

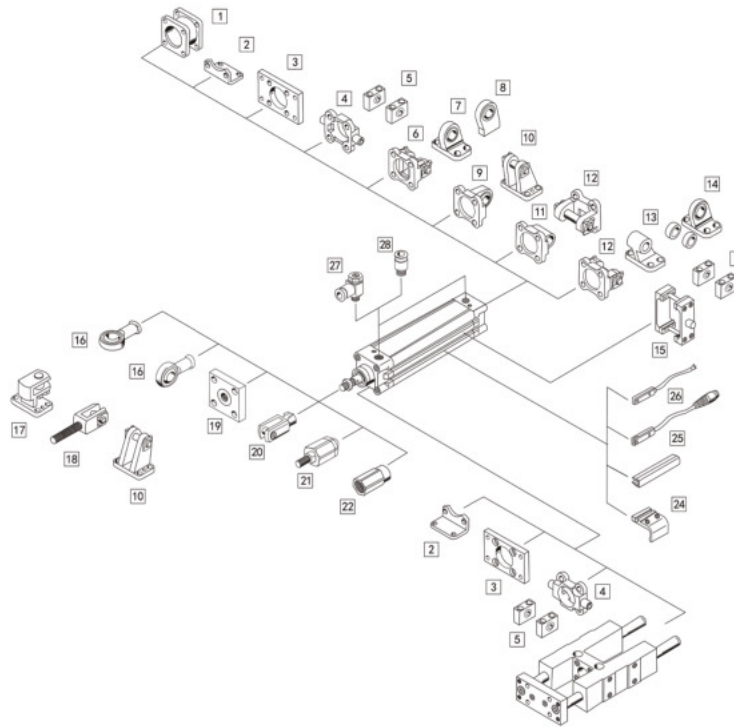
6

# PNEUMATIC CYLINDERS



# Technical Data 5

## Cylinder Peripheral Component



## Air cylinder theory force table

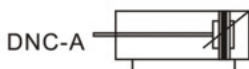
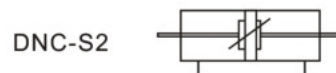
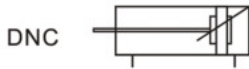
Bore (mm)	OD of rod (mm)	Acting type	Actual working area (mm <sup>2</sup> )	Working pressure (MPa)									
				0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	
32	12	Double acting	Push force	804	80.4	160.8	241.2	321.6	402.0	482.4	562.8	643.2	723.6
			Pull force	690	69.0	138.0	207.0	276.0	345.0	414.0	483.0	552.0	621.0
40	16	Double acting	Push force	1256	125.6	251.2	376.8	502.4	628.0	753.6	879.2	1002.4	1130.4
			Pull force	1055	105.5	211.0	316.5	422.0	527.5	633.0	738.5	844.0	949.5
50	20	Double acting	Push force	1963	196.3	392.6	588.9	785.2	981.5	1177.8	1374.1	1570.4	1766.7
			Pull force	1649	164.9	329.8	494.7	659.6	824.5	989.4	1154.3	1399.2	1484.1
63	20	Double acting	Push force	3117	311.7	623.4	935.1	1246.8	1558.5	1870.2	2181.9	2493.6	2805.3
			Pull force	2803	280.3	560.6	840.9	1121.2	1401.5	1681.8	1962.1	2242.4	2522.7
80	25	Double acting	Push force	5026	502.6	1005.2	1507.8	2010.4	2513.0	3015.6	3518.2	4020.8	4523.4
			Pull force	4536	453.6	907.2	1360.8	1814.4	2268.0	2721.6	3175.2	3628.8	4082.4
100	25	Double acting	Push force	7853	785.3	1570.6	2355.9	3141.2	3926.5	4711.8	5497.1	6282.4	7067.7
			Pull force	7362	736.2	1472.4	2208.6	2948.6	3681.0	4417.2	5153.4	5889.6	6625.8
125	32	Double acting	Push force	12272	1227.2	2454.4	3681.6	4908.8	6136.0	7363.2	8590.4	9817.6	11044.8
			Pull force	11468	1146.8	2293.6	3440.4	4587.2	5734.0	6880.8	8027.6	9174.4	10321.2
160	40	Double acting	Push force	2106	210.6	402.2	603.8	804.4	1005.0	1206.3	1407.2	1608.4	1809.4
			Pull force	18849	1884.9	3769.8	5654.7	7539.6	9424.5	11309.4	13194.3	15079.2	16964.1
200	40	Double acting	Push force	31416	3141.6	6283.2	9424.8	12566.4	15708.0	18849.6	21991.2	25132.8	28274.4
			Pull force	30157	3015.7	6031.4	9047.1	12062.8	15078.5	18094.2	21109.9	24125.6	27141.3

# DNC Series ISO6431 Standard Cylinder

## Ordering Code

## DNC Series ISO6431 Standard Cylinder

<b>DNC</b>	<b>32</b>	<b>X</b>	<b>50</b>	<b>20</b>	<b>PPV</b>	<b>A</b>	<b>S2</b>
Series Code	Bore		Stroke	Adjustable Stroke	Cushion	Magne	Type
VAM: One Way Valve				10:10mm 20:20mm 30:30mm 40:40mm 50:50mm 75:75mm 100:100mm	Blank: No Cushion PPV: With Cushion	Blank: Without Magnet A: With Magnet	Blank: Standard Cylinder S2: Double - shaft type



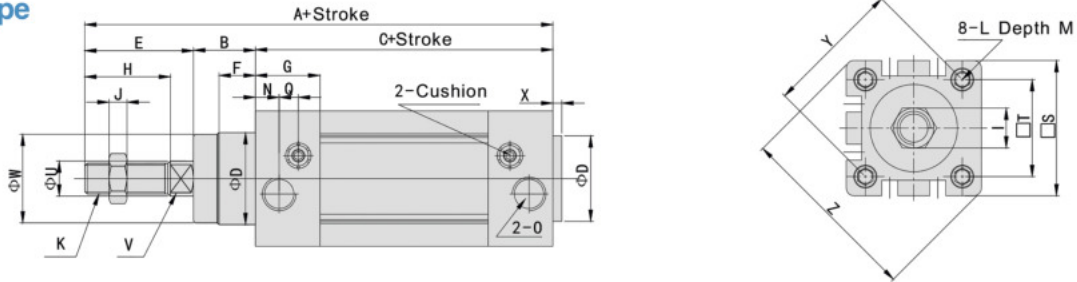
## Specifications

<b>Bore (mm)</b>	32	40	50	63	80	100	125
<b>Acting type</b>	Double acting						
<b>Working medium</b>	Clean air (40µm Filtration)						
<b>Mounting type</b>	DNC Series	Basic type FA FB CA CB CR LB TC TC-M					
	DNC- S2 Series	Basic type FA LB TC TC- M					
<b>Working pressure range</b>	0.1~1.0MPa						
<b>Guaranteed pressure</b>	1.35MPa						
<b>Working temperature</b>	- 5~70°C						
<b>Speed range</b>	50~800mm/s						
<b>Cushion type</b>	Adjustable cushion						
<b>Cushion stroke</b>	24mm			32mm			
<b>Working life</b>	≥4000Km						
<b>Port size</b>	G1/8	G1/4		G3/8		G1/2	

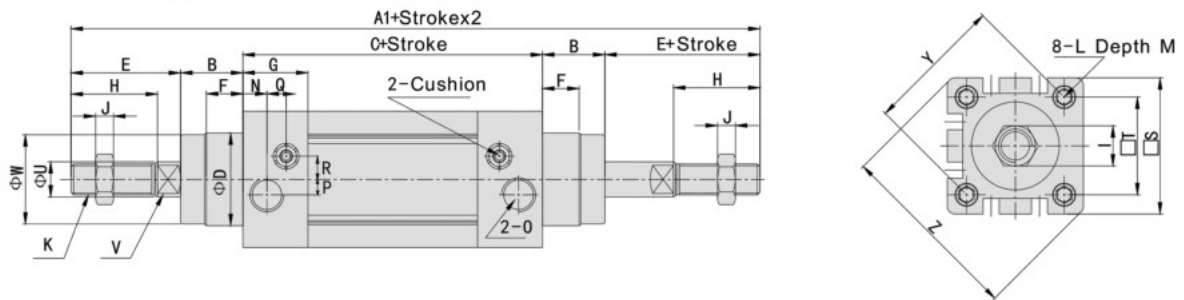
# DNC Series ISO6431 Standard Cylinder

## Main Dimensions

### DNC Basic type



### DNC-S2 Double shaft type



Bore	Sign	A	A1	A2	B	C	D	E	F	G	H	I	J	K
	32		142	190	185	16	94	30	32	10	25	22	17	
40		159	213	207	20	105	35	34	10	29.5	24	17	7	M12X1.25
50		175	244	233	27	106	40	42	10	32	32	23	8	M16X1.5
63		190	258	247	26	122	45	42	10	36	32	23	8	M16X1.5
80		214	301	288	35	127	45	52	10	37	40	26	10	M20X1.5
100		229	321	308	40	137	55	52	10	39	40	26	10	M20X1.5
125		279	352	-	46	160	60	73	20.5	44.7	54	-	-	M27X2

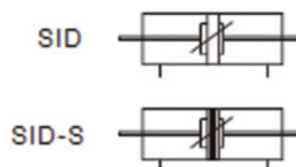
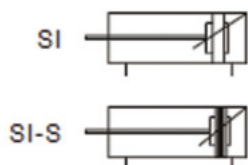
Bore	Sign	M	N	O	P	Q	R	S	T	U	V	W	X	L	Z
	32		12	15	G1/8	5	3	6.5	45	32.5	12	10	28	4	M6
40		12	17.5	G1/4	7	3	7	52	38	16	13	33	4	M6	21
50		12	21	G1/4	7	3	9	65	46.5	20	17	38	4	M8	23
63		12	23	G3/8	8	5	9	76	56.5	20	17	40	4	M8	23
80		12	24	G3/8	10	5	12	94	72	25	22	43	5	M10	29
100		12	26	G1/2	10	5	14	112	89	25	22	47	6	M10	29
125		-	22.3	G1/2	13	8	16	134	110	32	27	58	6	M12	-

# SI Series ISO6431 Standard Cylinder

## Ordering Code

## DNC Series ISO6431 Standard Cylinder

<b>SI</b>	<b>50</b>	<b>X</b>	<b>50</b>	<b>S</b>	<b>20</b>	<b>LB</b>
Series Code	Bore	Stroke	Magnet	Adjustable Stroke	Mounting type	
SI: Standard cylinder SID: Double-shaft type			Blank: Without Magnet S: With Magnet	10:10mm 50:50mm 20:20mm 75:75mm 30:30mm 100:100mm 40:40mm	Blank: Standard Cylinder LB: Leg mounting FA: Front rear plate mounting FB: Front rear plate mounting CA: Single trunnion mounting CB: Double trunnion mounting CR: Double trunnion with Hinge TC: Centre trunnion mounting	



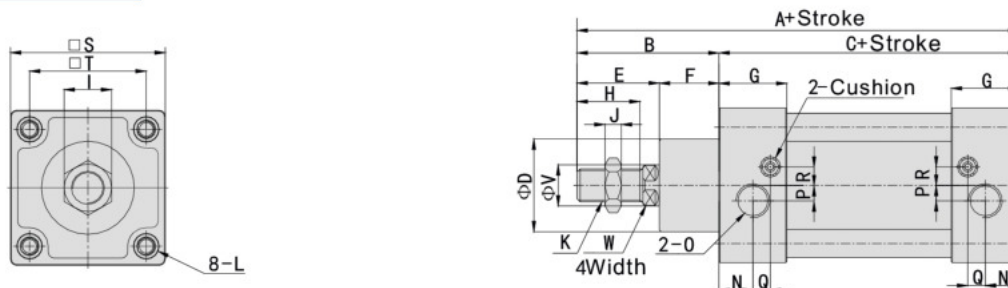
## Specifications

Bore (mm)		32	40	50	63	80	100	125	160	200
Acting type		Double acting								
Working medium		Clean air (40µm Filtration)								
Mounting type	SI Series	Basic type FA FB CA CB LB TC TC-M1 TC-M2								
	SID Series	Basic type FA LB TC TC-M1 TC-M2								
	SIJ Series	Basic type FA LB TC TC-M1 TC-M2								
Working pressure range		0.1~1.0MPa								
Guaranteed pressure		1.5MPa								
Working temperature		5~70°C								
Speed range		SI Series: 50~800mm/s Other- Series: 30-800mm/s								
Cushion type		Adjustable cushion								
Cushion stroke		27mm	30mm	36mm	40mm	50mm				
Working life		≥4000Km								
Port size		G1/8	G1/4	G3/8	G1/2	G3/4				

# SI Series ISO6431 Standard Cylinder

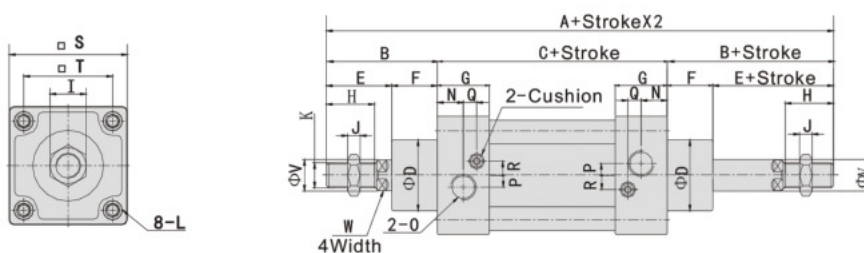
## Main Dimensions

### Basic type



Sign Bore	Sign																				
	A	B	C	D	E	F	G	H	I	J	K	L	N	O	P	Q	R	S	T	V	W
32	142	48	94	30	32	16	28	22	17	6	M10X1.25	M6	13.5	G1/8	4	7.5	7	47	32.5	12	10
40	159	54	105	35	36	18	29	24	19	7	M12X1.25	M6	16	G1/4	6	9.5	9	53	38	16	13
50	175	69	106	40	44	25	31	32	24	8	M16X1.5	M8	18.5	G1/4	8.5	6.7	9	65	46.5	20	17
63	190	69	121	45	44	25	32	32	24	8	M16X1.5	M8	19	G3/8	6	7.7	9	75	56.5	20	17
80	214	86	128	45	56	30	35	40	30	10	M20X1.5	M10	19	G3/8	10	5	13.5	95	72	25	22
100	229	91	138	55	59	32	36	40	30	10	M20X1.5	M10	18	G1/2	12.5	10	14.5	115	89	25	22
125	279	119	160	60	74	45	46	54	41	13.5	M27X2	M12	23	G1/2	14	12	14	140	110	32	27
160	332	152	180	65	94	58	50	72	55	18	M36X2	M16	25	G3/4	15	12	20	180	140	40	36
200	347	167	180	75	107	60	50	72	55	18	M36X2	M16	25	G3/4	15	12	20	220	175	40	36

### Double shaft type



Sign Bore	Sign																				
	A	B	C	D	E	F	G	H	I	J	K	L	N	O	P	Q	R	S	T	V	W
32	190	48	94	30	32	16	28	22	17	6	M10X1.25	M6	13.5	G1/8	4	7.5	7	47	32.5	12	10
40	213	54	105	35	36	18	29	24	19	7	M12X1.25	M6	16	G1/4	6	9.5	9	53	38	16	13
50	244	69	106	40	44	25	31	32	24	8	M16X1.5	M8	18.5	G1/4	8.5	6.7	9	65	46.5	20	17
63	259	69	121	45	44	25	32	32	24	8	M16X1.5	M8	19	G3/8	6	7.7	9	75	56.5	20	17
80	300	86	128	45	56	30	35	40	30	10	M20X1.5	M10	19	G3/8	10	5	13.5	95	72	25	22
100	320	91	138	55	59	32	36	40	30	10	M20X1.5	M10	18	G1/2	12.5	10	14.5	115	89	25	22
125	398	119	160	60	74	45	46	54	41	13.5	M27X2	M12	23	G1/2	14	12	14	140	110	32	27
160	484	152	180	65	94	58	50	72	55	18	M36X2	M16	25	G3/4	15	12	20	180	140	40	36
200	514	167	180	75	107	60	50	72	55	18	M36X2	M16	25	G3/4	15	12	20	220	175	40	36

# DNC/SI ISO6431 Standard Cylinder Brackets

## Ordering Code

SI - 50 - FA

ISO 6431 Standard      Bore

**Brackets type**

- LB: Leg mounting
- FA: Front plate mounting
- FB: Rear plate mounting
- CA: Single trunnion mounting
- CB: Double trunnion mounting
- CR: Double trunnion with hinge mounting
- TC: Centre trunnion mounting
- Y: Y fitting
- I: I fitting
- F: Floating fitting
- B: Bearing fitting

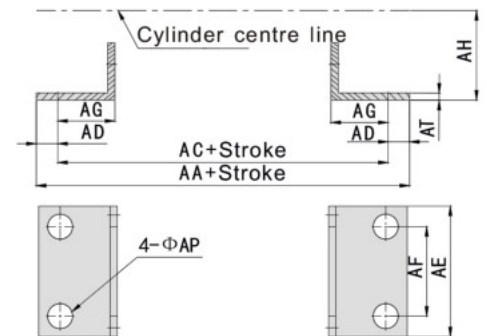
Cylinder		SI	SID	SIJ
<b>Mounting Type</b>	LB	○	○	○
	FA	○	○	○
	FB	○	×	×
	CA	○	×	×
	CB	○	×	×
	CR	○	○	○
	TC	○	○	○
	TC-M1	○	○	○
	TC-M2	○	○	○
	<b>Rod end fitting type</b>	I	○	○
Y		○	○	○
F		○	○	○
B		○	○	○

Note: ISO standard accessories, only suitable for DNC, SI etc ISO6431 series standard cylinder.

## Main Dimensions

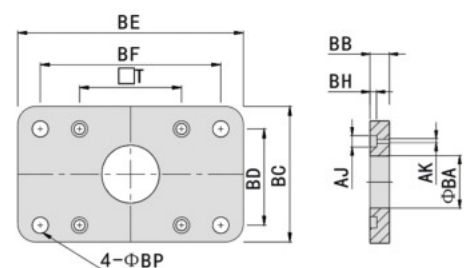
### LB

Brackets \ Cylinder	32	40	50	63	80	100	125	160	200
AA	158	179	190	209	248	258	290	340	380
AC	142	161	170	185	210	220	250	300	320
AD	8	9	10	12	19	19	20	20	30
AE	48	53	63	73	98	115	140	180	220
AF	32	36	45	50	63	75	90	115	135
AG	24	28	32	32	41	41	45	60	70
AH	32	36	45	50	63	71	90	115	135
AP	7	9	9	9	12	14	16	18	22
AT	4	4	4	4	5	5	8	8	8



### FA/FB

Brackets	32	40	50	63	80	100	125	160	200
AJ	10.5	10.5	14	17	17	17	19	25	25
AK	7	7	9	9	11	11	13	17	17
BA	30.3	35.3	40.3	45.3	45.3	55.3	60.3	65.3	75.3
BB	10	10	12	12	16	16	20	20	25
BC	50	55	65	75	100	120	140	180	220
BD	32	36	45	50	63	75	90	115	135
BE	80	90	110	125	154	186	224	280	320
BF	64	72	90	100	126	150	180	230	270
BH	6.5	6.5	6.5	8.5	10.5	10.5	8	8	12
BP	7	9	9	9	12	14	16	18	22
T	32.5	38	46.5	56.5	72	89	110	140	175

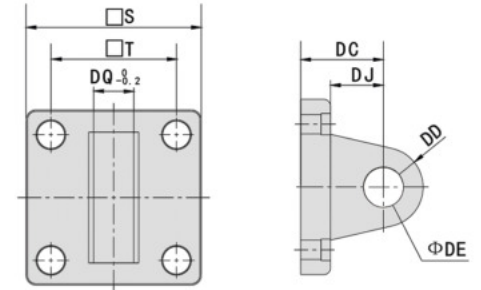


# DNC/SI ISO6431 Standard Cylinder Brackets

## Main Dimensions

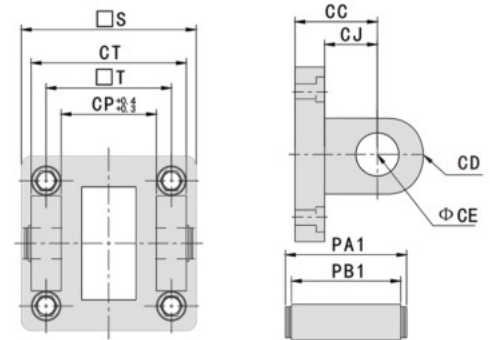
### CA

Brackets \ Bore	32	40	50	63	80	100	125	160	200
S	47	53	65	75	95	115	140	180	220
T	32.5	38	46.5	56.5	72	89	110	140	175
DC	22	25	27	32	36	41	50	55	60
DD	9	12	12	15	15	20	25	30	30
DE	10	12	12	16	16	20	25	30	30
DJ	13	16	17	22	22	27	33	35.5	37
DQ	25.8	27.8	31.7	39.7	49.7	59.7	69.7	89.7	89.7



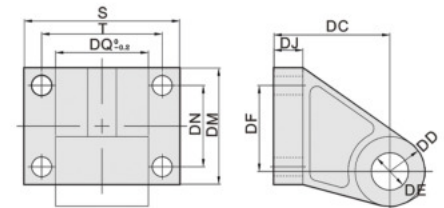
### CB

Sign \ Bore	32	40	50	63	80	100	125	160	200
CC	22	25	27	32	36	41	50	55	60
CD	9	12	12	15	15	20	25	30	30
CE	10	12	12	16	16	20	25	30	30
CJ	13	16	17	22	22	27	31	35.5	36
CP	26	28	32	40	50	60	70	90	90
CT	45	52	60	70	90	110	130	170	170
PA1	51	59	67	77	97	119	139	181	181
PB1	46.5	52.5	60.5	70.5	90.5	110.5	130.5	170.5	170.5
S	47	53	65	75	95	115	140	180	220
T	32.5	38	46.5	56.5	72	89	110	140	175



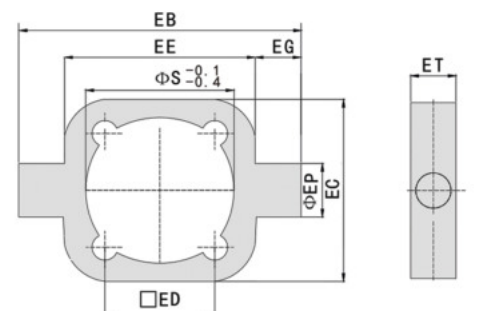
### CR

Sign \ Bore	S	T	DC	DD	DE	DF	DJ	DQ	DM	DN
32	51	38	32	10	10	21	8	26	31	18
40	54	41	36	11	12	24	9	28	35	22
50	65	50	57	13	12	33	12	31.5	45	30
63	67	52	50	15	16	37	12.5	40	50	35
80	86	66	63	15	16	41.5	14	50	60	40
100	96	76.5	71.5	18.5	20	55	15	60	70	51



### TC

Sign \ Bore	32	40	50	63	80	100	125	160	200
EB	100	113	125	140	160	182	210	264	314
EC	50	58	70	80	100	126	154	196	240
ED	32.5	38	46.5	56.5	72	89	110	140	175
EE	50	63	75	90	110	132	160	200	250
EG	25	25	25	25	25	25	25	32	32
EP	12	16	16	20	20	30	30	32	32
ET	20	24	28	28	28	28	36	40	40
S	36	45	55	68	86	106	132	170	40



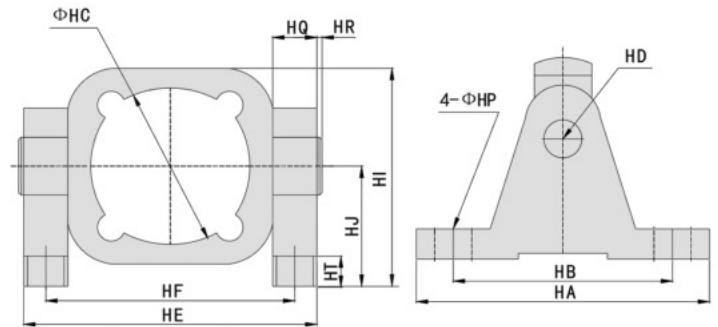


# DNC/SI ISO6431 Standard Cylinder Brackets

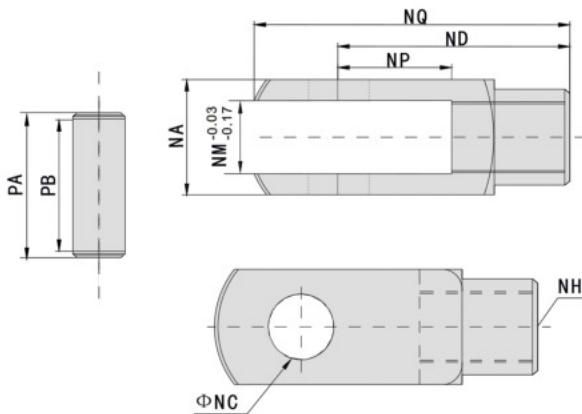
## Main Dimensions

### TC-M

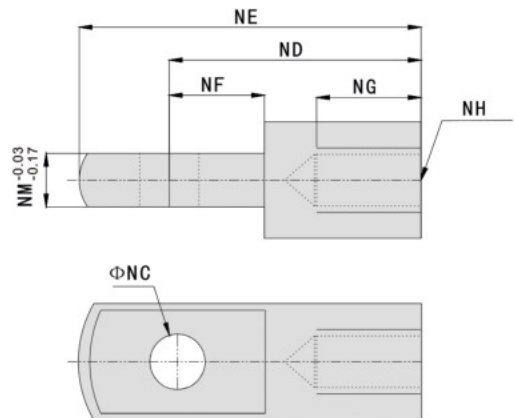
Sign	Bore					
	32	40	50	63	80	100
HA	110	110	110	120	120	120
HB	80	80	80	80	80	80
HC	36	45	55	58	86	106
HD	22	22	22	22	22	22
HE	96	109	121	136	156	178
HF	73	86	98	113	133	155
HI	68.5	76.5	82	86	113	130
HJ	43.5	47.5	47	46	63	67
HQ	23	23	23	23	23	23
HR	2	2	2	2	2	2
HT	12	12	12	12	14	14
HP	12	12	12	12	14	14



### Y Fitting



### I Fitting



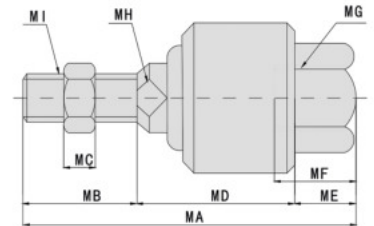
## Main Dimensions

Sign	Bore											
	NA	NC	ND	NE	NG	NF	NH	NM	NP	NQ	PA	PB
32	19	10	40	52	20	15	M10X1.25	10	20	52	26.2	20
40	25.4	12	48	67	20	24	M12X1.25	12	24	62	32.8	26.5
50	32	16	64	89	23	32	M16X1.5	16	32	83	39.3	33
63	32	16	64	89	23	32	M16X1.5	16	32	83	39.3	33
80	44.4	20	80	112	30	40	M20X1.5	20	40	105	53.3	45
100	44.4	20	80	112	30	40	M20X1.5	20	40	105	53.3	45
125	55	30	110	155	56	50	M27X2	30	54	148	64	55.6
160	70	35	144	201	72	50	M36X2	35	72	191	80	70.6
200	70	35	144	201	72	55	M36X2	35	72	191	80	70.6

# DNC/SI ISO6431 Standard Cylinder Brackets

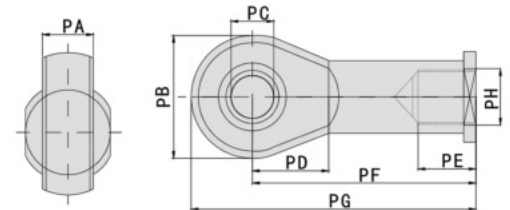
## Floating Fitting

Bore \ Sign	MA	MB	MC	MD	ME	MF	MG	MH	MI
HA	73	20	6	45	8	26	M10X1.25	12	M10X1.25
HB	77	24	7	46	7	26	M12X1.25	12	M12X1.25
HC	106	32	8	62	12	34	M16X1.5	19	M16X1.5
HD	106	32	8	63	12	34	M16X1.5	19	M16X1.5
HE	122	40	10	68	14	42	M20X1.5	19	M20X1.5
HF	122	40	10	68	14	42	M20X1.5	19	M20X1.5
HI	147	54	13.5	77	16	40	M27X2	24	M27X2
HJ	251	72	18	161	18	78	M36X2	36	M36X2
HQ	251	72	18	161	18	78	M36X2	36	M36X2



## B Fitting

Bore \ Sign	PA	PB	PC	PD	PE	PF	PG	PH
32	14	28	10	15	20	43	57	M10X1.25
40	16	32	12	17	22	50	66	M12X1.25
50	21	42	16	22	28	64	85	M16X1.5
63	21	42	16	22	28	64	85	M10X1.5
80	25	50	20	26	33	77	102	M20X1.5
100	25	50	20	26	33	77	102	M20X1.5
125	37	70	30	36	51	110	145	M27X2
160	43	80	35	41	56	125	165	M36X2
200	43	80	35	41	56	125	165	M36X2



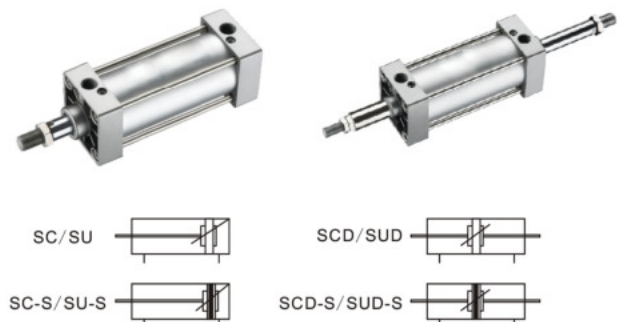
# SC/SU Series Standard Cylinder

## Ordering Code

SC/SU Series Standard Cylinder

**SI 50 x 50 -S - 20 - LB**

- Series Code:** SC: Standard cylinder, SCD: Double-shaft type, SU: Standard cylinder, SUD: Double-shaft type
- Bore:** 50
- Stroke:** 50
- Magnet:** S: With Magnet, Blank: without Magnet
- Adjustable Stroke:** 10:10mm, 20:20mm, 30:30mm, 40:40mm, 50:50mm, 75:75mm, 100:100mm
- Brackets type:** LB: Leg mounting, FA: Front rear plate mounting, FB: Front rear plate mounting, CA: Single trunnion mounting, CB: Double trunnion mounting, CR: Double trunnion with Hinge, mounting, TC: Centre trunnion mounting



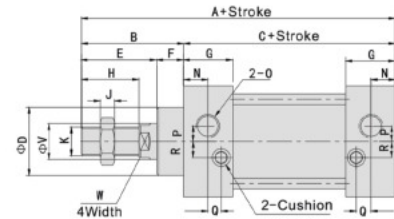
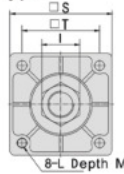
# SC/SU Series Standard Cylinder

## Specifications

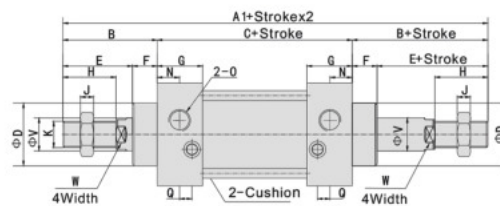
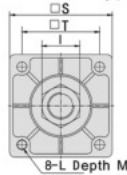
Bore (mm)	32	40	50	63	80	100	125	160	200
Acting type	Double acting								
Working medium	Clean air (40µm Filtration)								
Mounting type	SC\SU Series	Basic type FA FB CA CB CR LB TC TC-M							
	SCD\SUD Series	Basic type FA LB TC TC- M							
	SCJ\SUJ Series	Basic type FA LB TC TC- M							
Working pressure range	0.1~0.9MPa								
Guaranteed pressure	1.5MPa								
Working temperature	-5~70°C								
Speed range	50~800mm/s								
Cushion type	Adjustable cushion								
Cushion stroke	20mm			32mm				45mm	
Port size	G1/8	G1/4		G3/8		G1/2		G3/4	

## Main Dimensions

SC Basic type



SCD Double shaft type



Bore	Sign													
		A	A1	A2	B	C	D	E	F	G	H	I	J	K
32		140	187	182	47	93	28	32	15	27.5	22	17	6	M10X1.25
40		142	191	185	48	93	32	34	15	27.5	24	17	7	M12X1.25
50		150	207	196	57	93	38	42	15	27.5	32	23	8	M16X1.5
63		153	210	199	57	96	38	42	15	27.5	32	23	8	M16X1.5
80		183	258	243	75	108	47	52	21	33	40	26	10	M20X1.5
100		188	258	243	75	113	47	52	21	33	40	26	10	M20X1.5
125		226	/	/	104	122	55	73	34	33	54	40	10	M27X2
160		291	/	/	123	168	62	52	32	48	72	55	18	M36X2
200		347	/	/	167	180	80	73	55	48	72	55	18	M36X2

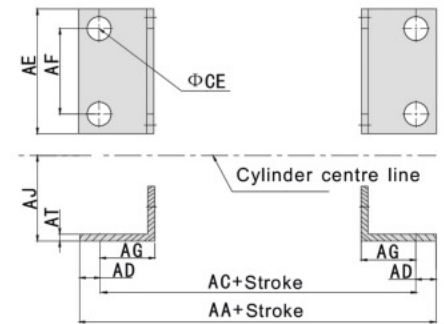
# SC/SU Series Standard Cylinder

Bore \ Sign	L	M	N	O	P	Q	R	S	T	V	W	Z
32	M6X1	9.5	13.5	G1/8	3.5	7.5	7	45	33	12	10	21
40	M6X1	9.5	13.5	G1/4	6	8.2	9	50	37	16	14	21
50	M6X1	9.5	13.5	G1/4	8.5	8.2	9	62	47	20	17	23
63	M8X1.25	9.5	13.5	G3/8	7	8.2	8.5	75	56	20	17	23
80	M10X1.5	11.5	16.5	G3/8	10	9.5	14	94	70	25	22	29
100	M10X1.5	11.5	16.5	G1/2	11	9.5	14	112	84	25	22	29
125	M12X1.75	15.5	16.5	G1/2	/	/	/	140	110	32	27	/
160	M16X2	17.5	25	G1/2	/	/	/	180	140	40	36	/
200	M16X2	17.5	25	G3/4	/	/	/	220	175	40	36	/

## Main Dimensions

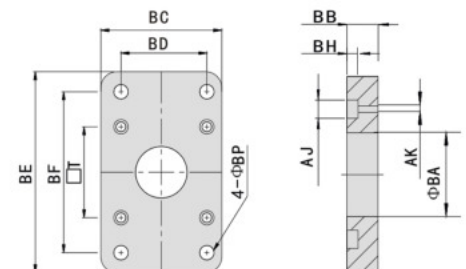
### LB

Sign \ Bore	32	40	50	63	80	100	125	160	200
AA	153	169	173	184	200	210	249	328	380
AC	134	140	149	158	168	174	213	288	320
AD	9.5	14.5	12	12	16	18	18	20	20
AE	50	57	68	80	97	112	140	180	220
AF	33	36	47	56	70	84	90	115	135
AG	20.5	23.5	28	31	30	30	45	60	70
AJ	28	30	36.5	41	49	57	90	115	135
AP	9	12	12	12	14	14	16	18	22
AT	3.2	3.2	3.2	3.2	4	4	8	8	10



### FA/ FB

Sign \ Bore	32	40	50	63	80	100	125	160	200
BA	28.3	32.3	38.3	38.3	47.3	47.3	56	63	81
BB	10	10	10	12	16	16	20	25	25
BC	47	52	65	76	95	115	140	180	220
BD	33	36	47	56	70	84	90	115	135
BE	72	84	104	116	143	162	224	280	320
BF	58	70	86	98	119	138	180	230	270
BH	6.5	6.5	8.5	8.5	10.5	10.5	15	20	20
AJ	10.5	10.5	13.5	13.5	16.6	16.5	19	25	25
AK	6.5	6.5	8.5	8.5	10.5	10.5	12.5	16.5	16.5
BP	7	7	9	9	12	12	16	18	22
T	33	37	47	56	70	84	110	140	175

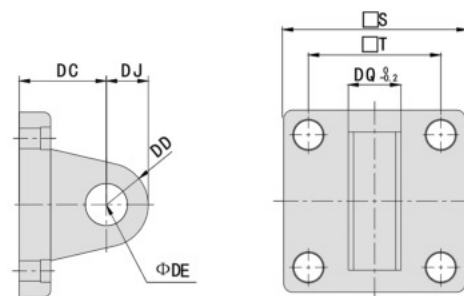


# SC/SU Series Standard Cylinder

## Main Dimensions

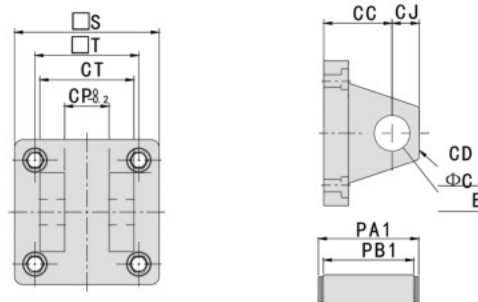
### CA

Sign \ Bore	32	40	50	63	80	100	125	160	200
BA	28.3	32.3	38.3	38.3	47.3	47.3	56	63	81
BB	10	10	10	12	16	16	20	25	25
BC	47	52	65	76	95	115	140	180	220
BD	33	36	47	56	70	84	90	115	135
BE	72	84	104	116	143	162	224	280	320
BF	58	70	86	98	119	138	180	230	270
BH	6.5	6.5	8.5	8.5	10.5	10.5	15	20	20
AJ	10.5	10.5	13.5	13.5	16.6	16.5	19	25	25
AK	6.5	6.5	8.5	8.5	10.5	10.5	12.5	16.5	16.5
BP	7	7	9	9	12	12	16	18	22
T	33	37	47	56	70	84	110	140	175



### CB

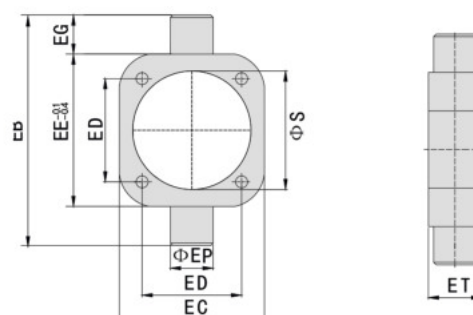
Sign \ Bore	32	40	50	63	80	100	125	160	200
CC	19	19	19	19	32	32	50	55	60
CD	5	5	3	3	8	8	25	30	30
CE	12	14	14	14	20	20	25	30	30
CJ	13	13	15	15	21	21	25	30	30
CP	16.3	20.5	20.3	20.3	32.3	32.3	70	90	90
CT	32	44	52	52	64	64	120	160	160
PA1	41	51.8	60.3	60.3	73.8	73.8	130	170	170
Pb1	33.5	45.8	54	54	65.5	65.5	121.5	161.5	161.5
S	48	50	62	75	94	112	140	180	220
T	33	37	47	56	70	84	110	140	175



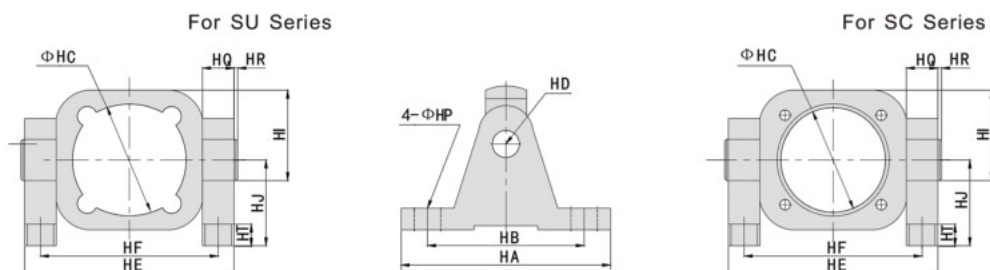
# SC/SU Series Standard Cylinder Brackets

### TC

Sign \ Bore	40	50	63	80	100	125	160	200
EB	113	126	138	164	182	210	264	336
EC	63	76	88	114	132	160	200	240
ED	37	47	56	70	84	110	140	175
EE	63	76	88	114	132	160	200	240
EG	30	30	30	30	30	30	32	48
EP	30	30	30	30	30	30	32	38
ET	30	30	30	30	30	30	32	44
S	45.5	55.5	68.5	87.5	107.5	134.5	172.5	212.5

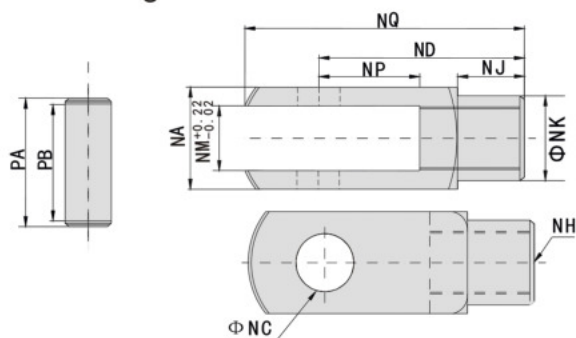


# SC/SU Series Standard Cylinder

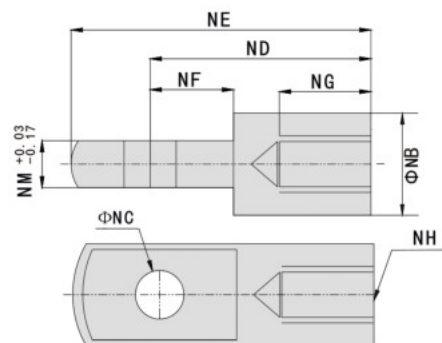


Bore \ Sign	HA	HB	HC	HD	HE	HF	HI	HJ	HQ	HR	HT	HP
40	110	80	45.5	22	109	86	81.5	50	23	12	12	12
50	110	80	55.5	22	122	99	88	50	23	12	12	12
63	110	80	68.5	22	134	111	94	50	23	12	12	12
80	120	85	87.5	22	160	137	127	70	23	14	14	14
100	120	85	107.5	22	178	155	136	70	23	14	14	14

## Y Fitting



## I Fitting



Bore \ Sign	NA	NB	NC	ND	NE	NF	NG	NH	NJ	NK	NM	NP	NQ	PA	PB
32	19	20	10	40	52	15	20	M10X1.25	12	18	10	20	52	25	19.5
40	25.4	24	12	48	67	24	20	M12X1.25	20	23	12	24	62	32.8	26.5
50	32	32	16	64	89	32	23	M16X1.5	22	30	16	32	83	39.3	33
63	32	32	16	64	89	32	23	M16X1.5	22	30	16	32	83	39.3	33
80	44.4	40	20	80	112	40	30	M20X1.5	22	30	20	40	105	53.3	45
100	44.4	40	20	80	112	40	30	M20X1.5	30	39	20	40	105	53.3	45
125	55	45	25	110	155	40	56	M27X2	30	39	48	64	148	64	55
160	80	54	30	120	201	35	50	M36X2	40	54	40	35	150	91	81
200	80	54	30	130	201	35	50	M36X2	40	54	40	35	150	91	81

# MB Series Standard Cylinder

## Ordering Code

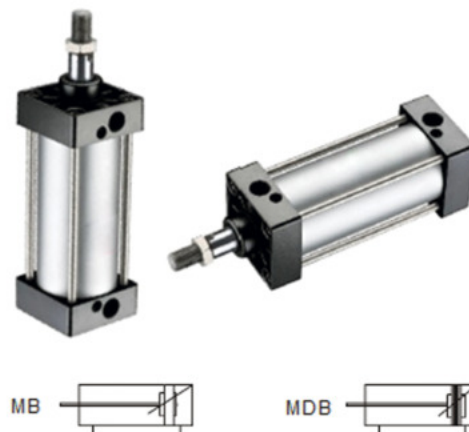
SC/SU Series Standard Cylinder

**M**  **B**            **32**    **X**    **50**

Magnet      Mounting type      Bore      Stroke

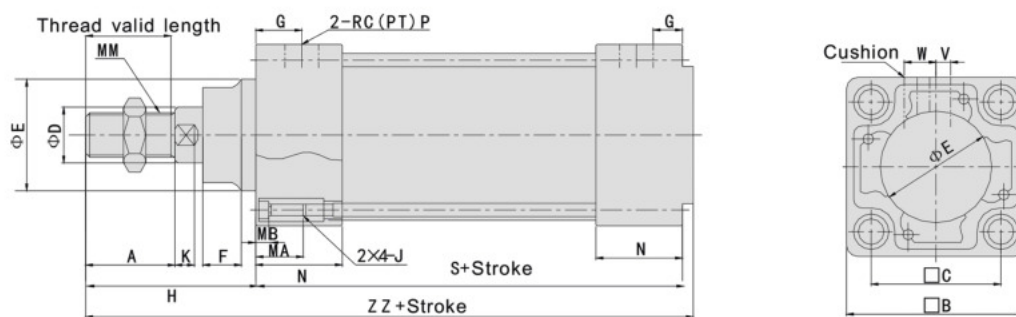
Blank: Without Magnet  
D: With Magnet

32:  $\varnothing$ 32mm  
40:  $\varnothing$ 40mm  
50:  $\varnothing$ 50mm  
63:  $\varnothing$ 63mm  
80:  $\varnothing$ 80mm  
100:  $\varnothing$ 100mm



## Specifications

Bore (mm)	32	40	50	63	80	100	125
Working medium	Double acting						
Acting type	Clean air (40 $\mu$ m Filtration)						
Max pressure	1.5MPa						
Min pressure	5~70°C						
Speed range (mm/s)	50~1000						50~700
Cushion	A Cushion Both Side						
Oil	No Need						
Port size	G1/8	G1/4		G3/8		G1/2	



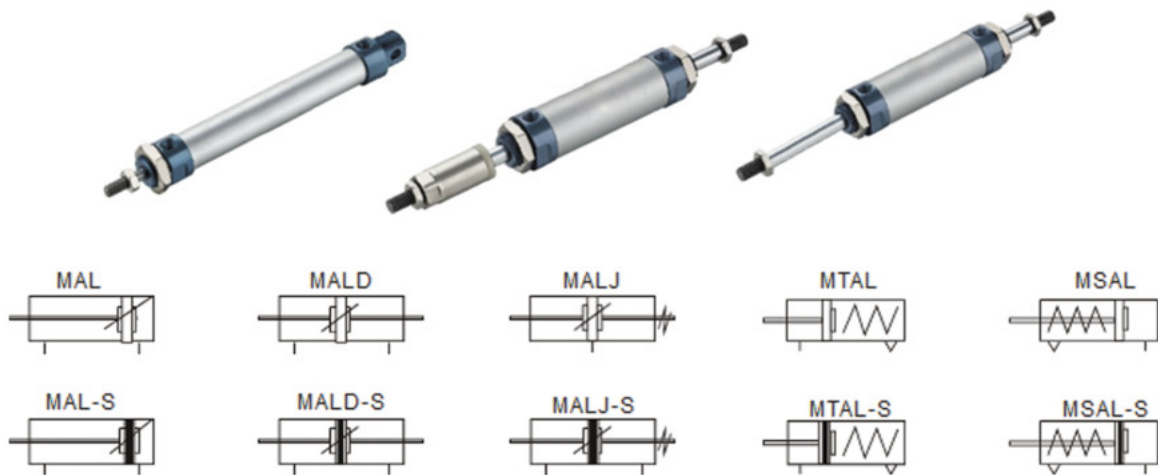
Bore	Stroke range	Thread length	A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	$\varnothing$ E	F	G	MA	MB	J	K	MM	N	P	S	V	W	H	ZZ
32	~500	19.5	22	46	32.5	12	30	13	13	16	4	M6X1.0	6	M10X1.25	27	1/8	84	4	6.5	47	135
40	~500	27	30	52	38	16	35	13	14	16	4	M6X1.0	6	M14X1.5	27	1/4	84	4	9	51	139
50	~500	32	35	65	46.5	20	40	14	15.5	16	5	M8X1.25	7	M18X1.5	31.5	1/4	94	5	10.5	58	156
63	~500	32	35	75	56.5	20	45	14	16.5	16	5	M8X1.25	7	M18X1.5	31.5	3/8	94	9	12	58	156
80	~500	37	40	95	72	25	45	20	19	16	5	M10X1.5	10	M22X1.5	38	3/8	114	11.5	14	72	190
100	~500	37	40	114	89	30	55	20	19	16	5	M10X1.5	10	M26X1.5	38	1/2	114	17	15	72	190
125	~500	50	54	136	110	32	60	27	19	20	6	M12X1.75	3	M27X2	38	1/2	120	17	15	97	223

# MAL Series Mini Cylinder

## Ordering Code

SC/SU Series Standard Cylinder

<b>MAL</b>	<b>CM</b>	<b>20</b>	<b>X</b>	<b>50</b>	<b>20</b>	<b>S</b>	<b>LB</b>
<b>Series Code</b>	<b>Rear Couer Type</b>	<b>Bore</b>		<b>Stroke</b>	<b>Adjustable Stroke</b>	<b>Magnet</b>	<b>Mounting type</b>
MAL:Double Acting MSAL:Spring Extend MSTL:Spring Return MALD:Double Shaft Acting MALJ:Adjustable cushion type	CA:Swivelling tail CM: Round tail U: Flat tail				10:10mm 20:20mm 30:30mm 40:40mm 50:50mm 75:75mm 100:100mm	Blank: Without Magnet S:With Magnet	Blank: Standard Cylinder LB: Leg mounting FA: Front rear plate mounting SDB: Trunnion bracket mounting



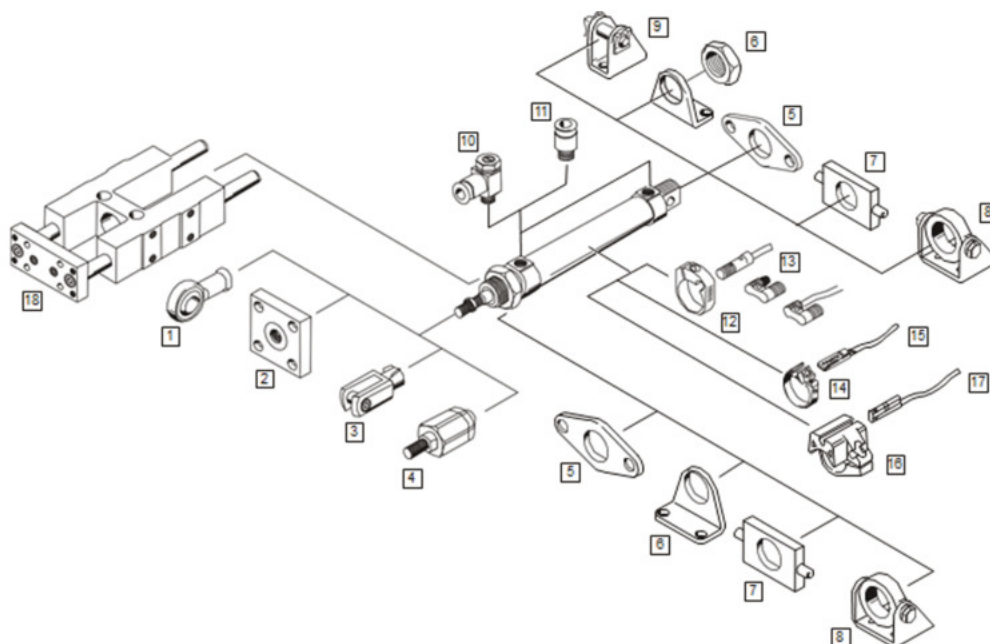
## Specifications

Bore (mm)	16	20	25	32	40
Acting type	MAL, MALD, MALJ Series: Double acting; MSAL, MATL Series: Single acting				
Working medium	Clean air (40µm Filtration)				
Mounting type	MAL, MSAL, MATL Series: Basic type LB FA SDB; MALD, MALJ Series: Basic type LB FA				
Working pressure range	MAL, MALD, MALJ Series: 0.1~0.9MPa; MSAL, MATL Series: 0.2~0.9MPa				
Guaranteed pressure	1.5MPa				
Working temperature	-5~70°C				
Speed range	MAL Series: 30~800mm/s; Other Series: 50~800mm/s				
Port size	M5X0.8		G1/8		G1/4



# Technical Data 6

## Cylinder Peripheral Component



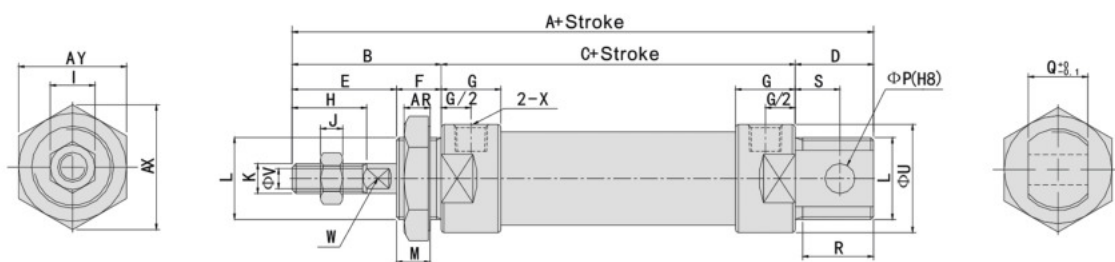
## Air cylinder theory force table

Bore (mm)	16		20		25		32		40		50		63							
OD of rod (mm)	6		8		10		12		16		16		16							
Acting type	Single Acting Spring Extend	Double Acting		Single Acting Spring Extend	Double Acting		Single Acting Spring Extend	Double Acting		Single Acting Spring Extend	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 (mm <sup>2</sup> )	201	201	181	314	314	264	490	490	412	804	804	690	1256	1256	1055	1963	1762	3116	2915	
Working pressure (MPa)	0.1	-	20.1	18.1	-	31.4	26.4	-	49.0	41.2	-	80.4	69.0	-	125.6	105.5	196.3	176.2	311.6	291.5
	0.2	-	40.2	36.2	15.7	62.8	52.8	24.5	98.0	82.4	40.2	160.8	138.0	62.8	251.2	211.0	392.6	352.4	487.8	603.1
	0.3	20.1	60.3	54.3	47.1	94.2	79.2	73.5	147.0	123.6	120.6	241.2	207.0	188.4	376.8	316.5	588.9	528.6	799.4	894.6
	0.4	40.2	80.4	72.4	78.5	125.6	105.6	122.5	196.0	164.8	201.6	321.6	276.0	314.0	502.4	422.0	785.2	704.8	1111	1186
	0.5	60.3	100.5	90.5	109.9	157.0	132.0	171.5	245.0	206.0	281.4	402.0	345.0	439.6	628.0	527.5	981.5	881.0	14222	1477
	0.6	80.4	120.6	108.6	141.3	188.4	158.4	220.5	294.0	247.2	361.8	482.4	414.0	565.2	753.6	633.0	1177	1057	1734	1769
	0.7	100.4	140.7	126.7	172.7	219.8	184.8	269.5	343.0	288.4	442.2	562.8	483.0	690.8	879.2	738.5	1374	1233	2045	2060
	0.8	-	-	-	204.1	251.2	211.2	318.5	392.0	329.6	522.6	643.2	552.0	816.4	1004	844.0	1570	1409	2357	2352
	0.9	-	-	-	235.5	282.6	237.6	367.5	441.0	370.8	603.0	723.6	621.0	942.0	1130	949.5	1766	1585	2669	2643

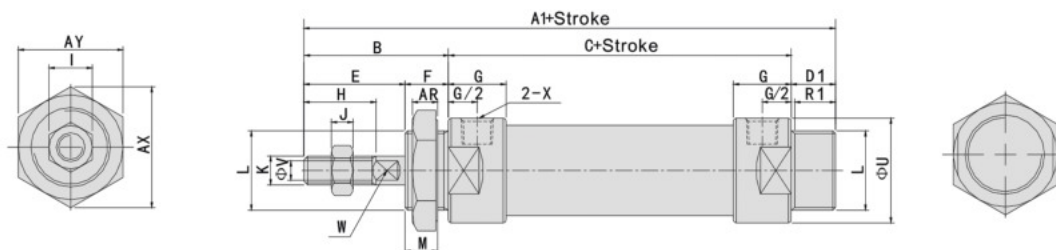
# MAL Series Mini Cylinder

## Main Dimensions

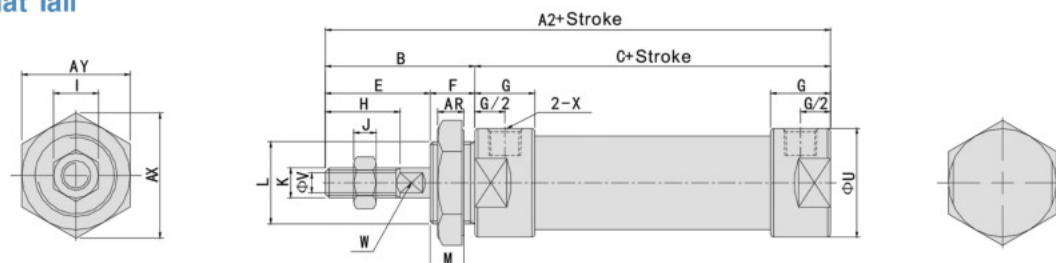
### MAL-CA Swivelling Tail



### MAL-CA Round Tail



### MAL-CA Flat Tail



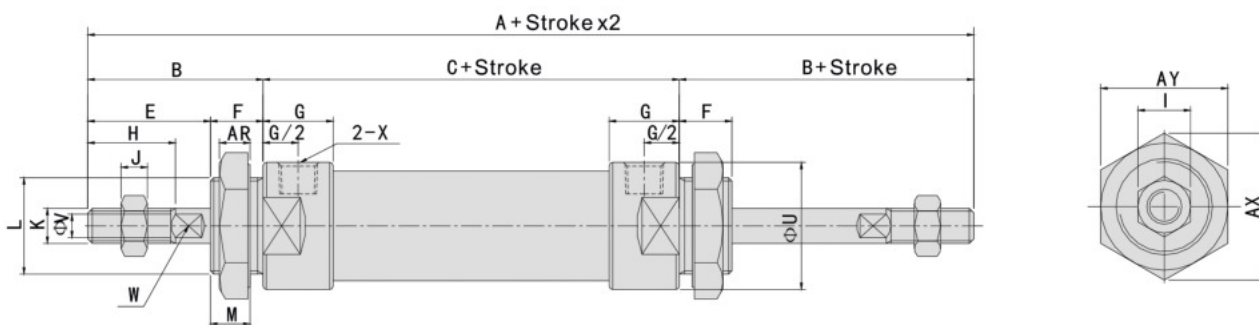
Bore	Sign	Dimensions													
		A	A1	A2	B	C	D	D1	E	F	G	H	I	J	K
16		104	104	90	38	52	15	20	24	14	11	16	10	5	M6x1
20		131	122	110	40	70	21	20	28	12	16	20	12	6	M8x1.25
25		135	128	114	44	70	21	23	30	14	16	22	17	6	M10x1.25
32		141	128	114	44	70	21	23	30	14	16	22	17	6	M10x1.25
40		165	152	138	46	92	27	30	32	14	30	24	17	7	M12x1.25

Bore	Sign	Dimensions													
		L	M	P	Q	R	R1	S	U	V	W	X	AR	AX	AY
16		M16x1.5	8	6	12	13	/	6	20	6	/	M5	7	24	27.5
20		M22x1.5	10	8	16	19	10	12	29	8	6	G1/8	7	33	29
25		M22x1.5	12	8	16	19	12	12	34	10	8	G1/8	7	33	29
32		M24x2.0	12	10	16	25	12	15	39.5	12	10	G1/8	8	33	32
40		M30x2.0	12	12	20	25	12	15	49.5	16	14	G1/4	9	47	41

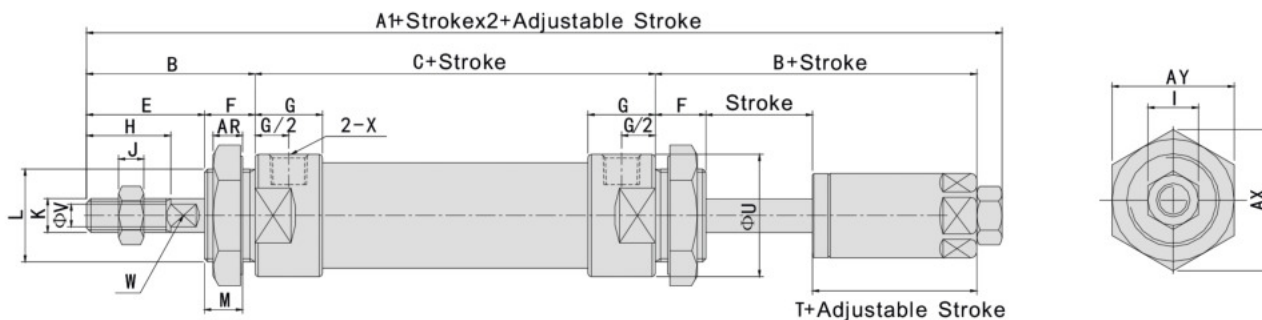
# MAL Series Mini Cylinder

## Main Dimensions

### MALD Double shaft type



### MALJ Double shaft adjustable stroke type



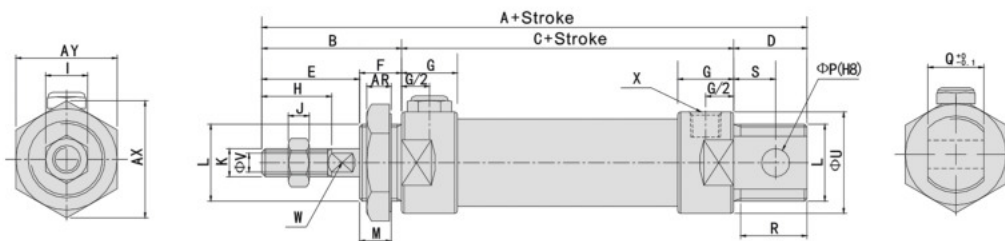
Bore	Sign										
	A	A1	B	C	E	F	G	H	I	J	K
20	131	122	40	70	28	12	16	20	12	6	M8X1.25
25	135	128	44	70	30	14	16	22	17	6	M10X1.25
32	141	128	44	70	30	14	16	22	17	6	M10X1.25
40	165	152	46	92	32	14	22	24	17	7	M12X1.25

Bore	Sign									
	L	M	U	V	W	X	AR	AX	AY	T
20	M22x1.5	10	29	8	6	G1/8	7	33	29	19
25	M22x1.5	12	34	10	8	G1/8	7	33	29	21
32	M24x2.0	12	39.5	12	10	G1/8	8	37	32	21
40	M30x2.0	12	49.5	16	14	G1/4	9	47	41	21

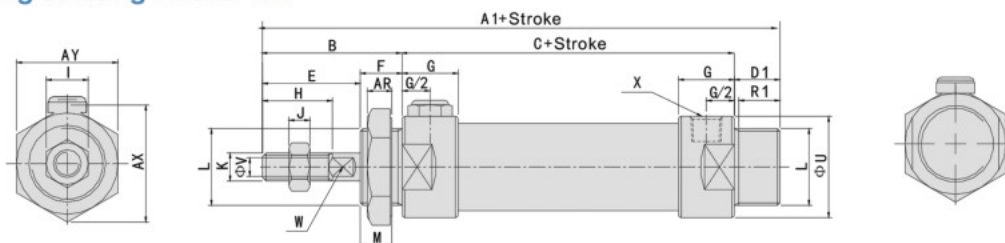
# MAL Series Mini Cylinder

## Main Dimensions

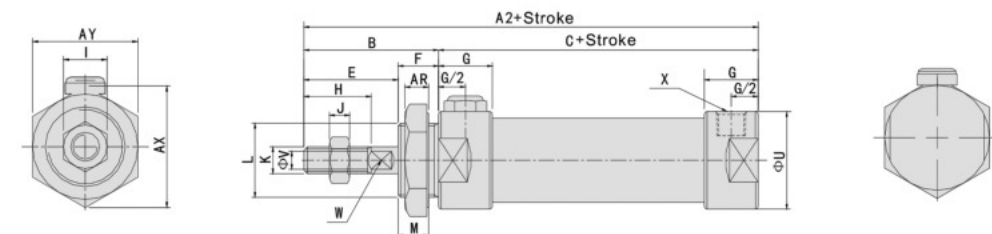
### MSAL-CA Single Acting Swivelling Tail



### MSAL-CM Single Acting Round Tail



### MSAL-U Single Acting Flat Tail



Sign	A		A1		A2		B	C		D	D1	E	F	G	H	I	J
	0~50	51~100	0~50	51~100	0~50	51~100		0~50	51~100								
20	131	156	122	147	110	135	40	70	95	21	12	28	12	16	20	12	6
25	135	160	128	153	114	139	44	70	95	21	14	30	14	16	22	17	6
32	141	166	128	153	114	139	44	70	95	27	14	30		16	22	17	6
40	165	190	152	177	138	163	46	92	14	27	14	32	14	22	24	17	7

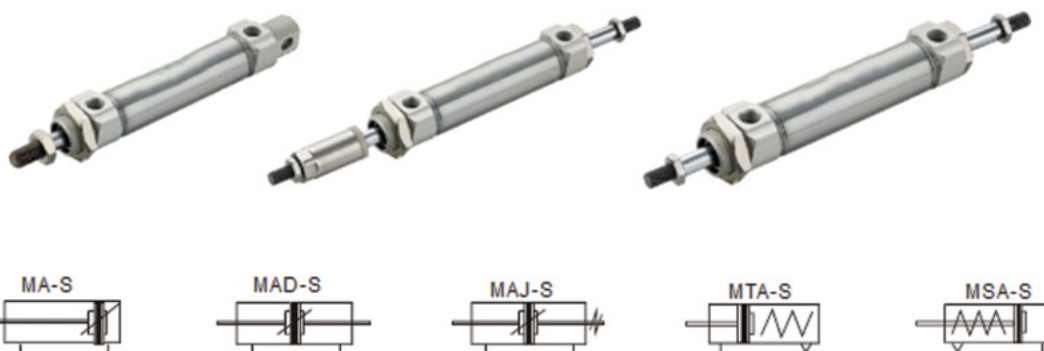
Sign Bore	K	L	M	P	Q	R	R1	S	U	V	W	X	AR	AX	AY
20	M8X1.25	M22X1.5	10	8	16	19	10	12	29	8	6	G1/8	7	33	29
25	M10X1.25	M22X1.5	12	8	16	19	12	12	34	10	8	G1/8	7	33	29
32	M10X1.25	M24X2.0	12	10	16	25	12	15	39.5	12	10	G1/8	8	37	32
40	M12X1.25	M30X2.0	12	12	20	25	12	15	49.5	16	14	G1/4	9	47	41

# MA Series Mini Cylinder

## Ordering Code

MA Series Mini Cylinder

<p><b>MA</b></p> <p>Series Code</p> <p>MA: Double Acting MST: Spring Return MAD: Double Shaft Acting MAJ: Adjustable cushion type MSA: Spring Extend</p>	<p><b>-</b></p>	<p><b>CM</b></p> <p>Rear Cover Type</p> <p>CA: Swivelling tail CM: Round tail U: Flat tail</p>	<p><b>20</b></p> <p>Bore</p>	<p><b>X</b></p>	<p><b>50</b></p> <p>Stroke</p>	<p><b>-</b></p>	<p><b>20</b></p> <p>Adjustable Stroke</p> <p>10:10mm 20:20mm 30:30mm 40:40mm 50:50mm 75:75mm 100:100mm</p>	<p><b>-</b></p>	<p><b>LB</b></p> <p>Mounting type</p> <p>Blank: Standard Cylinder LB: Leg mounting FA: Front rear plate mounting SDB: Trunnion bracket mounting</p>
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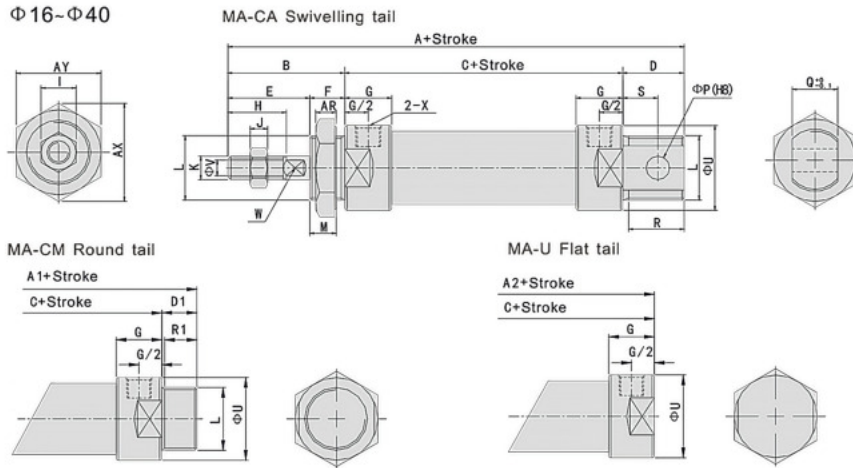


## Specifications

Bore (mm)		16	20	25	32	40	50	63	
Mounting type	MA, MAC, MAD, MAJ	Double acting							
	MSA, MTA	Single Acting						-	
Working medium		Clean air (40µm Filtration)							
Mounting type		MA, MAC, MSA, MTA Series: Basic type LB FA SDB						Basic type	
		MAD, MAJ Series: Basic type LB FA							
Working pressure range		MA, MAC, MAD, MAJ: 0.1~0.9MPa; MSA, MTA: 0.2~0.9MPa							
Guaranteed pressure		1.5MPa							
Working temperature		5~70°C							
Speed range		MA, MAC, MSA, MTA: 30~500mm/s MAD, MAJ: 30~800mm/s							
Cushion type	Standard	Fixed cushion							
	Cushion	-	Adjustable cushion						
Port size		M5X0.8	G1/8						

# MA Series Mini Cylinder

## Main Dimensions

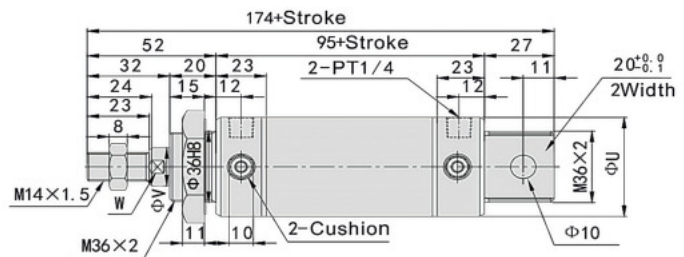
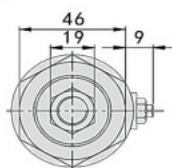


Bore	Sign	A	A1	A2	B	C	D	D1	E	F	G	H	I	J	K
		16	114	114	98	38	60	16	15	22	16	10	16	10	5
20	137	128	116	40	76	21	12	28	12	16	20	12	6	M8x1.25	
25	141	134	120	44	76	21	14	30	14	16	22	17	6	M10x1.25	
32	147	134	120	44	76	27	14	30	14	16	22	17	6	M10x1.25	
40	149	136	122	46	76	27	14	32	14	16.7	24	17	7	M12x1.25	

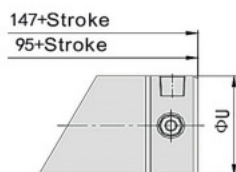
Bore	Sign	L	M	P	Q	R	R1	S	U	V	W	X	AR	AX	AY
		16	M16x1.5	14	6	12	14	14	9	21	6	5	M5	6	25
20	M22x1.5	10	8	16	19	12	12	27	8	6	G1/8	7	33	29	
25	M24x1.5	12	8	16	19	14	12	30	10	8	G1/8	7	33	29	
32	M24x2.0	12	10	16	25	14	15	35	12	10	G1/8	8	37	32	
40	M30x2.0	12	12	20	25	14	15	41.6	16	14	G1/8	9	47	41	

Φ50 Φ63

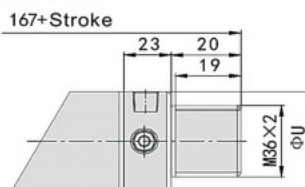
Swivelling tail



Flat tail



Round tail



Bore	Sign	U	V
		50	53
63	67	16	

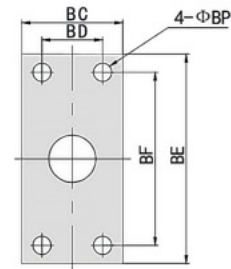
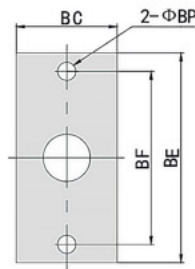
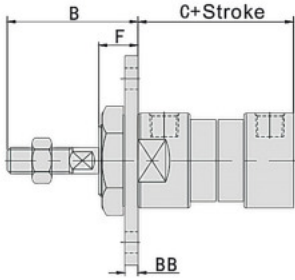
# MAL/MA Series Mini Cylinder Brackets

## Main Dimensions

FA

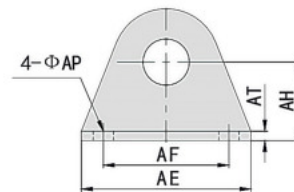
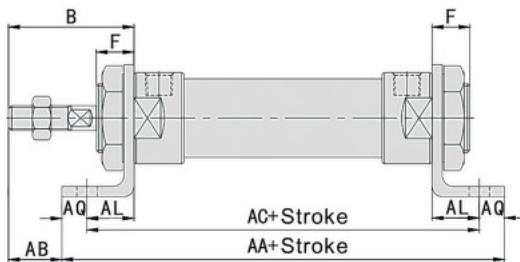
∅ 20~∅ 25

∅ 32 ~ ∅ 40



Sign	B	C (MA Series)	C (MSA Series)		C (MAL Series)	C (MSAL Series)		BB	BC	BD	BE	BF	BP	F
			0~50	51~100		0~50	51~100							
16	38	60	60	85	-	-	-	3	26	-	52	40	5.5	16
20	40	76	76	101	70	70	95	4	38	-	64	50	6.5	12
25	44	76	76	101	70	70	95	4	38	-	64	50	6.5	14
32	44	76	76	101	70	70	95	4	47	33	72	58	6.5	14
40	46	76	76	101	92	92	117	4	50	36	84	70	6.5	14

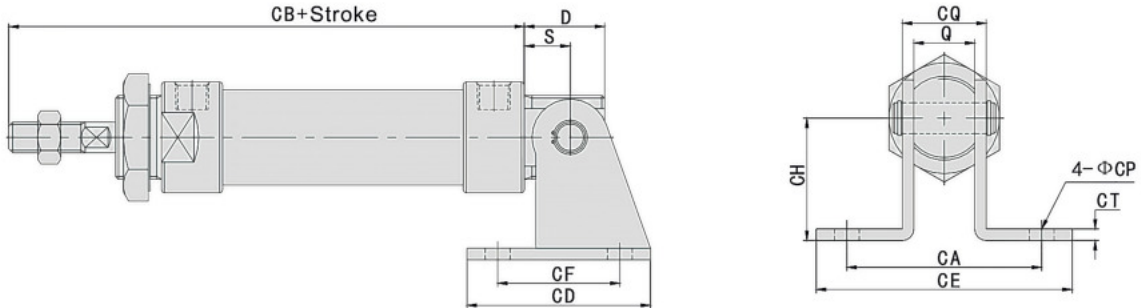
LB



Sign	B	F	AA (MA Series)	AA (MSA Series)		AB	AC (MA series)	AC (MSA Series)		AA (MAL Series)	AC (MSAL Series)		AC (MAL)	AC (MSAL Series)		AE	AF	AL	AQ	AP	AT	AH
				0~50	51~100			0~50	51~100		0~50	51~100		0~50	51~100							
16	38	16	98	98	123	25	86	86	111	-	-	-	-	-	-	44	32	13	6	5.5	3	20
20	40	12	122			25	106	106	131	116	116	141	100	100	125	54	40	15	8	6.5	3	25
25	44	14	122	122	147	29	106	106	131	116	116	141	100	100	125	54	40	15	8	6.5	3	25
32	44	14	142			19	126	126	151	136	136	161	120	120	145	59	45	25	8	6.5	4	32
40	46	14	142	142	167	21	126	126	151	158	158	183	142	142	167	64	50	25	8	6.5	4.5	36

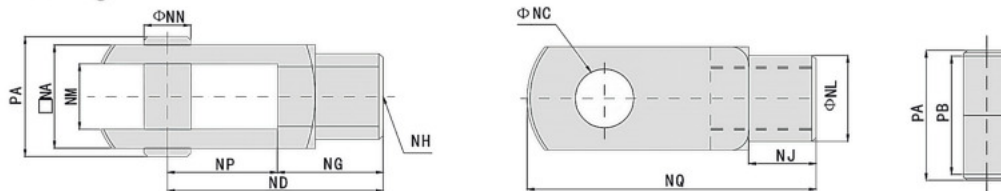
# MAL/MA Series Mini Cylinder Brackets

## Main Dimensions

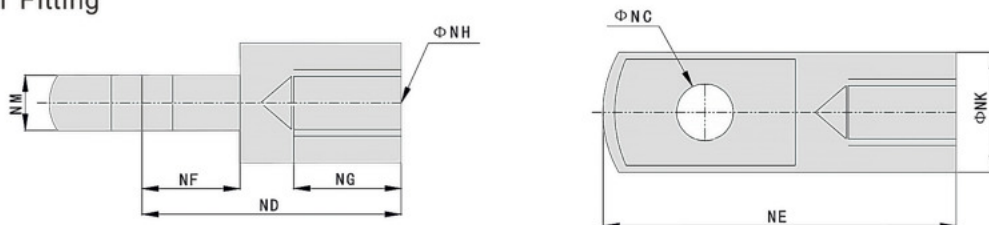


Sign	D	S	Q	CA	CB (MA series)	CB (MSA Series)		CB (MAL Series)	CB (MSAL Series)		CD	CE	CF	CH	CT	CP	CQ
						0~50	51~100		0~50	51~100							
16	16	9	12	-	107	107	132	-	-	-	23	-	12	20	2.3	5.5	16.5
20	21	12	16	51	128	128	153	122	122	147	48	67	32	32	3	6.5	22
25	21	12	16	51	132	132	157	126	126	151	48	67	32	32	3	6.5	22
32	27	15	16	51	135	135	160	129	129	154	52	67	36	36	4	6.5	24
40	27	15	20	55	137	137	162	153	153	178	56	71	40	40	4	6.5	28

### Y Fitting



### I Fitting



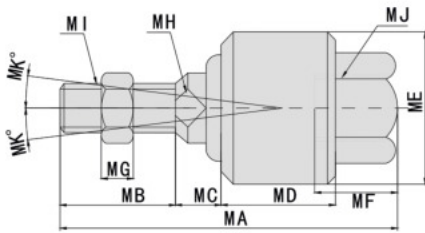
Bore \ Sign	NA	NC	ND	NE	NF	NG	NH	NJ	NK	NL	NM	NN	NP	NQ	PA	PB
16	12	4.5	12	28	8.5	12.5	M6X1	7	12	12	6	5	8.5	28	17	12.5
20	16	8	30	40	11	15	M8X1.25	10	16	14	8	8	15	40	21	16.5
25	19	10	40	52	15	20	M10X1.25	12	20	18	10	10	15	52	25	19.5
32	19	10	40	52	15	20	M10X1.25	12	20	18	10	10	20	52	25	19.5
40	25.4	10	48	67	15	25	M12X1.25	20	24	23	14	10	20	57	31	26



# MA Series Mini Cylinder

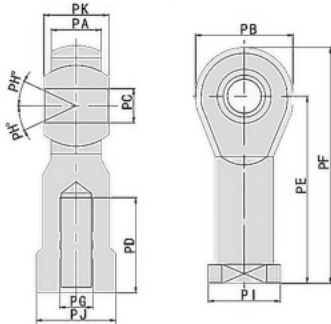
## Main Dimensions

### Floating Fitting



Bore \ Sign	MA	MB	MC	MD	ME	MF	MG	MH	MI	MJ	MK
20	51	20	6	17	24	11.5	6	8	M8X1.25	M8X1.25	13
25	58	22	7	21	26	11.5	7	10	M10X1.25	M10X1.25	12
32	58	22	7	21	26	11.5	7	10	M10X1.25	M10X1.25	12
40	58	22	8	21	28	11.5	8	12	M12X1.25	M12X1.25	12
50	70	22.5	8.5	28	34.5	13	8	15	M14X1.5	M14X1.5	13
63	70	22.5	8.5	28	34.5	13	8	15	M14X1.5	M14X1.5	13

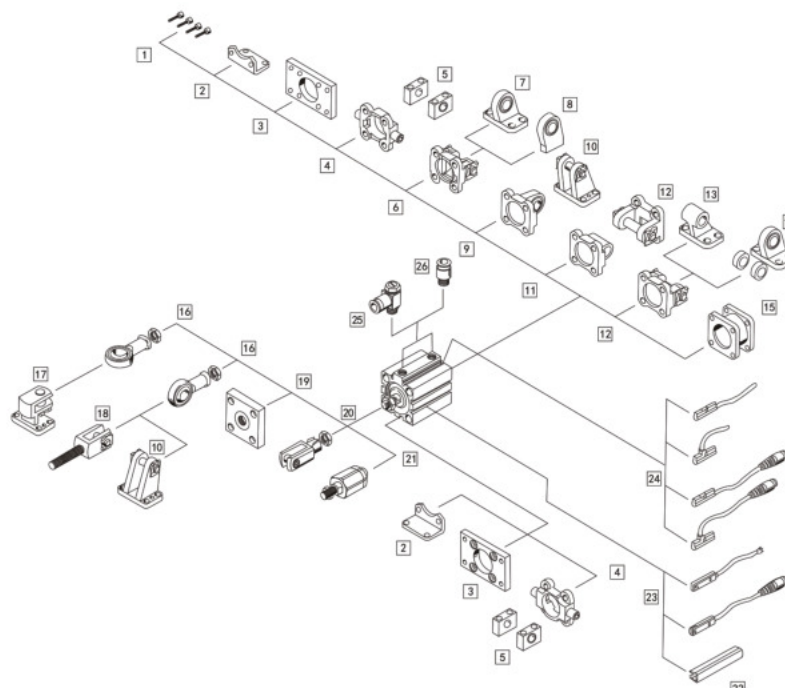
### Bearing Fitting



Bore \ Sign	PA	PB	PC	PD	PE	PF	PG	PH	PI	PJ	PK
20	9	24	8	16	36	48	M8X1.25	13	16	14	12
25	11	26	10	20	43	56	M10X1.25	13	19	17	14
32	11	26	10	20	43	56	M10X1.25	13	19	17	14
40	12	32	12	20	50	66	M12X1.25	13	22	19	16
50	15	40	16	24	64	84	M16X1.5	15	27	22	21
63	15	40	16	28	64	84	M16X1.5	15	27	22	21

# Technical Data 7

## Cylinder Peripheral Component



# Technical Data 7

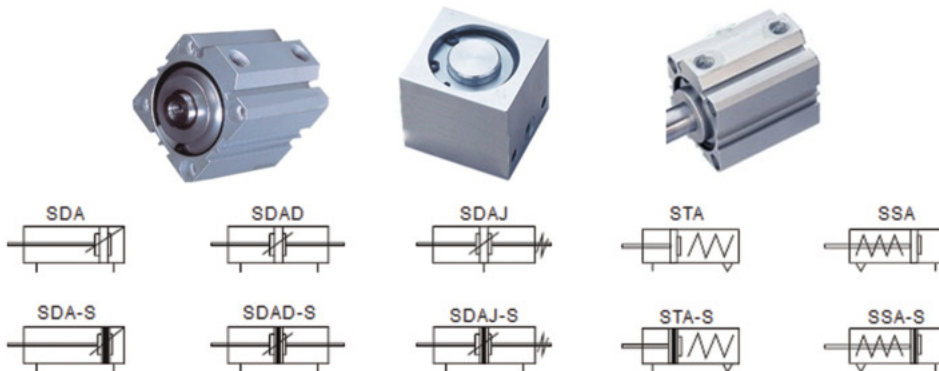
Bore (mm)	Piston Size (mm)	Acting Type	Pressure Square (mm <sup>2</sup> )	Air Pressure(MPa)							
				0.1	0.2	0.3	0.4	0.5	0.6	0.7	
12	6	Single acting extend		113	-	7.0	18.3	29.6	40.9	52.5	63.5
		Single acting return		85	-	1.4	9.9	18.4	26.9	35.4	43.9
		Double acting	Press side	113	-	22.6	33.9	45.2	56.5	67.8	79.1
			Pull side	85	-	1.7	25.5	3.4	42.5	5.1	59.5
16	6	Single acting extend		201	-	13.6	33.7	53.8	73.9	94.0	114.1
		Single acting return		173	-	8.0	25.3	42.6	59.9	77.2	94.5
		Double acting	Press side	201	-	40.2	60.3	80.4	100.5	120.6	140.7
			Pull side	173	-	36.4	51.9	69.2	86.5	103.8	121.1
20	8	Single acting extend		314	-	28.7	60.1	91.5	122.9	154.3	185.7
		Single acting return		264	-	18.7	45.1	71.5	97.9	124.3	150.7
		Double acting	Press side	314	-	62.8	94.2	125.6	157.0	188.4	219.8
			Pull side	264	-	52.8	79.2	105.6	132.0	158.4	184.8
25	10	Single acting extend		490	-	58.0	107.0	156.0	205.0	254.0	303.0
		Single acting return		412	-	42.4	83.6	124.8	166.0	207.2	248.4
		Double acting	Press side	490	-	98.0	147.0	196.0	245.0	294.0	343.0
			Pull side	412	-	82.4	123.6	164.8	206.0	247.2	288.4
32	12	Single acting extend		804	-	112.1	192.5	279.9	353.3	433.7	514.1
		Single acting return		690	-	89.3	158.3	227.3	296.3	365.3	434.3
		Double acting	Press side	804	-	160.8	241.2	321.6	402.0	482.4	562.8
			Pull side	690	-	138.0	207.0	276.0	345.0	414.0	483.0
40	16	Single acting extend		1256	-	200.8	326.4	452.0	577.6	703.2	828.8
		Single acting return		1055	-	160.6	266.1	371.6	477.1	582.6	688.1
		Double acting	Press side	1256	125.6	251.2	376.8	502.4	628.0	753.6	879.1
			Pull side	1055	105.5	211.0	316.5	422.0	527.5	633.0	738.5
50	20	Single acting extend		1963	196.3	392.6	588.9	785.2	981.5	1177.8	1374.1
		Single acting return		1649	164.9	328.8	494.7	659.6	824.5	989.4	1154.3
63	20	Double acting	Press side	3117	311.7	623.4	935.1	1246.8	1558.5	1870.2	2181.9
			Pull side	2803	280.3	560.6	840.9	1121.2	1401.5	1681.8	1962.1
80	25	Single acting extend		5026	502.6	1005.2	1507.8	2010.4	2513.0	3015.6	3518.2
		Single acting return		4536	453.6	907.2	1360.8	1814.4	2268.0	2721.6	3175.2
100	32	Double acting	Press side	7854	785.3	1570.6	2355.9	3141.2	3926.5	4711.8	5497.1
			Pull side	7049	704.9	1409.8	2114.7	2819.6	3524.5	4229.4	4934.3

# SDA Series Compact Cylinder

## Ordering Code

SDA Series Compact Cylinder

<b>SDA</b>	<b>S</b>	<b>20</b>	<b>X</b>	<b>30</b>	-	<b>20</b>	-	<b>B</b>
Series Code	Magnet	Bore		Stroke		Adjustable Stroke		Thread
SDA:Double Acting SSA:Single Acting Spring Extend STA:Single Acting Spring Return SDAD:Double Shaft Acting SDAJ:Adjustable cushion type	Blank : Without Magnet S:With Magnet					10:10mm 20:20mm 30:30mm 40:40mm 50:50mm 75:75mm 100:100mm		Blank: Female thread B: Male thread N: No thread



## Specifications

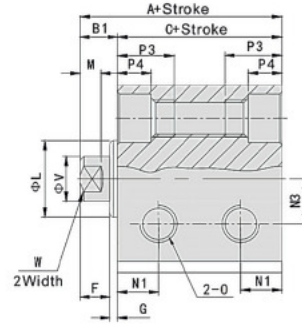
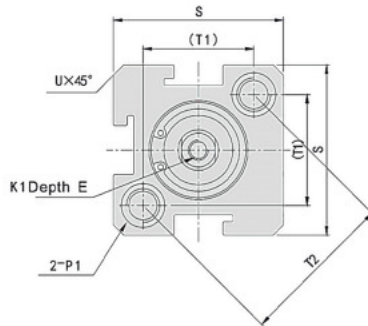
Bore( mm)		12	16	20	25	32	40	50	63	80	100
Acting type		Double acting									
		Single Acting Spring Extend, Single Acting Spring Return									-
Working medium		Clean air (40µm Filtration)									
Pressure range	Double acting	0.1~0.9MPa									
	Single acting	0.2~0.9MPa									-
Working pressure range		MA, MAC, MAD, MAJ: 0.1~0.9MPa; MSA, MTA:0.2~0.9MPa									
Guaranteed pressure		1.5MPa									
Working temperature		-5~70°C									
Guaranteed pressure		1.5Mpa(213Psi)									
Speed range	Double acting	30~500mm/s					30~350mm/s			30~250mm/s	
	Single acting	100-500mm/s									
Cushion type		Fixed Cushion									
Port size		M5X0.8				G1/8		G1/4		G3/8	

# SDA Series Compact Cylinder

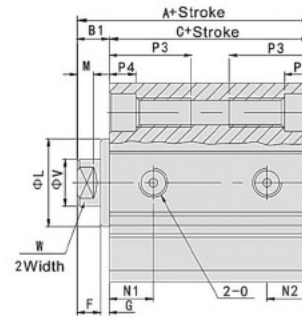
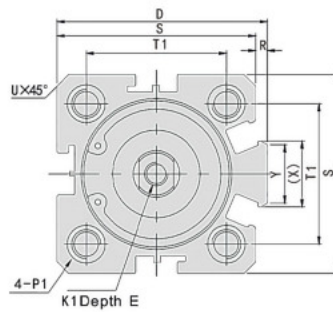
## Main Dimensions

SDA/ SDAS  
(Double Acting Type)

Ø12- Ø16



Ø20- Ø100



Model Bore/Sign	Standard			With Magnet			D	E	F	G	K	L	M	N1		N2		N3
	A	B1	C	A	B1	C								S=5	S>5	S=5	S>5	
12	22	5	17	32	5	27	-	6	4	1	M3X0.5	10.2	2.8	6.3	6.3	6		
16	24	5.5	18.5	34	5.5	28.5	-	6	4	1.5	M3X0.5	11	2.8	7.3	7.3	6.5		
20	25	5.5	19.5	35	5.5	29.5	36	8	4	1.5	M4X0.7	15	2.8	7.5	7.5	-		
25	27	6	21	37	6	31	42	10	4	2	M5X0.8	17	2.8	8	8	-		
32	31.5	7	24.5	41.5	7	34.5	50	12	4	3	M6X1	22	2.8	9	9	-		
40	33	7	26	43	7	36	58.5	12	4	3	M8X1.25	28	2.8	10	10	-		
50	37	9	28	47	9	38	71.5	15	5	4	M10X1.5	38	2.8	10.5	10.5	-		
63	41	9	32	51	9	42	84.5	15	5	4	M10X1.5	40	2.8	9.5	12	9.5	11	-
80	52	11	41	62	11	51	104	20	6	5	M14X1.5	45	4	11.5	14.5	11.5	14.5	-
100	63	12	51	73	12	61	124	20	7	5	M18X1.5	55	4	16	20.5	16	20.5	-

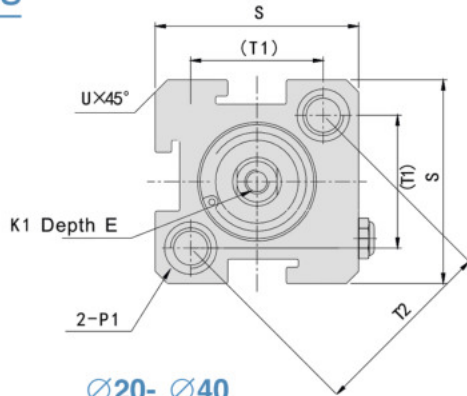
Bore	Sign	O	P1	P3	P4	R	S	T1	T2	U	V	W	X	Y
16	M5X0.8	Double Side Ø 6.5 Thread:M5X0.8 Through Hole:Ø 4.2	12	4.5	-	29	19.8	28	1.6	6	5	-	-	
20	M5X0.8	Double Side Ø 6.5 Thread:M5X0.8 Through Hole:Ø 4.2	14	4.5	2	34	24	-	2.1	8	6	11.3	10	
25	M5X0.8	Double Side Ø 8.2 Thread:M6X1 Through Hole:Ø 4.6	15	5.5	2	40	28	-	3.1	10	8	12	10	
32	G1/8	Double Side Ø 8.2 Thread:M6X1 Through Hole:Ø 4.6	16	5.5	6	44	34	-	2.15	12	10	18.3	15	
40	G1/8	Double Side Ø 10 Thread:M8X1.25 Through Hole:Ø 6.5	20	7.5	6.5	52	40	-	2.25	16	14	21.3	16	
50	G1/4	Double Side Ø 11 Thread:M8X1.25 Through Hole:Ø 6.5	25	8.5	9.5	62	48	-	4.15	20	17	30	20	
63	G1/4	Double Side Ø 11 Thread:M8X1.25 Through Hole:Ø 6.5	25	8.5	9.5	75	60	-	3.15	20	17	28.7	20	
80	G3/8	Double Side Ø 14 Thread:M12X1.75 Through Hole:Ø 9.2	25	10.5	10	95	74	-	3.65	25	22	36	26	
100	G3/8	Double Side Ø 17.5 Thread:M14X2 Through Hole:Ø 9.2	30	13	10	114	90	-	3.65	32	27	35	26	

# SDA Series Compact Cylinder

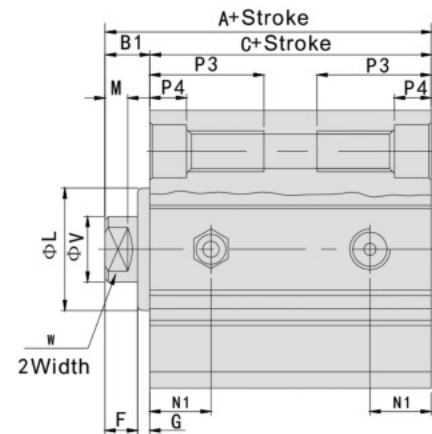
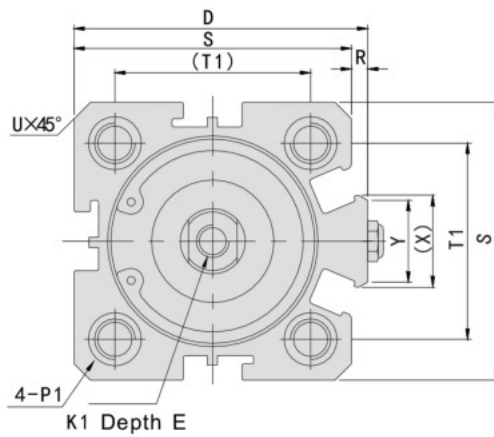
## Main Dimensions

SSA/ SSAS  
(Single Acting  
Spring Extend)

Ø12- Ø16



Ø20- Ø40



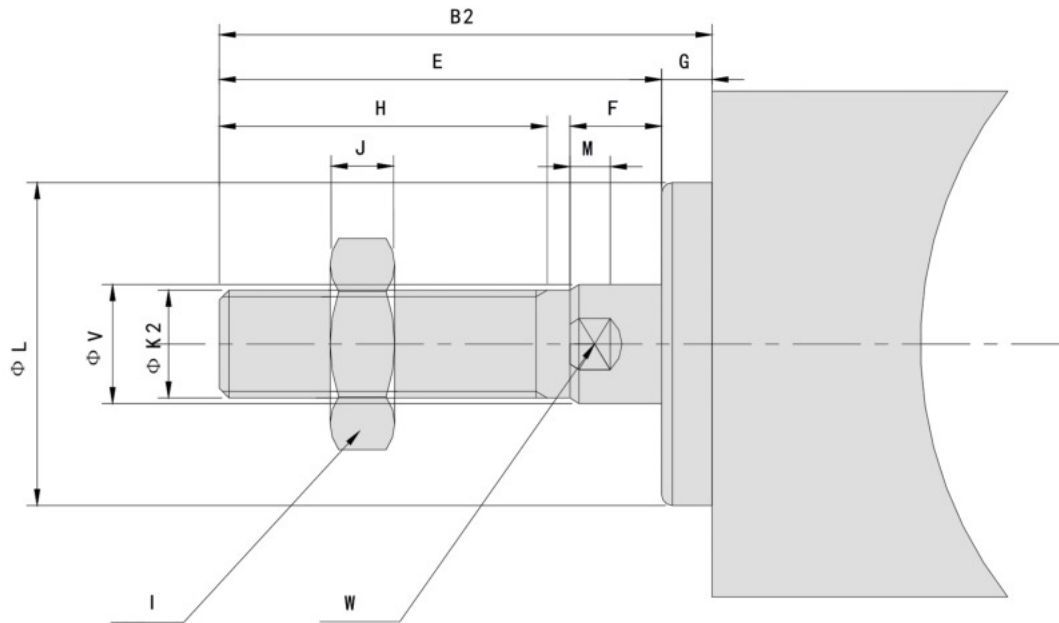
Model	Standard				With Magnet				D	E	F	G	K1	L	M	N1	N3		
	A		B1	C		A		B1										C	
	≤10	>10		≤10	>10	≤10	>10											≤10	>10
12	32	42	5	27	37	42	52	5	37	47	-	6	4	1	M3X0.5	10.2	2.8	6.3	6
16	34	44	5.5	28.5	38.5	44	54	5.5	38.5	48.5	-	6	4	1.5	M3X0.5	11	2.8	7.3	6.5
20	35	45	5.5	29.5	39.5	45	55	5.5	39.5	49.5	36	8	4	1.5	M4X0.7	16	2.8	7.5	-
25	37	47	6	31	41	47	57	6	41	51	42	10	4	2	M5X0.8	17	2.8	8	-
32	41.5	51.5	7	34.5	44.5	51.5	61.5	7	44.5	54.5	50	12	4	3	M6X1	22	2.8	9	-
40	43	53	7	36	46	53	63	7	46	56	58.5	12	4	3	M8X1.25	28	2.8	10	-

Bore	Sign	O	P1	P3	P4	R	S	T1	T2	U	V	W	X	Y
		12	M5X0.8	Double Side Ø 6.5 Thread:M5X0.8 Through Hole:Ø 4.2	12	4.5	-	25	16.2	23	1.6	6	5	-
16	M5X0.8	Double Side Ø 6.5 Thread:M5X0.8 Through Hole:Ø 4.2	12	4.5	-	29	19.8	28	1.6	6	5	-	-	
20	M5X0.8	Double Side Ø 6.5 Thread:M5X0.8 Through Hole:Ø 4.2	14	4.5	2	34	24	-	2.1	8	6	11.3	10	
25	M5X0.8	Double Side Ø 8.2 Thread:M6X1 Through Hole:Ø 4.6	15	5.5	2	40	28	-	3.1	10	8	12	10	
32	G1/8	Double Side Ø 8.2 Thread:M6X1 Through Hole:Ø 4.6	16	5.5	6	44	34	-	2.15	12	10	18.3	15	
40	G1/8	Double Side Ø 10 Thread:M8X1.25 Through Hole:Ø 6.5	20	7.5	6.5	52	40	-	2.25	16	14	21.3	16	

# SDA Series Compact Cylinder

## Main Dimensions

SDA SSA STA



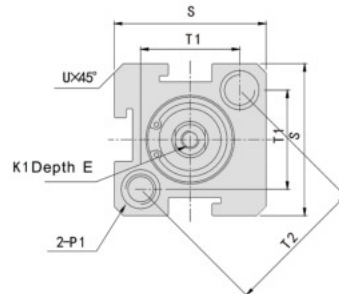
Bore \ Sign	B2	E	F	G	H	I	J	K	L	M	V	W
12	17	16	4	1	10	8	4	M5X0.8	10.2	2.8	6	5
16	17.5	16	4	1.5	10	8	4	M5X0.8	11	2.8	6	5
20	20.5	19	4	1.5	13	10	5	M6X1.0	15	2.8	8	6
25	23	21	4	2	15	12	5	M8X1.25	17	2.8	10	8
32	25	22	4	3	15	17	6	M10X1.25	22	2.8	12	10
40	35	32	4	3	25	19	6	M14X1.5	28	2.8	16	14
50	37	33	5	4	25	27	8	M18X1.5	38	2.8	20	17
63	37	33	5	4	25	27	11	M18X1.5	40	2.8	20	17
80	44	39	6	5	30	32	13	M22X1.5	45	4	25	22
100	50	45	7	5	35	32	13	M26X1.5	55	4	32	27

# SDA Series Compact Cylinder

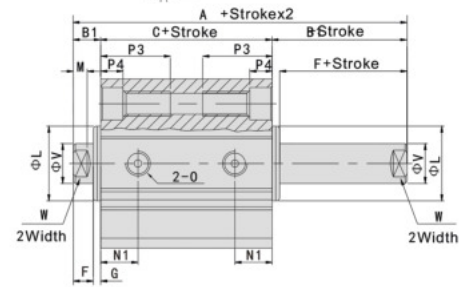
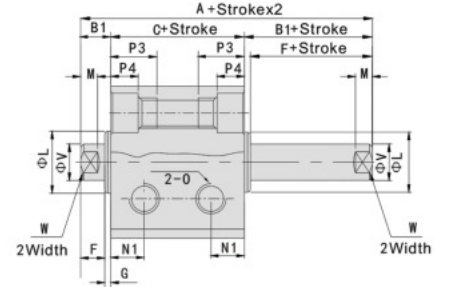
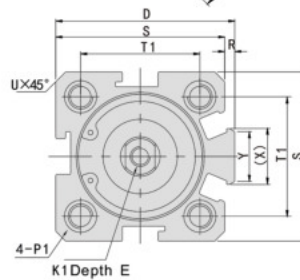
## Main Dimensions

Ø12- Ø16

**SDAD/SDADS**  
(Double Shaft Acting  
Adjustable Type)



Ø20- Ø100



Model	Standard			With Magnet			D	E		F	G	K1	L	M	N1		N3
	A	B1	C	A	B1	C		S <sub>≤10</sub>	S <sub>&gt;10</sub>						S <sub>≤10</sub>	S <sub>&gt;10</sub>	
12	27	5	17	37	5	27	-	6	4	1	M3X0.5	10.2	2.8	6.3	6		
16	29.5	5.5	18.5	39.5	5.5	28.5	-	6	4	1.5	M3X0.5	11	2.8	7.3	6.5		
20	30.5	5.5	19.5	40.5	5.5	29.5	36	8(S=56.5)	4	1.5	M4X0.7	16	2.8	7.5	-		
25	33	6	21	43	6	31	42	10(S=57)	4	2	M5X0.8	17	2.8	8	-		
32	38.5	7	24.5	48.5	7	34.5	50	8 12	4	3	M6X1	22	2.8	9	-		
40	40	7	26	50	7	36	58.5	8 12	4	3	M8X1.25	28	2.8	10	-		
50	46	9	28	56	9	38	71.5	8 15	5	4	M10X1.5	38	2.8	10.5	-		
63	50	9	32	60	9	42	84.5	10 15	5	4	M10X1.5	40	2.8	9.5 11.8	-		
80	63	11	41	73	11	51	104	13 20	6	5	M14X1.5	45	4	11.5 14.5	-		
100	75	12	51	85	12	61	124	18 20	7	5	M18X1.5	55	4	16 20.5	-		

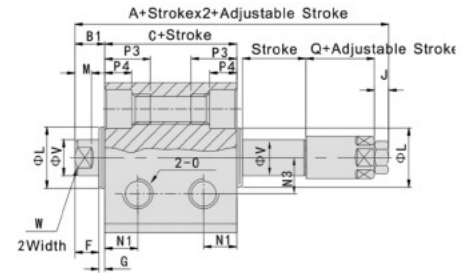
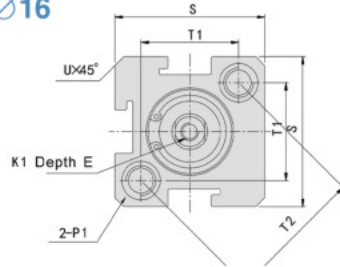
Bore	Sign	O	P1	P3	P4	R	S	T1	T2	U	V	W	X	Y
16	M5X0.8	Double Side Ø 6.5 Thread:M5X0.8 Through Hole:Ø 4.2	12	4.5	-	29	19.8	28	1.6	6	5	-	-	
20	M5X0.8	Double Side Ø 6.5 Thread:M5X0.8 Through Hole:Ø 4.2	14	4.5	2	34	24	-	2.1	8	6	11.3	10	
25	M5X0.8	Double Side Ø 8.2 Thread:M6X1 Through Hole:Ø 4.6	15	5.5	2	40	28	-	3.1	10	8	12	10	
32	G1/8	Double Side Ø 8.2 Thread:M6X1 Through Hole:Ø 4.6	16	5.5	6	44	34	-	2.15	12	10	18.3	15	
40	G1/8	Double Side Ø 10 Thread:M8X1.25 Through Hole:Ø 6.5	20	7.5	6.5	52	40	-	2.25	16	14	21.3	16	
50	G1/4	Double Side Ø 11 Thread:M8X1.25 Through Hole:Ø 6.5	25	8.5	9.5	62	48	-	4.15	20	17	30	20	
63	G1/4	Double Side Ø 11 Thread:M8X1.25 Through Hole:Ø 6.5	25	8.5	9.5	75	60	-	3.15	20	17	28.7	20	
80	G3/8	Double Side Ø 14 Thread:M12X1.75 Through Hole:Ø 9.2	25	10.5	10	94	74	-	3.64	25	22	36	26	
100	G3/8	Double Side Ø 17.5 Thread:M14X2 Through Hole:Ø 11.3	30	13	10	114	90	-	3.65	32	22	35	26	

# SDA Series Compact Cylinder

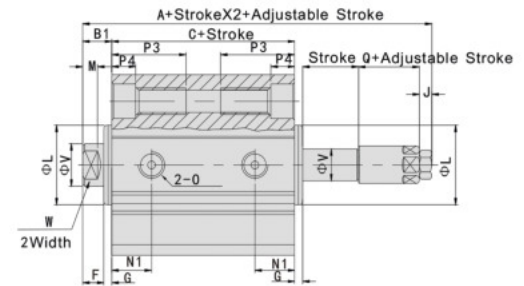
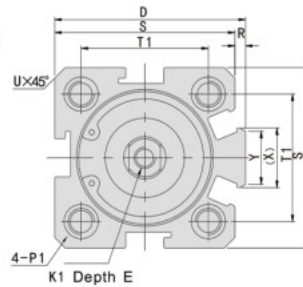
## Main Dimensions

SDAJ/SDAJS  
(Double Shaft Adjustable  
Stroke Type)

Ø12- Ø16



Ø20- Ø100



Model Bore/Sign Stroke	Standard			With Magnet			D	E		F	G	J	K1	L	M	N1	
	A	B1	C	A	B1	C		S≤10	S>10							S≤10	S>10
12	40	5	17	50	5	27	-	6	4	1	4	M3X0.5	10.2	2.8	6.3		
16	42.5	5.5	18.5	52.5	5.5	28.5	-	6	4	1.5	4	M3X0.5	11	2.8	7.3		
20	47.5	5.5	19.5	57.5	5.5	29.5	36	8(S=56.5)	4	1.5	5	M4X0.7	16	2.8	7.5		
25	55	6	21	65	6	31	42	10(S=57)	4	2	6	M5X0.8	17	2.8	8		
32	61.5	7	24.5	71.5	7	34.5	50	8 12	4	3	6	M6X1	22	2.8	9		
40	65	7	26	75	7	36	58.5	8 12	4	3	8	M8X1.25	28	2.8	10		
50	73	9	28	83	9	38	71.5	8 15	5	4	11	M10X1.5	38	2.8	10.5		
63	77	9	32	87	9	42	84.5	10 15	5	4	11	M10X1.5	40	2.8	9.5 11.8		
80	94	11	41	104	11	51	104	13 20	6	5	13	M14X1.5	45	4	11.5 14.5		
100	105	12	51	115	12	61	124	18 20	7	5	13	M18X1.5	55	4	16 20.5		

Bore	Sign	N3	O	P1	P3	P4	R	S	T1	T2	U	V	W	X	Y
		12	6	M5X0.8	Double Side Ø 6.5 Thread:M5X0.8 Through Hole:Ø 4.2	12	4.5	-	25	16.2	23	1.6	6	5	-
16	6.5	M5X0.8	Double Side Ø 6.5 Thread:M5X0.8 Through Hole:Ø 4.2	12	4.5	-	29	19.8	28	1.6	6	5	-	-	
20	-	M5X0.8	Double Side Ø 6.5 Thread:M5X0.8 Through Hole:Ø 4.2	14	4.5	2	34	24	-	2.1	8	6	11.3	10	
25	-	M5X0.8	Double Side Ø 8.2 Thread:M6X1 Through Hole:Ø 4.6	15	5.5	2	40	28	-	3.1	10	8	12	10	
32	-	G1/8	Double Side Ø 8.2 Thread:M6X1 Through Hole:Ø 4.6	16	5.5	6	44	34	-	2.15	12	10	18.3	15	
40	-	G1/8	Double Side Ø 10 Thread:M8X1.25 Through Hole:Ø 6.5	20	7.5	6.5	52	40	-	2.25	16	14	21.3	16	
50	-	G1/4	Double Side Ø 11 Thread:M8X1.25 Through Hole:Ø 6.5	25	8.5	9.5	62	48	-	4.15	20	17	30	20	
63	-	G1/4	Double Side Ø 11 Thread:M8X1.25 Through Hole:Ø 6.5	25	8.5	9.5	75	60	-	3.15	20	17	28.7	20	
80	-	G3/8	Double Side Ø 14 Thread:M12X1.75 Through Hole:Ø 9.2	25	10.5	10	94	74	-	3.64	25	22	36	26	
100	-	G3/8	Double Side Ø 17.5 Thread:M14X2 Through Hole:Ø 11.3	30	13	10	114	90	-	3.65	32	22	35	26	

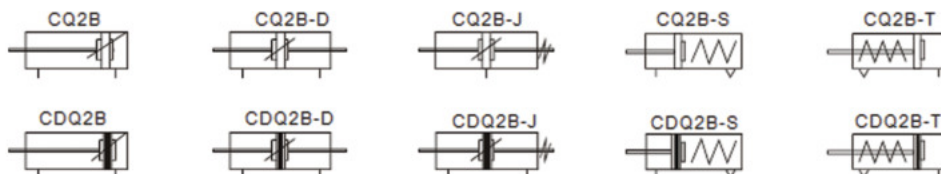


# CQ2 Series Compact Cylinder

## Ordering Code

### CQ2 Series Compact Cylinder

<p><b>C □ Q2</b></p> <p>—</p> <p><b>Magnet</b></p> <p>Blank: Without Magnet D: With Magnet</p>	<p><b>B</b></p> <p>—</p> <p><b>Mounting</b></p> <p>B: Through hole A: Female thread at both ends</p>	<p><b>12</b></p> <p>—</p> <p><b>Bore</b></p> <p>Double Acting: 12~100MM Spring Acting: 12~50MM</p>	<p><b>X 10</b></p> <p>—</p> <p><b>Stroke</b></p>	<p><b>D</b></p> <p>—</p> <p><b>Acting</b></p> <p>Blank: Double acting S: Single acting spring extent T: Single acting spring return D: Double shaft double acting J: Double shaft double acting adjustable</p>	<p><b>M</b></p> <p>—</p> <p><b>Thread Type</b></p> <p>Blank: Female thread on piston rod M: Male thread on piston rod</p>
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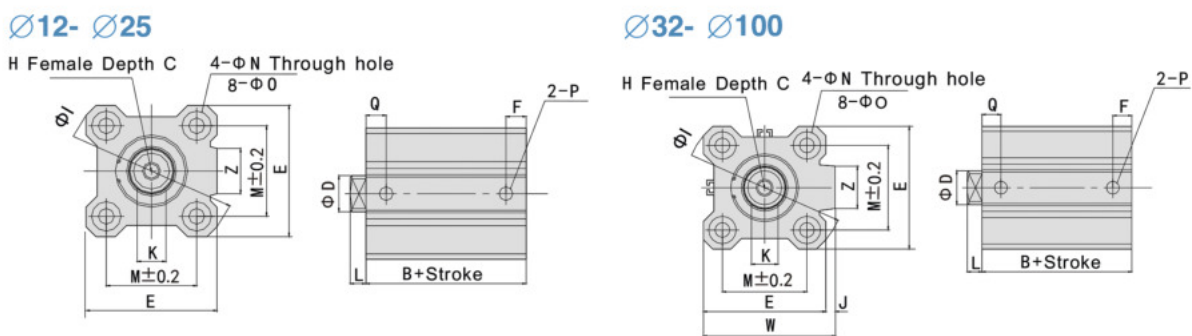
## Specifications

Bore (mm)	12	16	20	25	32	40	50	63	80	100
Working medium	Clean air (40µm Filtration)									
Acting Type	Double Single acting spring extent / Single acting spring reurn									
Guaranteed Pressure	1.5MPa									
Max. Working Pressure	1.5MPa									
Working temperature	5~60°C									
Thread on Piston Rod	Female thread (Standard), Male thread Optional)									
Tolerance of Stroke	+ 1.0 0 mm									
Lubrication	Not Required									
Installation	Through hole (Standard), Female thread on both sides (Optional)									
Port size	M5X0.8			G1/8			G1/4		G3/8	

# CQ2 Series Compact Cylinder

## Main Dimensions

Double acting/  
Single acting



Bore	Stroke	B	ØD	E	F	H	S	C	ØI	J	K	L	M	ØN	ØO	P	Q	W	Z
12	5~30	17	6	25	5	M3*0.5	25	6	32	-	5	3.5	15.5	3.5	6.5 Depth3.5	M5*0.8	7.5	-	-
16	5~30	18.5	8	29	5.5	M3*0.5	29	8	38	-	6	3.5	20	3.5	6.5Depth3.5	M5*0.8	8	-	10
20	5~50	19.5	10	36	5.5	M5*0.8	34	7	47	-	8	4.5	25.5	5.5	9Depth7	M5*0.8	9	-	10
25	5~30	22.5	12	40	5.5	M6*1.0	40	12	52	-	10	5	28	5.5	9Depth7	M5*0.8	11	-	10
32	5 10~50	23	16	16	7.5 5.5	M8*1.25	44	13	60	4.5	14	7	34	5.5	9Depth7	M5*0.8 1/8	11.5 10.5	49.5	14
40	5~50	29.5	16	45	8	M8*1.25	52	13	69	5	14	7	40	5.5	9Depth7	1/8	11	57	14
50	10~50	30.5	20	52	10.5	M10*1.5	62	15	86	7	17	8	50	6.6	11 Depth8	1/4	10.5	71	19
63	10~50	36	20	64	10.5	M10*1.5	21	15	103	7	17	8	60	9	14Depth10.5	1/4	15	84	19
80	10~50	43.5	25	98	12.5	M16*2.0	94	21	132	6	22	10	77	11	17.5Depth13.5	3/8	16	104	26
100	10~50	53	30	117	13	M20*2.5	114	27	156	6.5	27	12	94	11	17.5Depth13.5	3/8	23	123.5	26

### Note2 Long Stroke

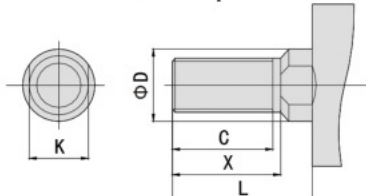
Bore	Stroke (MM)	B	F	P	Q	Bore	Stroke (MM)	B	F	P	Q
32	75.100	33	7.5	1/8	10.5	63	75.100	46	10.5	1/4	15
40	75.100	39.5	8	1/8	11	80	75.100	53.5	12.5	-	16
50	75.100	40.5	10.5	1/4	10.5	100	75.100	63	13	3/8	23

Note1) Standard stroke is at 5mm interval;  
 Note2) The stroke is medium stroke between 55mm and 100mm( 55, 60,65, 70, 80, 85, 90, 95) plus 5, 10, 15 or 20mm thick backing plate;  
 Note3) Unless specified, the dimensions of the model with through hole is the same as those of the model with female thread at both ends.

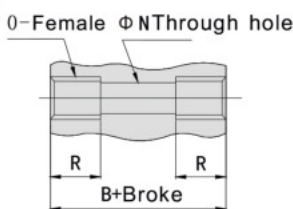
Bore	B			ØD	E	F		H	C	ØI	J	K	L	M	ØN	O	P			Q		W	Z
	5st	10st	20st			5st	10st										5st	10st	20st	5st	10st		
12	22	27	-	6	25	5	5	M3*0.5	6	32	-	5	3.5	15.5	3.5	6.5 Depth3.5	M5*0.8	-	7.5	7.5	-	-	
16	23.5	28.5	-	8	29	5.5	5.5	M4*0.7	8	38	-	6	3.5	20	3.5	6.5 Depth3.5	M5*0.8	-	8	8	-	10	
20	24.5	29.5	-	10	36	5.5	5.5	M5*0.8	7	-	-	8	4.5	25.5	5.5	9 Depth 7	M5*0.8	-	9	9	-	10	
25	27.5	32.5	-	12	40	5.5	5.5	M6*1.0	12	52	-	10	5	28	5.5	9 Depth 7	M5*0.8	-	11	11	-	10	
32	28	33	-	16	45	5.5	7.5	M8*1.25	13	60	4.5	14	7	34	5.5	9 Depth 7	M5*0.8	-	11.5	10.5	49.5	18	
40	34.5	39.5	-	16	52	8	8	M8*1.25	13	69	5	14	7	40	5.5	9 Depth 7	1/8	-	11	11	57	18	
50	-	40.5	50.5	20	64	10.5	10.5	M10*1.5	15	86	7	17	8	50	6.6	11 Depth 8	-	-	10.5	10.5	11	22	

# CQ2 Series Compact Cylinder

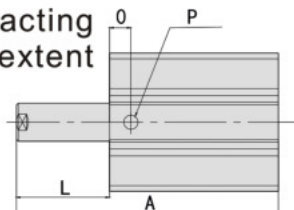
Male thread on piston rod



Female thread at both ends



Single acting spring extent  
Φ12~Φ50



Bore (mm)	C	X	Ø D	H	L	K
12	9	10.5	6	M5*0.8	14	5
16	10	12	8	M6*1.0	15.5	6
20	12	14	10	M8*1.25	18.5	8
25	15	17.5	12	M10*1.25	22.5	10
32	20.5	23.5	16	M14*1.5	28.5	14
40	20.5	23.5	16	M14*1.5	28.5	14
50	26	28.5	20	M18*1.5	33.5	17
63	26	28.5	20	M18*1.5	33.5	17
80	32.5	35.5	25	M22*1.5	43.5	22
100	32.5	35.5	30	M26*1.5	43.5	27

Bore (mm)	O	R
12	M4*0.7	7
16	M4*0.7	7
20	M6*1.0	10
25	M6*1.0	10
32	M6*1.0	10
40	M6*1.0	10
50	M8*1.25	14
63	M10*1.5	18
80	M12*1.7	22
100	M12*1.7	22

Bore (mm)	A			L		
	5st	10st	20st	5st	10st	20st
12	30.5	40.5	-	8.5	13.5	-
16	32	42	-	8.5	13.5	-
20	34	44	-	9.5	14.5	-
25	37.5	47.5	-	10	10	-
32	40	50	-	12	17	-
40	46.5	56.5	-	12	17	-
50	-	58.5	78.5	-	18	28

Note: Unless otherwise specified, the dimensions of model with through hole are the same as those of model with female thread at both ends

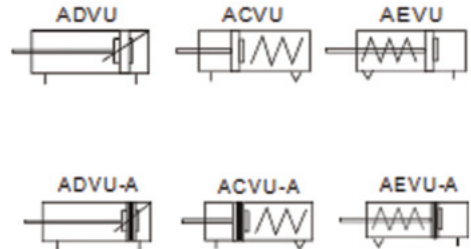
# ADVU Series Compact Cylinder

## Ordering Code

ADVU Series Compact Cylinder

<p><b>ADVU</b></p> <p>Series Code</p> <p>ADVU: Double Acting AEVU: Spring Return ACVU: Spring Extend ADVUD: Double Shaft Acting ADVUJ: Adjustable cushion type</p>	<p><b>12</b></p> <p>Bore</p>	<p><b>X 10</b></p> <p>Stroke</p>	<p><b>25</b></p> <p>Adjustable Stroke</p>	<p><b>A</b></p> <p>Magnet</p> <p>Blank: Without Magnet A: With Magnet</p>	<p><b>B</b></p> <p>Stroke</p> <p>Blank: Female Thread B: Male Thread</p>
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# ADVU Series Compact Cylinder

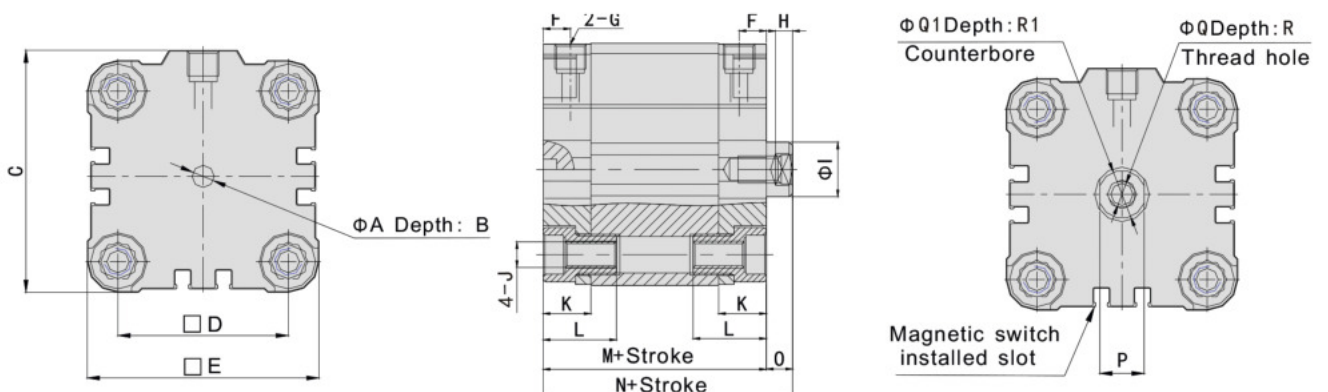


## Specifications

Bore (mm)	12	16	20	25	32	40	50	63	80	100
Working medium	Clean air (40µm Filtration)									
Acting Type	Double Acting Spring Extend/ Spring Return									
Pressure range	Double Acting	0.2~1.0MPa								
	Spring Acting									
Guaranteed pressure	1.5MPa									
Working temperature	-5~70°C									
Speed range	Double Acting: 30~500mm/ s Spring Acting: 50~500mm/ s									
Tolerance of Stroke	0 ~150 + 1.0 mm					0 > 150 + 1.4 mm				
Cushion type	Rubber Cushion									
Port size	M5X0.8					G1/8			G1/4	

## Main Dimensions

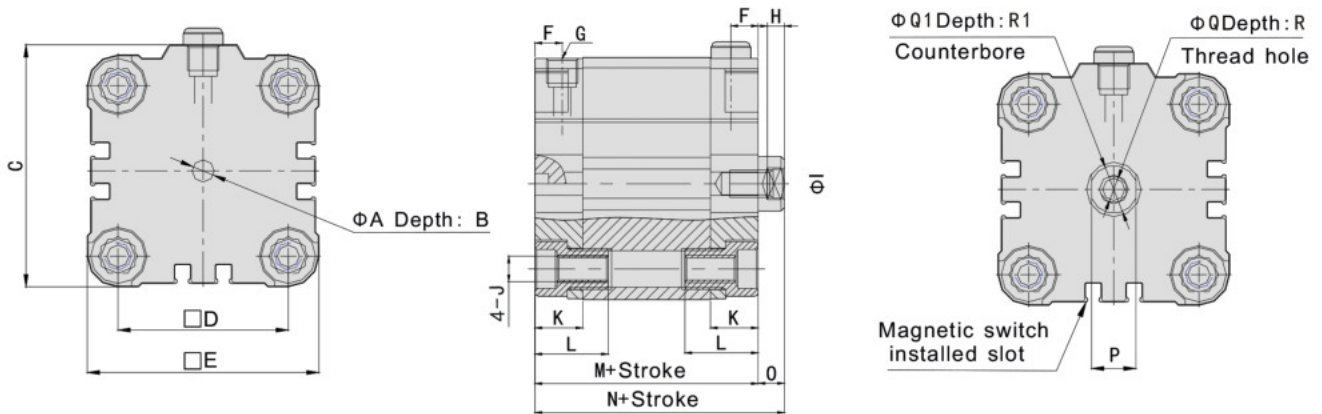
### ADVU



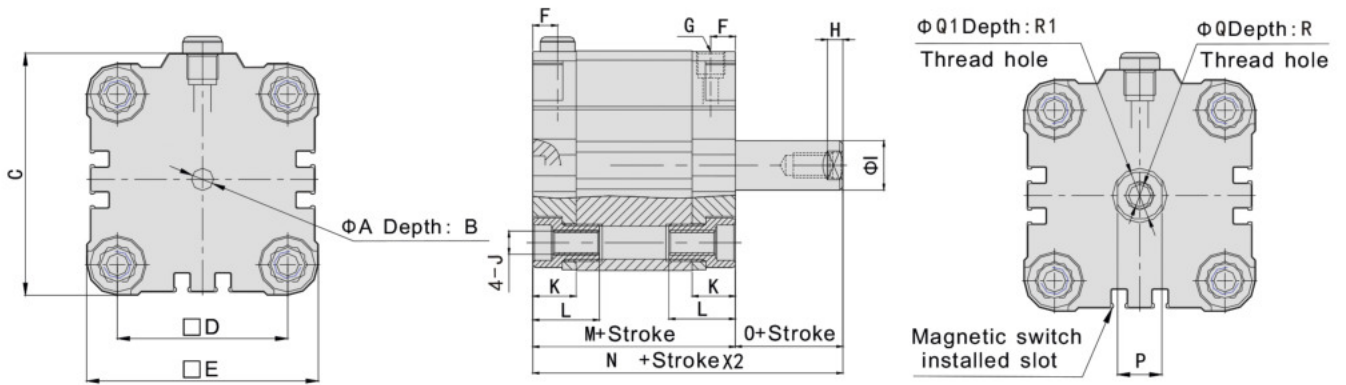
# ADVU Series Compact Cylinder

## Main Dimensions

### AEVU



### ACVU



Bore	Sign	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	8	M5X0.8	3	6	M4X0.7	11.5	18	38	42.5	4.5	5	M3X0.5	3.3	8
16	6	4	30	18	29	8	M5X0.8	3	8	M4X0.7	11.5	18	38	42.5	4.5	7	M4X0.7	4.5	10	1.5	
20	6	4	37.5	22	36	8	M5X0.8	3	10	M5X0.8	11.5	18	38	42.5	4.5	9	M5X0.8	5.5	12	2	
25	6	4	41.5	26	40	8	M5X0.8	4	10	M5X0.8	11.5	18	39.5	45	5.5	9	M5X0.8	5.5	12	2	
32	6	4	52	32	50	8	G1/8	4.5	12	M6X1.0	14	21	44.5	50.5	6	32	M6X1.0	6.5	14	2.6	
40	6	4	62.5	42	60	8	G1/8	4.5	12	M6X1.0	14	21	45.5	52	6.5	10	M6X1.0	6.5	14	2.6	
50	6	4	71	50	68	8	G1/8	5	16	M8X1.25	14	22	45.5	53	7.5	10	M8X1.25	8.5	16	3.3	
63	8	4	91	62	87	8	G1/8	5	16	M10X1.5	15	24	50	57.5	7.5	13	M8X1.25	8.5	16	3.3	
80	8	4	111	82	107	8.5	G1/8	5.5	20	M10X1.5	16	27	56	64	8	17	M10X1.5	10.5	20	4.7	
100	8.1	4	133	103	128	10.5	G1/8	7	25	M10X1.5	19	32	66.5	76.5	10	22	M12X17.5	12.5	24	6.1	