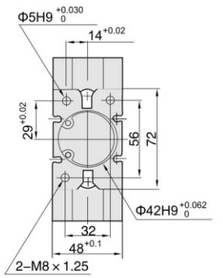
Built–in throttle's Magnet Switch

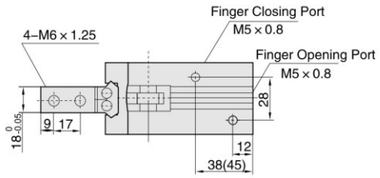


SHZ Ø40

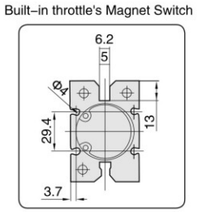






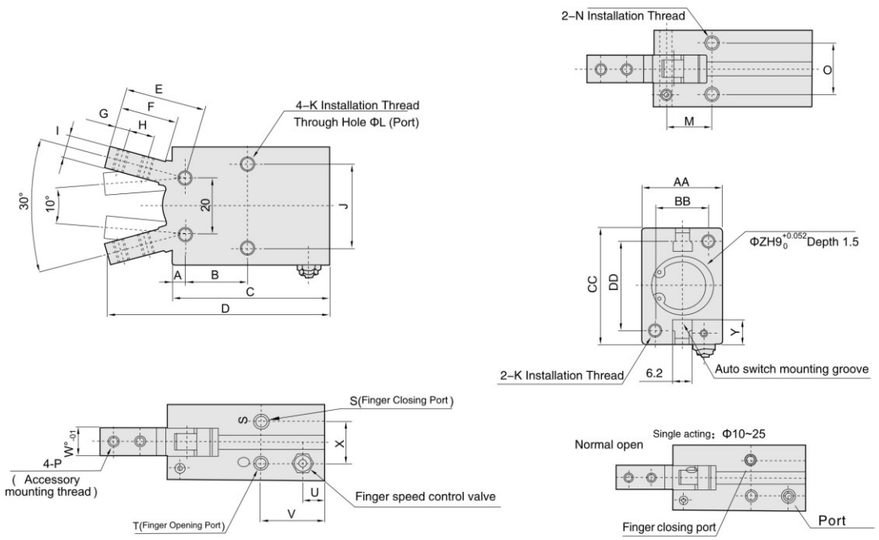


Built–in throttle's Magnet Switch



Main Dimensions (mm)

SHY Ø10 — Ø25



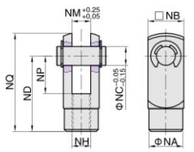
Bore	A	B	C	D	E	F	G	H	I	J	K	ΦL	M	N	O	P	Q	R	Port Size S	Port Size T	U	V	W	X	Y	ΦZ	AA	BB	CC	DD
10	2.8	12.8	38.6	52.4	17.2	12	3	5.7	4	16	M3X0.5	5	2.6	8.8	M3X0.5	6	11.4	M2.5X0.45	3	5.7	M3X0.5	7.2	18.8	6.4	10.4	5.4	11	16.4	12	23	18
16	3.9	16.2	44.6	62.5	22.6	16	4	7	7	24	M4X0.7	8	3.4	10.7	M4X0.7	8	16	M3X0.5	4	7	M5X0.8	7	18.3	8	13	5.8	17	23.6	15	30.6	22
20	4.5	21.7	55.2	78.7	28	20	5.2	9	8	30	M5X0.8	10	4.3	15.7	M5X0.8	8	18.6	M4X0.7	5	9	M5X0.8	7.5	22.2	10	15	9	21	27.6	18	42	32
25	4.6	25.8	60.2	92	37.5	27	8	12	10	36	M6	12	5.1	19.3	M6	10	22	M5X0.8	6	12	M5X0.8	7.7	23.5	12	20	11.5	26	33.6	22	52	40

How to Order?

Series No.	–	Thread size	×	Thread length	Accessory code
FJ：Accessory		M6：M6 M8：M8 M10：M10 M12：M12 M16：M16 M20：M20 M27：M27 M36：M36 M42：M42 M48：M48		1：1 1.25：1.25 1.5：1.5 2.0：2.0	IJ：I fitting YJ：Y fitting YCJ：Y fitting FD：Floating fitting BJ：Bearing fitting

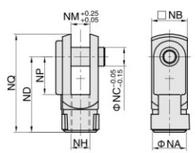
Y Fitting

Model\Sign	NA	NB	NC	ND	NH	NM	NP	NQ
FJ-M6X1YJ	10	12	6	24	M6X1	6	12	31
FJ-M8X1.25YJ	14	16	8	32	M8X1.25	8	16	42
FJ-M10X1.25YJ	18	20	10	40	M10X1.25	10	20	52
FJ-M12X1.25YJ	20	24	12	48	M12X1.25	12	24	62
FJ-M16X1.5YJ	26	32	16	64	M16X1.5	16	32	83
FJ-M20X1.5YJ	34	40	20	80	M20X1.5	20	40	105
FJ-M27X2YJ	42	55	30	110	M27X2	30	55	148
FJ-M36X2YJ	60	70	35	144	M36X2	35	72	188
FJ-M42X2YJ	70	85	40	168	M42X2	40	84	232
FJ-M48X2YJ	80	90	50	192	M48X2	50	96	265



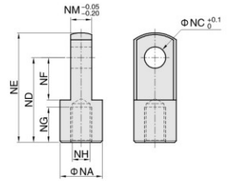
YC Fitting

Model\Sign	NA	NB	NC	ND	NH	NM	NP	NQ
FJ-M6X1 YCJ	10	12	6	24	M6X1	6	12	31
FJ-M8X1.25 YCJ	14	16	8	32	M8X1.25	8	16	42
FJ-M10X1.25 YCJ	18	20	10	40	M10X1.25	10	20	52
FJ-M12X1.25 YCJ	20	24	12	48	M12X1.25	12	24	62
FJ-M16X1.5 YCJ	26	32	16	64	M16X1.5	16	32	83
FJ-M20X1.5 YCJ	34	40	20	80	M20X1.5	20	40	105
FJ-M27X2 YCJ	42	55	30	110	M27X2	30	55	148



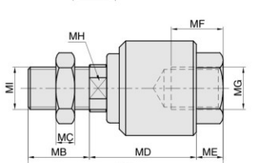
I Fitting

Model\Sign	NA	NC	ND	NE	NF	NG	NH	NM
FJ-M6X1 IJ	12	6	24	31	12	10	M6X1	6
FJ-M8X1.25 IJ	16	8	30	40	11	15	M8X1.25	8
FJ-M10X1.25 IJ	20	10	40	52	15	20	M10X1.25	10
FJ-M12X1.25 IJ	24	12	48	67	24	20	M12X1.25	12
FJ-M16X1.5 IJ	32	16	64	89	32	23	M16X1.5	16
FJ-M20X1.5 IJ	40	20	80	112	40	30	M20X1.5	20
FJ-M27X2 IJ	55	30	110	155	50	55	M27X2	30



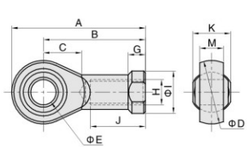
Floating Fitting

Model\Sign	ND	MB	MC	MD	ME	MF	MG	MH	MI
FJ-M6X1.0FD	35	12	5	19	5	5	M6X1.0	7	M6X1.0
FJ-M8X1.25FD	51	20	6	23	8	12	M8X1.25	8	M8X1.25
FJ-M10X1.25FD	58	22	6	28	8	12	M10X1.25	10	M10X1.25
FJ-M12X1.25FD	58	22	7	29	7	12	M12X1.25	12	M12X1.25
FJ-M16X1.5FD	90	27	8	51	12	14	M16X1.5	15	M16X1.5
FJ-M20X1.5FD	102	29	10	59	14	18	M20X1.5	22	M20X1.5
FJ-M27X2.0FD	140	40	13.5	75	25	22	M27X2.0	30	M27X2.0
FJ-M30X2.0FD	148	42	18	73	25	40	M30X2.0	40	M30X2.0
FJ-M36X2.0FD	148	42	18	73	25	40	M36X2.0	40	M36X2.0



Bearing Fitting

Model\Sign	A	B	C	D	E	G	H	I	J	K	M
FJ-M6X1BJ	40.5	31	11	20	6	7	M6X1	13	18	11	7
FJ-M8X1.25BJ	48	36	12	24	8	7.5	M8X1.25	16	20	14	9
FJ-M10X1.25BJ	57.5	44	15.5	28	10	8	M10X1.25	19	25	17	10.5
FJ-M12X1.25BJ	66.5	51.5	17	32	12	9.5	M12X1.25	22	25	19	12
FJ-M16X1.5BJ	85	65	25	40	16	11	M16X1.5	27	35	24	15
FJ-M20X1.5BJ	102	77	30	50	20	12.5	M20X1.5	34	40	30	18
FJ-M27X2BJ	145	109	40.5	70	30	18.5	M27X2	50	60	43	25
FJ-M36X2BJ	168	127.5	39.5	80	35	19	M36X2	57	70	49.5	28.5

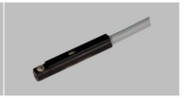
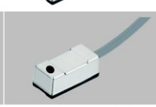


Special Cylinder

E · MC enjoys very high reputation with strong R&D capability in China Pnematic Industry Line.

We're glad to design all kinds of special cylinder according to customers' requirement

Magnet switch table

For Cylinder Model	Bore size	Two wire type	Three wire NPN type	Three wire PNP type	Reed switch photo
SD	Φ20–100 (Front face installation)	HX–01R	HX–01N	HX–01P	
SE	Full series				
RAL RA IA SJ SM	Full series	HX–03R	HX–03N	HX–03P	
SQ SG EU SHZ/SHY EXH	Full series	HX–07R	HX–07N	HX–07P	
SD EN	Full series (Side installation)	HX–11R	HX–11N	HX–11P	
RAL RA IA SJ SM	Full series	HX–15R	HX–15N	HX–15P	
TBC XBC VBC LBC	Full series	HX–20R	HX–20N	HX–20P	
TBC XBC VBC LBC	Full series	HX–21R	HX–21N	HX–21P	
FVBC EXS EXSW	Full series	HX–31R	HX–31N	HX–31P	
SHZ/SHY	Full series	HX–36R	HX–36N	HX–36P	

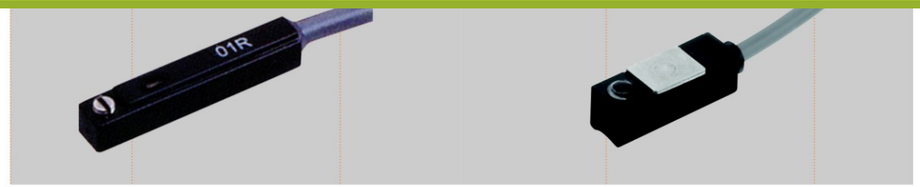
HX-01 series Magnet switch

How to Order?

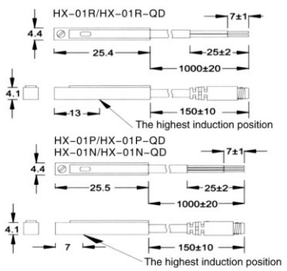
HX – 01 – R – H – 2M – QD8

- HX: Product code
- 01: Series No.
  - Switch type
  - R:Two wire reed switch
  - N: NPT type
  - P: PNP type
- R: Special model
  - No.:Standard sensitive
  - B: NC type
  - H: High sensitive type
  - L: Low sensitive type
  - X: No indicator type
- H: Wire length
  - No: Standard 1M
  - 1.5M: 1.5M
  - 2M: 2M
  - 5M: 5M
- QD8: Connection
  - QD8: QD8 Male fitting

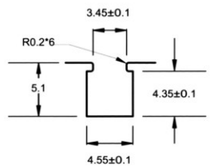
Note: 1.Testing with standard magnet: Φ15. 5x Φ8x5t (Plastic magnet) ;
2. Sine wave/X、Y、Z3 axial direction/ each axial direction three times/ each time 11ms;
3. complex amplitude 1.5mm/10Hz–55Hz sweep frequency, last one minute/ each time X、Y、Z axial direction for one hour;
4. 1=No/2=output short circuit protection/3=Power reverse connection protection/4=Surge absorption protection



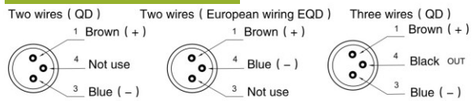
Dimensions



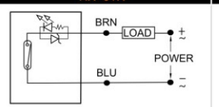
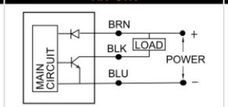
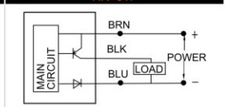
Groove dimension



QD fitting wiring



Specification

Type / Parameter	HX–01R	HX–01N	HX–01P
Connect Diagram			
Wiring method	2–Wire Type	3–Wire Type	
Switching logic	SPST Normally Open	Solid State Output, Normally Open	
Sensor type	Reed switch	NPN type (Input)	PNP type (Output)
Operating voltage	5~240V DC/AC	5–30V DC	
Max. switching current	100mA max.	200mA max.	
Contact rating	10W max.	6W max.	
Current consumption	None	20mA @ 24V DC max.	
Voltage drop	2.5 V max.	0.5V @ 200mA max	
Leakage current	None	0.01mA max.	
Indicator	Red LED	Red LED	Green LED
Max. exchange frequency	200Hz	1000Hz	
Temperature range	–10–70℃		
Shock	30G	50G	
Vibration	9G		
Enclosure classification	IEC 529 IP67 (NEMA 6)		
Protection circuit	None	Power reverse connection protection Surge absorption protection	
Cable	2.8Φ, 2C, Gray color, oil resistance PVC	2.8Φ, 3C, Black color, oil resistance PVC	

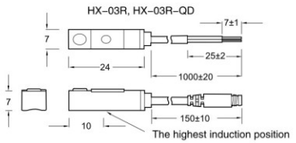
How to Order?

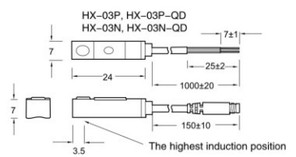
HX – 03 – R – H – 2M – QD8

- HX: Product code
- 03: Series No.
  - Switch type
  - R:Two wire reed switch
  - N: NPT type
  - P: PNP type
- R: Special model
  - No.:Standard sensitive
  - B: NC type
  - H: High sensitive type
  - L: Low sensitive type
  - X: No indicator type
- H: Wire length
  - No: Standard 1M
  - 1.5M: 1.5M
  - 2M: 2M
  - 5M: 5M
- QD8: Connection
  - QD8: QD8 Male fitting

Note: 1.Testing with standard magnet: Φ15. 5x Φ8x5t (Plastic magnet) ;
2. Sine wave/X、Y、Z3 axial direction/ each axial direction three times/ each time 11ms;
3. complex amplitude 1.5mm/10Hz–55Hz sweep frequency, last one minute/ each time X、Y、Z axial direction for one hour;
4. 1=No/2=output short circuit protection/3=Power reverse connection protection/4=Surge absorption protection

Dimensions

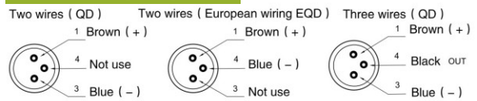




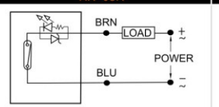
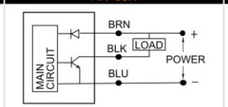
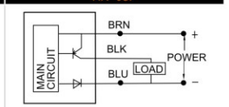
HX-03 be fixed by PBK steel belt

For Φ6–Φ63 round air cylinder

QD fitting wiring



Specification

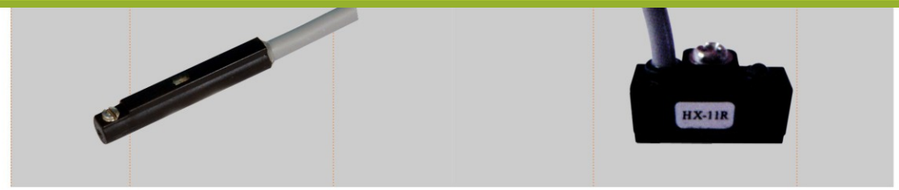
Type / Parameter	HX–03R	HX–03N	HX–03P
Connect Diagram			
Wiring method	2–Wire Type	3–Wire Type	
Switching logic	SPST Normally Open	Solid State Output, Normally Open	
Sensor type	Reed switch	NPN type (Input)	PNP type (Output)
Operating voltage	5–240V DC/AC	5–30V DC	
Max. switching current	100mA	200mA	
Contact rating	10W	6W	
Current consumption	None	20mA max@ 24V	
Voltage drop	3.0V	0.5V max @ 200mA	
Leakage current	None	0.01mA	
Indicator	Red LED	Red LED	Green LED
Max. exchange frequency	200Hz	1000Hz	
Temperature range	–10–70℃		
Shock	30G	50G	
Vibration	9G		
Enclosure classification	IEC 529 IP67 (NEMA 6)		
Protection circuit	None	Power reverse connection protection Surge absorption protection	
Cable	2.8Φ, 2C, Gray color, oil resistance PVC	2.8Φ, 3C, Black color, oil resistance PVC	

HX-07 series Magnet switch

How to Order?

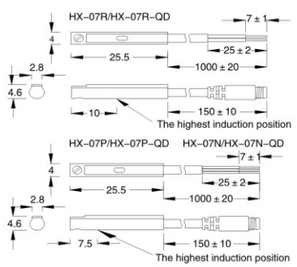
HX – 07 – R – H – 2M – QD8

- HX: Product code
- 07: Series No.
- R: Special model
  - Switch type
  - R:Two wire reed switch
  - N: NPT type
  - P: PNP type
- H: Special model
  - No.:Standard sensitive
  - B: NC type
  - H: High sensitive type
  - L: Low sensitive type
  - X: No indicator type
- 2M: Wire length
  - No: Standard 1M
  - 1.5M: 1.5M
  - 2M: 2M
  - 5M: 5M
- QD8: Connection
  - QD8: QD8 Male fitting

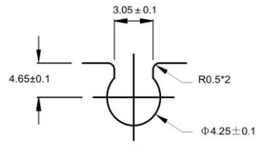


Note: 1.Testing with standard magnet: Φ15. 5x Φ8x5t (Plastic magnet) ;
2. Sine wave/X、Y、Z3 axial direction/ each axial direction three times/ each time 11ms;
3. complex amplitude 1.5mm/10Hz~55Hz sweep frequency, last one minute/ each time X、Y、Z axial direction for one hour;
4. 1=No/2=output short circuit protection/3=Power reverse connection protection/4=Surge absorption protection

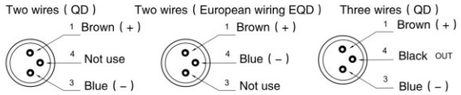
Dimensions



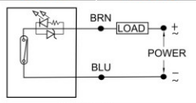
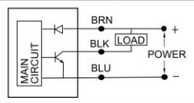
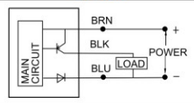
Groove dimension



QD fitting wiring



Specification

Type	HX-07R	HX-07RA	HX-07N	HX-07P
Connect Diagram / Parameter				
Wiring method	2-Wire Type		3-Wire Type	
Switching logic	SPST Normally Open		Solid State Output, Normally Open	
Sensor type	Reed switch		NPN type (Input)	PNP type (Output)
Operating voltage	5-120V DC/AC	5-240V DC/AC	5-30V DC	
Max. switching current	100 mA max.		200 mA max.	
Contact rating	6 W max.	10 W max.	6 W max.	
Current consumption	None		20mA @ 24V DC max	
Voltage drop	2.5V max.		0.5V @ 200mA max	
Leakage current	None		0.01mA max.	
Indicator	Red LED	Green LED	Red LED	Green LED
Max. exchange frequency	200Hz		1000Hz	
Temperature range	-10~70℃			
Shock	30G		50G	
Vibration	9G			
Enclosure classification	IEC 529 IP67 (NEMA 6)			
Protection circuit	None		Power reverse connection protection Surge absorption protection	
Cable	2.8Φ, 2C, Gray color, oil resistance PVC		2.8Φ, 3C, Black color, oil resistance PVC	

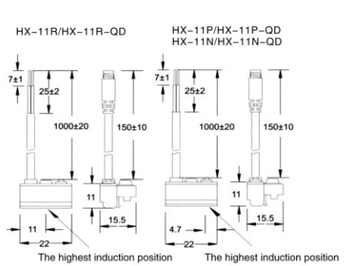
How to Order?

HX – 11 – R – H – 2M – QD8

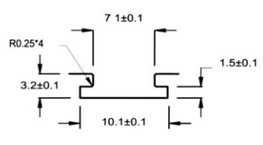
- HX: Product code
- 11: Series No.
- R: Special model
  - Switch type
  - R:Two wire reed switch
  - N: NPT type
  - P: PNP type
- H: Special model
  - No.:Standard sensitive
  - B: NC type
  - H: High sensitive type
  - L: Low sensitive type
  - X: No indicator type
- 2M: Wire length
  - No: Standard 1M
  - 1.5M: 1.5M
  - 2M: 2M
  - 5M: 5M
- QD8: Connection
  - QD8: QD8 Male fitting

Note: 1.Testing with standard magnet: Φ15. 5x Φ8x5t (Plastic magnet) ;
2. Sine wave/X、Y、Z3 axial direction/ each axial direction three times/ each time 11ms;
3. complex amplitude 1.5mm/10Hz~55Hz sweep frequency, last one minute/ each time X、Y、Z axial direction for one hour;
4. 1=No/2=output short circuit protection/3=Power reverse connection protection/4=Surge absorption protection

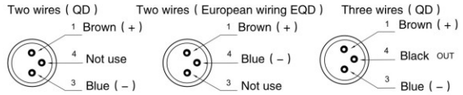
Dimensions



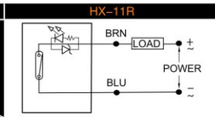
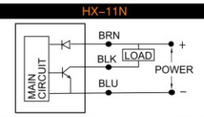
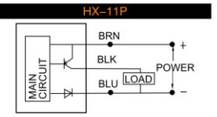
Groove dimension



QD fitting wiring



Specification

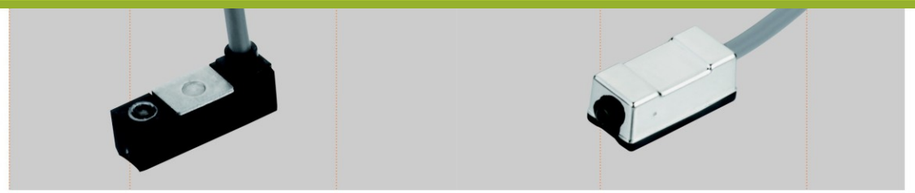
Type	HX-11R	HX-11N	HX-11P
Connect Diagram / Parameter			
Wiring method	2-Wire Type	3-Wire Type	
Switching logic	SPST Normally Open	Solid State Output, Normally Open	
Sensor type	Reed switch	NPN type (Input)	PNP type (Output)
Operating voltage	5~240V DC/AC	5~30V DC	
Max. switching current	100 mA max.	200 mA max.	
Contact rating	10 W max.	6 W max.	
Current consumption	None	20mA @ 24V DC max	
Voltage drop	3.5V max.	0.5V max @ 200mA	
Leakage current	None	0.01mA max.	
Indicator	Green LED	Red LED	Green LED
Max. exchange frequency	200Hz	1000Hz	
Temperature range	-10~70℃		
Shock	30G	50G	
Vibration	9G		
Enclosure classification	IEC 529 IP67 (NEMA 6)		
Protection circuit	None	Power reverse connection protection Surge absorption protection	
Cable	3.3Φ、2C,Gray color, oil resistance PVC	3.3Φ、3C,Black color, oil resistance PVC	

How to Order?

HX – 15 – R – H – 2M – QD8

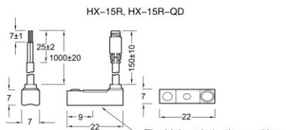
- HX: Product code
- 15: Series No.
  - Switch type
  - R:Two wire reed switch
  - N: NPT type
  - P: PNP type
- R: Special model
  - No.:Standard sensitive
  - B: NC type
  - H: High sensitive type
  - L: Low sensitive type
  - X: No indicator type
- H: Wire length
  - No: Standard 1M
  - 1.5M: 1.5M
  - 2M: 2M
  - 5M: 5M
- QD8: Connection
  - QD8: QD8 Male fitting

Note: 1.Testing with standard magnet: Φ15. 5x Φ8x5t (Plastic magnet) ;
2. Sine wave/X、Y、Z3 axial direction/ each axial direction three times/ each time 11ms;
3. complex amplitude 1.5mm/10Hz–55Hz sweep frequency, last one minute/ each time X、Y、Z axial direction for one hour;
4. 1=No/2=output short circuit protection/3=Power reverse connection protection/4=Surge absorption protection

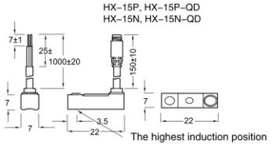


Dimensions

HX–15R, HX–15R–QD



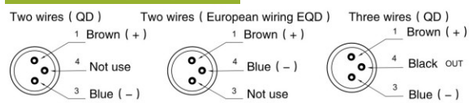
HX–15P, HX–15P–QD
HX–15N, HX–15N–QD



HX-15 be fixed by PBK steel belt

For Φ6–Φ63 round air cylinder

QD fitting wiring



Specification

Type / Connect Diagram / Parameter	HX–15R	HX–15N	HX–15P
Wiring method	2–Wire Type	3–Wire Type	
Switching logic	SPST Normally Open	Solid State Output, Normally Open	
Sensor type	Reed switch	NPN type (Input)	PNP type (Output)
Operating voltage	5－240V DC/AC	5－30V DC	
Max. switching current	100 mA max.	200 mA max.	
Contact rating	10 W max.	6 W max.	
Current consumption	None	20mA @ 24V DC max	
Voltage drop	3.0V max.	0.5V @ 200mA max	
Leakage current	None	0.01mA max.	
Indicator	Green LED	Red LED	
Max. exchange frequency	200Hz	1000Hz	
Temperature range	–10－70℃		
Shock	30G	50G	
Vibration	9G		
Enclosure classification	IEC 529 IP67 (NEMA 6)		
Protection circuit	None	Power reverse connection protection Surge absorption protection	
Cable	2.8Φ, 2C, Gray color, oil resistance PVC	2.8Φ, 3C, Black color, oil resistance PVC	

How to Order?

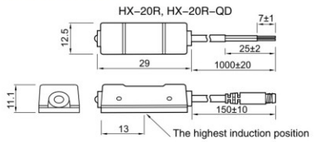
HX – 20 – R – H – 2M – QD8

- HX: Product code
- 20: Series No.
  - Switch type
  - R:Two wire reed switch
  - N: NPT type
  - P: PNP type
- R: Special model
  - No.:Standard sensitive
  - B: NC type
  - H: High sensitive type
  - L: Low sensitive type
  - X: No indicator type
- H: Wire length
  - No: Standard 1M
  - 1.5M: 1.5M
  - 2M: 2M
  - 5M: 5M
- QD8: Connection
  - QD8: QD8 Male fitting

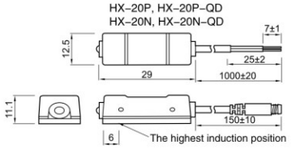
Note: 1.Testing with standard magnet: Φ15. 5x Φ8x5t (Plastic magnet) ;
2. Sine wave/X、Y、Z3 axial direction/ each axial direction three times/ each time 11ms;
3. complex amplitude 1.5mm/10Hz–55Hz sweep frequency, last one minute/ each time X、Y、Z axial direction for one hour;
4. 1=No/2=output short circuit protection/3=Power reverse connection protection/4=Surge absorption protection

Dimensions

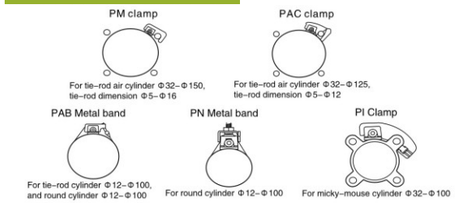
HX–20R, HX–20R–QD



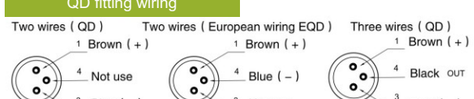
HX–20P, HX–20P–QD
HX–20N, HX–20N–QD



Installation of HX-20



QD fitting wiring



Specification

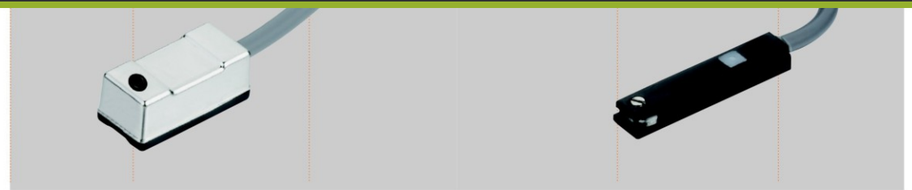
Type / Connect Diagram / Parameter	HX–20R	HX–20RB	HX–20N	HX–20P
Wiring method	2–Wire Type		3–Wire Type	
Switching logic	SPST Normally Open	SPST Normally close	Solid State Output, Normally Open	
Sensor type	Reed switch		NPN type (Input)	PNP type (Output)
Operating voltage	5–240V DC/AC	5–120V DC/AC	5–30V DC	
Max. switching current	100 mA max.		200 mA max.	
Contact rating	10 W max.		6 W max.	
Current consumption	None		20mA @ 24V DC max	
Voltage drop	3.5V max.		0.5V max @ 200mA	
Leakage current	None		0.01mA max.	
Indicator	Green LED		Red LED	Green LED
Max. exchange frequency	200Hz		1000Hz	
Temperature range	10－70℃			
Shock	30G		50G	
Vibration	9G			
Enclosure classification	None		IEC 529 IP67 (NEMA 6)	
Protection circuit			Power reverse connection protection Surge absorption protection	
Cable	2.8Φ、2C,Gray color, oil resistance PVC		2.8Φ、3C, Gray color, oil resistance PVC	

HX-21 series Magnet switch

How to Order?

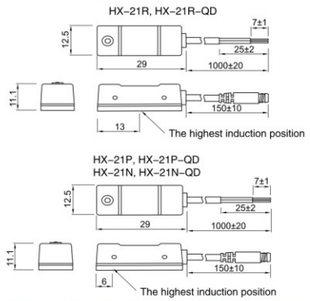
HX – 21 – R – H – 2M – QD8

- HX: Product code
- 21: Series No.
- R: Special model
  - No.:Standard sensitive
  - B: NC type
  - H: High sensitive type
  - L: Low sensitive type
  - X: No indicator type
- H: Switch type
  - R:Two wire reed switch
  - N: NPT type
  - P: PNP type
- 2M: Wire length
  - No: Standard 1M
  - 1.5M: 1.5M
  - 2M: 2M
  - 5M: 5M
- QD8: Connection
  - QD8: QD8 Male fitting

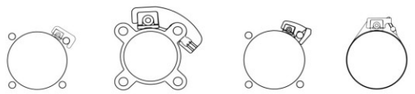


Note: 1.Testing with standard magnet: Φ15. 5x Φ8x5t (Plastic magnet) ;
2. Sine wave/X、Y、Z3 axial direction/ each axial direction three times/ each time 11ms;
3. complex amplitude 1.5mm/10Hz–55Hz sweep frequency, last one minute/ each time X、Y、Z axial direction for one hour;
4. 1=No/2=output short circuit protection/3=Power reverse connection protection/4=Surge absorption protection

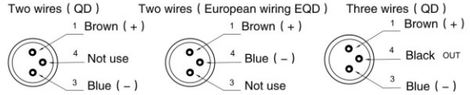
Dimensions



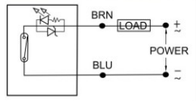
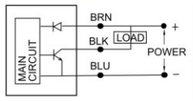
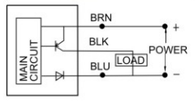
Installation of HX-21



QD fitting wiring



Specification

Type	HX–21R	HX–21RB	HX–20N	HX–20P
Connect Diagram / Parameter				
Wiring method	2–Wire Type		3–Wire Type	
Switching logic	SPST Normally Open	SPST常闭型	Solid State Output, Normally Open	
Sensor type	Reed switch		NPN type (Input)	PNP type (Output)
Operating voltage	5–240V DC/AC	5–120V DC/AC	5–30V DC	
Max. switching current	100 mA max.		200 mA max.	
Contact rating	10 W max.		6 W max.	
Current consumption	None		20mA @ 24V DC max	
Voltage drop	3.5V max.		0.5V @ 200mA max	
Leakage current	None		0.01mA max.	
Indicator			Red LED	Green LED
Max. exchange frequency	200Hz		1000Hz	
Temperature range			10－70℃	
Shock	30G		50G	
Vibration			9G	
Enclosure classification			IEC 529 IP67 (NEMA 6)	
Protection circuit	None		Power reverse connection protection	Surge absorption protection
Cable	4.0Φ，2C，Gray color, oil resistance PVC		4.0Φ，3C，Black color, oil resistance PVC	

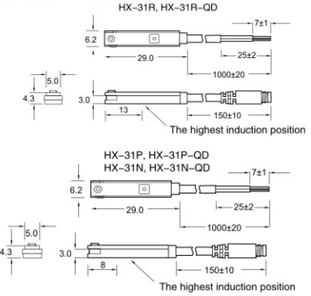
How to Order?

HX – 31 – R – H – 2M – QD8

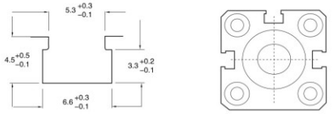
- HX: Product code
- 31: Series No.
- R: Special model
  - No.:Standard sensitive
  - B: NC type
  - H: High sensitive type
  - L: Low sensitive type
  - X: No indicator type
- H: Switch type
  - R:Two wire reed switch
  - N: NPT type
  - P: PNP type
- 2M: Wire length
  - No: Standard 1M
  - 1.5M: 1.5M
  - 2M: 2M
  - 5M: 5M
- QD8: Connection
  - QD8: QD8 Male fitting

Note: 1.Testing with standard magnet: Φ15. 5x Φ8x5t (Plastic magnet) ;
2. Sine wave/X、Y、Z3 axial direction/ each axial direction three times/ each time 11ms;
3. complex amplitude 1.5mm/10Hz–55Hz sweep frequency, last one minute/ each time X、Y、Z axial direction for one hour;
4. 1=No/2=output short circuit protection/3=Power reverse connection protection/4=Surge absorption protection

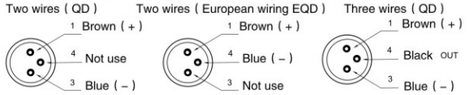
Dimensions



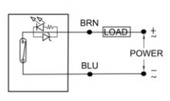
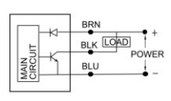
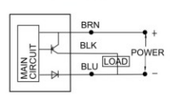
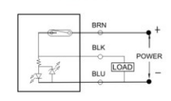
Installation of HX-31



QD fitting wiring



Specification

Type	HX–31R	HX–31N	HX31–P	HX–31RP
Connect Diagram / Parameter				
Wiring method	2–Wire Type	3–Wire Type		3–Wire Type
Switching logic	SPST Normally Open	Solid State Output, Normally Open		SPST Normally Open
Sensor type	Reed switch	NPN type (Input)	PNP type (Output)	Reed switch
Operating voltage	5－240V DC/AC	5－30V DC		10–30V DC/AC
Max. switching current	100mA max.	100mA max.		500mA max.
Contact rating	10W max.	3W max.		10W max.
Current consumption	None	8 mA @24V DC max.		10 mA @24V DC max.
Voltage drop	3.5V max.	1.5V max.		0.1V @ 100mA max.
Leakage current	None	0.01mA		None
Indicator	Red LED	Red LED	Yellow LED	Yellow LED
Max. exchange frequency	200Hz	1000Hz		200Hz
Temperature range	10－70℃			
Shock	30G	50G		30G
Vibration	9G			
Enclosure classification	IEC 529 IP67 (NEMA 6)			
Protection circuit	None	Output short circuit protection	Power reverse connection protection	None
Cable	3.2Φ、2C,Gray color, oil resistance PVC	3.2Φ、3C，Gray color, oil resistance PVC		

HX-36 series Magnet switch

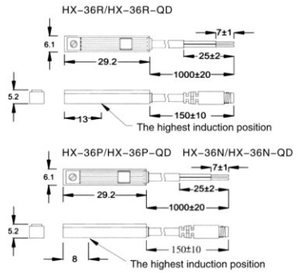
How to Order?

HX – 36 – R – H – 2M – QD8

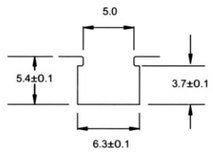
- HX: Product code
- 36: Series No.
- R: Switch type
  - R:Two wire reed switch
  - N: NPT type
  - P: PNP type
- H: Special model
  - No.:Standard sensitive
  - B: NC type
  - H: High sensitive type
  - L: Low sensitive type
  - X: No indicator type
- 2M: Wire length
  - No: Standard 1M
  - 1.5M: 1.5M
  - 2M: 2M
  - 5M: 5M
- QD8: Connection
  - QD8: QD8 Male fitting

Note: 1.Testing with standard magnet: Φ15. 5x Φ8x5t (Plastic magnet) ;
2. Sine wave/X、Y、Z3 axial direction/ each axial direction three times/ each time 11ms;
3. complex amplitude 1.5mm/10Hz–55Hz sweep frequency, last one minute/ each time X、Y、Z axial direction for one hour;
4. 1=No/2=output short circuit protection/3=Power reverse connection protection/4=Surge absorption protection

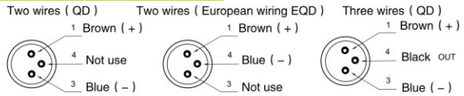
Dimensions



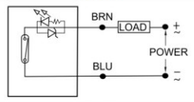
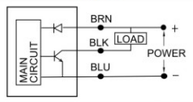
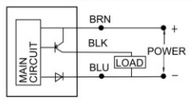
Groove dimension



QD fitting wiring



Specification

Type	HX–36R	HX–36N	HX–36P
Connect Diagram / Parameter			
Wiring method	2–Wire Type	3–Wire Type	
Switching logic	SPST Normally Open	Solid State Output, Normally Open	
Sensor type	Reed switch	NPN type (Input)	PNP type (Output)
Operating voltage	5 – 240V DC/AC	5–30V DC	
Max. switching current	100mA max.	200mA max.	
Contact rating	10W max.	36W max.	
Current consumption	None	20mA @ 24V DC max.	
Voltage drop	2.5 V @50mA max.	0.5 V max.	
Leakage current	None	0.01mA max.	
Indicator	Red LED	Red LED	Green LED
Max. exchange frequency	200Hz	1000Hz	
Temperature range	–10 – 70℃		
Shock	30G	50G	
Vibration	9G		
Enclosure classification	IEC 529 IP67 (NEMA 6)		
Protection circuit	None	Output short circuit protection Power reverse connection protection	
Cable	2.9Φ、2C,Gray color, oil resistance PVC	2.89Φ、3C, Gray color, oil resistance PVC	

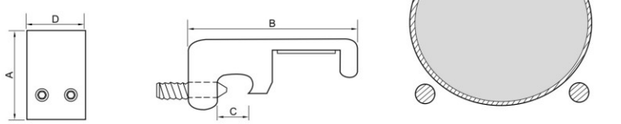
Dimension of PM Series Bracket

Bracket is designed for mounting HX–20&HX–21 series sensor on tie–rod cylinder, hydraulic cylinder

Photo

Dimension & installation

Model \ Dimension	A	B	C	D
PM–6	19	31.0	6.5	12
PM–8	20	34.5	8.0	12
PM–10	18	33.0	9.5	12
PM–12	20	35.5	11.5	12
PM–14	24	38.0	13.5	12
PM–16	24	40.0	15.5	12



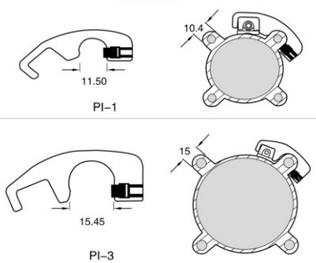
Material: Zinc alloy
Using for tie–rod cylinder Φ32–Φ200, hydraulic cylinder (tie–rod bore Φ5–Φ16)

Dimension of PI Series Bracket

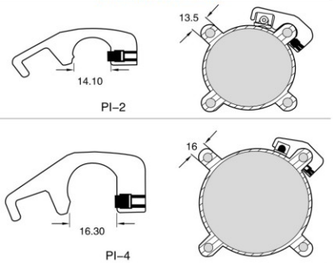
Bracket is designed for mounting HX–20&HX–21 series sensor on ISO profile cylinder.(Micky mouse type)

Photo

Dimension



Dimension & installation



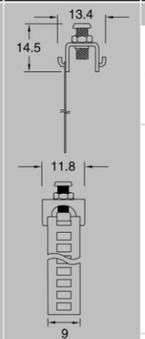
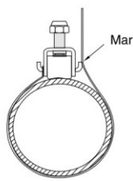
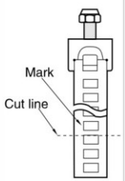
Material:Aluminum alloy
Using for ISO cylinder Φ32–Φ160(Micky mouse type)

PI–1: Using for Cylinder Φ32、Φ40
PI–3: Using for Cylinder Φ80
PI–5: Using for Cylinder Φ125

PI–2: Using for Cylinder Φ50、Φ63
PI–4: Using for Cylinder Φ100
PI–6: Using for Cylinder Φ160

Dimension of BK Series Bracket

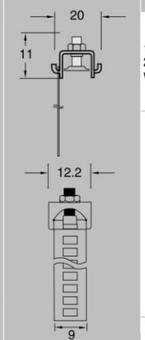
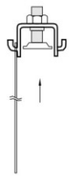
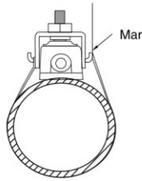
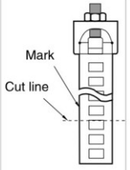
Clamp is designed for mounting HX-03&HX-15 series sensor on Φ6 bore round cylinder

Photo	Dimension	Dimension & installation			
		Step 1	Step 2	Step 3	Step 4
		1. Release the screw up 2. Make the screw within the collect	1. Put one end of the band to the hanger. 2. Install the switch and strain the metal band. 3.Another end of the band to the hanger and make mark.	1. Cut the metal band at the opposite face of the marked position.	1. Put the metal band on the marked position. 2. Install the switch, lock the screw. 3.Finally lock the screw nut.
					

BK-81: For round cylinder and tie-rod cylinder Φ12-Φ63.
BK-82: For round cylinder and tie-rod cylinder Φ80-Φ125(Speed design for ≥Φ125).

Dimension of PBN Series Bracket

Clamp is designed for mounting HX-20&HX-21 series sensor on Φ12 bore round cylinder.

Photo	Dimension	Dimension & installation			
		Step 1	Step 2	Step 3	Step 4
		1. Release the screw up 2. Make the screw within the collect	1. Put one end of the band to the hanger. 2. Install the switch and strain the metal band. 3.Another end of the band to the hanger and make mark.	1. Cut the metal band at the opposite face of the marked position.	1. Put the metal band on the marked position. 2. Install the switch, lock the screw. 3.Finally lock the screw nut.
					

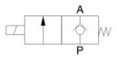
PBN-01: For round cylinder and tie-rod cylinder Φ12-Φ63.
PBN-02: For round cylinder and tie-rod cylinder Φ80-Φ125(Speed design for ≥Φ125).

Directional Valve

With the advanced electrolysis technology to remove the burrs, the inner surface of the valve comes to be very smooth, and it is also a big support for ensuring the life cycles of valves when using the Japanese seals. 64 pcs valve bodies are machined simultaneously by completely computer controlled CNC machines at one time, coils are tested under 20,000 voltage equipment, and armatures are well provided by 3–D CNC machines imported from Japan, all these details make E・MC to be the top in China.

V series standard/ N series low power solenoid valve (2/2 way)

V221



How to Order?

Low power solenoid valve

Series No.	ID Code	Positions	Ways	Controls	—	Port size	Voltage	Connection mode	Cover color	—	Thread type
N	M: Standard armature+ Low power coil	2 positions	2:2 ways	1: Single control		06：1/8 " 08：1/4 "	E2：AC220V E4：DC24V E5：DC12V	Blank: DIN connector F: Flying leads	Blank: Brown translucent J: Colorless and translucent		Blank: G P: PT T: NPT

Standart solenoid valve

Series No.	Ways	Positions	Controls	—	Port size	ID Code	Voltage	Connection mode	Cover color	—	Thread type
V	2:2 ways	2 positions	1: Single control		06：1/8 " 08：1/4 "	Blank: standard type A: Amisco coil	E1：AC110V E2：AC220V E3：AC380V E4：DC24V E5：DC12V E6：AC36V E7：AC24V E8：DC110V E9：DC48V E10：DC36V	Blank: DIN connector F: Flying leads	Blank: Brown translucent J: Colorless and translucent		Blank: G P: PT T: NPT

Order Example:

V series directional valve, 2/2 way, single control, 1/8 port size, Amisco coil, AC110V, DIN connector, G thread, ERP code is: V221-06AE1

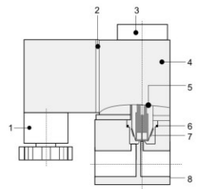
Specifications

Model No.	NM221-06	NM221-08	V221-06	V221-08
Working medium	Air. water. oil			
Acting type	Direct acting			
Orifice (mm)	2			
Port size	1/8	1/4	1/8	1/4
Lubrication	Not required			
Working pressure (MPa)	0~0.8			
Guaranteed pressure (MPa)	1.2			
Working temperature (℃)	-5~60			
Voltage range	-15%~+10%			
Power consumption	AC:1VA	DC:0.9W	AC : 5.5VA	DC : 4.8W
Insulation class	Class F			
Protective class	IP65 (DIN40050)			
Activate time (s)	<0.05			
Seal material	NBR			
Weight (g)	141	138	141	138

Product Features

* Various voltages and working styles are available.
* Different surface treatment, thread types (G,PT,NPT) are available.

Internal structure

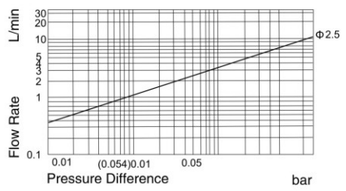


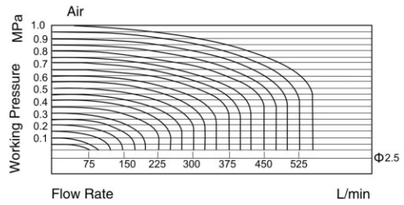
No	Designation
1	Connector
2	Connector washer
3	Nut
4	Coil
5	Pilot units
6	O-ring
7	Spring
8	Valve body

Main Parts Material

Part name	Material
Valve body	Aluminum alloy
Connector	Engineering plastic
Connector washer	NBR (FPM)
Pilot units	Pure steel+Cu+Stainless steel
Diaphragm	NBR
Nut	POM+Carbon steel
Coil	Brass Wire covered with heat resistance colophony

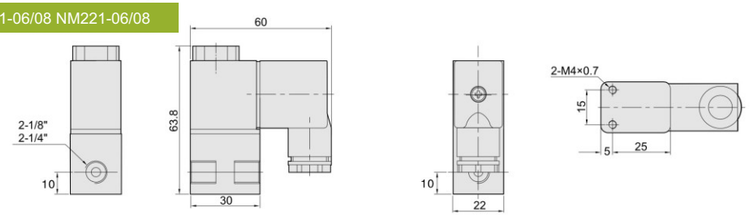
Flow Chart





Main Dimension

V221-06/08 NM221-06/08



(If with th steel nut, the height is 60.7mm)

V series standard/ N series low power solenoid valve (3/2 way)

V321

How to Order?

Low power solenoid valve

Series No.	Valve body ID code	ID Code	Positions	Ways	Controls	Port size	Voltage	Connection mode	Cover color	Thread type
N	Blank: standard valve body P: Europeans valve body (Only for 3/2 way)	M: Standard armature +Low power coil	2:2 positions	3:3 ways	1: Single control	M5: M5 06: 1/8 "	E2: AC220V E4: DC24V E5: DC12V	Blank: DIN connector F: Flying leads	Blank: Brown translucent J: Colorless and translucent	Blank: G P: PT T: NPT

Standart solenoid valve

Series No.	Ways	Positions	Controls	Port size	ID Code	Voltage	Connection mode	Cover color	Thread type
V VP	3:3 ways	2:2 positions	1: Single control	V321 M5:M5 06: 1/8 " VP321 06: 1/8 "	Blank: standard type A: Amisco coil	E1: AC110V E2: AC220V E3: AC380V E4: DC24V E5: DC12V E6: AC36V E7: AC24V E8: DC110V E9: DC48V E10: DC36V	Blank: DIN connector F: Flying leads	Blank: Brown translucent J: Colorless and translucent	Blank: G P: PT T: NPT

Order Example:

N series solenoid valve, standard pilot+Low power coil, 3/2 way, single control,1/8" port size, standard coil,DC24V,DIN connector, G thread, ERP code is: NM231-06E4

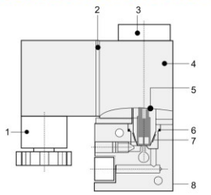
Specifications

Model No.	NM231-M5	NM231-06	NM231-06P	V321-M5	V321-06	VP321-06
Working medium	Clean air (After 25 μm filteration)					
Acting type	Direct acting					
Orifice (mm)	1.2					
Port size	M5	1/8		M5	1/8	
Lubrication	Not required					
Working pressure (MPa)	0~0.8					
Guaranteed pressure (MPa)	1.2					
Working temperature (℃)	-5~60					
Voltage range	-15%~+10%					
Power consumption	AC:1VA DC:0.9W			AC: 5.5VA DC:4.8W		
Insulation class	Class F					
Protective class	IP65 (DIN40050)					
Max. acting frequency	10 cycles/s					
Seal material	NBR					
Activate time	Below 0.05 Sec.					
Weight (g)	141		138	141		138

Product Features

* Various voltages and working styles are available.
* Different surface treatment, thread types (G,PT,NPT) are available.

Internal structure

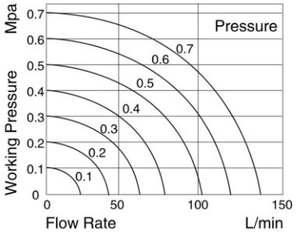


No	Designation
1	Connector
2	Connector washer
3	Nut
4	Coil
5	Pilot units
6	O-Ring
7	Spring
8	Valve body

Main Parts Material

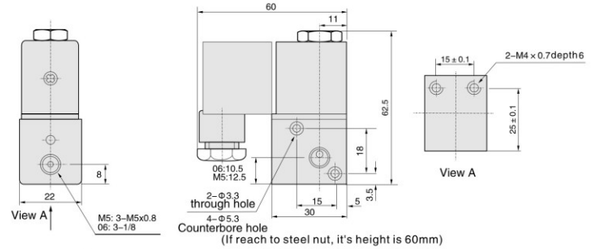
Part name	Material
Valve body	Aluminum alloy
Connector	Engineering plastic
Connector washer	NBR
Pilot units	Pure steel+Cu+Stainless steel
Diaphragm	NBR
Nut	POM+Carbon steel
Coil	Brass Wire covered with heat resistance colophony

Flow Chart

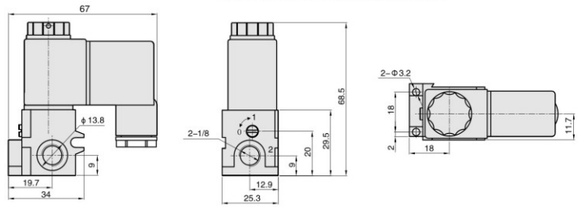


Main Dimension

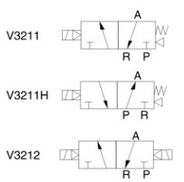
V321-M5/06
NM231-M5/06



VP321-06
NPM231-06



V series standard/ N series low power solenoid valve (3/2 way)



How to Order?

Low power solenoid valve

Series No. N — Valve body size: 1: 1Series, 2: 2Series, 3: 3Series, 4: 4Series — ID Code: M: Standard armature +Low power coil — Positions: 2: 2 positions — Ways: 3: 3 ways — Controls: 1: Single control, 2: Double control — Original status: Blank: NC, H: NO — Port size: M5: M5, 06: 1/8", 08: 1/4", 10: 3/8", 15: 1/2" — Voltage: E2: AC220V, E4: DC24V (1 Serise only DC24V) — Connection mode: Blank: DIN connector, F: Flying leads — Cover color: Blank: Brown translucent, J: Colorless and translucent — Thread type: Blank: G, P: PT, T: NPT

Order Example:

N series solenoid valve, 1 series valve body size, standard pilot+Low power coil, 3/2 way, single control, NC, 1/8" port size, standard coil,DC24V, DIN connector, G thread, ERP code is: N1M231–06E4

Note: Low power N series with white valve body

Specifications

Model NO.	N1M231–M5 N1M232–M5	N1M231–06 N1M232–06	N2M231–06 N2M232–06	N2M231–08 N2M232–08	N3M231–08 N3M232–08	N3M231–10 N3M232–10	N4M231–10 N4M232–10	N4M231–15 N4M232–15
Port size	M5	G1/8	G1/8	G1/4	G1/4	G3/8	G3/8	G1/2
Sectional area(mm^2)	5.5(CV=0.31)	12(CV=0.67)	14(CV=0.78)	16(CV=0.89)	25(CV=1.40)	30(CV=1.68)	50(CV=2.79)	50(CV=2.79)
Working medium	Clean air(After 25 μ m filteration)							
Acting type	Pilot type							
Lubrication	Not required							
Working pressure(MPa)	0.15~0.8							
Guaranteed pressure(MPa)	1.2							
Working temperature(℃)	–5~60							
Voltage range	–15%~10%							
Power consumption	DC:0.7W		DC:1.0W ; AC:1.0VA					
Insulation class	Class F							
Protective class	IP65(DIN40050)							
Max. acting frequency	5 Cycles/s							
Activate time(S)	<0.05							
Weight(g)	N1M231: 102 N1M232: 169		N2M231: 107 N2M232: 303		N3M231: 260 N3M232: 370		N4M231: 443 N4M232: 569	

Note: The technical data of NO type and NC type are same.

How to Order?

Standart solenoid valve

Series No. V — Ways: 3:3 ways — Positions: 2:2 positions — Valve body size: 1: 1 Series — Controls: 1: Single control, 2: Double control — Original status: Blank: NC, H: NO — Port size: M5: M5, 06: 1/8" — ID Code: Blank: standard type, A: Amisco coil — Voltage: E1: AC110V, E2: AC220V, E3: AC380V, E4: DC24V, E5: DC12V, E6: AC36V, E7: AC24V, E8: DC110V, E9: DC48V, E10: DC36V — Connection mode: Blank: DIN connector, F: Flying leads — Cover color: Blank: Brown translucent, J: Colorless and translucent — Valve color: Blank: Black, W: White — Thread type: Blank: G, P: PT, T: NPT

Order Example:

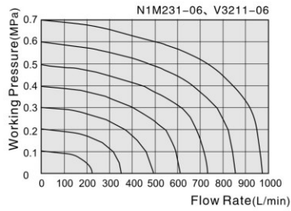
V series solenoid valve, 1 series valve body size, standard pilot+Low power coil, 3/2 way, single control, NC, 1/8" port size, standard coil,DC24V, DIN connector, G thread, ERP code is: V3211–06E4

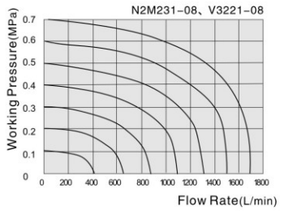
Specifications

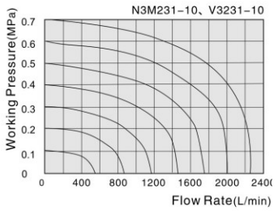
Model NO.	V3211–M5 V3212–M5	V3211–06 V3212–06	V3221–06 V3222–06	V3221–08 V3222–08	V3231–08 V3232–08	V3231–10 V3232–10	V3241–10 V3242–10	V3241–15 V3242–15
Port size	M5	G1/8	G1/8	G1/4	G1/4	G3/8	G3/8	G1/2
Sectional area(mm^2)	5.5(CV=0.31)	12(CV=0.67)	14(CV=0.78)	16(CV=0.89)	25(CV=1.40)	30(CV=1.68)	50(CV=2.79)	50(CV=2.79)
Working medium	Clean air(After 25 μ m filteration)							
Acting type	Pilot type							
Lubrication	Not required							
Working pressure(MPa)	0.15~0.8							
Guaranteed pressure(MPa)	1.2							
Working temperature(℃)	–5~60							
Voltage range	–15%~10%							
Power consumption	DC:2.8W ; AC:3.0VA		DC:4.8W ; AC:5.5VA					
Insulation class	Class F							
Protective class	IP65(DIN40050)							
Max. acting frequency	5 Cycles/s							
Activate time(S)	<0.05							
Weight(g)	V3211: 102 V3212: 169		V3221: 107 V3222: 303		V3231: 260 V3232: 370		V3241: 443 V3242: 569	

Note: The technical data of NO type and NC type are same.

Flow Chart



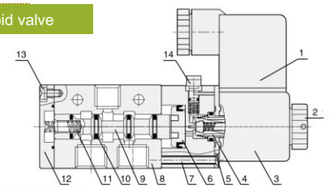




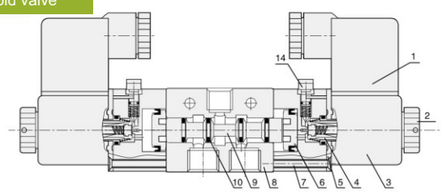
V series standard/ N series low power solenoid valve (3/2 way)

Internal structure

Single solenoid valve



Double solenoid valve

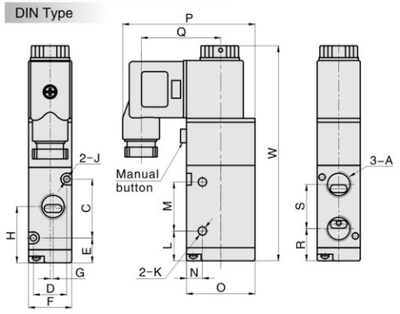


NO.	Part name	Material
1	Connector	Engineering plastic
2	Nut	POM+Carbon steel
3	Coil	Cu
4	Pilot units	
5	Plate	Carbon steel
6	Piston	POM
7	Screw	Carbon steel
8	Valve body	Aluminum alloy
9	Spool	Aluminum alloy
10	O-ring	HNBR
11	Spring	Stainless steel
12	Rear cover	Zinc alloy
13	Screw	Carbon steel
14	Manual override	Engineering plastic

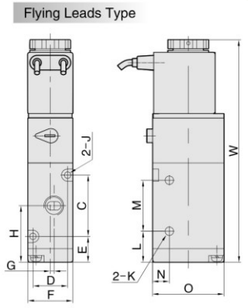
Main Dimension

Single solenoid valve

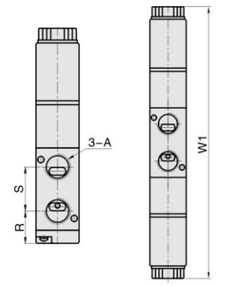
DIN Type



Flying Leads Type



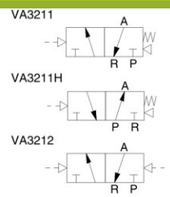
Double solenoid valve



(mm)

Model\Sign	A	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	W	W1*
V3211-M5	M5	19	13	13.2	18	0	22.7	3.3	3.3	12.2	21	7.5	27	54.8	32.8	15.7	14	87.5	129.6
V3211-06	G1/8	19	13	13.2	18	1.5	23.7	3.3	3.3	12.2	21	7.5	27	54.8	32.8	14.7	16	87.5	129.6
V3221-06	G1/8	30	17	12.7	22	0	27.7	3.3	4.3	15.2	25	8.2	35	67.5	40.5	18.5	18.5	109.7	164
V3221-08	G1/4	30	17	12.7	22	1.5	28.7	3.3	4.3	15.2	25	8.2	35	67.5	40.5	16.5	22.5	109.7	164
V3231-08	G1/4	35	20	15	27	0	32.5	4.3	4.3	17.5	30	10.5	40	70	40.5	21.5	22	120.5	176
V3231-10	G3/8	35	20	15	27	2	32.5	4.3	4.3	17.5	30	10.5	40	70	40.5	20.5	24	120.5	176
V3241-10	G3/8	40.5	27	21	34	0	45	4.3	5.3	21	48	13.5	50	75	40.5	29.5	31.5	144	198
V3241-15	G1/2	40.5	27	21	34	2	45	4.3	5.3	21	48	13.5	50	75	40.5	29.5	31.5	144	198

Note: The dimensions of NO type and NC type are same, the dimensions of N series and V series are same.



How to Order?

Series No.	Ways	Positions	Valve body size	Controls	Original status	—	Port size	Valve type	Valve color	—	Thread type
VA	3:3 ways	2:2 positions	1: 1Series 2: 2Series 3: 3Series 4: 4Series	1: Single control 2:Double control	Blank: NC H:NO		M5:M5 06:1/8 " 08:1/4 " 10:3/8 " 15:1/2 "	Blank: Standard type M: NAMUR type	Blank:Black W:White		Blank: G P: PT T: NPT

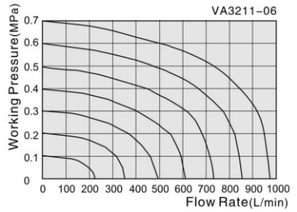
Order Example:
V series air control valve, 1 series valve body size, NC type, 3/2 way,1/8" port size, standard valve body, white color, PT thread, ERP code is: VA3211-06W-P

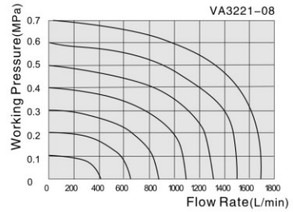
Specifications

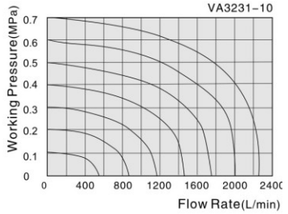
Model NO.	VA3211-M5 VA3212-M5	VA3211-06 VA3212-06	VA3221-06 VA3222-06	VA3221-08 VA3222-08	VA3231-08 VA3232-08	VA3231-10 VA3232-10	VA3241-10 VA3242-10	VA3241-15 VA3242-15
Port size	M5	G1/8	G1/8	G1/4	G1/4	G3/8	G3/8	G1/2
Sectional area(mm^2)	5.5(CV=0.31)	12(CV=0.67)	14(CV=0.78)	16(CV=0.89)	25(CV=1.40)	30(CV=1.68)	50(CV=2.79)	50(CV=2.79)
Working medium	Clean air(After 25 μ m filteration)							
Acting type	External type							
Lubrication	Not required							
Working pressure(MPa)	0.15~0.8							
Guaranteed pressure(MPa)	1.2							
Working temperature(℃)	-5~60							
Max. acting frequency	5 Cycles/s							
Weight(g)	VA3211: 60 VA3212: 75		VA3221: 116 VA3222: 143		VA3231: 187 VA3232: 220		VA3241: 378 VA3242: 430	

Note: The technical data of NO type and NC type are same.

Flow Chart



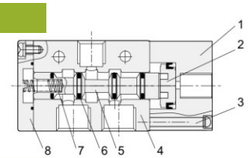




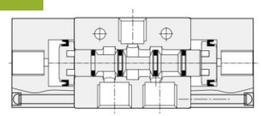
V series air control valve (3/2 way)

Internal structure

Single air control



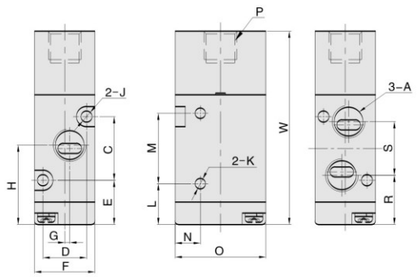
Double air control



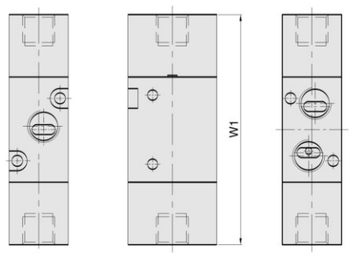
NO.	Part name	Material
1	Air control cover	Aluminum alloy
2	Piston	POM
3	Screw	Carbon steel
4	Valve body	Aluminum alloy
5	Spool	Aluminum alloy
6	O-ring	HNBR
7	Spring	Stainless steel
8	Rear cover	Zinc alloy

Main Dimension

Single air control



Double air control



(mm)

Model\Sign	A	C	D	E	F	G	H	J	K	L	M	N	O	P	R	S	W	W1*
VA3211-M5	M5	19	13	13.2	18	0	22.7	3.3	3.3	12.2	21	7.5	27	G1/8	15.7	14	57.7	70
VA3211-06	G1/8	19	13	13.2	18	1.5	23.7	3.3	3.3	12.2	21	7.5	27	G1/8	14.7	16	57.7	70
VA3221-06	G1/8	30	17	12.7	22	0	27.7	3.3	4.3	15.2	25	8.2	35	G1/8	18.5	18.5	69.7	84
VA3221-08	G1/4	30	17	12.7	22	1.5	28.7	3.3	4.3	15.2	25	8.2	35	G1/8	16.5	22.5	69.7	84
VA3231-08	G1/4	35	20	15	27	0	32.5	4.3	4.3	17.5	30	10.5	40	G1/8	21.5	22	80.5	96
VA3231-10	G3/8	35	20	15	27	2	32.5	4.3	4.3	17.5	30	10.5	40	G1/8	20.5	24	80.5	96
VA3241-10	G3/8	40.5	27	21	34	0	45	4.3	5.3	21	48	13.5	50	G1/8	29.5	31.5	103	116
VA3241-15	G1/2	40.5	27	21	34	2	45	4.3	5.3	21	48	13.5	50	G1/8	29.5	31.5	103	116

Note: The dimensions of NO type and NC type are same.

How to Order?

V -- 32 -- 1 – N -- F

- V: V series
- 32: 3/2 way
- 1: 1:1 series valve body; 2:2 series valve body; 3:3 series valve body; 4:4 series valve body
- N: 1:1 linker; 2:2 linker; 3:3 linker; ..... ; 16:16 linker
- F: manifold

VBP -- 32 -- 2

- VBP: V series blind plate (for V series manifold)
- 32: 3: 3 Port,2 Position valve
- 2: 1:1 series valve body; 2:2 series valve body; 3:3 series valve body; 4:4 series valve body

* V series manifold for 3/2, 2 series valve body, 5 linkers, model: V322-5F

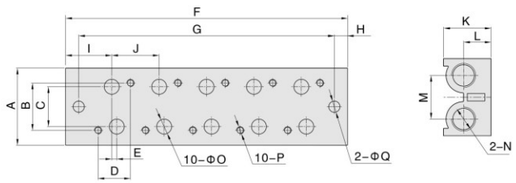
* Blind plate for 3/2 valve, 2 series valve body, Model: VBP-322

Note: Blind plate assembly comprising: Blind, gaskets and mounting screws

Corresponding Application

NO.	Manifold Model	Valve Model
1	V321-NF (N≤16)	V3211 (H) /V3212
2	V322-NF (N≤16)	V3221 (H) /V3222
3	V323-NF (N≤12)	V3231 (H) /V3232
4	V324-NF (N≤7)	V3241 (H) /V3242

Main Dimension

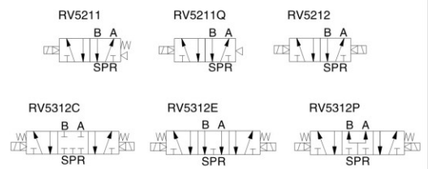


(mm)

Model\Sign	F										A	B	C	D	E	H	I	J
	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F								
V321-□F	37	56	75	94	113	132	151	170	189	208	31	19	16	13	2	5.25	19.5	19
V322-□F	46.5	69	92	115	137.5	160	183	206	228.5	251	45	30	18	17	0	6.5	43	23
V323-□F	54	82	110	138	166	194	222	250	278	306	50	35	24	20	0	6	27	28
V324-□F	63	98	133	168	203	238	273	308	343	378	62.5	40.5	31.5	26	0	7	31.5	35

Model\Sign	G										K	L	M	N	O	P	Q
	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F							
V321-□F	26.5	45.5	64.5	83.5	102.5	121.5	140.5	159.5	178.5	197.5	19	11	17.5	G1/8	6	M3	4.5
V322-□F	33.5	56	79	102	124.5	147	170	193	215.5	238	24	14.5	23	G1/4	6	M3	4.5
V323-□F	42	70	98	126	154	182	210	238	266	294	28	12	29	G3/8	8.5	M4	5.5
V324-□F	49	84	119	154	189	224	259	294	329	364	35	16	35.5	G3/8	12	M4	5.5

RV series standard/ low power solenoid valve (5/2, 5/3 way)



How to Order?

Low power solenoid valve

Series No.	Valve body size	ID Code	Positions	Ways	Controls	Original status	—	Port size	Reset form	Voltage	Connection mode	Cover color	Acting type	—	Thread type
N	1: 1Series 2: 2Series 3: 3Series 4: 4Series	R: Standard armature +Low power coil	2: 2 positions 3: 3 positions	5:5 ways	1: Single control 2:Double control	C: Center close P: Center pressure E: Center exhaust (Only for 5/3 way)		M5: M5 06: 1/8" 08: 1/4" 10: 3/8" 15: 1/2"	Blank: Spring Q: Air (Only single control)	E2: AC220V E4: DC24V (1 Serise only DC24V)	Blank: DIN connector F: Flying leads	Blank: Brown translucent J: Colorless and translucent	Blank: Internal pilot WB: External pilot		Blank: G P: PT T: NPT

Order Example:
RV series solenoid valve, 2 series valve body size, standard pilot+Low power coil, 5/2 way, single control, 1/4" port size, standard coil,DC24V, DIN connector, G thread, ERP code is: N2R251-08E4

Specifications

Model NO.	N1R251-M5 N1R252-M5 N1R352-M5	N1R251-06 N1R252-06 N1R352-06	N2R251-06 N2R252-06 N2R352-06	N2R251-08 N2R252-08 N2R352-08	N3R251-08 N3R252-08 N3R352-08	N3R251-10 N3R252-10 N3R352-10	N4R251-10 N4R252-10 N4R352-10	N4R251-15 N4R252-15 N4R352-15
Port size	M5	G1/8	G1/8	G1/4(Ex.G1/8)	G1/4	G3/8(Ex.G1/4)	G3/8	G1/2
Sectional area(mm^2)	5/2:5.5(CV=0.31) 5/3:5.5(CV=0.28)	5/2:12(CV=0.67) 5/3:9(CV=0.50)	5/2:14(CV=0.78) 5/3:12(CV=0.67)	5/2:16(CV=0.89) 5/3:12(CV=0.67)	5/2:25(CV=1.40) 5/3:18(CV=1.00)	5/2:30(CV=1.68) 5/3:18(CV=1.00)	5/2:50(CV=2.79) 5/3:30(CV=1.67)	5/2:50(CV=2.79) 5/3:30(CV=1.67)
Working medium	Clean air(After 25 μ m filteration)							
Acting type	Internal pilot type / External pilot type							
Reset Type	Spring reset / Gas reset							
Lubrication	Not required							
Working pressure(MPa)	0.15~0.8							
Guaranteed pressure(MPa)	1.2							
Working temperature(℃)	-20~70(Dry air)							
Voltage range	-15%~10%							
Power consumption	DC:0.7W		DC:1.0W ; AC:1.0VA					
Insulation class	Class F							
Protective class	IP65(DIN40050)							
Max. acting frequency	5/2: 5 Cycles/s; 5/3: 3 Cycles/s							
Activate time(S)	<0.05							
Weight(g)	N1R251: 110 N1R252: 171 N1R352: 181		N2R251: 209 N2R252: 314 N2R352: 357		N3R251: 289 N3R252: 400 N3R352: 450		N4R251: 528 N4R252: 638 N4R352: 727	

How to Order?

Standart solenoid valve

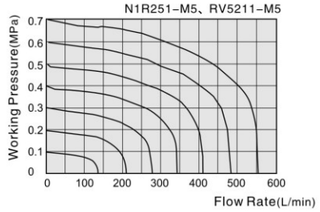
Series No.	Ways	Positions	Valve body size	Controls	Original status	—	Port size	Reset form	ID Code	Voltage	Connection mode	Cover color	Acting type	—	Thread type
RV	5:5 ways	2: 2 positions 3: 3 positions	1: 1Series 2: 2Series 3: 3Series 4: 4Series	1: Single control 2:Double control	C: Center close P: Center pressure E: Center exhaust (Only for 5/3 way)		M5: M5 06: 1/8" 08: 1/4" 10: 3/8" 15: 1/2"	Blank: Spring Q: Air (Only single control)	Blank: standard type A: Amisco coil	E1: AC110V E6: AC36V E2: AC220V E7: AC24V E3: AC380V E8: DC110V E4: DC24V E9: DC48V E5: DC12V E10: DC36V	Blank: DIN connector F: Flying leads	Blank: Brown translucent J: Colorless and translucent	Blank: Internal pilot WB: External pilot		Blank: G P: PT T: NPT

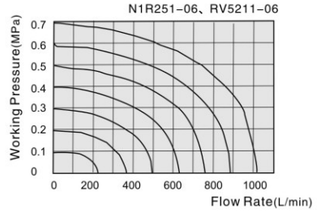
Order Example:
RV series solenoid valve, 2 series valve body size, 5/2 way, single control, 1/4" port size, standard coil,DC24V, DIN connector, G thread, ERP code is: RV5221-08E4

Specifications

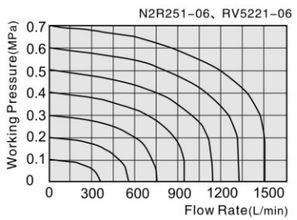
Model NO.	RV5211-M5 RV5212-M5 RV5312-M5	RV5211-06 RV5212-06 RV5312-06	RV5221-06 RV5222-06 RV5322-06	RV5221-08 RV5222-08 RV5322-08	RV5231-08 RV5232-08 RV5332-08	RV5231-10 RV5232-10 RV5332-10	RV5241-10 RV5242-10 RV5342-10	RV5241-15 RV5242-15 RV5342-15
Port size	M5	G1/8	G1/8	G1/4(Ex.G1/8)	G1/4	G3/8(Ex.G1/4)	G3/8	G1/2
Sectional area(mm^2)	5/2:5.5(CV=0.31) 5/3:5.5(CV=0.28)	5/2:12(CV=0.67) 5/3:9(CV=0.50)	5/2:14(CV=0.78) 5/3:12(CV=0.67)	5/2:16(CV=0.89) 5/3:12(CV=0.67)	5/2:25(CV=1.40) 5/3:18(CV=1.00)	5/2:30(CV=1.68) 5/3:18(CV=1.00)	5/2:50(CV=2.79) 5/3:30(CV=1.67)	5/2:50(CV=2.79) 5/3:30(CV=1.67)
Working medium	Clean air(After 25 μ m filteration)							
Acting type	Internal pilot type / External pilot type							
Reset Type	Spring reset / Gas reset							
Lubrication	Not required							
Working pressure(MPa)	0.15~0.8							
Guaranteed pressure(MPa)	1.2							
Working temperature(℃)	-20~70(Dry air)							
Voltage range	-15%~10%							
Power consumption	DC:2.8W ; AC:3.0VA		DC:3.0W ; AC:4.0VA					
Insulation class	Class F							
Protective class	IP65(DIN40050)							
Max. acting frequency	5/2: 5 Cycles/s; 5/3: 3 Cycles/s							
Activate time(S)	<0.05							
Weight(g)	RV5211: 110 RV5212: 171 RV5312: 181		RV5221: 209 RV5222: 314 RV5322: 357		RV5231: 289 RV5232: 400 RV5332: 450		RV5241: 528 RV5242: 638 RV5342: 727	

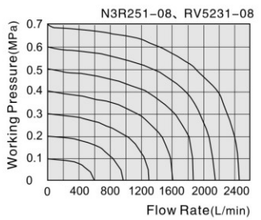
Flow Chart

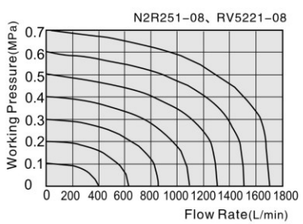


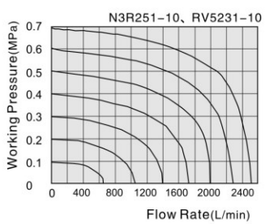


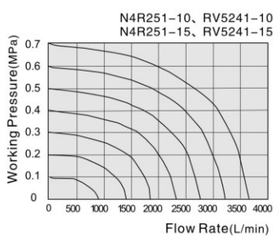
Flow Chart





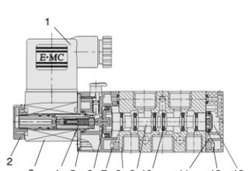




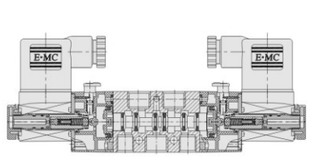


Internal structure

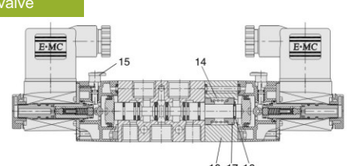
Single solenoid valve



Double solenoid valve



5/3 solenoid valve

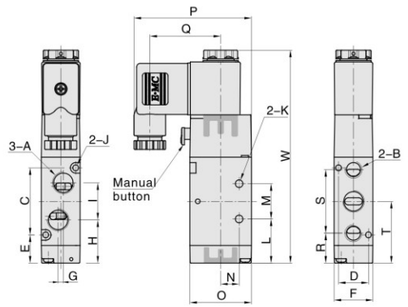


NO.	Part name	Material
1	Connector	Engineering plastic
2	Nut	POM+Carbon steel
3	Coil	Cu
4	Pilot units	
5	Plate	Carbon steel
6	Piston	POM
7	Pilot seat	Engineering plastic
8	Valve body	Aluminum alloy
9	Spool	Aluminum alloy
10	O-ring	HNBR
11	Rear cover	Engineering plastic
12	Filter	Synthetic material
13	Piston	POM
14	Spring	Stainless steel
15	Manual override	Engineering plastic
16	Back seat	Aluminum alloy
17	Spring seat	Aluminum alloy
18	C-type buckle	65Mn

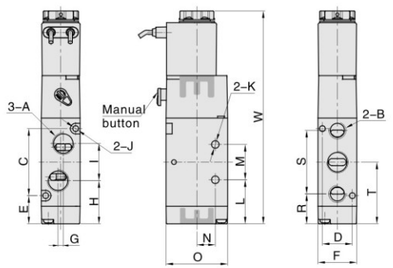
Main Dimension

Single solenoid valve

DIN Type



Flying Leads Type



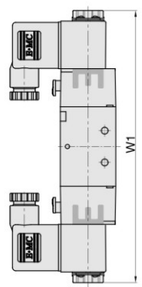
(mm)

Model\Sign	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	W
RV5211-M5	M5	M5	30	13	16.5	18	0	24.3	14.5	3.3	3.3	24.5	14	9.5	27	54.8	32.8	17.8	27	31.5	103.1
RV5211-06	G1/8	G1/8	30	13	16.5	18	3	23.5	16	3.3	3.3	24.5	14	9.5	27	54.8	32.8	17.5	28	31.5	103.1
RV5221-06	G1/8	G1/8	38	17	16	22	0	26	18	3.3	4.3	25	20	10.5	35	66.7	40.2	17	36	35	120.7
RV5221-08	G1/4	G1/8	38	17	16	22	3	25	20	3.3	4.3	25	20	10.5	35	66.7	40.2	17	36	35	120.7
RV5231-08	G1/4	G1/4	50	20	19.1	27	0	32.1	24	4.3	4.3	32.1	24	13.5	40	69.2	40.2	21.6	45	44.1	139.3
RV5231-10	G3/8	G1/4	50	20	19.1	27	4	32.1	24	4.3	4.3	32.1	24	13.5	40	69.2	40.2	21.6	45	44.1	139.3
RV5241-10	G3/8	G3/8	72	27	23.8	34	0	45.8	36	4.3	5.5	45.8	28	17.5	50	74.2	40.2	28.3	63	59.8	170.5
RV5241-15	G1/2	G1/2	72	27	23.8	34	4	45.8	36	4.3	5.5	45.8	28	17.5	50	74.2	40.2	28.3	63	59.8	170.5

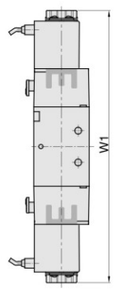
Note: The dimensions of NR series and RV series are same.

Double solenoid valve

DIN Type

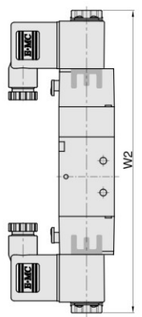


Flying Leads Type

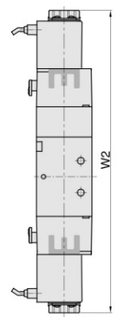


5/3 solenoid valve

DIN Type



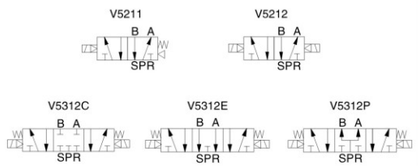
Flying Leads Type



Model\Sign	W1	W2
RV5212	143.2	–
RV5222	171.4	–
RV5232	190.4	–
RV5242	221.4	–
RV5312	–	158.2
RV5322	–	190.4
RV5332	–	209.4
RV5342	–	243.4

Note: The dimensions of NR series and RV series are same.

V series standard/ N series low power solenoid valve (5/2, 5/3 way)



Low power solenoid valve

Series No.	Valve body size	ID Code	Positions	Ways	Controls	Original status	—	Port size	Voltage	Connection mode	Cover color	—	Thread type
N	1：1Series 2：2Series 3：3Series 4：4Series	M: Standard armature +Low power coil	2:2 positions 3:3 positions	5:5 ways	1: Single control 2:Double control	C: Center close P: Center pressure E: Center exhaust (Only for 5/3 way)		M5：M5 06：1/8" 08：1/4" 10：3/8" 15：1/2"	E2：AC220V E4：DC24V	Blank: DIN connector F: Flying leads	Blank: Brown translucent J: Colorless and translucent		Blank: G P: PT T: NPT

Order Example:
N series solenoid valve, 2 series valve body size, standard pilot+Low power coil, 5/2 way, single control, 1/4" port size, standard coil,DC24V, DIN connector, G thread, ERP code is: N2M251−08E4
Note: Low power N series with white valve body

Specifications

Model NO.	N1M251−M5 N1M252−M5 N1M352−M5	N1M251−06 N1M252−06 N1M352−06	N2M251−06 N2M252−06 N2M352−06	N2M251−08 N2M252−08 N2M352−08	N3M251−08 N3M252−08 N3M352−08	N3M251−10 N3M252−10 N3M352−10	N4M251−10 N4M252−10 N4M352−10	N4M251−15 N4M252−15 N4M352−15
Port size	M5	G1/8	G1/8	G1/4(Ex.G1/8)	G1/4	G3/8(Ex.G1/4)	G3/8	G1/2
Sectional area(mm^2)	5/2:5.5(CV=0.31) 5/3:5.5(CV=0.28)	5/2:12(CV=0.67) 5/3:9(CV=0.50)	5/2:14(CV=0.78) 5/3:12(CV=0.67)	5/2:16(CV=0.89) 5/3:12(CV=0.67)	5/2:25(CV=1.40) 5/3:18(CV=1.00)	5/2:30(CV=1.68) 5/3:18(CV=1.00)	5/2:50(CV=2.79) 5/3:30(CV=1.67)	5/2:50(CV=2.79) 5/3:30(CV=1.67)
Working medium	Clean air(After 25 μ m filteration)							
Acting type	Pilot type							
Lubrication	Not required							
Working pressure(MPa)	0.15~0.8							
Guaranteed pressure(MPa)	1.2							
Working temperature(℃)	−5~60							
Voltage range	−15%~10%							
Power consumption	DC:0.7W		DC:1.0W ; AC:1.0VA					
Insulation class	Class F							
Protective class	IP65(DIN40050)							
Max. acting frequency	5/2：5 Cycles/s；5/3：3 Cycles/s							
Activate time(S)	<0.05							
Weight(g)	N1M251: 110 N1M252: 171 N1M352: 181		N2M251: 209 N2M252: 314 N2M352: 357		N3M251: 289 N3M252: 400 N3M352: 450		N4M251: 528 N4M252: 638 N4M352: 727	

How to Order?

Standart solenoid valve

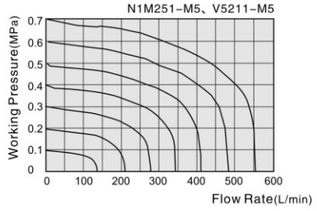
Series No.	Ways	Positions	Valve body size	Controls	Original status	—	Port size	ID Code	Voltage	Connection mode	Cover color	Valve color	—	Thread type
V	5:5 ways	2：2 positions 3：3 positions	1：1Series 2：2Series 3：3Series 4：4Series	1: Single control 2:Double control	C: Center close P: Center pressure E: Center exhaust (Only for 5/3 way)		M5：M5 06：1/8" 08：1/4" 10：3/8" 15：1/2"	Blank: standard type A: Amisco coil	E1：AC110V E2：AC220V E3：AC380V E4：DC24V E5：DC12V E6：AC36V E7：AC24V E8：DC110V E9：DC48V E10：DC36V	Blank: DIN connector F: Flying leads	Blank: Brown translucent J: Colorless and translucent	Blank:Black W:White		Blank: G P: PT T: NPT

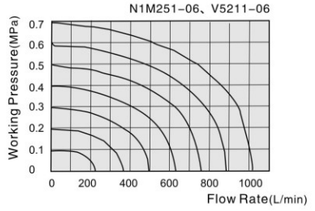
Order Example:
V series solenoid valve, 2 series valve body size, 5/2 way, single control, 1/4" port size, standard coil,DC24V,DIN connector, G thread, ERP code is: V5221−08E4

Specifications

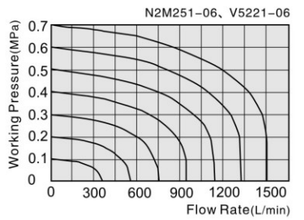
Model NO.	V5211−M5 V5212−M5 V5312−M5	V5211−06 V5212−06 V5312−06	V5221−06 V5222−06 V5322−06	V5221−08 V5222−08 V5322−08	V5231−08 V5232−08 V5332−08	V5231−10 V5232−10 V5332−10	V5241−10 V5242−10 V5342−10	V5241−15 V5242−15 V5342−15
Port size	M5	G1/8	G1/8	G1/4(Ex.G1/8)	G1/4	G3/8(Ex.G1/4)	G3/8	G1/2
Sectional area(mm^2)	5/2:5.5(CV=0.31) 5/3:5.5(CV=0.28)	5/2:12(CV=0.67) 5/3:9(CV=0.50)	5/2:14(CV=0.78) 5/3:12(CV=0.67)	5/2:16(CV=0.89) 5/3:12(CV=0.67)	5/2:25(CV=1.40) 5/3:18(CV=1.00)	5/2:30(CV=1.68) 5/3:18(CV=1.00)	5/2:50(CV=2.79) 5/3:30(CV=1.67)	5/2:50(CV=2.79) 5/3:30(CV=1.67)
Working medium	Clean air(After 25 μ m filteration)							
Acting type	Pilot type							
Lubrication	Not required							
Working pressure(MPa)	0.15~0.8							
Guaranteed pressure(MPa)	1.2							
Working temperature(℃)	−5~60							
Voltage range	−15%~10%							
Power consumption	DC:2.8W ; AC:3.0VA		DC:4.8W ; AC:5.5VA					
Insulation class	Class F							
Protective class	IP65(DIN40050)							
Max. acting frequency	5/2：5 Cycles/s；5/3：3 Cycles/s							
Activate time(S)	<0.05							
Weight(g)	V5211: 110 V5212: 171 V5312: 181		V5221: 209 V5222: 314 V5322: 357		V5231: 289 V5232: 400 V5332: 450		V5241: 528 V5242: 638 V5342: 727	

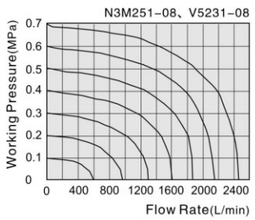
Flow Chart

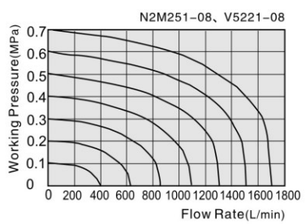


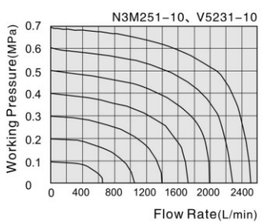


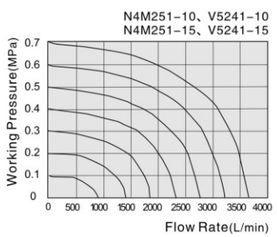
Flow Chart







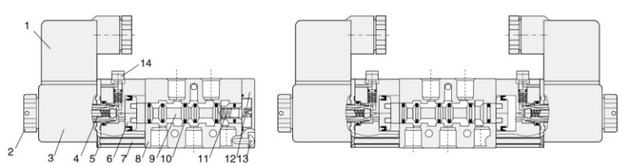




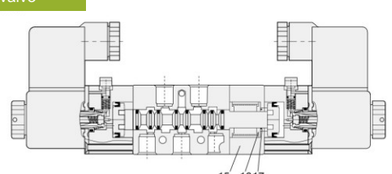
Internal structure

Single solenoid valve

Double solenoid valve



5/3 solenoid valve

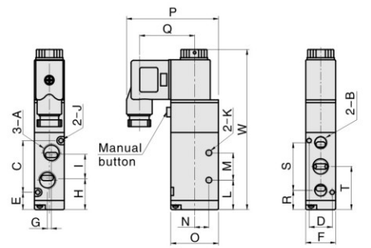


NO.	Part name	Material
1	Connector	Engineering plastic
2	Nut	POM+Carbon steel
3	Coil	Cu
4	Pilot units	
5	Plate	Carbon steel
6	Piston	POM
7	Screw	Carbon steel
8	Valve body	Aluminum alloy
9	Spool	Aluminum alloy
10	O-ring	HNBR
11	Spring	Stainless steel
12	Rear cover	Zinc alloy
13	Screw	Alloy steel
14	Manual override	Engineering plastic
15	Back seat	Aluminum alloy
16	Spring seat	Aluminum alloy
17	C-type buckle	65Mn

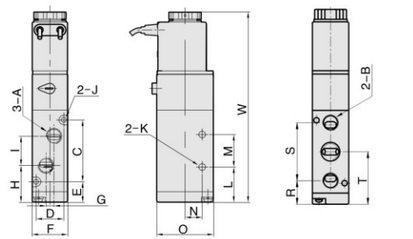
Main Dimension

Single solenoid valve

DIN Type



Flying Leads Type



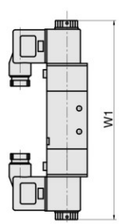
(mm)

Model\Sign	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	W
V5211-M5	M5	M5	30	13	13.2	18	0	21	14.5	3.3	3.3	21.2	14	9.5	27	54.8	32.8	14.5	27.5	28.2	98.5
V5211-06	G1/8	G1/8	30	13	13.2	18	3	20.2	16	3.3	3.3	21.2	14	9.5	27	54.8	32.8	14.5	27.5	28.2	98.5
V5221-06	G1/8	G1/8	38	17	12.7	22	0	22.7	18	3.3	4.3	21.7	20	10.5	35	67.5	40.5	14.2	35	31.7	117.7
V5221-08	G1/4	G1/8	38	17	12.7	22	3	21.7	20	3.3	4.3	21.7	20	10.5	35	67.5	40.5	14.2	35	31.7	117.7
V5231-08	G1/4	G1/4	50	20	15	27	0	28	24	4.3	4.3	28	24	13.5	40	70	40.5	17.5	45	40	135.5
V5231-10	G3/8	G1/4	50	20	15	27	4	28	24	4.3	4.3	28	24	13.5	40	70	40.5	17.5	45	40	135.5
V5241-10	G3/8	G3/8	72	27	21	34	0	39	36	4.3	5.5	43	28	17.5	50	75	40.5	25.5	63	57	168
V5241-15	G1/2	G1/2	72	27	21	34	4	39	36	4.3	5.5	43	28	17.5	50	75	40.5	25.5	63	57	168

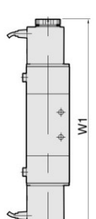
Note: The dimensions of N series and V series are same.

Double solenoid valve

DIN Type

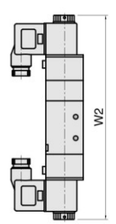


Flying Leads Type

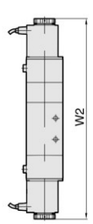


5/3 solenoid valve

DIN Type



Flying Leads Type

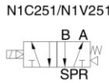


Model\Sign	W1	W2
V5212	140.6	-
V5222	172	-
V5232	191	-
V5242	222	-
V5312	-	155.6
V5322	-	191
V5332	-	210
V5342	-	244

Note: The dimensions of N series and V series are same.

N series standard/ low power solenoid valve (5/2 way)

N1C251/N1V251



How to Order?

Low power solenoid valve

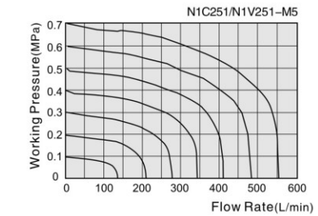
Series No.	Valve body size	ID Code	Positions	Ways	Controls	—	Port size	Valve type	Voltage	Connection mode	Cover color	—	Thread type
N	1: 1Series 2: 2Series 3: 3Series 4: 4Series	C: With M2P pilot valve +Low power coil V: With M2P pilot valve + standard coil	2:2 positions	5:5 ways	1: Single control 2:Double control		M5: M5 06: 1/8" 08: 1/4" 10: 3/8" 15: 1/2"	Blank: Standard type	E4: DC24V E8: DC110V (Low power coil voltage DC24V)	Blank: DIN connector F: Flying leads	Blank: Brown translucent J: Colorless and translucent		Blank: G P: PT T: NPT

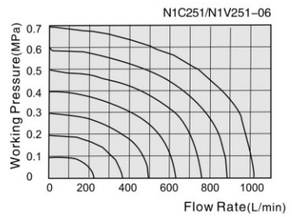
Order Example:
N series solenoid valve, 1 series valve body,M2P series pilot valve+Low power coil, 5/2 way, single control, 1/8" port size, standard coil,DC24V, DIN connector, NPT thread, ERP code is: N1C251-06E4-T
Note: Low power N series with white valve body

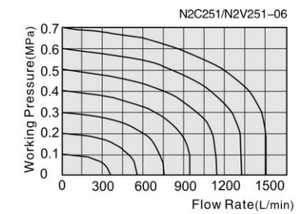
Specifications

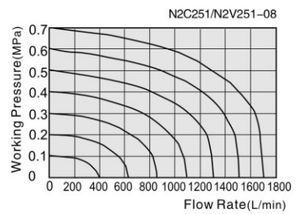
Model NO.	N1C251-M5 N1V251-M5	N1C251-06 N1V251-06	N2C251-06 N2V251-06	N2C251-08 N2V251-08	N3C251-08 N3V251-08	N3C251-10 N3V251-10	N4C251-10 N4V251-10	N4C251-15 N4V251-15
Port size	M5	G1/8	G1/8	G1/4(Ex.G1/8)	G1/4	G3/8(Ex.G1/4)	G3/8	G1/2
Sectional area(mm^2)	5.5(CV=0.31)	12(CV=0.67)	14(CV=0.78)	16(CV=0.89)	25(CV=1.40)	30(CV=1.68)	50(CV=2.79)	50(CV=2.79)
Working medium	Clean air(After 25 μ m filteration)							
Acting type	Pilot type							
Lubrication	Not required							
Working pressure(MPa)	0.15~0.8							
Guaranteed pressure(MPa)	1.2							
Working temperature(℃)	-5~60							
Voltage range	-15%~10%							
Power consumption	DC:0.5W(N1C);DC:1.2W(N1V)		DC:0.7W(Low power coil);DC:2.3W(Standard coil)					
Insulation class	Class F							
Protective class	IP65(DIN40050)							
Max. acting frequency	7 Cycles/s							
Activate time(S)	<0.05							
Weight(g)	110		209		289		528	

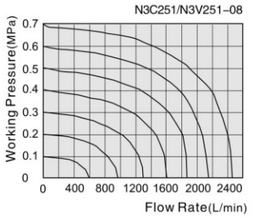
Flow Chart

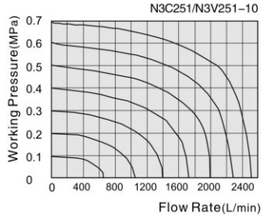


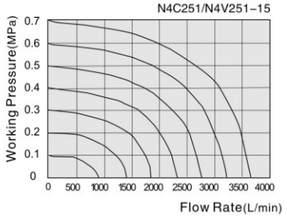






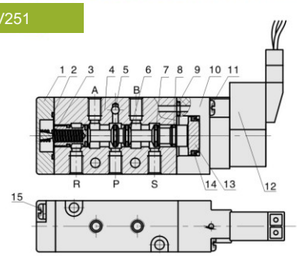






Internal structure

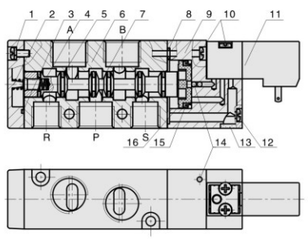
N1C251/N1V251



NO.	Part name	Material
1	Rear cover	Zinc alloy
2	Diamond ring	NBR
3	Spring	Stainless steel
4	Valve body	Aluminum alloy
5	Steel ball	Stainless steel
6	Spool	Aluminum alloy
7	Spool ring	HNBR
8	O-ring	HNBR
9	O-ring	NBR
10	Pilot seat	Aluminum alloy
11	Screw	Carbon steel
12	MINI Valve	
13	Piston	POM
14	Y ring	NBR
15	Screw	Carbon steel

N series standard/ low power solenoid valve (5/2 way)

Internal structure

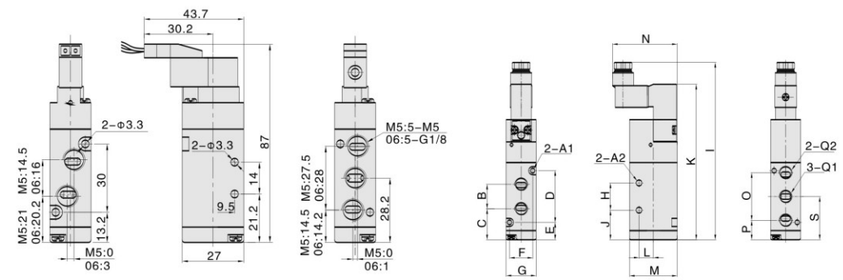


NO.	Part name	Material
1	Screw	Carbon steel
2	Rear cover	Zinc alloy
3	Diamond ring	NBR
4	Spring	Stainless steel
5	Spool ring	HNBR
6	Valve body	Aluminum alloy
7	Spool	Aluminum alloy
8	O-ring	NBR
9	Pilot seat	Aluminum alloy
10	Screw	Carbon steel
11	MINI Valve	
12	Screw	Carbon steel
13	Silencing sheet	Cu
14	Steel ball	Stainless steel
15	Y ring	NBR
16	Piston	POM

Main Dimension

N1C251/N1V251

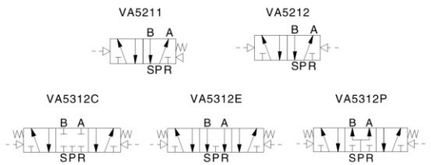
N2C251/N2V251
N3C251/N3V251
N4C251/N4V251



(mm)

Model\Sign	A1	A2	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q1	Q2	S
N2V251-06	Φ3.3	Φ4.3	18	22.7	38	12.7	17	22	20	130.2	21.7	114.2	Φ10.5	35	47.5	35	14.2	G1/8	G1/8	31.7
N2V251-08	Φ3.3	Φ4.3	20	21.7	38	12.7	17	22	20	130.2	21.7	114.2	Φ10.5	35	47.5	35	14.2	G1/4	G1/8	31.7
N3V251-08	Φ4.3	Φ4.3	24	28	50	15	20	27	24	148.5	28	132.5	Φ13.5	40	47.5	45	17.5	G1/4	G1/4	40
N3V251-10	Φ4.3	Φ4.3	24	28	50	15	20	27	24	148.5	28	132.5	Φ13.5	40	47.5	45	17.5	G3/8	G1/4	40
N4V251-10	Φ4.3	Φ5.5	36	39	72	21	27	34	28	182	43	166	Φ17.5	50	47.5	63	25.5	G3/8	G3/8	57
N4V251-15	Φ4.3	Φ5.5	36	39	72	21	27	34	28	182	43	166	Φ17.5	50	47.5	63	25.5	G1/2	G1/2	57

Note: The dimensions of NC series and NV series are same.



How to Order?

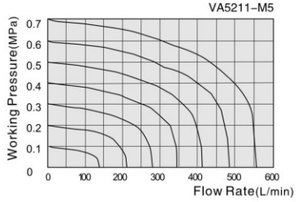
Series No.	Ways	Positions	Valve body size	Controls	Original status	—	Port size	Valve type	Valve color	—	Thread type
VA	5:5 ways	2:2 positions 3:3 positions	1: 1Series 2: 2Series 3: 3Series 4: 4Series	1: Single control 2:Double control	C: Center close P: Center pressure E: Center exhaust (Only for 5/3 way)		M5: M5 06: 1/8" 08: 1/4" 10: 3/8" 15: 1/2"	Blank: Standard type M: NAMUR type	Blank:Black W:White		Blank: G P: PT T: NPT

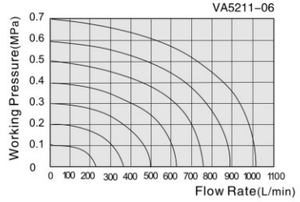
Order Example:
V series air control valve, 1 series valve body size, 5/2 way,single control,1/8" port size, standard valve body, white color, PT thread, ERP code is: VA5211-06W-P

Specifications

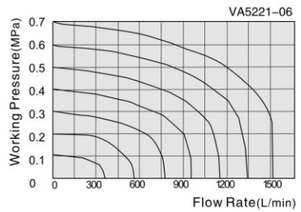
Model NO.	VA5211-M5 VA5212-M5 VA5312-M5	VA5211-06 VA5212-06 VA5312-06	VA5221-06 VA5222-06 VA5322-06	VA5221-08 VA5222-08 VA5322-08	VA5231-08 VA5232-08 VA5332-08	VA5231-10 VA5232-10 VA5332-10	VA5241-10 VA5242-10 VA5342-10	VA5241-15 VA5242-15 VA5342-15
Port size	M5	G1/8	G1/8	G1/4(Ex.G1/8)	G1/4	G3/8(Ex.G1/4)	G3/8	G1/2
Sectional area(mm^2)	5/2:5.5(CV=0.31) 5/3:5.5(CV=0.28)	5/2:12(CV=0.67) 5/3:9(CV=0.50)	5/2:14(CV=0.78) 5/3:12(CV=0.67)	5/2:16(CV=0.89) 5/3:12(CV=0.67)	5/2:25(CV=1.40) 5/3:18(CV=1.00)	5/2:30(CV=1.68) 5/3:18(CV=1.00)	5/2:50(CV=2.79) 5/3:30(CV=1.67)	5/2:50(CV=2.79) 5/3:30(CV=1.67)
Working medium	Clean air(After 25 μ m filteration)							
Acting type	External type							
Lubrication	Not required							
Working pressure(MPa)	0.15~0.8							
Guaranteed pressure(MPa)	1.2							
Working temperature(℃)	-5~60							
Max. acting frequency	5/2:5 Cycles/s; 5/3:3 Cycles/s							
Weight(g)	V5211: 72 V5212: 87 V5312: 181		V5221: 128 V5222: 153 V5322: 219		V5231: 218 V5232: 260 V5332: 358		V5241: 437 V5242: 490 V5342: 598	

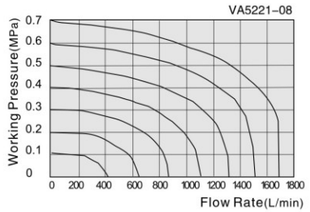
Flow Chart

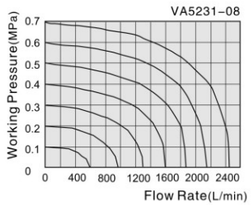


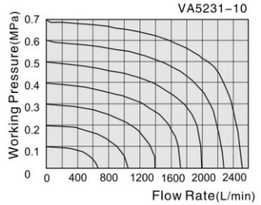


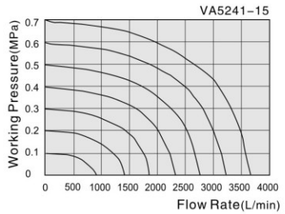
Flow Chart





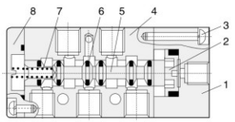




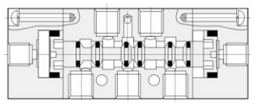


Internal structure

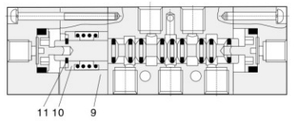
Single air control



Double air control



5/3 air control



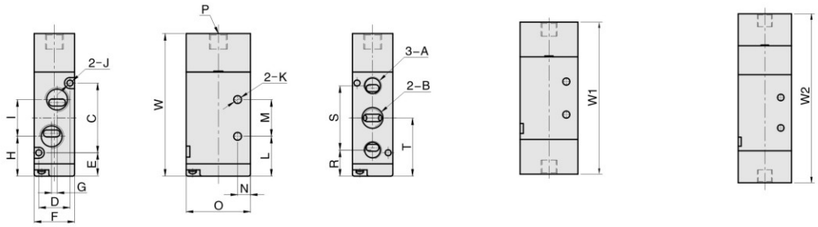
NO.	Part name	Material
1	Air control cover	Aluminum alloy
2	Piston	POM
3	Screw	Carbon steel
4	Valve body	Aluminum alloy
5	Spool	Aluminum alloy
6	O–ring	NBR
7	Spring	Stainless steel
8	Rear cover	Zinc alloy
9	Back seat	Aluminum alloy
10	Spring seat	Aluminum alloy
11	C–type buckle	65Mn

Main Dimension

Single air control

Double air control

5/3 air control



(mm)

Model\Sign	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	T	W	W1	W2
VA5211–M5	M5	M5	30	13	13.2	18	0	21	14.5	3.3	3.3	21.2	14	9.5	27	G1/8	14.5	27.5	28.2	68.7	81	96
VA5211–06	G1/8	G1/8	30	13	13.2	18	3	20.2	16	3.3	3.3	21.2	14	9.5	27	G1/8	14.5	27.5	28.2	68.7	81	96
VA5221–06	G1/8	G1/8	38	17	12.7	22	0	22.7	18	3.3	4.3	21.7	20	10.5	35	G1/8	14.2	35	31.7	77.7	92	111
VA5221–08	G1/4	G1/8	38	17	12.7	22	3	21.7	20	3.3	4.3	21.7	20	10.5	35	G1/8	14.2	35	31.7	77.7	92	111
VA5231–08	G1/4	G1/4	50	20	15	27	0	28	24	4.3	4.3	28	24	13.5	40	G1/8	17.5	45	40	95.5	111	130
VA5231–10	G3/8	G1/4	50	20	15	27	4	28	24	4.3	4.3	28	24	13.5	40	G1/8	17.5	45	40	95.5	111	130
VA5241–10	G3/8	G3/8	72	27	21	34	0	39	36	4.3	5.5	43	28	17.5	50	G1/8	25.5	63	57	127	140	162
VA5241–15	G1/2	G1/2	72	27	21	34	4	39	36	4.3	5.5	43	28	17.5	50	G1/8	25.5	63	57	127	140	162

V series manifold (5/2 way)

How to Order?

V -- 52 -- 1 — N -- F

- V: V Series
- 52: 5 port, 2 position
- 1: 1:1 series valve body; 2:2 series valve body; 3:3 series valve body; 4:4 series valve body
- N: 1: 1 linker; 2: 2 linkers; 3: 3 linkers; ……; 16: 16 linkers
- F: Manifold

* V series manifold for 5/2, 2 series valve body,5 linkers,Model: V522-5F

VBP -- 52 -- 2

- VBP: V series blind plate (for V series manifold)
- 52: 5:5 port, 2 position
- 2: 1:1 series valve body; 2:2 series valve body; 3:3 series valve body; 4:4 series valve body

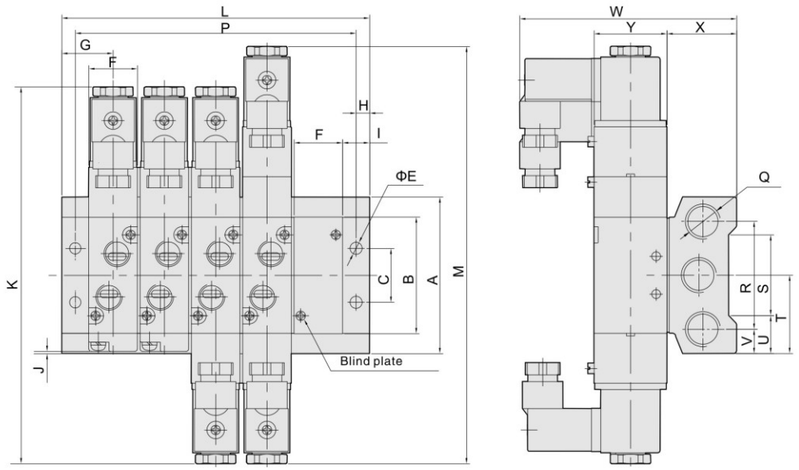
* Blind plate for 5/2 valve,2 series valve body ,Model: VBP-522

Note: 1.The dimensions of 5/3 way is same as 5/2 way series.
2.Blind plate assembly comprising: Blind, gaskets and mounting screws.

Corresponding Application

Valve Model	V5211/V5212	V5221/V5222	V5231/V5252	V5241/V5242
Manifold Model	V521-NF(N≤16)	V522-NF(N≤16)	V523-NF(N≤12)	V524-NF(N≤7)

Main Dimension (mm)



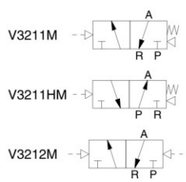
Type/Item	L															
	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F
V521-□F	38	57	76	95	114	133	152	171	190	209	228	247	266	285	304	323
V522-□F	46	69	92	115	138	161	184	207	230	253	276	299	322	345	368	391
V523-□F	54	82	110	138	166	194	222	250	278	306	334	362	–	–	–	–
V524-□F	63	98	133	168	203	238	273	–	–	–	–	–	–	–	–	–

Type/Item	A	B	C	E	F	G	H	I	J	K
V521-□F	58	43.2	20	4.5	18.3	19	5	10	-0.8	139.4
V522-□F	61	50.7	21	4.5	22.4	23	6	12	1.2	170
V523-□F	75	64.8	26	4.5	27.3	27	6	13.5	2.5	188.8
V524-□F	104	94.5	32	5.5	34.3	31.5	7	14.5	5	221.8

Type/Item	P															
	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F
V521-□F	28	47	66	85	104	123	142	161	180	199	218	237	256	275	294	313
V522-□F	34	57	80	103	126	149	172	195	218	241	264	287	310	333	356	379
V523-□F	42	70	98	126	154	182	210	238	266	294	322	350	–	–	–	–
V524-□F	49	84	119	154	189	224	259	–	–	–	–	–	–	–	–	–

Type/Item	M	Q	R	S	T	U	V	W	X	Y
V521-□F	154.5	G1/4	40	30	29	14	9	79	25	27
V522-□F	189	G1/4	43	32	30.5	14.5	9	93	26	35
V523-□F	208	G3/8	53	48	37.5	13.5	11	99.5	30	40
V524-□F	243	G1/2	68	67	52	18.5	18	112.5	38	50

V series standard/N series low power NAMUR solenoid valve (3/2 way)



How to Order?

Low power solenoid valve

Series No. | Valve body size | ID Code | Positions | Ways | Controls | Original status | — Port size | Valve type | Voltage | Connection mode | Cover color | — | Thread type

- Series No.: N
- Valve body size: 1:1 series; 2:2 series; 3:3 series; 4:4 series
- ID Code: M: Standard armature +Low power coil
- Positions: 2: 2 positions
- Ways: 3: 3 ways
- Controls: 1: Single control; 2: Double controls
- Original status: Blank: NC; H: NO
- Port size: M5: M5; 06: 1/8"; 08: 1/4"; 10: 3/8"; 15: 1/2"
- Valve type: M: NAMUR type
- Voltage: E2: AC220V; E4: DC24V
- Connection mode: Blank: DIN connector; F: Flying leads
- Cover color: Blank: Brown translucent; J: Colorless and translucent
- Thread type: Blank: G; P: PT; T: NPT

Order Example:

V series solenoid valve, 3/2 way, 1 series valve body, double control, port size 1/8", NAMUR valve type, low power coil, AC220V, flying leads coil, black color valve, G thread, ERP code is: N1M231-06ME2F.
Note: Low power type with white valve body

Specifications

Model NO.	N1M231-M5 N1M232-M5	N1M231-06 N1M232-06	N2M231-06 N2M232-06	N2M231-08 N2M232-08	N3M231-08 N3M232-08	N3M231-10 N3M232-10	N4M231-10 N4M232-10	N4M231-15 N4M232-15
Port size	M5	G1/8	G1/8	G1/4	G1/4	G3/8	G3/8	G1/2
Sectional area(mm^2)	5.5(CV=0.31)	12(CV=0.67)	14(CV=0.78)	16(CV=0.89)	25(CV=1.40)	30(CV=1.68)	50(CV=2.79)	50(CV=2.79)
Working medium	Clean air(After 25 μ m filteration)							
Acting type	Pilot type							
Lubrication	Not required							
Working pressure(MPa)	0.15~0.8							
Guaranteed pressure(MPa)	1.2							
Working temperature(℃)	-5~60							
Voltage range	-15%~10%							
Power consumption	DC:0.7W		DC:1.0W ; AC:1.0VA					
Insulation class	Class F							
Protective class	IP65(DIN40050)							
Max. acting frequency	5 Cycles/s							
Activate time(S)	<0.05							
Weight(g)	N1M231-M: 114 N1M232-M: 171		N2M231-M: 203 N2M232-M: 310		N3M231-M: 295 N3M232-M: 403		N4M231-M: 448 N4M232-M: 578	

Note: The technical data of NO type and NC type are same.

How to Order?

Standart solenoid valve

Series No. | Ways | Positions | Valve body size | Controls | Original status | Port size | Valve type | ID Code | Voltage | Connection mode | Cover color | Valve color | — | Thread type

- Series No.: V
- Ways: 3: 3 ways
- Positions: 2: 2 positions
- Valve body size: 1:1 series; 2:2 series; 3:3 series; 4:4 series
- Controls: 1: Single control; 2: Double controls
- Original status: Blank: NC; H: NO
- Port size: M5: M5; 06: 1/8"; 08: 1/4"; 10: 3/8"; 15: 1/2"
- Valve type: M: NAMUR type
- ID Code: Blank: standard type; A: Amisco coil
- Voltage: E1: AC110V; E2: AC220V; E3: AC380V; E4: DC24V; E5: DC12V; E6: AC36V; E7: AC24V; E8: DC110V; E9: DC48V; E10: DC36V
- Connection mode: Blank: DIN connector; F: Flying leads
- Cover color: Blank: Brown translucent; J: Colorless and translucent
- Valve color: Blank:Black; W:White
- Thread type: Blank: G; P: PT; T: NPT

Order Example:

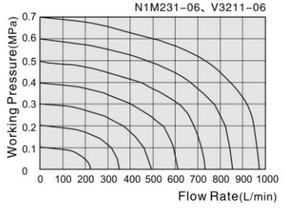
V series solenoid valve, 3/2 way, 1 series valve body, double control, port size 1/8", NAMUR valve type, standard coil, AC220V, flying leads coil, black color valve, G thread, ERP code is: V3212-06ME2F.

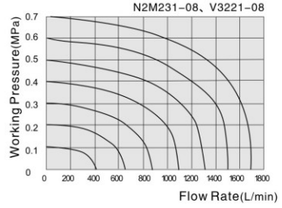
Specifications

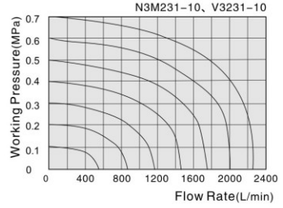
Model NO.	V3211-M5 V3212-M5	V3211-06 V3212-06	V3221-06 V3222-06	V3221-08 V3222-08	V3231-08 V3232-08	V3231-10 V3232-10	V3241-10 V3242-10	V3241-15 V3242-15
Port size	M5	G1/8	G1/8	G1/4	G1/4	G3/8	G3/8	G1/2
Sectional area(mm^2)	5.5(CV=0.31)	12(CV=0.67)	14(CV=0.78)	16(CV=0.89)	25(CV=1.40)	30(CV=1.68)	50(CV=2.79)	50(CV=2.79)
Working medium	Clean air(After 25 μ m filteration)							
Acting type	Pilot type							
Lubrication	Not required							
Working pressure(MPa)	0.15~0.8							
Guaranteed pressure(MPa)	1.2							
Working temperature(℃)	-5~60							
Voltage range	-15%~10%							
Power consumption	DC:2.8W ; AC:3.0VA		DC:4.8W ; AC:5.5VA					
Insulation class	Class F							
Protective class	IP65(DIN40050)							
Max. acting frequency	5 Cycles/s							
Activate time(S)	<0.05							
Weight(g)	V3211-M: 114 V3212-M: 171		V3221-M: 203 V3222-M: 310		V3231-M: 295 V3232-M: 403		V3241-M: 448 V3242-M: 578	

Note: The technical data of NO type and NC type are same.

Flow Chart



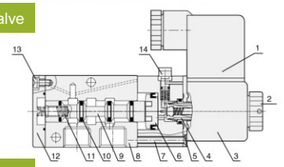




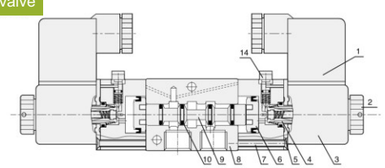
V series standard/N series low power NAMUR solenoid valve (3/2 way)

Internal structure

Single solenoid valve



Double solenoid valve

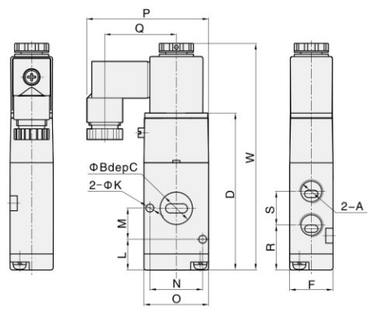


NO.	Part name	Material
1	Connector	Engineering plastic
2	Nut	POM+Carbon steel
3	Coil	Cu
4	Pilot units	
5	Plate	Carbon steel
6	Piston	POM
7	Screw	Carbon steel
8	Valve body	Aluminum alloy
9	Spool	Aluminum alloy
10	O-ring	HNBR
11	Spring	Stainless steel
12	Rear cover	Zinc alloy
13	Screw	Carbon steel
14	Manual override	Engineering plastic

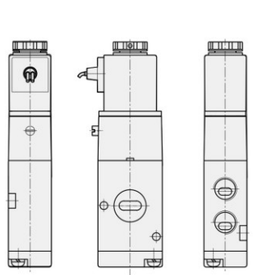
Main Dimension

Single solenoid valve

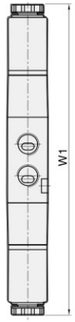
DIN Type



Flying Leads Type



Double solenoid valve



(mm)

Model\Sign	A	B	C	D	F	L	M	N	O	P	Q	R	S	W	W1*
V3211-M5M	M5	13.6	1.5	65	18	12.7	14	22	27	54.8	32.8	19.7	14	87.5	129.6
V3211-06M	G1/8	13.6	1.5	65	18	12.7	14	22	27	54.8	32.8	19.7	14	87.5	129.6
V3221-06M	G1/8	17.6	1.5	75.5	22	12.2	20	29	35	67.5	40.5	22.2	18	109.7	164
V3221-08M	G1/4	17.6	1.5	75.5	22	12.2	20	29	35	67.5	40.5	22.2	18	109.7	164
V3231-08M	G1/4	19.5	1.5	93.5	27	14	24	32	40	70	40.5	26.7	21.5	120.5	176
V3231-10M	G3/8	19.5	1.5	93.5	27	14	24	32	40	70	40.5	26.7	21.5	120.5	176
V3241-10M	G3/8	21.8	1.8	104.5	34	17.5	33	41	50	75	40.5	29.5	32	29.5	198
V3241-15M	G1/2	21.8	1.8	104.5	34	17.5	33	41	50	75	40.5	29.5	32	29.5	198

Note: The dimensions of NO type and NC type are same, the dimensions of N series and V series are same.

V5211M

V5212M

How to Order?

Low power solenoid valve

Series No.	Valve body size	ID Code	Positions	Ways	Controls	—	Port size	Valve type	Voltage	Connection mode	Cover color	—	Thread type
N	1:1 series 2:2 series 3:3 series 4:4 series	M: Standard armature +Low power coil	2: 2 positions	5: 5 ways	1: Single control 2: Double controls		M5: M5 06: 1/8" 08: 1/4" 10: 3/8" 15: 1/2"	M: NAMUR type	E2: AC220V E4: DC24V	Blank: DIN connector F: Flying leads	Blank: Brown translucent J: Colorless and translucent		Blank: G P: PT T: NPT

Order Example:

V series solenoid valve, 5/2 way, 1 series valve body, double control, port size 1/8", NAMUR valve type, low power coil, AC220V, flying leads coil, black color valve, G thread, ERP code is: N1M251-06ME2F.

Note: Low power type with white valve body

Specifications

型号	N1M251-M5 N1M252-M5	N1M251-06 N1M252-06	N2M251-06 N2M252-06	N2M251-08 N2M252-08	N3M251-08 N3M252-08	N3M251-10 N3M252-10	N4M251-10 N4M252-10	N4M251-15 N4M252-15
Port size	M5	G1/8	G1/8	G1/4(Ex.G1/8)	G1/4	G3/8(Ex.G1/4)	G3/8	G1/2
Sectional area(mm^2)	5.5(CV=0.31)	12(CV=0.67)	14(CV=0.78)	16(CV=0.89)	25(CV=1.40)	30(CV=1.68)	50(CV=2.79)	50(CV=2.79)
Working medium	Clean air(After 25 μ m filteration)							
Acting type	Pilot type							
Lubrication	Not required							
Working pressure(MPa)	0.15~0.8							
Guaranteed pressure(MPa)	1.2							
Working temperature(℃)	-5~60							
Voltage range	-15%~10%							
Power consumption	DC:0.7W		DC:1.0W ; AC:1.0VA					
Insulation class	Class F							
Protective class	IP65(DIN40050)							
Max. acting frequency	5 Cycles/s							
Activate time(S)	<0.05							
Weight(g)	N1M251-M: 113 N1M252-M: 176		N2M251-M: 208 N2M252-M: 306		N3M251-M: 300 N3M252-M: 409		N4M251-M: 533 N4M252-M: 666	

V series standard/N series low power NAMUR solenoid valve (5/2 way)

How to Order?

Standart solenoid valve

Series No. — V
Ways — 5: 5 ways
Positions — 2: 2 positions
Valve body size — 1:1 series; 2:2 series; 3:3 series; 4:4 series
Controls — 1: Single control; 2: Double controls
—
Port size — M5: M5; 06: 1/8"; 08: 1/4"; 10: 3/8"; 15: 1/2"
Valve type — M: NAMUR type
ID Code — Blank: standard type; A: Amisco coil
Voltage — E1: AC110V; E2: AC220V; E3: AC380V; E4: DC24V; E5: DC12V; E6: AC36V; E7: AC24V; E8: DC110V; E9: DC48V; E10: DC36V
Connection mode — Blank: DIN connector; F: Flying leads
Cover color — Blank: Brown translucent; J: Colorless and translucent
Valve color — Blank:Black; W:White
—
Thread type — Blank: G; P: PT; T: NPT

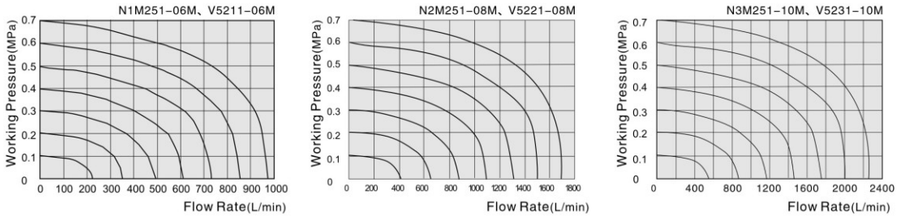
Order Example:

V series solenoid valve, 5/2 way, 1 series valve body, double control, port size 1/8", NAMUR valve type, standard coil, AC220V, flying leads coil, black color valve, G thread, ERP code is: V5212-06ME2F.

Specifications

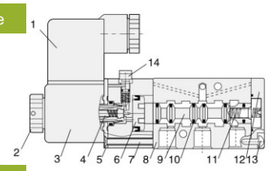
Model NO.	V5211-M5M V5212-M5M	V5211-06M V5212-06M	V5221-06M V5222-06M	V5221-08M V5222-08M	V5231-08M V5232-08M	V5231-10M V5232-10M	V5241-10M V5242-10M	V5241-15M V5242-15M
Port size	M5	G1/8	G1/8	G1/4	G1/4	G3/8	G3/8	G1/2
Sectional area(mm^2)	5.5(CV=0.31)	12(CV=0.67)	14(CV=0.78)	16(CV=0.89)	25(CV=1.40)	30(CV=1.68)	50(CV=2.79)	50(CV=2.79)
Working medium	Clean air(After 25 μ m filteration)							
Acting type	Pilot type							
Lubrication	Not required							
Working pressure(MPa)	0.15~0.8							
Guaranteed pressure(MPa)	1.2							
Working temperature(℃)	-5~60							
Voltage range	-15%~10%							
Power consumption	DC:0.7W		DC:1.0W ; AC:1.0VA					
Insulation class	Class F							
Protective class	IP65(DIN40050)							
Max. acting frequency	5 Cycles/s							
Activate time(S)	<0.05							
Weight(g)	V5211-M: 113 V5212-M: 176		V5221-M: 208 V5222-M: 306		V5231-M: 300 V5232-M: 409		V5241-M: 533 V5242-M: 666	

Flow Chart

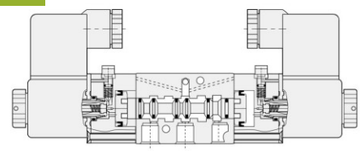


Internal structure

Single solenoid valve



Double solenoid valve



NO.	Part name	Material
1	Connector	Engineering plastic
2	Nut	POM+Carbon steel
3	Coil	Cu
4	Pilot units	
5	Plate	Carbon steel
6	Piston	POM
7	Screw	Carbon steel
8	Valve body	Aluminum alloy
9	Spool	Aluminum alloy
10	O-ring	HNBR
11	Spring	Stainless steel
12	Rear cover	Zinc alloy
13	Screw	Carbon steel
14	Manual override	Engineering plastic

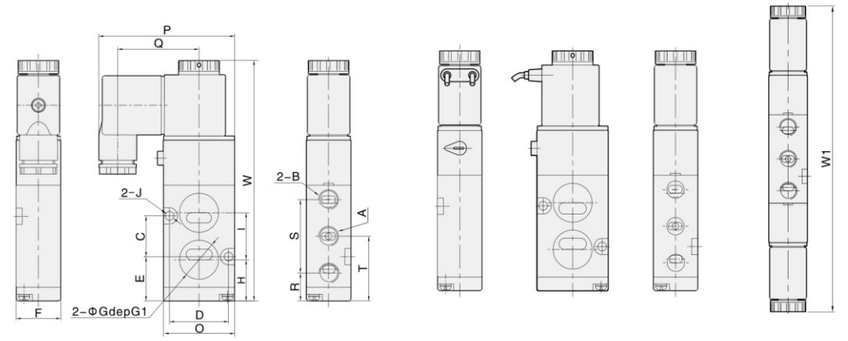
Main Dimension

Single solenoid valve

Double solenoid valve

DIN Type

Flying Leads Type



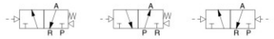
(mm)

Model\Sign	A	B	C	D	E	F	G	G1	H	I	J	O	P	Q	R	S	T	W	W1*
V5211-M5M	M5	M5	14	22	21.2	18	13.6	1.5	19	18.5	3.3	27	54.8	32.8	14.5	27.5	28.2	97	138
V5211-06M	G1/8	G1/8	14	22	21.2	18	13.6	1.5	19	18.5	3.3	27	54.8	32.8	14.2	28	28.2	97	138
V5221-06M	G1/8	G1/8	20	29	21.7	22	17.6	1.5	20	23	4.3	35	67.5	40.5	14.2	35	31.7	117	171
V5221-08M	G1/4	G1/8	20	29	21.7	22	17.6	1.5	20	23	4.3	35	67.5	40.5	14.2	35	31.7	117	171
V5231-08M	G1/4	G1/4	24	32	28	27	19.5	1.5	28	24	5.2	40	70	40.5	17.5	45	40	135	190
V5231-10M	G3/8	G1/4	24	32	28	27	19.5	1.5	28	24	5.2	40	70	40.5	17.5	45	40	135	190
V5241-10M	G3/8	G3/8	33	41	40.5	34	21.8	1.8	39	36	6	50	75	40.5	25.5	63	57	168	221
V5241-15M	G1/2	G1/2	33	41	40.5	34	21.8	1.8	39	36	6	50	75	40.5	25.5	63	57	168	221

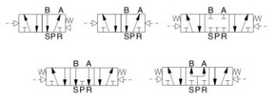
Note: The dimensions of NO type and NC type are same, the dimensions of N series and V series are same.

V series NAMUR air control valve (3/2, 5/2, 5/3 way)

VAM Series 3/2



VAM Series 5/2, 5/3



VA3231-08M

VA5231-08M

How to Order?

Series No.	Ways	Positions	Valve body size	Controls	Original status	Port size		Valve type	Valve color	Thread type
VA	3:3 ways 5:5 ways	2:2 positions 3:3 positions	1: 1 Series 2: 2 Series 3: 3 Series 4: 4 Series	1: Single control 2:Double control	Blank: NC H:NO C: Center close P: Center pressure E: Center exhaust (Only for 5/3 way)	1 Series M5: M5 06: 1/8 " 2 Series 06 : 1/8 " 08 : 1/4 "	3 Series 08: 1/4 " 10: 3/8 " 4 Series 10 : 3/8 " 15 : 1/2 "	M: NAMUR type	Blank:Black W:White	Blank: G P: PT T: NPT

Order Example:

V series air control valve, 3/2 way, 2 series valve body, NC type, single control, 1/4" port size, NAMUR valve type,white valve body, PT thread, ERP code is: VA3221-08MW-P

Specifications

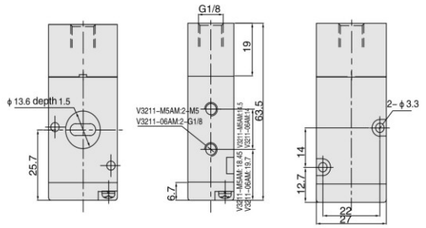
Model No.	VA3211/VA3212-M5	VA3211/VA3212-06	VA3221/VA3222-06	VA3221/VA3222-08	VA3231/VA3232-08
Working medium	Air (25um filter)				
Acting type	The external air control				
Port size	M5	1/8	In=Out=1/8	In=Out=1/4	In=Out=1/4
Sectional area	5.5mm² (Cv=0.31)	12.0mm² (Cv=0.67)	14.0mm² (Cv=0.78)	16.0mm² (Cv=0.89)	25.0mm² (Cv=1.39)
Lubrication	Not required				
Pressure range	0.15~0.8Mpa (21~114psi)				
Guarantee pressure	1.5Mpa (215psi)				
Working temperature(℃)	-20~70				
Body material	Aluminum alloy				
Max. acting frequency	5cycles/s				

Model No.	VA3231/VA3232-10	VA5211/VA5212-M5	VA5322C/P/E-M5	VA5211/VA5212-06	VA5322C/P/E-06
Working medium	Air (25um filter)				
Acting type	The external air control				
Port size	In=Out=3/8	In=Out=M5	In=Out=M5	In=Out=1/8	In=Out=1/8
Sectional area	30.0mm² (Cv=1.67)	5.5mm² (Cv=0.31)	5.0mm² (Cv=0.28)	12.0mm² (Cv=0.67)	9.0mm² (Cv=0.50)
Lubrication	Not required				
Pressure range	0.15~0.8Mpa (21~114psi)				
Guarantee pressure	1.5Mpa (215psi)				
Working temperature(℃)	-20~70				
Body material	Aluminum alloy				
Max. acting frequency	5cycles/s		3 cycles/s	5cycles/s	3 cycles/s

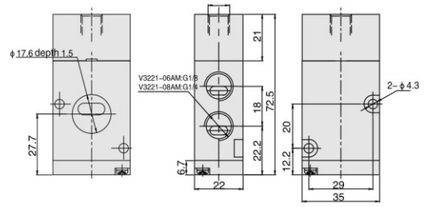
Note: The technical data of NO type and NC type are same.

Main Dimension

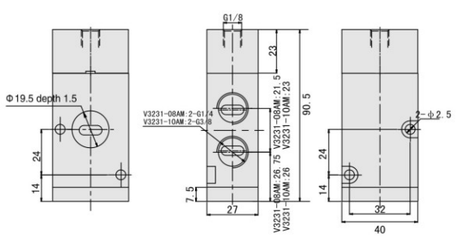
VA3211M



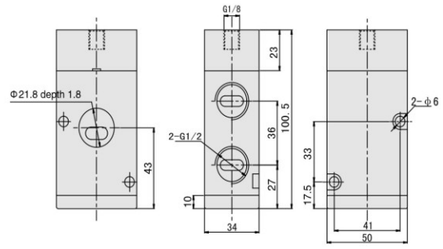
VA3221M



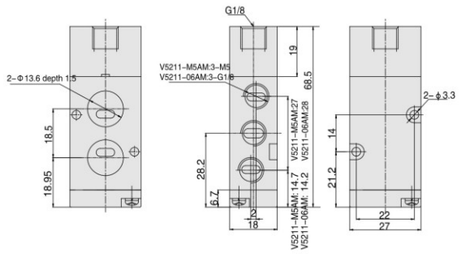
VA3231M



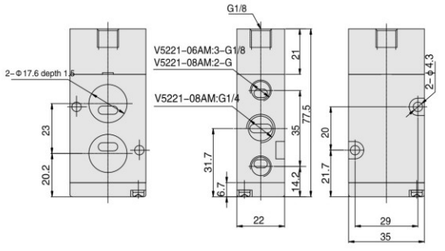
VA3241M



VA5211M

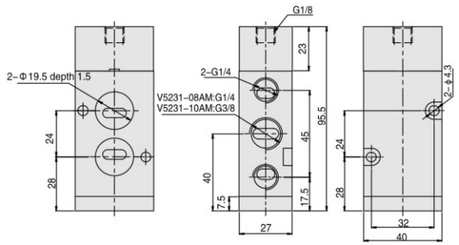


VA5221M

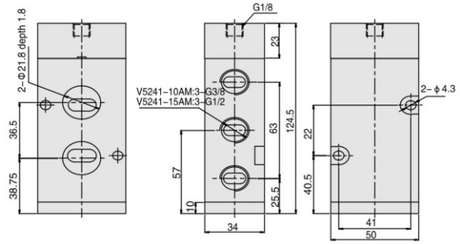


Main Dimension

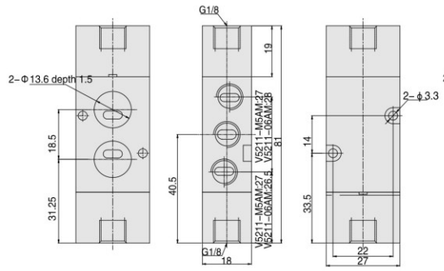
VA5231M



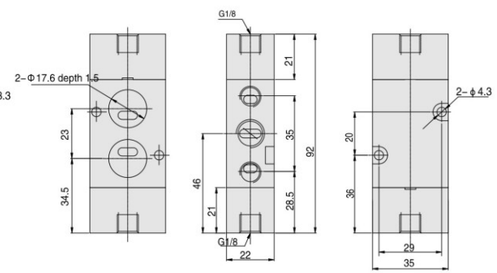
VA5241M



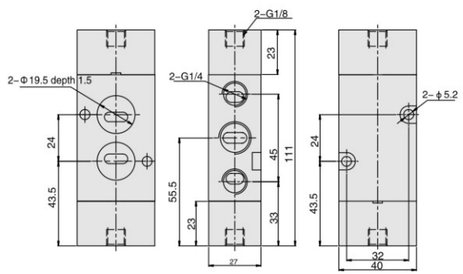
VA5212M



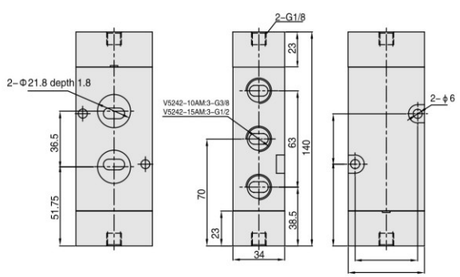
VA5222M



VA5232M

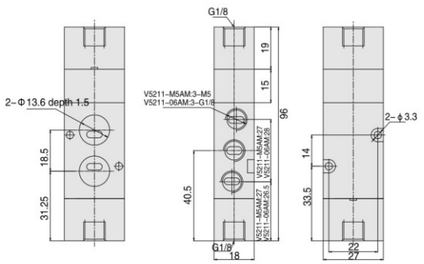


VA5242M

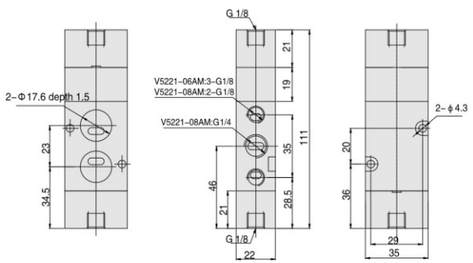


Main Dimension

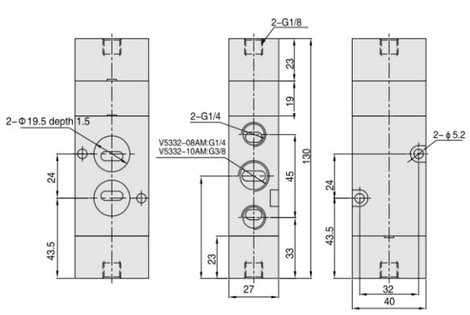
VA5312M



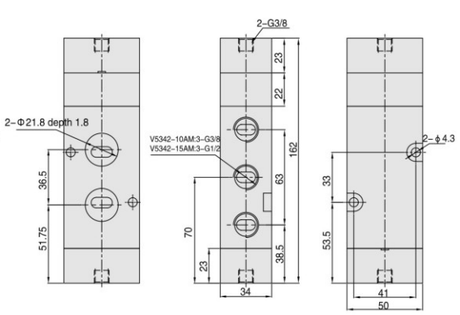
VA5322M



VA5332M

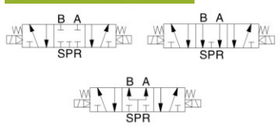


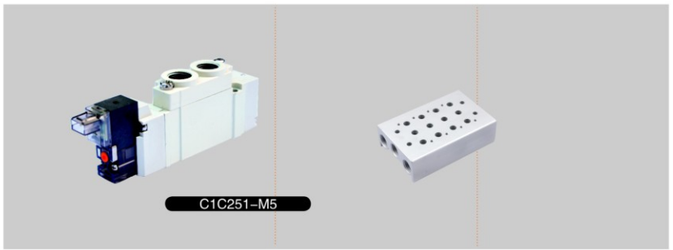
VA5342M



5/2 way

5/3 way



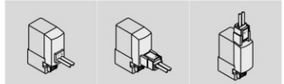


How to Order?

Series No.	Valve body size	ID Code	Positions	Ways	Controls	Original status	Port size	Voltage	Connection mode	Thread type
C	1: 1 Series 2: 2 Series	C: Energy saving type V: Standard type	2: 2 positions 3: 3 positions Note: Three position ones only with 5 ways	3:3 ways 5:5 ways	1: Single control 2:Double control Note: single acting only suitable for two positions	3/2 way Blank: NC H:NO C: Center close P: Center pressure E: Center exhaust (Only for 5/3 way)	1Series M5: M5 2Series 06 : 1/8 "	E4: DC24V E5: DC12V	L: L Type plug M: M type plug F: Flying leads	Blank: G P: PT T: NPT Note:If port size with M5 then no tread type

Electrical entry

Grommet	L plug connector	M plug connector
F: Lead wire (Length 300mm)	L: With wire (Length 300mm)	M: With wire (Length 300mm)



Order Example:

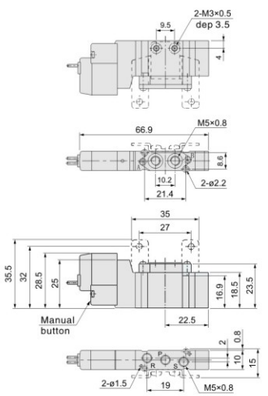
CC series compact solenoid valve, 2 series valve body, energy saving type, 3/2 way, single control, 1/8" port size, DC12V, L type plug wiring, G thread,
ERP code is: C2C231-06E5L

Specifications

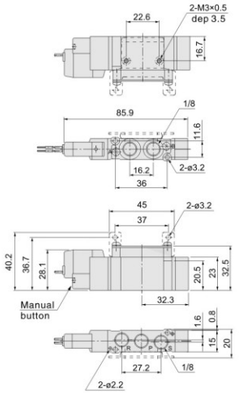
Model		C1C	C2C
Working medium		Air	
The internal pressure of the pilot work (MPa)	Two single coil	0.15~0.7	
	Two bit double coil	0.1~0.7	
	Three position	0.2~0.7	
Working temperature		-10~50(Dry air)	
The highest frequency (Hz)	The two single and double coil	10	5
	Three position	3	3
Reaction time (ms)	Two single coil	≤12	≤19
	Three position	≤15	≤32
The pilot valve exhaust		Common exhaust type for main and pilot valve	
Lubrication		Not required	
Installation		Free	
Impact resistance		150/30	
Protective structure		Anti-Dust	

Main Dimension

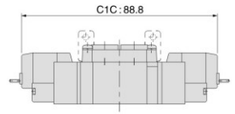
C1C251/C1V251



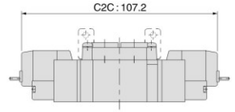
C2C251/C2V251



C1C252/C1V252



C2C252/C2V252



The connecting plate ordering

C -- 1 — N -- F

- C: C series
- 1: 1:1 Series valve body; 2:2 Series valve body
- N: 1:1 Link; 2:2 Link; 3:3 Link; .....
- F: Manifold

C series manifold, 1 series valve size, 5 linkers, Model: C1-5F

C1C Technical Data

links	2	3	4	5	6	7	8	9	10
A	40	50.5	61	71.5	82	92.5	103	113.5	124
B	30.5	41	51.5	62	72.5	83	93.5	104	114.5

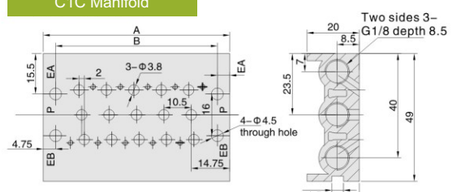
11	12	13	14	15	16	17	18	19	20
134.5	145	155.5	166	176.5	187	197.5	208	218.5	229
125	135.5	146	156.5	167	177.5	188	198.5	209	219.5

C2C Technical Data

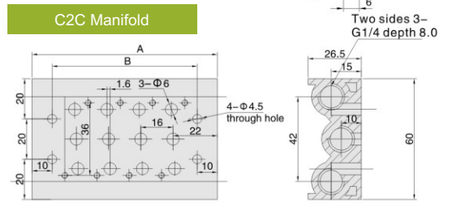
links	2	3	4	5	6	7	8	9	10
A	60	76	92	108	124	140	156	172	188
B	40	56	72	88	104	120	136	152	168

11	12	13	14	15	16	17	18	19	20
204	220	236	252	268	284	300	316	332	348
184	200	216	232	248	264	280	296	312	328

C1C Manifold



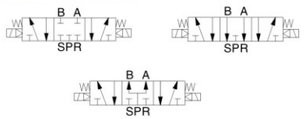
C2C Manifold



S series solenoid valve (5/2, 5/3 way)

5/2 way

5/3 way



How to Order?

Series No.	Ways	Positions	Valve body size	Controls	Original status	—	Port size	Voltage	Connection mode	—	Thread type
S: (Solenoid control) SA: (Air control)	5:5 ways	2:2 positions 3:3 positions	2: 2Series 3: 3Series 4: 4Series	1: Single control 2:Double control	C: Center close P: Center pressure E: Center exhaust (Only for 5/3 way)		2Series 08: 1/4" 3Series 10: 3/8"	E1 : AC110V E2: AC220V E4: DC24V E5: DC12V	Blank: DIN connector F: Flying leads		Blank: G P: PT T: NPT

Order Example:

S series solenoid valve,5/2 way,2 series valve body, single control, 1/4 port size,DC12V, DIN connection, G thread.

ERP code is: S5221-08E5

Note: SA series not with voltage and connection ways.

Product Features

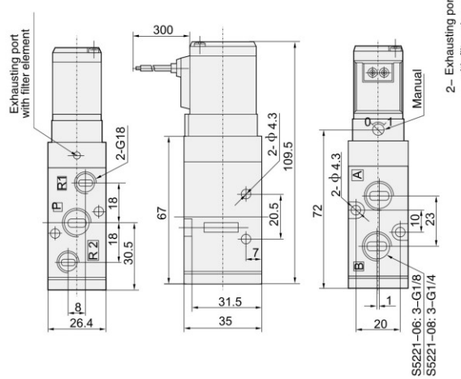
S series directional 5/2 way valves include pilot valve and air valve,the valve body from 2 series, 3 series with both flying leads type and DIN type coil.It's similar to SMC VF3/VF5 series Installed on suitable manifold, many valves can working together.

Specifications

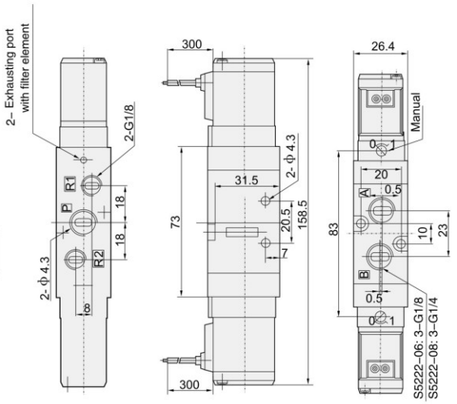
Model	S series solenoid valve	S series air valve
Working medium	Clean air(After 25 μm filteration)	
Acting type	Pilot type	External control
Sectional area (mm^2)	17.1	45
Working pressure (MPa)	0.15~0.8	
Guaranteed. pressure (MPa)	1.2	
Working temperature (℃)	-5 ~ 60	
Voltage range	-15% ~ 10%	
Standard voltage	AC: 100V, 220V, DC: 12V, 24V	-
Insulation	Class F	-
Protective class	IP65 (DIN40050)	-
Max. acting frequency	5 cycles/s	
Activate time	<0.05	
Seal	Anti-dust	
Power consumption	AC1/4" ~ 1/2" body 4.8W(AC)/4.2W(DC), 1/8"body, 2.8W (AC)/2.5W(DC)	-
	DC1/4" ~ 1/2"body 5.5 VA(AC)/4.8W(DC), 1/8" body, 3.2VA(AC)/2.8W(DC)	-
Manual operation	Screwdriver locked type	

Main Dimension

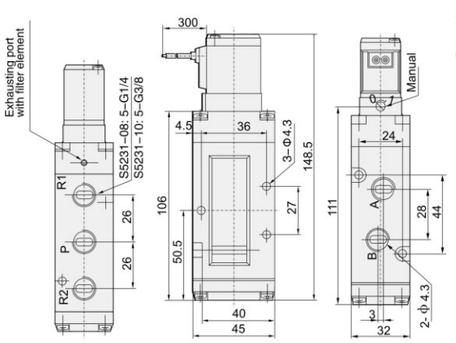
S5221-08



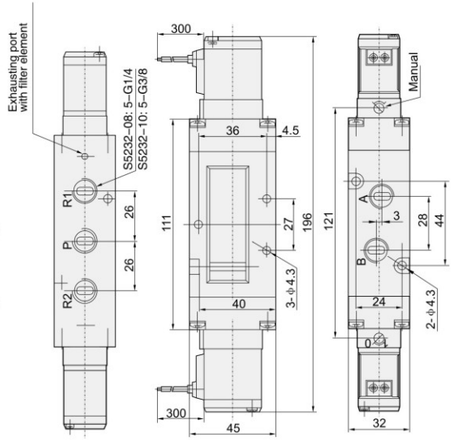
S5222-08



S5231-10

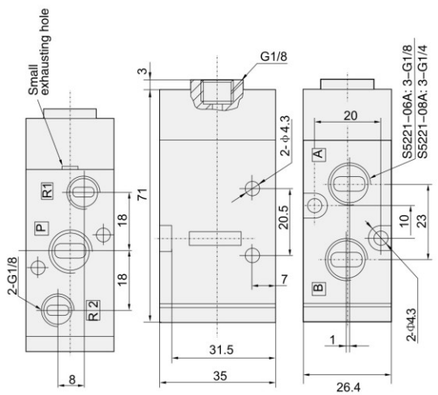


S5232-10

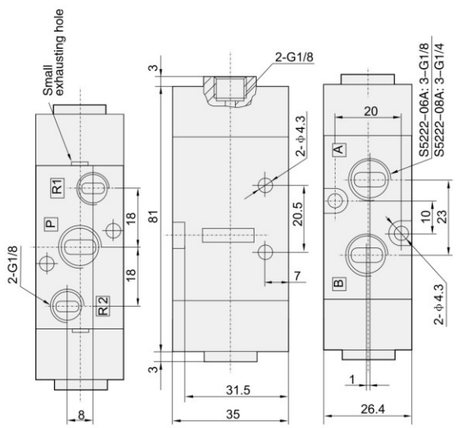


Main Dimension

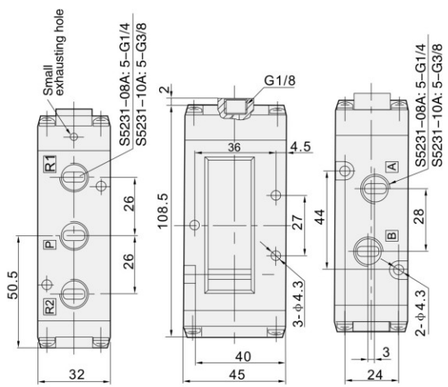
SA5221-08



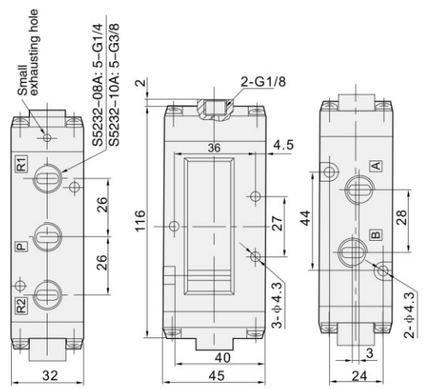
SA5222-08

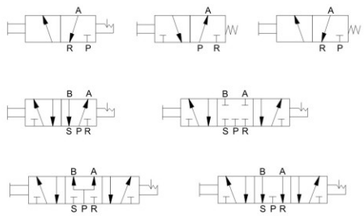


SA5231-10



SA5232-10





How to Order?

Series No.	Ways	Positions	Valve body size	Original status	Port size	Reset	Valve color	Thread type
L	3:3 ways 5:5 ways	2:2 positions 3:3 positions	1: 1 Series 2: 2 Series 3: 3 Series 4: 4 Series	Blank: NC H:NO C: Center close P: Center pressure E: Center exhaust (Only for 5/3 way)	1 Series 06: 1/8" 3 Series 08: 1/4" 10: 3/8" 2 Series 06: 1/8" 08: 1/4" 4 Series 10: 3/8" 15: 1/2"	Blank:Manual reset S:Spring return	Blank: Black W: White	Blank: G P: PT T: NPT

Order Example:

L series hand pull valve, 3/2 way, 2 series valve body, NC type, 1/4" port size, manual reset, black valve body, G thread, ERP code is: L322-08

Product Features

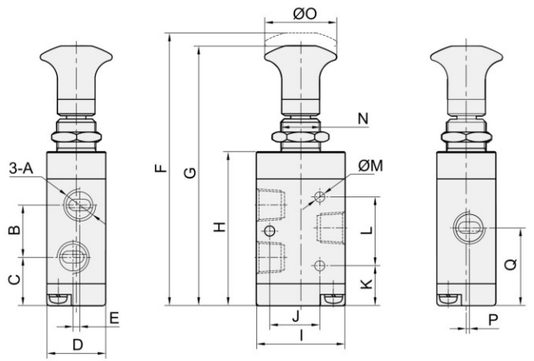
* Manual operated
* Various working styles are available
* Black color is standard color, different color are optional

Specifications

Model	L Series Hand pull valve
Working medium	Clean air(After 25 μm filteration)
Acting type	External control
Lubrication	Not required
Working pressure (MPa)	0~0.8
Guaranteed pressure (MPa)	1.2
Working temperature(℃)	-5~60

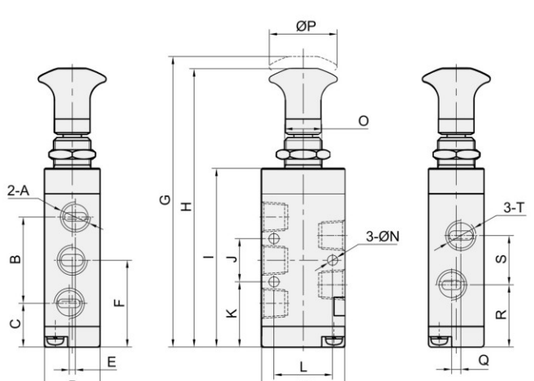
Main Dimension

L321/L322/L323/L324

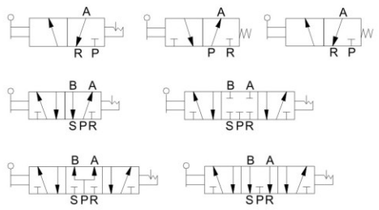


Model/ Sign	L321	L322 –06	L322 –08	L323 –08	L323 –10	L324 –10	L324 –15
A	G1/8	G1/8	G1/4	G1/4	G3/8	G3/8	G1/2
B	16	18.5	22.5	22	24	31.5	31.5
C	14.7	18.45	16.45	21.5	20.5	29.25	29.8
D	18	22	22	27	27	34	34
E	2	0	0	0	2	0	0
F	84.5	94	94	111.3	111.3	141	141
G	80.5	89.7	89.7	105.7	105.7	136	136
H	44.7	54.7	54.7	63.5	63.5	87.5	87.5
I	27	35	35	40	40	50	50
J	19	24	24	28	28	36	36
K	15.7	17.7	17.7	20.5	20.5	31	31
L	14	20	20	24	24	28	28
M	3.1	4.3	4.3	4.3	4.3	4.3	4.3
N	M14x1	M14x1	M14x1	M14x1	M14x1	M22x2.5	M22x2.5
O	22.5	22.5	22.5	32	32	32	32
P	1	0	1.5	0	2	2	2
Q	22.7	27.7	27.7	32.5	32.5	45	45

L521/L522/L523/L524



Model/ Sign	L521	L522 –06	L522 –08	L523 –08	L523 –10	L524 –10	L524 –15
A	G1/8	G1/8	G1/4	G1/4	G1/4	G3/8	G1/2
B	28	35	35	45	45	63	63
C	14.2	14.2	14.2	17.5	17.5	25.5	25.5
D	18	22	22	27	27	34	34
E	1	0	0	0	4	0	0
F	28.2	31.7	31.7	40	40	57	57
G	95.5	102	102	126.3	126.3	165	165
H	91.5	98	98	120.7	120.7	160	160
I	55.7	62.7	62.7	78.5	78.5	111.5	111.5
J	14	20	20	24	24	28	28
K	21.2	21.7	21.7	28	28	43	43
L	19	24	24	28	28	36	36
M	27	35	35	40	40	50	50
N	3.3	4.3	4.3	4.3	4.3	5.5	5.5
O	M14x1	M14x1	M14x1	M14x1	M14x1	M22x1.5	M22x1.5
P	22.5	22.5	22.5	32	32	32	32
Q	3	0	3	0	4	0	4
R	20.2	22.7	21.7	28	28	39	39
S	16	18	20	24	24	36	35.5
T	G1/8	G1/8	G1/4	G1/4	G3/8	G3/8	G1/2



How to Order?

Series No.	Ways	Positions	Valve body size	Original status	—	Port size	Reset	—	Thread type
H	3:3 ways 5:5 ways	2:2 positions 3:3 positions	1: 1 Series 2: 2 Series 3: 3 Series 4: 4 Series	Blank: NC H:NO C: Center close P: Center pressure E: Center exhaust (Only for 5/3 way)		1 Series M5：M5 06：1/8 " 2 Series 06：1/8 " 08：1/4 " 3 Series 08：1/4 " 10：3/8 " 4 Series 10：3/8 " 15：1/2 "	Blank:Manual reset S:Spring return		Blank: G P: PT T: NPT

Order Example:

H series hand push valve, 3/2 way, 2 series valve body, NC type, 1/4" port size, manual reset, black valve body, G thread, ERP code is: H322–08

Product Features

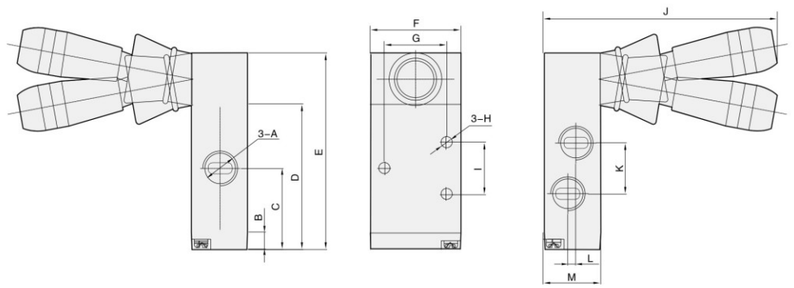
* Manual operated
* Various working style are available
* Black color is standard color, different color are optional

Specifications

Model	H Series Hand push valve
Working medium	Clean air(After 25 μm filteration)
Acting type	External control
Lubrication	Not required
Working pressure(MPa)	0~0.8
Guaranteed pressure (MPa)	1.2
Working temperature (°C)	–5~60
Seal material	NBR

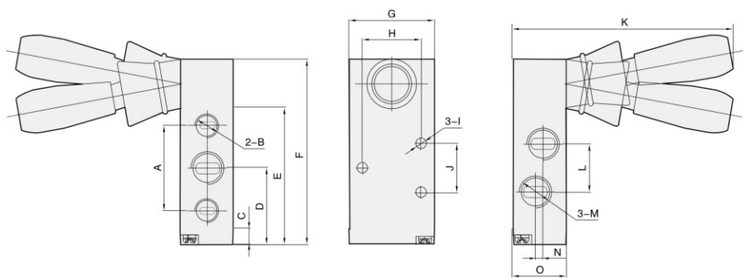
Main Dimension

H321/H322/H323/H324



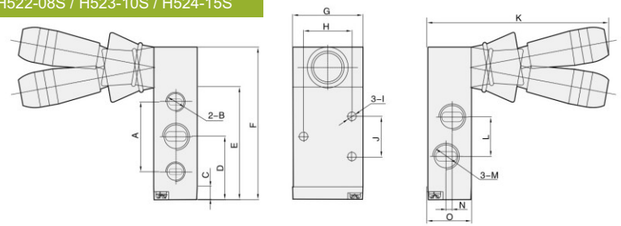
Model/Sign	A	B	C	D	E	F	G	H	I	J	K	L	M
H321–06	G1/8	6.7	23.7	38.7	58.7	27	19	Φ3.1	14	83.8	16	2	18
H322–08	G1/4	6.7	28.7	48.7	68.7	35	24	Φ4.3	20	90	22.5	0	22
H323–10	G3/8	7.5	32.5	57.5	77.7	40	28	Φ4.3	24	99.3	24	2	27
H324–15	G1/2	10	45	80	108	50	36	Φ5.5	28	105.8	31.5	0	34

H521/H522/H523/H524



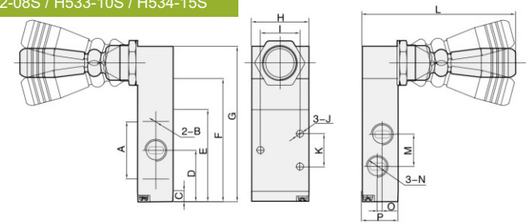
Model/Sign	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
H521–06	28	G1/8	6.7	28.2	49.7	69.7	27	19	Φ3.3	14	83.8	16	G1/8	3	18
H522–08	35	G1/8	6.7	31.7	56.7	76.7	35	24	Φ4.3	20	91.3	20	G1/4	3	22
H523–10	45	G1/4	7.5	40	72.5	92.5	40	28	Φ4.3	24	96.5	24	G3/8	4	27
H524–15	63	G1/2	10	57	104	132	50	36	Φ5.5	28	105	36	G1/2	4	34

H521-06S / H522-08S / H523-10S / H524-15S



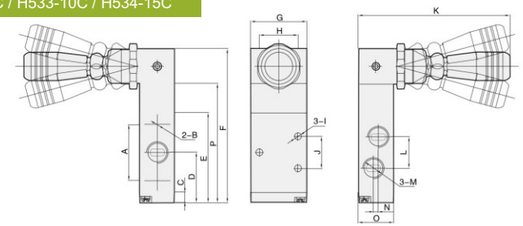
Model/Sign	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
H521–06S	28	G1/8	6.7	28.2	49.7	69.7	27	19	Φ3.3	14	87.5	16	G1/8	3	18
H522–08S	35	G1/8	6.7	31.7	56.7	76.7	35	24	Φ4.3	20	90	20	G1/4	3	22
H523–10S	45	G1/4	7.5	40	72.5	92.5	40	28	Φ4.3	24	96.5	24	G3/8	4	27
H524–15S	63	G1/2	10	57	104	132	50	36	Φ5.5	28	105.8	36	G1/2	4	34

H531-06S / H532-08S / H533-10S / H534-15S



Model/Sign	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
H531–06S	28	G1/8	6.5	28.2	49.7	64.5	84.7	27	19	Φ3.3	14	92.5	16	G1/8	3	18
H532–08S	35	G1/8	6.5	31.7	56.7	75.5	97.7	35	24	Φ4.3	20	94.2	20	G1/4	3	22
H533–10S	44	G1/4	7.5	40	72.5	91.5	113.5	40	28	Φ4.3	24	100	24	G3/8	4	27
H534–15S	63	G1/2	10	57	104	124	154	50	36	Φ5.5	28	109.6	36	G1/2	4	34

H531-06C / H532-08C / H533-10C / H534-15C



Model/Sign	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
H531–06C	28	G1/8	6.5	28.2	49.7	84.5	27	19	Φ3.3	14	94.5	16	G1/8	3	18	64.5
H532–08C	36	G1/8	6.5	31.7	56.7	97	35	24	Φ4.3	20	95.5	20	G1/4	3	22	75.5
H533–10C	44	G1/4	7.5	40	72.5	113.5	40	28	Φ4.3	24	100	24	G3/8	4	27	91.5
H534–15C	63	G1/2	10	57	104	152	50	36	Φ5.5	28	108	36	G1/2	4	34	124

M series mechanical valve (3/2, 5/2 way)

3/2 way

5/2 way

How to Order?

Series No.	Ways	Positions	—	Port size	Button type	—	Thread type
MV MJ M	3: 3 ways 5: 5 ways	2: 2 position		06：1/8 " 08：1/4 "	Blank: No button S1B: The button with arrow mark(Black) S2: Roller type S3R: Button with "Reset" mark(Red) S4G: Concave button(Green) S5R: Flat button(Red) S6R: Mushroom head button(Red) S6B: Mushroom head button(Black) Note: S1 and S3 with manual return, Others with spring return.		Blank：G P：PT T：NPT

Order Example:

M series mechanical valve, 3/2 way, 1/8" port size, with black button with arrow mark, G thread, ERP code is: M32-06S1B

Note: Button mechanical valve assembly comprising: a Button component, the mounting bracket, under mounting brackets and mounting screws.

Product Features

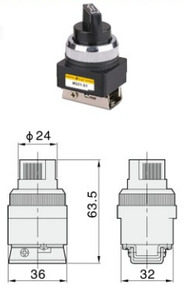
* Black color is standard color, different colors are optional
* Controlled by mechanical force
* Various buttons are available

Specifications

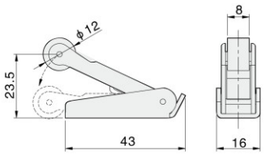
Model	MS32-06	MJ32-08	M32-08	M52-08
Working medium	Clean air(After 25 μm filteration)			
Acting type	External control			
Lubrication	Not required			
Working pressure (MPa)	0~0.8			
Guaranteed pressure (MPa)	1.2			
Working temperature (℃)	-5~60			
Max. acting frequency	5 cycles/s			
Port size	1/8 , 1/4			

Main Dimensions for Button

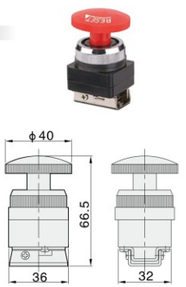
S1



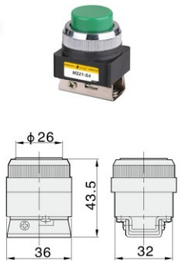
S2



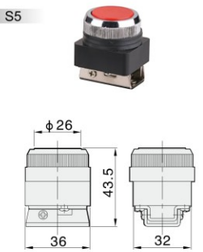
S3



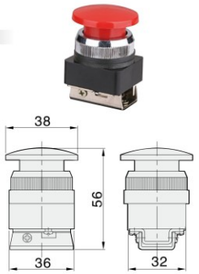
S4



S5



S6



Main Dimension

Mv32 Series

MV32-06S1

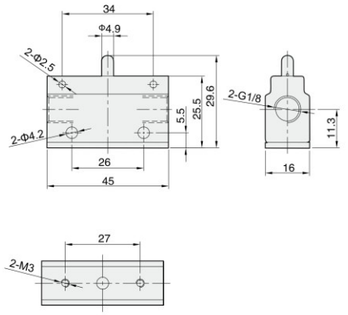
MV32-06S2

MV32-06S3

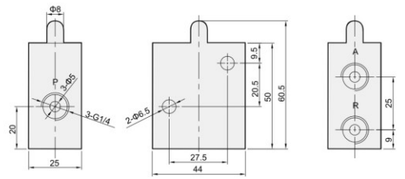
MV32-06S4

MV32-06S5

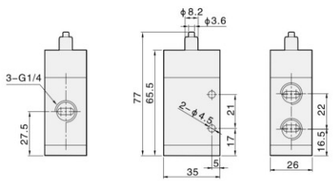
MV32-06S6



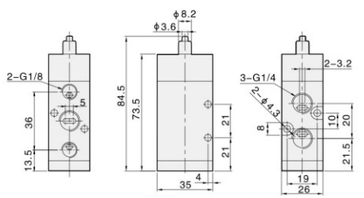
MJ32 Series

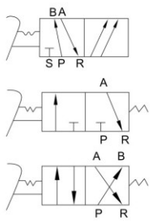


M32 Series



M52 Series





How to Order?

Series No.	Ways	Positions	Valve body size	Type	—	Port size	Valve type	—	Thread type
F: F series foot valve	3: 3 ways 4: 4 ways 5: 5 ways	2: 2 position	2: 2 series	Blank: No cover C:With cover		06：1/8 " 08：1/4 "	Blank: Basic type L: With lock N: New valve body LB: With lock,big valve body		Blank: G P: PT T: NPT

Order Example:

F series foot valve, 5/2 way, 2 series valve body, without cover, 1/4" port size, with lock, G thread, ERP code is: F522-08L

Product Features

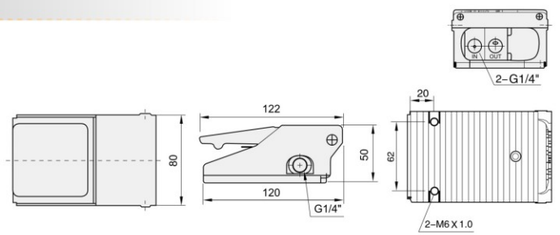
* Strong design and work in harsh environment
* Various types are available

Specifications

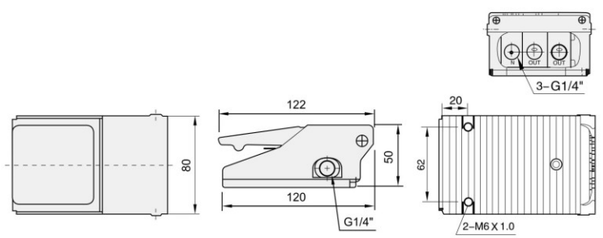
Model	F322	F422	F522
Working medium	Clean air(After 25 μm filteration)		
Acting type	External control		
Lubrication	Not required		
Working pressure (MPa)	0~0.8		
Max pressure (MPa)	1.2		
Working temperature (℃)	-5~60		
Port size	1/8 " , 1/4 "		

Main Dimension

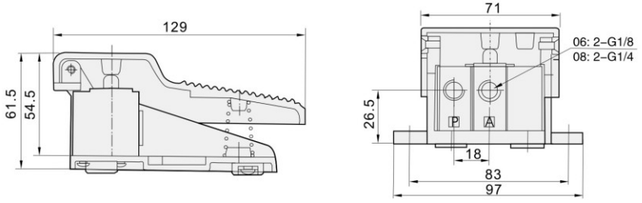
F322-08



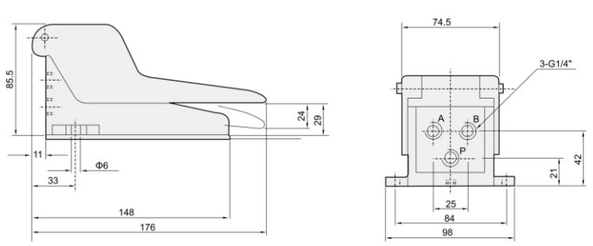
F422-08



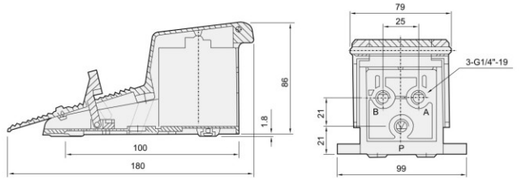
F322-08N



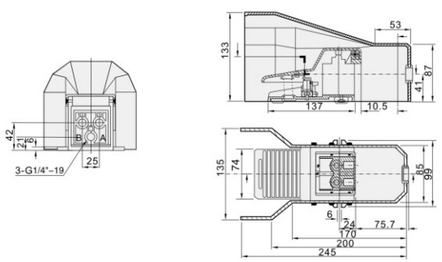
F522-08N



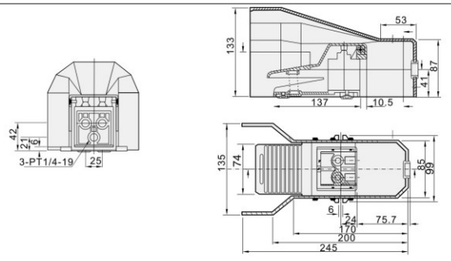
F522-08L



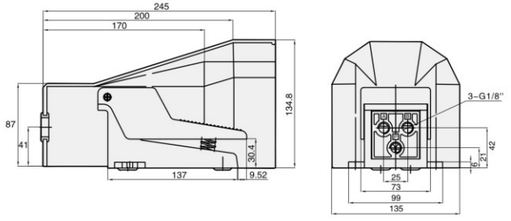
F522C-08L



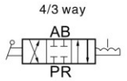
F522C-08



F522C-06LB



4/3 way



How to Order?

Series No.	Ways	Positions	Valve body size	—	Port size	—	Thread type
M: M series U: U series R: R series MR: MR series	4: 4 ways	3: Three position	2:2 series		08: 1/4 " 10: 3/8 " 15: 1/2 "		Blank: G P: PT T: NPT

Order Example:

R series hand switch valve, 4/3 way, 2 series valve body, G thread,
ERP code is: R432-08

Product Features

* Different types are available
* MR series valve is the valve with longer lifetime and the better performance
* Sizes are from 1/4" to 1/2"

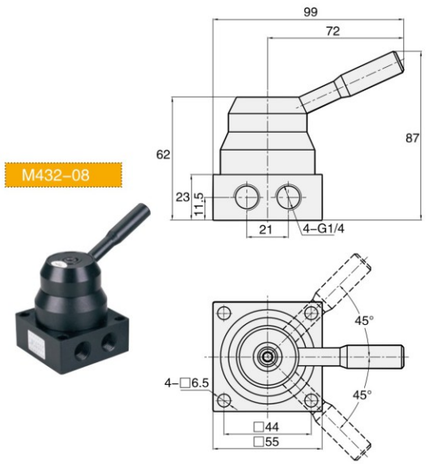
Specifications

Model	M432	U432	R432	MR432
Working medium	Clean air(After 25 μm filteration)			
Acting type	External control			
Lubrication	Not required			
Working pressure (MPa)	0~1.0			
Guaranteed pressure (MPa)	1.5			
Working temperature (℃)	-5~60			
Port size	1/4 " , 3/8 " , 1/2 "			

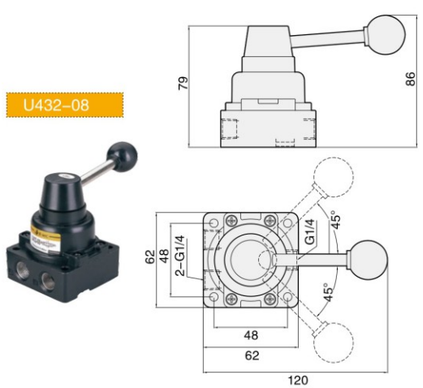
* Note:R432 series also have "bottom thread" type

Main Dimension

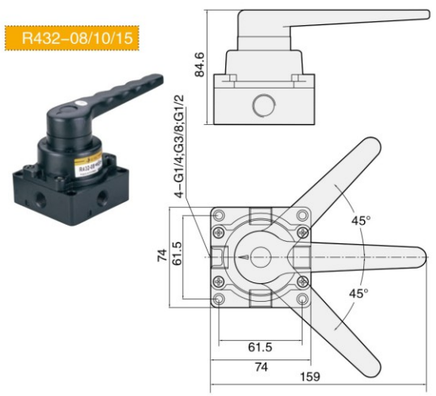
M432-08



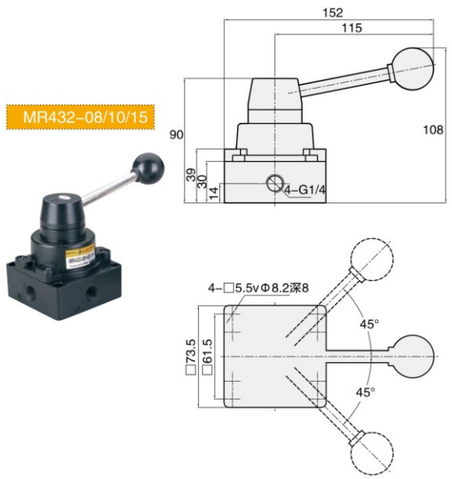
U432-08

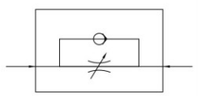


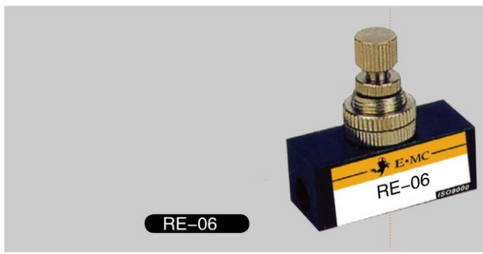
R432-08/10/15

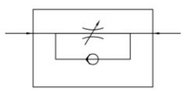


MR432-08/10/15









How to Order?

Series No. — Port size — Tooth type code

RE: Flow control valve

06：1/8 "
08：1/4 "
10：3/8 "
15：1/2 "

Blank: G
P: PT
T: NPT

Order Example:

RE series flow control valve, 1/4" port size, G thread, the ERP code is: RE-08

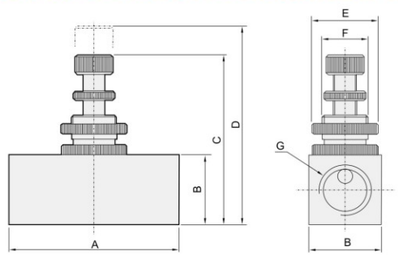
Product Features

* Normally, it isn't used in pneumatic system separately, always used with main valve together, offering a good assistance for main valve to control the whole system, so the system can work very well.

Specifications

Model	RE-06	RE-08	RE-10	RE-15
Working medium	Clean air(After 25 μm filteration)			
Lubrication	Not required			
Working pressure (MPa)	0.05~1.0			
Guaranteed pressure (MPa)	1.5			
Working temperature (℃)	-5~60			
Port size	1/8	1/4	3/8	1/2

Main Dimension



Model	A	B	C	D	E	F	G
RE-06	45	19	43	50	ϕ19	M14X1	G1/8
RE-08	45	19	43	50	ϕ19	M14X1	G1/4
RE-10	55	25	55	62	ϕ25	M18X1	G3/8
RE-15	55	25	55	62	ϕ25	M18X1	G1/2

How to Order?

Series No. — Port size — Tooth type code

BRE: The large flow control valve

06：1/8 "
08：1/4 "
10：3/8 "
15：1/2 "

Blank: G
P: PT
T: NPT

Order Example:

BRE series large flow control valve, 1/4" port size, G thread, ERP code is: BRE-08

Product Features

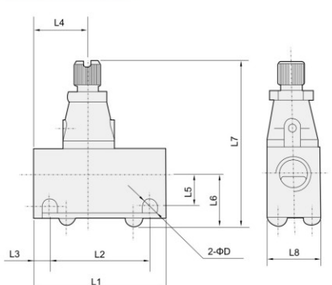
* Normally, it isn't used in pneumatic system separately, always used with main valve together, offering a good assistance for main valve to control the whole system, so the system can work very well.

Specifications

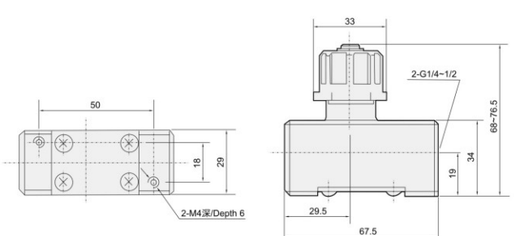
Model	BRE-06	BRE-08	BRE-10	BRE-15
Working medium	Clean air (After 40 micron filteration)			
Working pressure (MPa)	0.05~1.0			
Max. pressure resistance (MPa)	1.5			
Working temperature (℃)	-5~60			
Sizes available	1/8－1/2			

Main Dimension

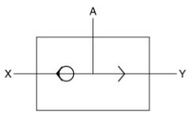
BRE-06/08/10



BRE-15

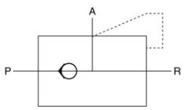


Model	Port Size	L1	L2	L3	L4	L5	L6	L7	L8	D
BRE-06	G1/8	40	30	5	17	10	15.5	50－54.5	16	4.5
BRE-08	G1/4	40	30	5	23	11.5	17	51.5－56	20	4.5
BRE-10	G3/8	56	45.5	5.25	25	13.2	21	62－69	26	5.5



ES-06

KKP-08



How to Order?

Series No.	—	Port size	—	Tooth type code
ES: Shuttle valve		06：1/8 " 08：1/4 " 10：3/8 "	15：1/2 " 20：3/4 " 25：1 "	Blank: G P: PT T: NPT

Order Example:

ES series shuttle valve, 1/4" port size, G thread, ERP code is: ES-08

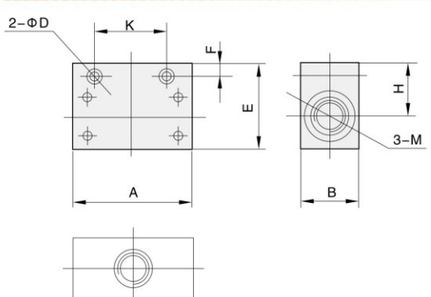
Product Features

* Normally, it isn't used in pneumatic system separately, always used with main valve together, offering a good assistance for main valve to control the whole system, so the whole system can work very well.

Specifications

Model	ES-06	ES-08	ES-10	ES-15	ES-20	ES-25
Working medium	Clean air(After 25 μm filteration)					
Lubrication	Not required					
Working pressure (MPa)	0.05~0.8					
Guaranteed pressure (MPa)	1.2					
Working temperature (℃)	-5~60					
Port size	1/8	1/4	3/8	1/2	3/4	1

Main Dimension



Model	Port Size	A	K	B	E	H	F	D	Thread
ES-6	6	52	36	25	42	28	9	4.8	M10x1(G1/8)
ES-8	8	52	36	25	42	28	9	4.8	M12x1.25(G1/4)
ES-10	10	70	48	36	52	34	10	7	M16x1.5(G3/8)
ES-15	15	70	48	36	52	34	10	7	M20x1.5(G1/2)
ES-20	20	110	72	55	76	49	12	7	M27x2(G3/4)
ES-25	25	110	72	55	76	49	12	7	M33x2(G1)

How to Order?

Series No.	—	Port size	—	Tooth type code
KKP: Quick exhaust valve		06：1/8 " 08：1/4 "	10：3/8 " 15：1/2 "	Blank: G P: PT T: NPT

Order Example:

KKP quick exhaust valve. 1/4" port size, G thread, ERP code is: KKP-08

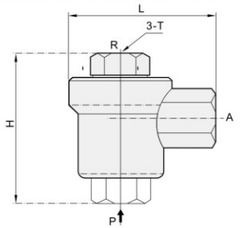
Product Features

* Normally, it isn't used in pneumatic system separately, always used with main valve together, offering a good assistance for main valve to control the whole system, so the system can work very well.

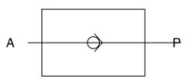
Specifications

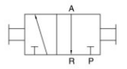
Model	KKP-06	KKP-08	KKP-10	KKP-15
Working medium	Clean air (After 25 μm filteration)			
Working pressure (MPa)	0.15~0.8			
Guaranteed. pressure resistance (MPa)	1.2			
Working temperature (℃)	-5~60			
Port size	1/8 - 1/2			

Main Dimension



Model	T	H	L
KKP-6	G1/8	37	41.5
KKP-8	G1/4	51	45
KKP-10	G3/8	68	62
KKP-15	G1/2	77	86





How to Order?

Series No. — Port size — Tooth type code

EA: one-way valve

06: 1/8" 15: 1/2"
08: 1/4" 20: 3/4"
10: 3/8" 25: 1"

Blank: G
P: PT
T: NPT

Order Example:

EA series one way valve. 1/4" port size, G thread, ERP code is : EA-08

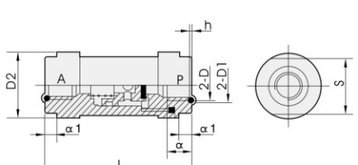
Product Features

* Normally, it isn't used in pneumatic system separately, always used with main valve together, offering a good assistance for main valve to control the whole system, so the system can work very well.

Specifications

Model	EA-06	EA-08	EA-10	EA-15	EA-20	EA-25
Working medium	Clean air(After 25 μm filteration)					
Lubrication	Not required					
Working pressure (MPa)	0.05~0.8					
Guaranteed pressure (MPa)	1.2					
Working temperature (℃)	-5~60					
Port size	1/8	1/4	3/8	1/2	3/4	1

Main Dimension



Model	Port size	D	D1	D2	S	L	α	α1	H
EA-6	6	G1/8 M10×1	ϕ13	ϕ25	24	64	10	6	1.4 $^{0}_{0.1}$
EA-8	8	G1/4 M12×1.5	ϕ16	ϕ25	24	64	12	6	1.4 $^{0}_{0.1}$
EA-10	10	G3/8 M16×1.5	ϕ20	ϕ38	36	86	14	8	1.8 $^{0}_{0.1}$
EA-15	15	G1/2 M20×1.5	ϕ26	ϕ38	36	86	14	8	1.8 $^{0}_{0.1}$
EA-20	20	G3/4 M27×2	ϕ32	ϕ50	46	112	21	10	1.8 $^{0}_{0.1}$
EA-25	25	G1 M33×2	ϕ40	ϕ50	46	112	23	10	2.7 $^{0}_{0.12}$
EA-32	32	G1-1/4 M42×2	ϕ48	ϕ88	75	161	25	18	2.7 $^{0}_{0.12}$
EA-40	40	G1-1/2 M48×2	ϕ54	ϕ88	75	161	26	18	2.7 $^{0}_{0.12}$
EA-50	50	G2 M60×2	ϕ70	ϕ115	90	200	26	26	4.5 $^{0}_{0.18}$

How to Order?

Series No. — Port size — Type — Tooth type code

YHS: Slide valve

06: 1/8" 15: 1/2"
08: 1/4" 20: 3/4"
10: 3/8" 25: 1"

Blank: Standard type
MM: Double male thread type
FF:Double female thread type
MF:One male and the other female type

Blank: G
P: PT
T: NPT

Order Example:

YHS slide valve,1/4" port size, double male thread type, G thread ,ERP code is: YHS-08MM

Product Features

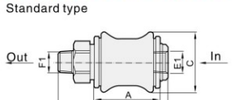
* Generally do not separate in pneumatic systems use, Usually use and the main valve.Provide a good help to the overall control of the main valve,In order to complete the control function of the whole system.

Specifications

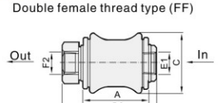
Model	YHS-06	YHS-08	YHS-10	YHS-15	YHS-20	YHS-25
Working medium	Clean air(After 25 μm filteration)					
Acting type	External control					
Lubrication	Not required					
Working pressure (MPa)	0~1.0					
Guaranteed pressure (MPa)	1.5					
Working temperature (℃)	-5~60					
Port size	1/8	1/4	3/8	1/2	3/4	1

Main Dimension

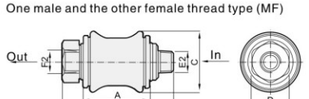
Standard type



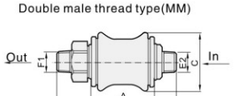
Double female thread type (FF)



One male and the other female thread type (MF)



Double male thread type(MM)



Model	A	B1	B2	B3	B4	C
YHS06	30	50	43	50	57	27.5
YHS08	32.5	58	47	58	69	30
YHS10	39	68.5	55.5	68.5	81.5	35.5
YHS15	50	85.5	70.5	85.5	100.5	44
YHS20	58	96.5	79.5	96.5	113.5	53.5
YHS25	70	114.5	96.5	114.5	132.5	65.5

Model	D	E1	E2	F1	F2
YHS06	17	G1/8	G1/8	G1/8	G1/8
YHS08	19	G1/4	G1/4	G1/4	G1/4
YHS10	22	G3/8	G3/8	G3/8	G3/8
YHS15	30	G1/2	G1/2	G1/2	G1/2
YHS20	36	G3/4	G3/4	G3/4	G3/4
YHS25	44	G1	G1	G1	G1

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