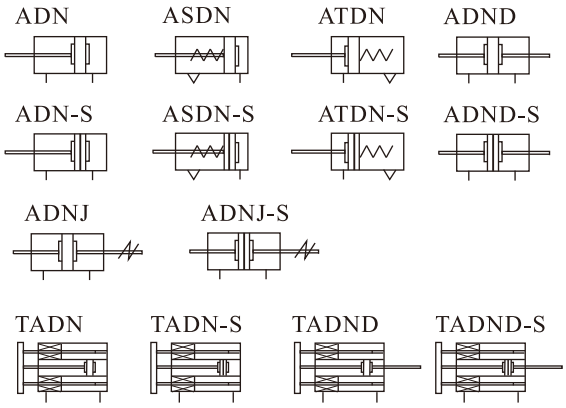
Compact cylinder——ADN Series

Product feature

1. In accordance with ISO21287 standard, the mounting size is vogue.
2. The cylinder body connects with the threads of the front and back cover, forming high strength and convenient maintenance.
3. The internal diameter of the body is treated with rolling followed by the treatment of hard anodizing, forming an excellent abrasion resistance and durability.
4. The seal of piston adopts heterogeneous two-way seal structure. It has compact dimension and the function of oil reservation.
5. Compact structure can effectively save fifty percent installation space with ISO15552 standard cylinder.
6. There are magnetic switch slots around the cylinder body, which is convenient to install inducting switch.
7. Bumper is available and it can availably absorb excrescent energy.
8. Installing accessorirs with various specifications are optional.

Symbol



Specification

Bore size(mm)		12	16	20	25	32	40	50	63	80	100	125
Acting type		Double acting										
		Single acting_Push type, Single acting_Pull type										-
Fluid		Air(to be filtered by 40μm filter element)										
Operating pressure	Double acting	0.15~1.0MPa(22~145psi)										
	Single acting	0.2~1.0MPa(28~145psi)										
Proof pressure		1.5MPa(215psi)										
Temperature ℃		-20~70										
Speed range mm/s		Double acting: 30~500 Single acting: 50~500										
Stroke tolerance		Stroke≤$100^{+1.0}_{0}$ Stroke>$100^{+1.5}_{0}$										
Cushion type		Bumper										
Port size [Note1]		M5×0.8				G1/8						G1/4

[Note1] The standard thread type is G thread, Please control us for other thread type.

Standard Stroke

Bore size (mm)			Standard stroke (mm)	Max.stroke
Common type	Double acting	12	5 10 15 20 25 30 35 40 45 50	50
		16	5 10 15 20 25 30 35 40 45 50 55 60 70 75	75
		20	5 10 15 20 25 30 35 40 45 50 55 60 70 75 80 90 100	100
		25	5 10 15 20 25 30 35 40 45 50 55 60 70 75 80 90 100 110 120 125 150	150
		32 40	5 10 15 20 25 30 35 40 45 50 55 60 70 75 80 90 100 110 120 125 150 160 175 200	200
		50 63	5 10 15 20 25 30 35 40 45 50 55 60 70 75 80 90 100 110 120 125 150 160 175 200 225 250	250
		80 100 125	5 10 15 20 25 30 35 40 45 50 55 60 70 75 80 90 100 110 120 125 150 160 175 200 225 250 275 300	300
	Single acting	12	5 10	10
		16~100	5 10 15 20 25	25
Non-rotating with yoke		12	5 10 15 20 25 30 35 40 45 50	50
		16	5 10 15 20 25 30 35 40 45 50 55 60 70 75	75
		20 25 32 40	5 10 15 20 25 30 35 40 45 50 55 60 70 75 80 90 100	100
		50 63 80 100	5 10 15 20 25 30 35 40 45 50 55 60 70 75 80 90 100	100

[Note] Consult us for non-standard stroke.

Compact cylinder——ADN Series

Ordering code

ADN - 32 × 50 -S - B - FA - □

ADND - 32 × 50 -S - B - FA - □

ADNJ - 32 × 50 - 20 -S - B - FA - □

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

①Model
AND: Compact cylinder(Double acting)
ASDN: Compact cylinder(Single acting-push)
ATDN: Compact cylinder(Single acting-pull)
ADND: Compact cylinder(Double rod)
ADNJ: Compact cylinder(Adjustable stroke)
TADN: Compact cylinder (Double acting non-rotating with yoke)
TADND: Compact cylinder (Double rod non-rotating with yoke)

⑦Mounting type [Note1]		
Mounting type		Series
Blank: No accessories FA: FA type FB: FB type CA: CA type CB: CB type	CR: CR type FTC: FTC type LB: LB type SDB: SDB type	AND ASDN ATDN
Blank: No accessories FB: FB type CA: CA type	CB: CB type CR: CR type FTC: FTC type	TADN
Blank: No accessories FB: FB type		TADND
Blank: No accessories FA: FA type FTC: FTC type LB: LB type		ADND ADNJ

⑥Rod type	
Rod type	Series
Blank: Female thread	AND ASDN ATDN ADND ADNJ
B: Male thread	
No this code	TADN TADND

⑧ Thread type
Blank： G thread
PT： PT thread

②Bore size	
Bore size	Series
12 16 20 25 32 40 50 63 80 100 125	ADN ADND ADNJ
12 16 20 25 32 40 50 63 80 100	ASDN ATDN TADN TADND

③ Stroke
Refer to stroke table for details

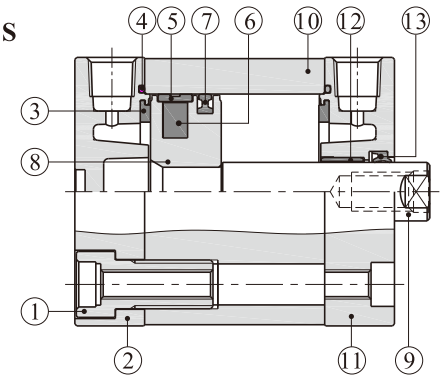
⑤ Magnet
Blank: Without magnet
S: With magnet

④ Adjustable stroke	
Series	Adjustable stroke
ADNJ series	10： 10mm
	20： 20mm
	30： 30mm
	40： 40mm
	50： 50mm
	75： 75mm
	100： 100mm
Others series	No this code

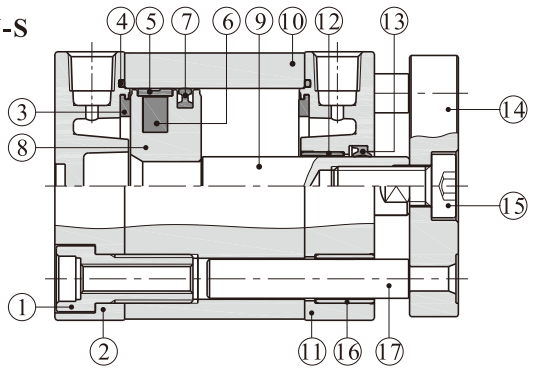
[Note1]CR must be used with CB, SDB must be used with CA, FTC must be used with TCM2.

Inner structure and material of major parts

ADN-S



TADN-S

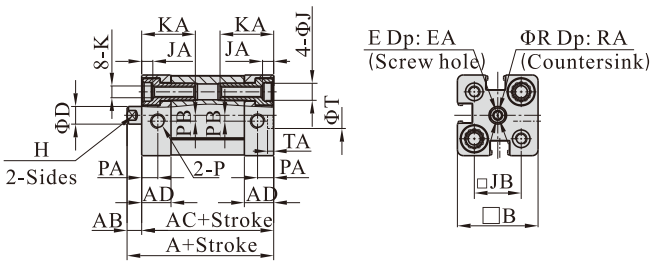


NO.	Item	Material	NO.	Item	Material
1	Screw	Carbon steel	10	Body	Aluminum alloy
2	Back cover	Aluminum alloy	11	Front cover	Aluminum alloy
3	Bumper	TPU	12	Bushing	Wear resistant material
4	O-ring	NBR	13	Front cover packing	NBR
5	Wear ring	Wear resistant material	14	Panal	Aluminum alloy
6	Magnet	Sintered metal or Plastic	15	Screw	Carbon steel
7	Piston seal	NBR	16	Bushing	Wear resistant material
8	Piston	Aluminum alloy	17	Guide rod	Stainless steel or S45C
9	Piston rod	S45C			

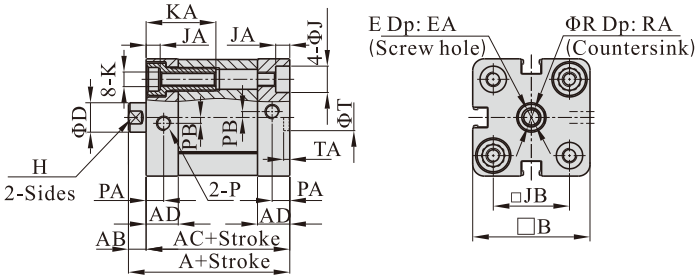
Dimensions

ADN series

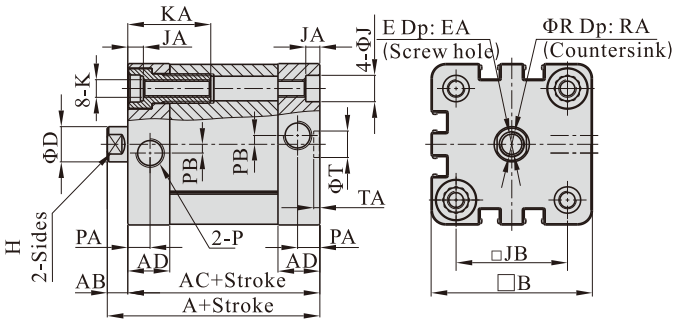
Φ12



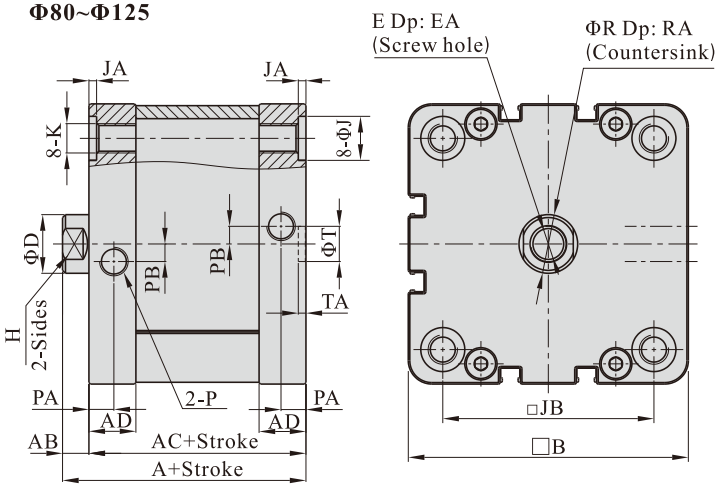
Φ16~Φ25



Φ32~Φ63



Φ80~Φ125



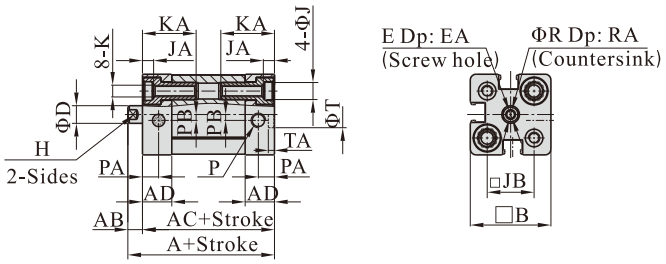
Bore size\Item	A	AB	AC	AD	B	D	E	EA	H	J	JA	JB	K	KA	P
12	40	5	35	10	27.5	6	M3×0.5	8	5	6	3.5	16	M4×0.7	18.5	M5×0.8
16	40	5	35	10	30	8	M4×0.7	10	7	6	3.5	18	M4×0.7	18.5	M5×0.8
20	43	6	37	10.5	35.5	10	M6×1.0	14	9	9	4.5	22	M5×0.8	23.5	M5×0.8
25	45	6	39	11	40	10	M6×1.0	14	9	9	4.5	26	M5×0.8	23.5	M5×0.8
32	51	7	44	14	49.5	12	M8×1.25	16	10	9	4.5	32.5	M6×1.0	28.5	G1/8
40	52.5	7	45.5	14.5	55	12	M8×1.25	16	10	9	4.5	38	M6×1.0	28.5	G1/8
50	53.5	8	45.5	14.5	65.5	16	M10×1.5	20	13	11	4.5	46.5	M8×1.25	30.5	G1/8
63	57	8	49	15	75.5	16	M10×1.5	20	13	11	4.5	56.5	M8×1.25	30.5	G1/8
80	63	9	54	16	95.5	20	M12×1.75	20	17	15	2.5	72	M10×1.5	–	G1/8
100	76	9	67	19	113.5	20	M12×1.75	20	17	15	2.5	89	M10×1.5	–	G1/8
125	92	11	81	20	134.5	25	M16×2.0	25	21	–	–	110	M12×1.75	–	G1/4

Bore size\Item	PA	PB	R	RA	T	TA
12	5.5	2	3.5	1.5	9	2.1
16	5.5	2	4.5	1.5	9	2.1
20	6	2	6.5	2.5	9	2.1
25	6	2	6.5	2.5	9	2.1
32	7.5	3	8.5	3.5	9	2.1
40	7.5	3	8.5	3.5	9	2.1
50	7.5	3	10.5	4.5	12	2.6
63	7.5	4	10.5	4.5	12	2.6
80	8.5	6	12.5	6	12	2.6
100	10.5	7	12.5	6	12	2.6
125	10.5	8	16.5	7	12	2.6

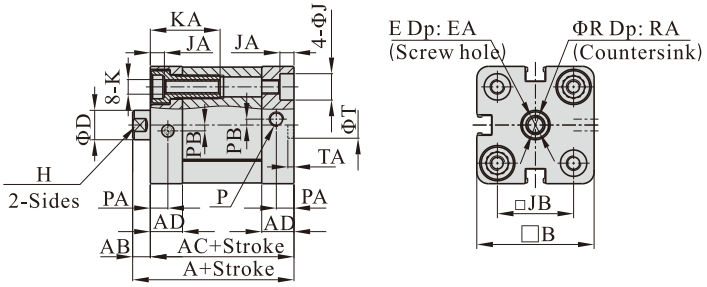
Remark: The dimensions of magnet type cylinder are the same as non-magnet type cylinder.
Please refer to page 112 for male thread dimensions.

ASDN series

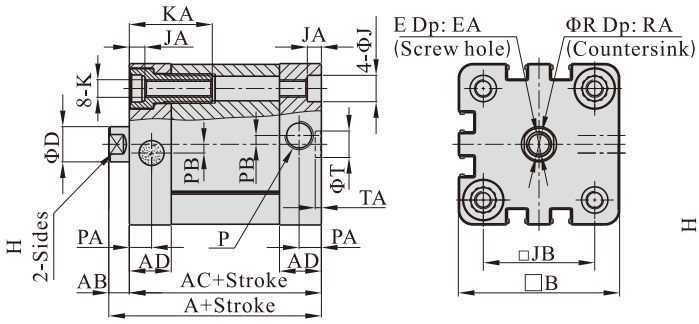
Φ12



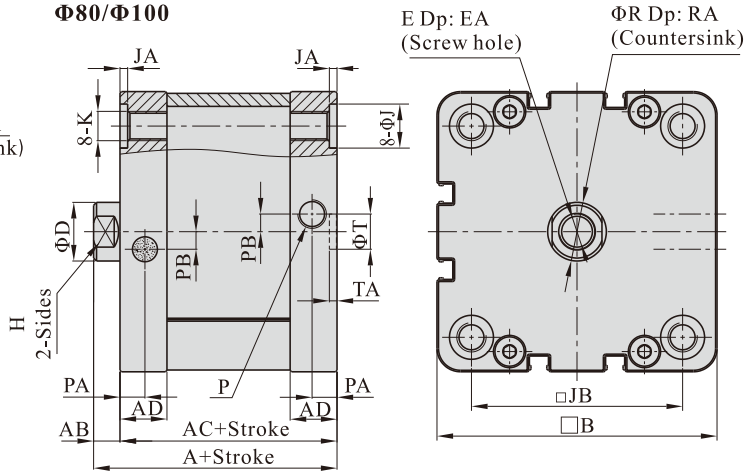
Φ16~Φ25



Φ32~Φ63



Φ80/Φ100



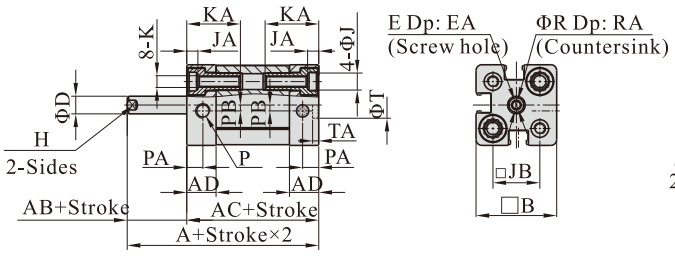
Bore size\Item	A	AB	AC	AD	B	D	E	EA	H	J	JA	JB	K	KA	P
12	40	5	35	10	27.5	6	M3×0.5	8	5	6	3.5	16	M4×0.7	18.5	M5×0.8
16	40	5	35	10	30	8	M4×0.7	10	7	6	3.5	18	M4×0.7	18.5	M5×0.8
20	43	6	37	10.5	35.5	10	M6×1.0	14	9	9	4.5	22	M5×0.8	23.5	M5×0.8
25	45	6	39	11	40	10	M6×1.0	14	9	9	4.5	26	M5×0.8	23.5	M5×0.8
32	51	7	44	14	49.5	12	M8×1.25	16	10	9	4.5	32.5	M6×1.0	28.5	G1/8
40	52.5	7	45.5	14.5	55	12	M8×1.25	16	10	9	4.5	38	M6×1.0	28.5	G1/8
50	53.5	8	45.5	14.5	65.5	16	M10×1.5	20	13	11	4.5	46.5	M8×1.25	30.5	G1/8
63	57	8	49	15	75.5	16	M10×1.5	20	13	11	4.5	56.5	M8×1.25	30.5	G1/8
80	63	9	54	16	95.5	20	M12×1.75	20	17	15	2.5	72	M10×1.5	–	G1/8
100	76	9	67	19	113.5	20	M12×1.75	20	17	15	2.5	89	M10×1.5	–	G1/8

Bore size\Item	PA	PB	R	RA	T	TA
12	5.5	2	3.5	1.5	9	2.1
16	5.5	2	4.5	1.5	9	2.1
20	6	2	6.5	2.5	9	2.1
25	6	2	6.5	2.5	9	2.1
32	7.5	3	8.5	3.5	9	2.1
40	7.5	3	8.5	3.5	9	2.1
50	7.5	3	10.5	4.5	12	2.6
63	7.5	4	10.5	4.5	12	2.6
80	8.5	6	12.5	6	12	2.6
100	10.5	7	12.5	6	12	2.6

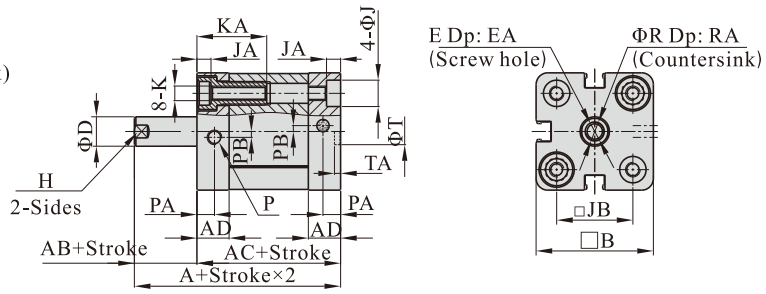
Remark: The dimensions of magnet type cylinder are the same as non-magnet type cylinder.
Please refer to page 112 for male thread dimensions.

ATDN series

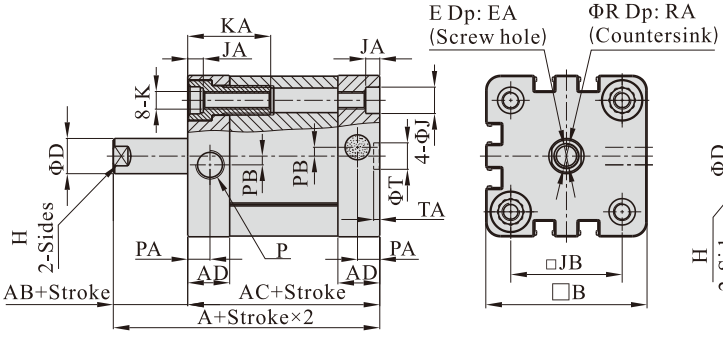
Φ12



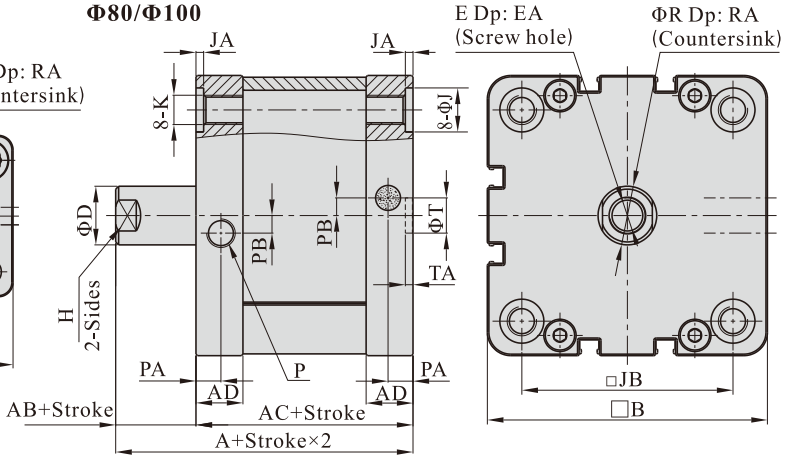
Φ16~Φ25



Φ32~Φ63



Φ80/Φ100

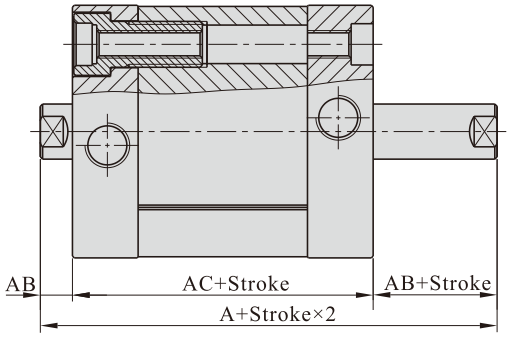


Bore size\Item	A	AB	AC	AD	B	D	E	EA	H	J	JA	JB	K	KA	P
12	40	5	35	10	27.5	6	M3×0.5	8	5	6	3.5	16	M4×0.7	18.5	M5×0.8
16	40	5	35	10	30	8	M4×0.7	10	7	6	3.5	18	M4×0.7	18.5	M5×0.8
20	43	6	37	10.5	35.5	10	M6×1.0	14	9	9	4.5	22	M5×0.8	23.5	M5×0.8
25	45	6	39	11	40	10	M6×1.0	14	9	9	4.5	26	M5×0.8	23.5	M5×0.8
32	51	7	44	14	49.5	12	M8×1.25	16	10	9	4.5	32.5	M6×1.0	28.5	G1/8
40	52.5	7	45.5	14.5	55	12	M8×1.25	16	10	9	4.5	38	M6×1.0	28.5	G1/8
50	53.5	8	45.5	14.5	65.5	16	M10×1.5	20	13	11	4.5	46.5	M8×1.25	30.5	G1/8
63	57	8	49	15	75.5	16	M10×1.5	20	13	11	4.5	56.5	M8×1.25	30.5	G1/8
80	63	9	54	16	95.5	20	M12×1.75	20	17	15	2.5	72	M10×1.5	–	G1/8
100	76	9	67	19	113.5	20	M12×1.75	20	17	15	2.5	89	M10×1.5	–	G1/8

Bore size\Item	PA	PB	R	RA	T	TA
12	5.5	2	3.5	1.5	9	2.1
16	5.5	2	4.5	1.5	9	2.1
20	6	2	6.5	2.5	9	2.1
25	6	2	6.5	2.5	9	2.1
32	7.5	3	8.5	3.5	9	2.1
40	7.5	3	8.5	3.5	9	2.1
50	7.5	3	10.5	4.5	12	2.6
63	7.5	4	10.5	4.5	12	2.6
80	8.5	6	12.5	6	12	2.6
100	10.5	7	12.5	6	12	2.6

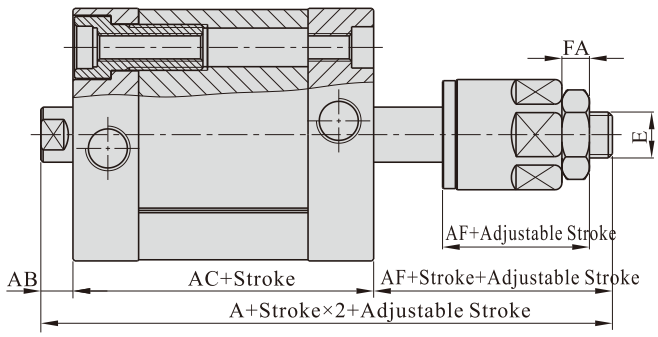
Remark: The dimensions of magnet type cylinder are the same as non-magnet type cylinder.
Please refer to page 112 for male thread dimensions.

ADND series



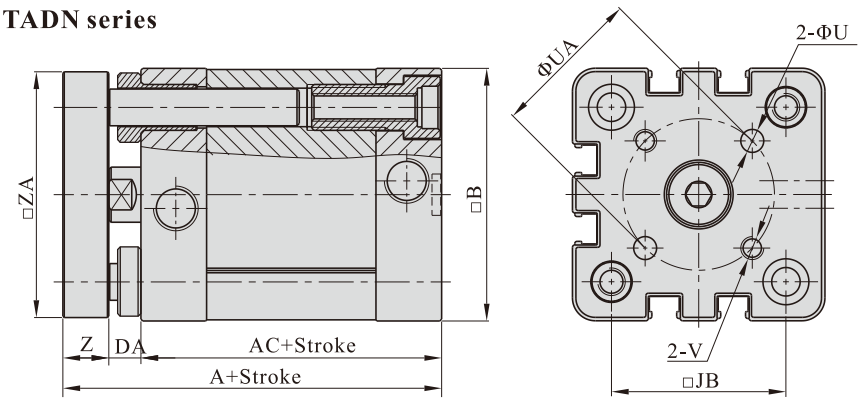
Bore size\Item	A(ADND)	A(ADNJ)	AB
12	45	57	5
16	45	61	5
20	49	68	6
25	51	70	6
32	58	78	7
40	59.5	79.5	7
50	61.5	81.5	8
63	65	85	8
80	72	92	9
100	85	105	9
125	103	127.5	11

ADNJ series



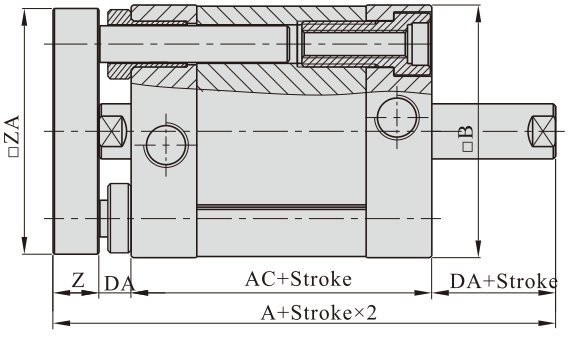
Bore size\Item	AC	AF	FA	E
12	35	17	4	M5×0.8
16	35	21	5	M6×1.0
20	37	25	6	M8×1.25
25	39	25	6	M8×1.25
32	44	27	6	M10×1.25
40	45.5	27	6	M10×1.25
50	45.5	28	7	M12×1.25
63	49	28	7	M12×1.25
80	54	29	8	M16×1.5
100	67	29	8	M16×1.5
125	81	35.5	10	M20×1.5

TADN series



Bore size\Item	A(TADN)	A(TADND)
12	46	51
16	46	51
20	51	57
25	53	59
32	61	68
40	62.5	69.5
50	65.5	73.5
63	69	77
80	77	86
100	90	99

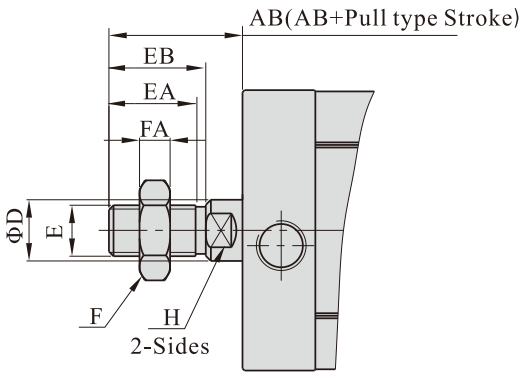
TADND series



Bore size\Item	AC	B	DA	JB	U	UA	V	Z	ZA
12	35	27.5	5	16	3	12	M3×0.5	6	26.5
16	35	30	5	18	3	14	M3×0.5	6	29
20	37	35.5	6	22	4	17	M4×0.7	8	34.5
25	39	40	6	26	5	22	M5×0.8	8	39
32	44	49.5	7	32.5	5	28	M5×0.8	10	48
40	45.5	55	7	38	5	33	M5×0.8	10	53.5
50	45.5	65.5	8	46.5	6	42	M6×1.0	12	64
63	49	75.5	8	56.5	6	50	M6×1.0	12	74
80	54	95.5	9	72	8	65	M8×1.25	14	94
100	67	113.5	9	89	10	80	M10×1.5	14	112

Remark:
1. The unmarked dimension is the same as ADN standard type
2. The dimensions of magnet type cylinder are the same as non-magnet type cylinder.

Male thread



Bore size\Item	AB	D	E	EA	EB	F	FA	H
12	15	6	M5×0.8	9	10	8	4	5
16	17	8	M6×1.0	11	12	10	5	7
20	22	10	M8×1.25	15	16	12	6	9
25	22	10	M8×1.25	15	16	12	6	9
32	26	12	M10×1.25	17	19	17	6	10
40	26	12	M10×1.25	17	19	17	6	10
50	30	16	M12×1.25	20	22	17	7	13
63	30	16	M12×1.25	20	22	17	7	13
80	37	20	M16×1.5	26	28	23	8	17
100	37	20	M16×1.5	26	28	23	8	17
125	51	25	M20×1.5	38	40	26	10	21

List for ordering code of accessories

Accessories / Bore size	Mounting accessories							
	LB	FA/FB	CA	CB	CR	SDB	FTC	TCM2
12	F-ACE12LB	F-ACE12FA	F-ACE12CA	-	-	F-MI12SDB	-	-
16	F-ACP12LB	F-ACE16FA	F-ACE16CA	-	-	F-MI12SDB	-	-
20	F-ACP20LB	F-ACE20FA	F-ACE20CA	-	-	F-MI20SDB	-	-
25	F-ACP25LB	F-ACE25FA	F-ACE25CA	-	-	F-MI20SDB	-	-
32	F-ACE32LB	F-SI32FA	F-SE32CA	F-SE32CB	F-SI32CR	-	F-SI32FTC	F-SI32TCM2
40	F-ACE40LB	F-SI40FA	F-SE40CA	F-SE40CB	F-SI40CR	-	F-SI40FTC	F-SI40TCM2
50	F-ACE50LB	F-SI50FA	F-SE50CA	F-SE50CB	F-SI50CR	-	F-SI50FTC	F-SI40TCM2
63	F-ACE63LB	F-SI63FA	F-SE63CA	F-SE63CB	F-SI63CR	-	F-SI63FTC	F-SI63TCM2
80	F-ACE80LB	F-SI80FA	F-SE80CA	F-SE80CB	F-SI80CR	-	F-SI80FTC	F-SI63TCM2
100	F-ACE100LB	F-SI100FA	F-SE100CA	F-SE100CB	F-SI100CR	-	F-SI100FTC	F-SI125TCM2
125	-	F-SI125FA	F-SE125CA	F-SE125CB	F-SI125CR	-	F-SI125FTC	F-SI125TCM2

Accessories / Bore size	Knuckle				Sensor switch	
	I	Y	F	U	CS1-E	DS1-E
12	F-ACQ12I	F-ACQ12Y	F-M5X080F	F-M5X080U	CS1-E	DS1-E
16	F-M6X100I	F-M6X100Y	F-M6X100F	F-M6X100U		
20	F-M8X125I	F-M8X125Y	F-M8X125F	F-M8X125U		
25						
32	F-M10X125I	F-M10X125Y	F-M10X125F	F-M10X125U		
40						
50	F-M12X125I	F-M12X125Y	F-M12X125F	F-M12X125U		
63						
80	F-M16X150I	F-M16X150Y	F-M16X150F	F-M16X150U		
100						
125	F-M20X150I	F-M20X150Y	F-M20X150F	F-M20X150U		

Accessory selection

Cylinder model\Accessories			Mounting accessories									Knuckle				Sensor switch	
			LB	FA	FB	CA	CB	CR	SDB	FTC	TCM2	I	Y	U	F	CS1-E	DS1-E
ADN	Female thread	Without magnet	●	●	●	●	●	●	●	●	●	×	×	×	×	×	×
		With magnet										●	●	●	●	●	●
	Male thread	Without magnet														×	×
		With magnet														●	●
ASDN ATDN	Female thread	Without magnet	●	●	●	●	●	●	●	●	●	×	×	×	×	×	×
		With magnet										●	●	●	●	●	●
	Male thread	Without magnet														×	×
		With magnet														●	●
ADND ADNJ	Female thread	Without magnet	●	●	×	×	×	×	×	●	●	×	×	×	×	×	×
		With magnet										●	●	●	●	●	●
	Male thread	Without magnet														×	×
		With magnet														●	●
TADN	Female thread	Without magnet	×	×	●	●	●	●	●	●	●	×	×	×	×	×	×
		With magnet														●	●
TADND	Female thread	Without magnet	×	×	●	×	×	×	×	×	×	×	×	×	×	×	×
		With magnet														●	●

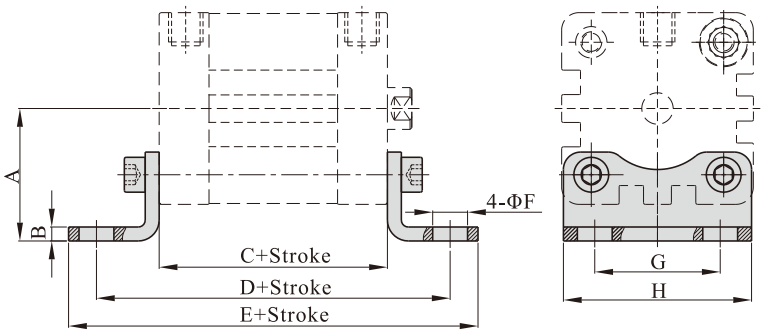
Material of accessories

Accessories / Bore size	Mounting accessories									Knuckle			
	LB	FA	FB	CA	CB	CR	SDB	FTC	TCM2	I	Y	F	U
12~25	△	●	●	●	–	–	△	■	●	□	□	□	□
32~100	△	●	●	◇	◇	◇	–	■	●	□	□	□	□
125	–	◇	◇	◇	◇	◇	–	■	●	□	□	□	□

●——Aluminum alloy; ■——Cast iron; ◇——Ductile Iron; △——SPCC; □——Carbon Steel

Dimensions

LB type

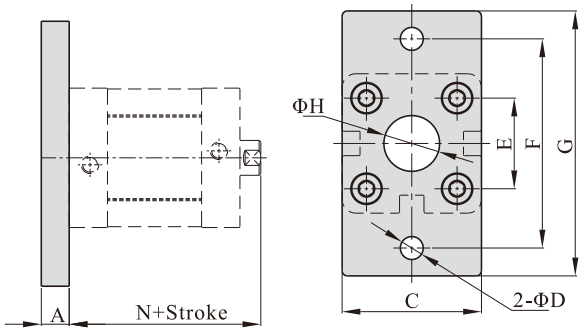


Bore size\Item	A	B	C	D	E	F	G	H
12	21	3	35	61	71	5.5	16	25
16	22	3	35	61	70.6	5.5	18	27
20	27	3.8	37	69	81.6	6.5	22	34
25	29	3.8	39	71	83.6	6.5	26	38
32	33.5	4	44	76	89	7	32	48
40	38	4	45.5	81.5	97.5	10	36	54
50	45	5	45.5	87.5	103.	10	45	65
63	50	5	49	91	107	10	50	75
80	63	6	54	106	127	12	63	95
100	74	6	67	121	146	14.5	75	112

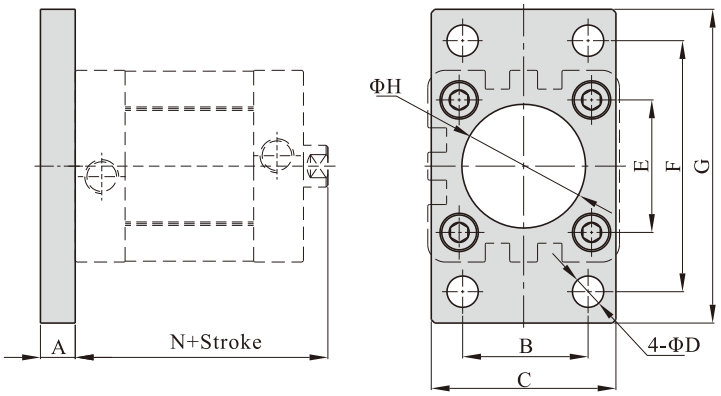
[Note] Valve C in the above table is only for ACE series.
Please refer to relevant content for valve C of other series.

FA/FB type

Φ12~Φ25



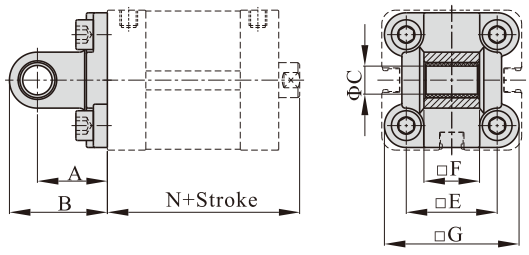
Φ32~Φ125



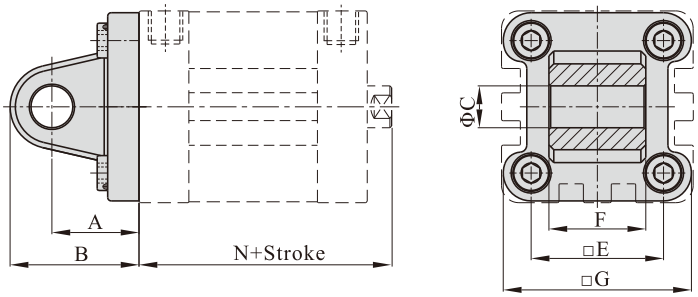
Bore size\Item	A	B	C	D	E	F	G	H	N
12	8	-	25	5.5	16	40	55	10	40
16	8	-	30	5.5	18	43	55	10	40
20	8	-	35	6.6	22	55	68	16	43
25	8	-	39.5	6.6	26	60	76	16	45
32	10	32	47	7	32.5	64	80	30.5	51
40	10	36	53	9	38	72	90	35.5	52.5
50	12	45	65	9	46.5	90	108	40.5	53.5
63	12	50	75	9	56.5	100	118	45.5	57
80	16	63	95	12.5	72	126	150	45.5	63
100	16	75	115	14.5	89	150	176	55.5	76
125	20	90	139	16.5	110	180	218	60.5	92

CA type

Φ12~Φ25



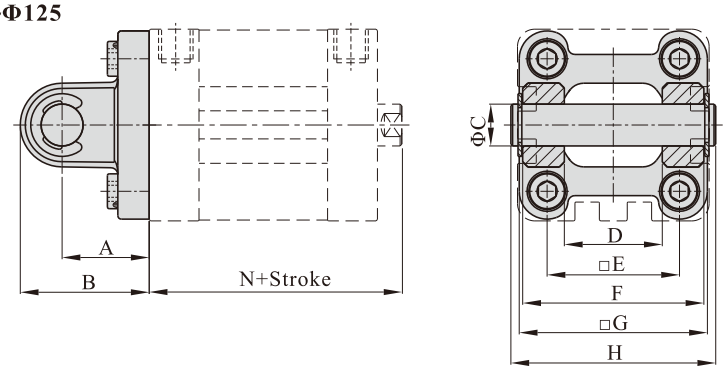
Φ32~Φ125



Bore size\Item	A	B	C	E	F	G	N
12	16	22	6	16	11.9	24	40
16	16	22	6	18	11.9	28.5	40
20	20	28	8	22	15.9	34.5	43
25	20	28	8	26	15.9	38.5	45
32	22	32.5	10	32.5	25.8	46.5	51
40	25	37	12	38	27.8	54	52.5
50	27	39	12	46.5	31.7	64	53.5
63	32	47	16	56.5	39.7	75	57
80	36	51.5	16	72	49.7	93	63
100	41	61	20	89	59.7	110	76
125	50	74	25	110	69.7	134	92

CB type

Φ32~Φ125

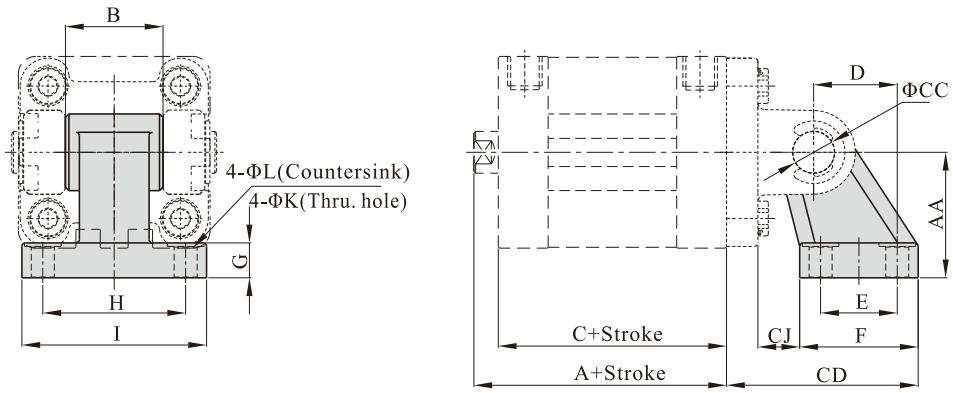


Bore size\Item	A	B	C	D	E	F	G	H	N
32	22	32.5	10	26	32.5	45	46.5	51	51
40	25	37	12	28	38	52	54	59	52.5
50	27	39	12	32	46.5	60	64	67	53.5
63	32	47	16	40	56.5	70	75	77	57
80	36	51.5	16	50	72	90	93	97	63
100	41	61	20	60	89	110	110	119	76
125	50	74	25	70	110	130	134	139	92

[Note] CB is attached with relevant PIN.

CR type

Φ32~Φ125

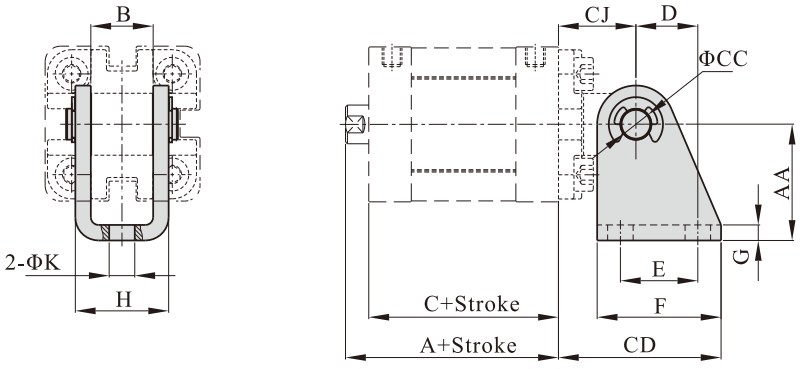


Bore size\Item	A	AA	B	C	CC	CD	CJ	D	E	F	G	H	I	K	L
32	51	32	26	44	10	50	10	21	18	31	8	38	51	6.6	11
40	52.5	36	28	45.5	12	56	12	24	22	35	10	41	54	6.6	11
50	53.5	45	32	45.5	12	68	13	33	30	45	12	50	65	9	14
63	57	50	40	49	16	77	17	37	35	50	12	52	67	9	14
80	63	63	50	54	16	93	19	47	40	60	14	66	86	11	17
100	76	71	60	67	20	106	22	55	50	70	15	76	96	11	17
125	92	90	70	81	25	135	26	70	60	90	20	94	124	14	20

[Note] CR cann't be used alone, it must be used with CB.

SDB type

Φ12~Φ25

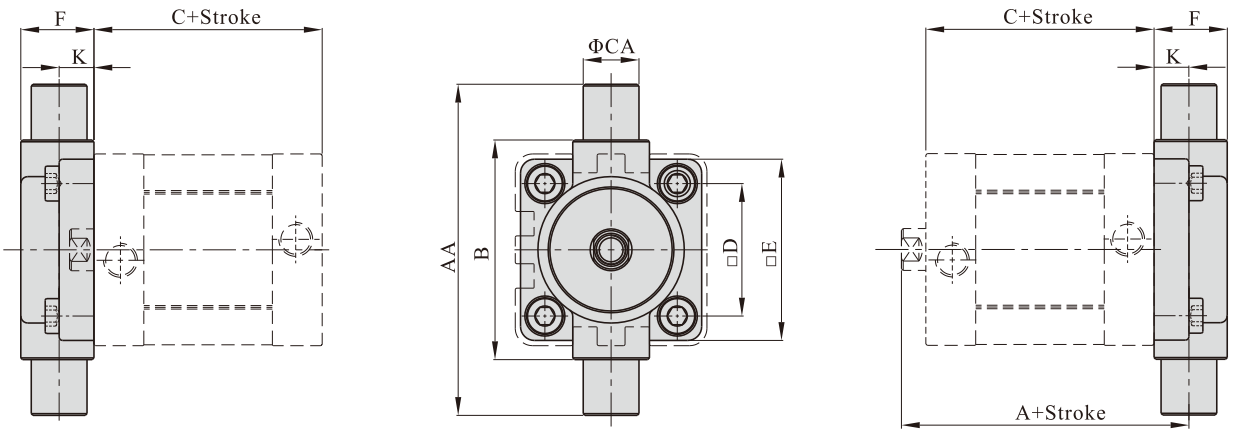


Bore size\Item	A	AA	B	C	CC	CD	CJ	D	E	F	G	H	K
12	40	27	12.1	35	6	34	16	13	15	25	2	18.1	5.5
16	40	27	12.1	35	6	34	16	13	15	25	2	18.1	5.5
20	43	30	16.1	37	8	42	20	16	20	32	2.5	24.1	6.6
25	45	30	16.1	39	8	42	20	16	20	32	2.5	24.1	6.6

[Note] SDB cann't be used alone, it must be used with CA.

FTC type

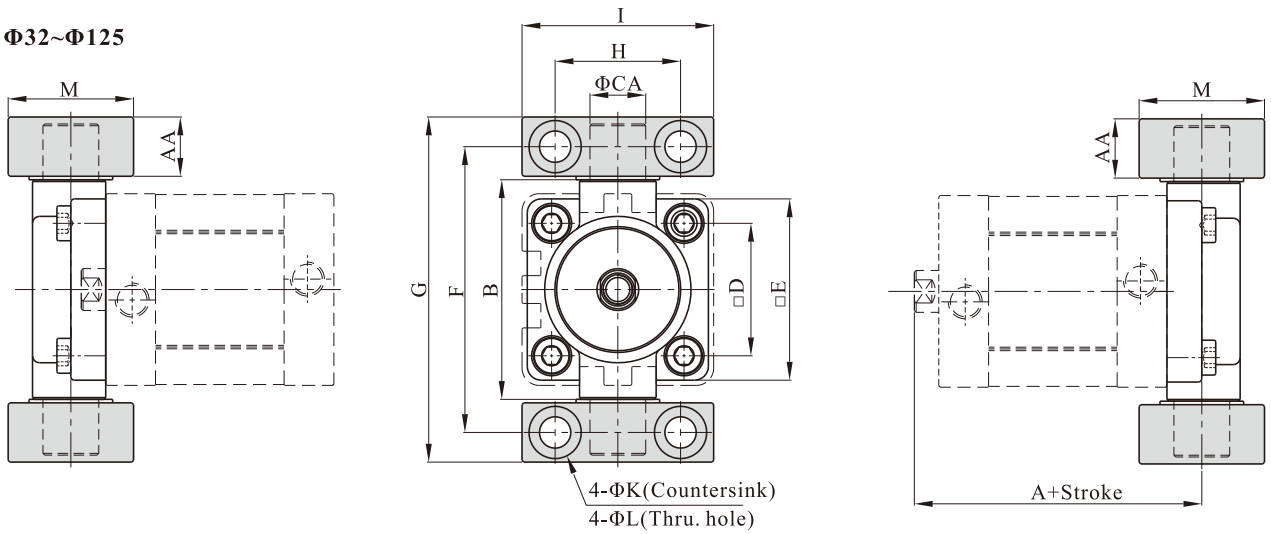
Φ32~Φ125



Bore size\Item	A	AA	B	C	CA	D	E	F	K
32	63	74	50	44	12	32.5	46	19	10
40	66.5	95	63	45.5	16	38	52	21	10
50	71.5	107	75	45.5	16	46.5	64	26	12
63	77	130	90	49	20	56.5	74	28	12
80	85	150	110	54	20	72	94	31	16
100	102	185	132	67	25	89	114	35	16
125	124	210	160	81	25	110	139	43	20

TCM2 type

Φ32~Φ125

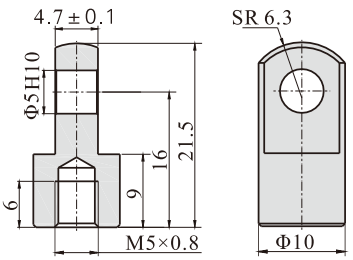


Bore size\Item	A	AA	B	CA	D	E	F	G	H	I	K	L	M
32	63	14	52	12	32.5	46	66	80	32	46	11	7	30
40	66.5	17	65	16	38	52	82	99	36	55	15	9	36
50	71.5	17	75	16	46.5	64	94	111	36	55	15	9	36
63	77	20.5	90	20	56.5	74	113.5	134	42	65	18	11	40
80	85	20.5	112	20	72	94	133.5	154	42	65	18	11	40
100	102	24.5	135	25	89	114	159.5	184	50	75	20	14	50
125	124	24.5	170	25	110	139	187.5	212	50	75	20	14	50

[Note] TCM2 cann't be used alone, it must be used with FTC.
The installation position of the accessories can not be adjusted arbitrarily.

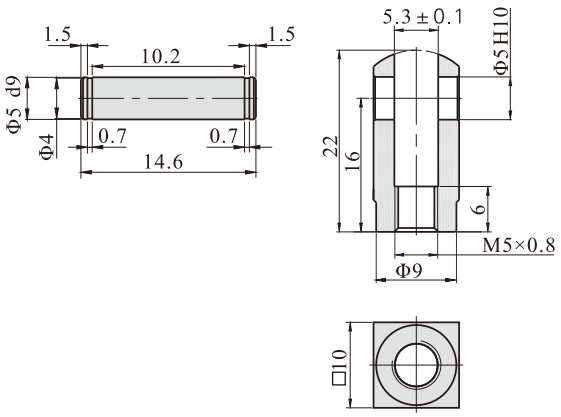
I Knuckle

F-ACQ12I



Y Knuckle

F-ACQ12Y



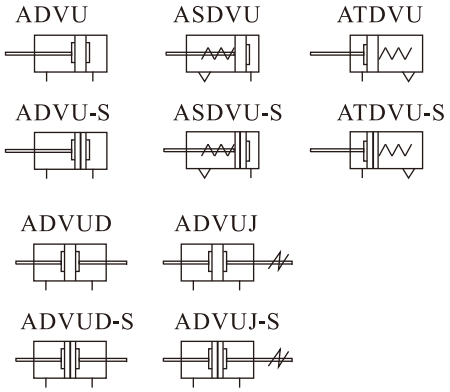
Tight cylinder——ADVU Series



Product feature

1. DIN standard cylinder.
2. The cylinder body connects with the threads of the front and back cover, forming high strength and convenient maintenance.
3. The internal diameter of the body is treated with rolling followed by the treatment of hard anodizing, forming an excellent abrasion resistance and durability
4. The seal of piston adopts heterogeneous two-way seal structure. It has compact dimension and the function of oil reservation.
5. Compact structure can effectively save installation space.
6. There are magnetic switch slots around the cylinder body, which is convenient to install inducting switch.
7. Installing accessories with various specifications are optional.

Symbol



Specification

Bore size(mm)		12	16	20	25	32	40	50	63	80	100
Acting type		Double acting, Single acting-Push type, Single acting-Pull type									
Fluid		Air(to be filtered by 40μm filter element)									
Operating pressure	Double acting	0.1~1.0MPa(15~145psi)(1.0~10.0bar)									
	Single acting	0.2~1.0MPa(28~145psi)(2.0~10.0bar)									
Proof pressure		1.5MPa(215psi)(15bar)									
Temperature ℃		-20~80									
Speed range mm/s		Double acting: 30~500 Single acting: 50~500									
Stroke tolerance		$0\sim150\ ^{+1.0}_{0}$ $>150^{+1.4}_{0}$									
Cushion type		Bumper									
Port size [Note1]		M5×0.8				G1/8					G1/4

[Note1] The standard thread type is G thread, Please control us for other thread type.

Standard Stroke

Bore size (mm)		Standard stroke (mm)	Max. std stroke	Max. stroke
12 16	Double acting	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 110 120 125 150 160 175 200	200	200
	Single acting	5 10	10	-
20 25	Double acting	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 110 120 125 150 160 175 200	200	200
	Single acting	5 10 15 20 25	25	-
32 40 50 63	Double acting	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 110 120 125 150 160 175 200 225 250 275 300	300	300
	Single acting	5 10 15 20 25	25	-
80 100	Double acting	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 110 120 125 150 160 175 200 225 250 275 300 325 350 375 400	400	400
	Single acting	5 10 15 20 25	25	-

[Note] Consult us for non-standard stroke.

Tight cylinder——ADVU Series

Ordering code

ADVU - 32 × 50 -S - B - FA - □

ADVUD - 32 × 50 -S - B - FA - □

ADVUJ - 32 × 50 - 20 -S - B - FA - □

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

①Model
ADVU: Tight cylinder(Double acting)
ASDVU: Tight cylinder(Single acting-push)
ATDVU: Tight cylinder(Single acting-pull)
ADVUD: Tight cylinder(Double rod)
ADVUJ: Tight cylinder(Adjustable stroke)

②Bore size
12 16 20 25 32 40 50 63 80 100

⑦Mounting typ	
Mounting type	Series
Blank: No accessories FA: FA type FB: FB type CA: CA type CB: CB type LB: LB type	ADVU ASDVU ATDVU
Blank: No accessories FA: FA type LB: LB type	ADVUD ADVUJ

⑥Rod type
Blank: Female thread
B: Male thread

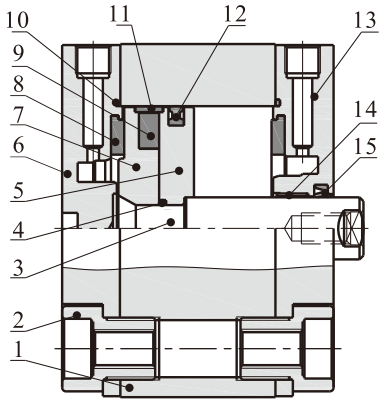
⑧ Thread type
Blank： G thread
PT： PT thread

③ Stroke
Refer to stroke table for details

⑤ Magnet
Blank: Without magnet
S: With magnet

④ Adjustable stroke	
Series	Adjustable stroke
ADVUJ series	10： 10mm
	20： 20mm
	30： 30mm
	40： 40mm
	50： 50mm
	75： 75mm
	100： 100mm
Others series	No this code

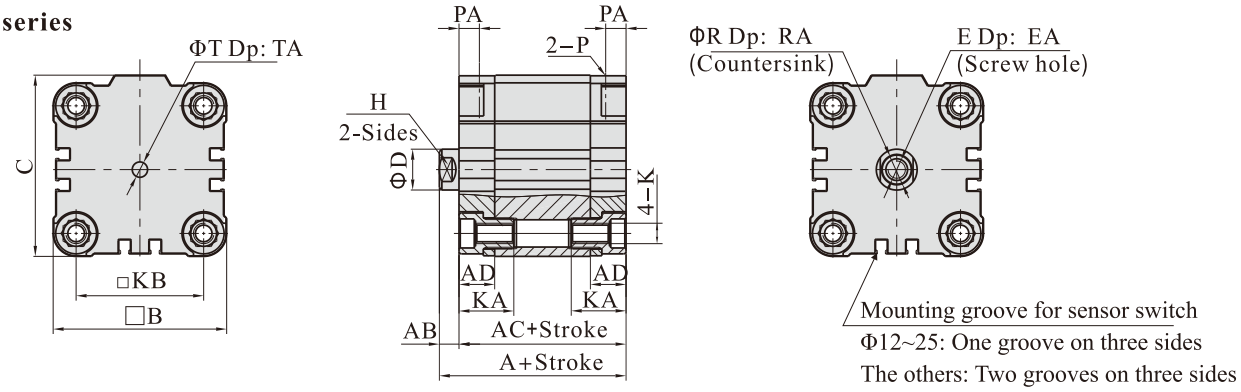
Inner structure and material of major parts



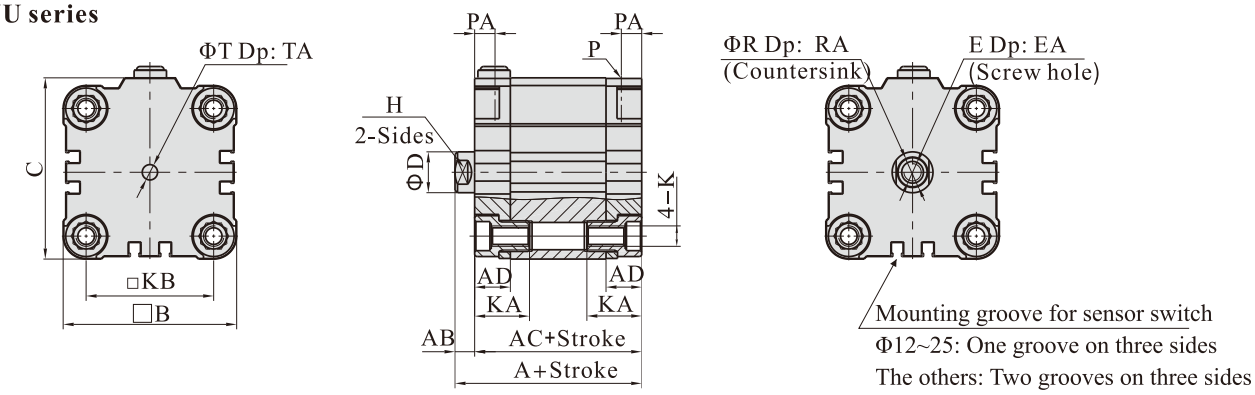
NO.	Item		Material
1	Body		Aluminum alloy
2	Screw		Carbon steel
3	Piston rod	Φ12~25	Stainless steel
		Others	S45C
4	O-ring		NBR
5	Piston		Aluminum alloy
6	Back cover		Aluminum alloy
7	Magnet holder		Aluminum alloy
8	Bumper		TPU
9	Magnet	Φ12~32	Sintered metal
		Others	Plastic
10	O-ring		NBR
11	Wear ring	Φ12~32	No
		Others	Wear resistant material
12	Piston seal		NBR
13	Front cover		Aluminum alloy
14	Bushing	Φ12~20	No
		Others	Wear resistant material
15	Front cover packing		NBR

Dimensions

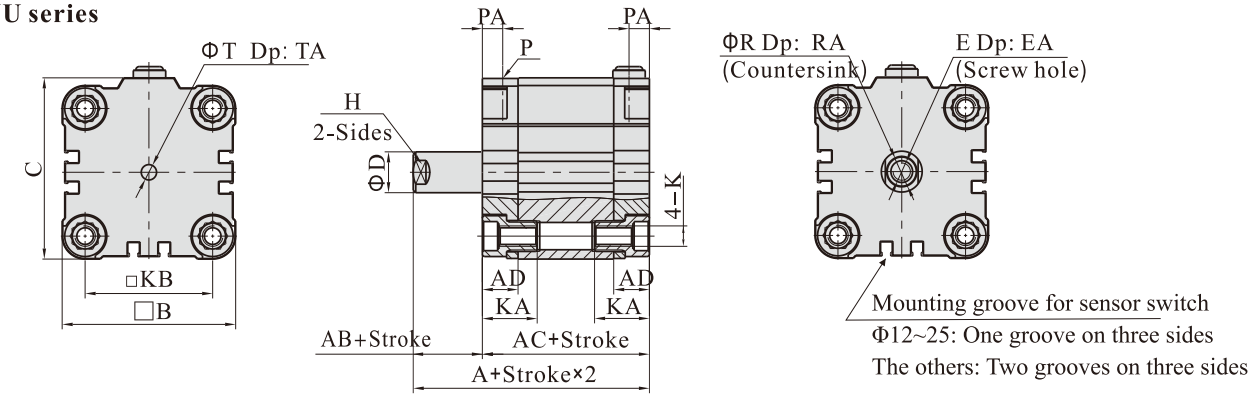
ADVU series



ASDVU series



ATDVU series

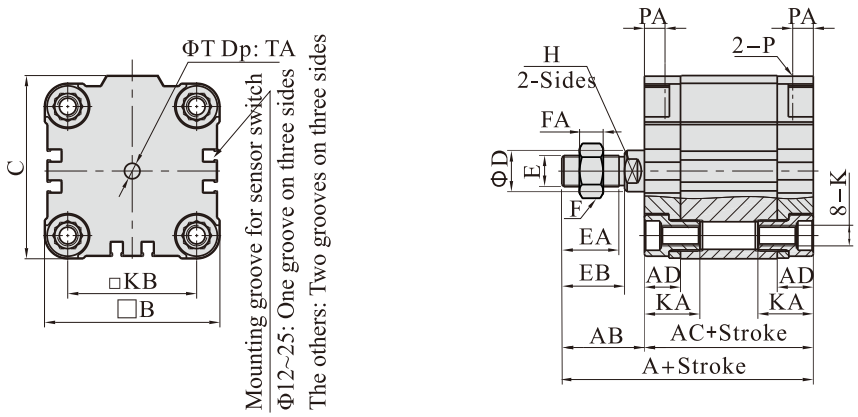


Bore size\Item	A	AB	AC	AD	B	C	D	E	EA	H	K	KA	KB	P	PA	R	RA	T	TA
12	42.5	4.5	38	11.5	29	30	6	M3×0.5	8	5	M4×0.7	18	18	M5×0.8	7	3.5	1.5	6	4
16	42.5	4.5	38	11.5	29	30	8	M4×0.7	10	6	M4×0.7	18	18	M5×0.8	7	4.5	1.5	6	4
20	42.5	4.5	38	11.5	36	37.5	10	M5×0.8	12	8	M5×0.8	18	22	M5×0.8	7	5.5	2	6	4
25	45	5.5	39.5	11.5	40	41.5	10	M5×0.8	12	8	M5×0.8	18	26	M5×0.8	7	5.5	2	6.1	4
32	50.5	6	44.5	14	50	52	12	M6×1.0	14	10	M6×1.0	21	32	G1/8	8	6.5	2.5	6.1	4
40	52	6.5	45.5	14	60	62.5	12	M6×1.0	14	10	M6×1.0	21	42	G1/8	8	6.5	2.5	6.1	4
50	53	7.5	45.5	14	68	71	16	M8×1.25	16	13	M8×1.25	21.5	50	G1/8	8	8.5	3.5	6.1	4
63	57.5	7.5	50	15	87	91	16	M8×1.25	16	13	M10×1.5	24	62	G1/8	8	8.5	3.5	8.1	4
80	64	8	56	16	107	111	20	M10×1.5	20	17	M10×1.5	27	82	G1/8	8.5	10.5	4.5	8.1	4
100	76.5	10	66.5	19	128	133	25	M12×1.75	24	22	M10×1.5	32	103	G1/4	10.5	12.5	6	8.1	4

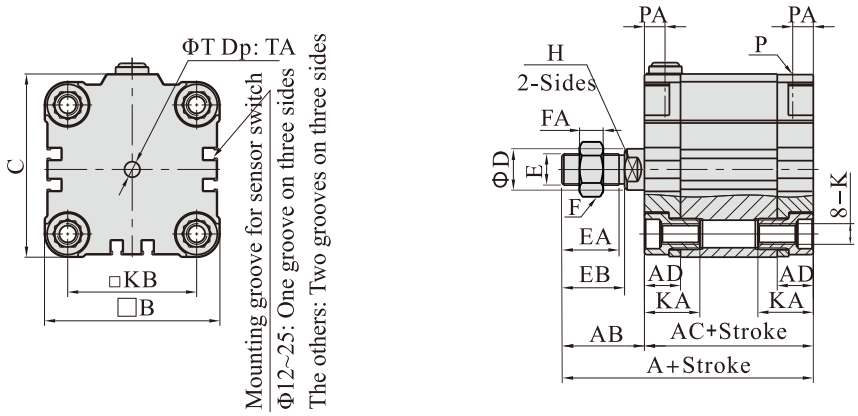
Remark: The dimensions of magnet type cylinder are the same as non-magnet type cylinder.

Tight cylinder——ADVU Series

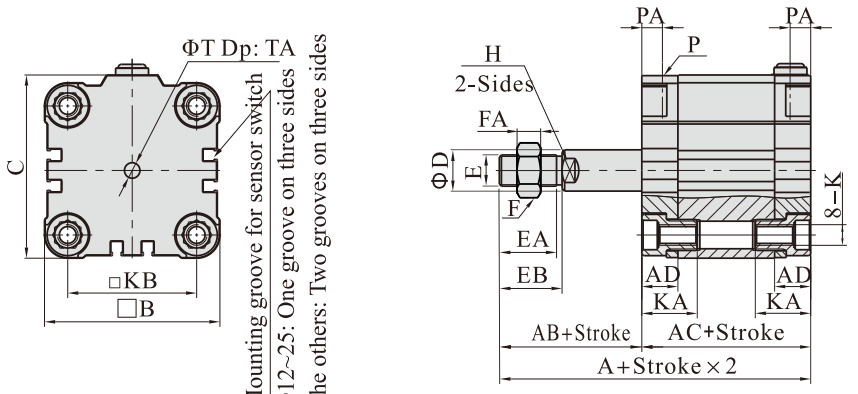
ADVU-B series



ASDVU-B series



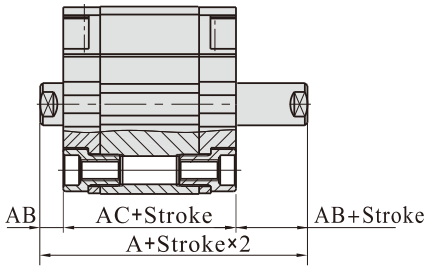
ATDVU-B series



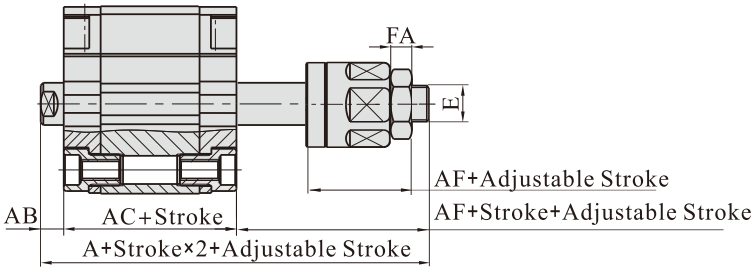
Bore size\Item	A	AB	AC	AD	B	C	D	E	EA	EB	F	FA	H	K	KA	KB	P	PA	T	TA
12	58.5	20.5	38	11.5	29	30	6	M6×1.0	15	16	10	5	5	M4×0.7	18	18	M5×0.8	7	6	4
16	62.5	24.5	38	11.5	29	30	8	M8×1.25	19	20	12	6	6	M4×0.7	18	18	M5×0.8	7	6	4
20	64.5	26.5	38	11.5	36	37.5	10	M10×1.25	20	22	17	6	8	M5×0.8	18	22	M5×0.8	7	6	4
25	67	27.5	39.5	11.5	40	41.5	10	M10×1.25	20	22	17	6	8	M5×0.8	18	26	M5×0.8	7	6.1	4
32	72.5	28	44.5	14	50	52	12	M10×1.25	20	22	17	6	10	M6×1.0	21	32	G1/8	8	6.1	4
40	74	28.5	45.5	14	60	62.5	12	M10×1.25	20	22	17	6	10	M6×1.0	21	42	G1/8	8	6.1	4
50	77	31.5	45.5	14	68	71	16	M12×1.25	22	24	17	7	13	M8×1.25	21.5	50	G1/8	8	6.1	4
63	81.5	31.5	50	15	87	91	16	M12×1.25	22	24	17	7	13	M10×1.5	24	62	G1/8	8	8.1	4
80	96	40	56	16	107	111	20	M16×1.5	30	32	23	8	17	M10×1.5	27	82	G1/8	8.5	8.1	4
100	116.5	50	66.5	19	128	133	25	M20×1.5	38	40	26	10	22	M10×1.5	32	103	G1/4	10.5	8.1	4

Remark: The dimensions of magnet type cylinder are the same as non-magnet type cylinder.

ADVUD series



ADVUJ series



Bore size\Item	A(ACPD)	A(ACPJ)	AB	AC	AF	E	FA
12	47	63.5	4.5	38	21	M6×1.0	5
16	47	67.5	4.5	38	25	M8×1.25	6
20	47	69.5	4.5	38	27	M10×1.25	6
25	50.5	72	5.5	39.5	27	M10×1.25	6
32	56.5	77.5	6	44.5	27	M10×1.25	6
40	58.5	79	6.5	45.5	27	M10×1.25	6
50	60.5	81	7.5	45.5	28	M12×1.25	7
63	65	85.5	7.5	50	28	M12×1.25	7
80	72	93	8	56	29	M16×1.5	8
100	86.5	112	10	66.5	35.5	M20×1.5	10

Remark)
1. The dimensions of magnet type cylinder are the same as non-magnet type cylinder.
2. Please refer to this page for male thread dimensions.
3. The unmarked dimension is the same as ADVU standard type.

List for ordering code of accessories

Accessories / Bore size	Mounting accessory				Knuckle		Sensor switch
	LB	FA/FB	CA	CB	F: F Knuckle	U: U Knuckle	
12	F-ADVU12LB	F-ADVU12FA	F-ADVU12CA	-	-	F-M6X100U	CS1-G DS1-G
16	F-ADVU12LB	F-ADVU12FA	F-ADVU12CA	-	F-M8X125F	F-M8X125U	
20	F-ADVU20LB	F-ADVU20FA	F-ADVU20CA	-	F-M10X125F	F-M10X125U	
25	F-ADVU25LB	F-ADVU25FA	F-ADVU25CA	-			
32	F-ADVU32LB	F-ADVU32FA	-	F-ADVU32CB			
40	F-ADVU40LB	F-ADVU40FA	-	F-ADVU40CB			
50	F-ADVU50LB	F-ADVU50FA	-	F-ADVU50CB	F-M12X125F	F-M12X125U	
63	F-ADVU63LB	F-ADVU63FA	-	F-ADVU63CB			
80	F-ADVU80LB	F-ADVU80FA	-	F-ADVU80CB	F-M16X150F	F-M16X150U	
100	F-ADVU100LB	F-ADVU100FA	-	F-ADVU100CB	F-M20X150F	F-M20X150U	

Accessory selection

Cylinder model / Accessories			Mounting accessory					Knuckle		Sensor switch	
			LB	FA	FB	CA	CB	F	U	CS1-G	DS1-G
ADVU	Female thread	Standard	●	●	●	●	●	×	×	×	×
		With magnet						×	×	●	●
	Male thread	Standard						●	●	×	×
		With magnet						●	●	●	●
ASDVU ATDVU	Female thread	Standard	●	●	●	●	●	×	×	×	×
		With magnet						×	×	●	●
	Male thread	Standard						●	●	×	×
		With magnet						●	●	●	●
ADVUD ADVUJ	Female thread	Standard	●	●	×	×	×	×	×	×	×
		With magnet						×	×	●	●
	Male thread	Standard						●	●	×	×
		With magnet						●	●	●	●

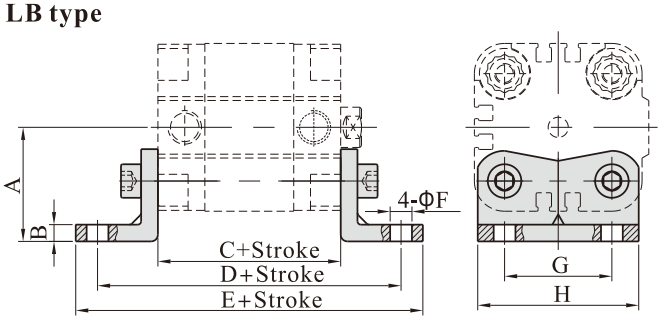
Material of accessories

Accessories / Bore size	Mounting accessories					Knuckle	
	LB	FA	FB	CA	CB	F	U
12~25	○	●	●	●	-	□	□
32~100	○	●	●	-	●	□	□

●——Aluminum alloy；○——SPCC；□——Carbon Steel

Dimensions

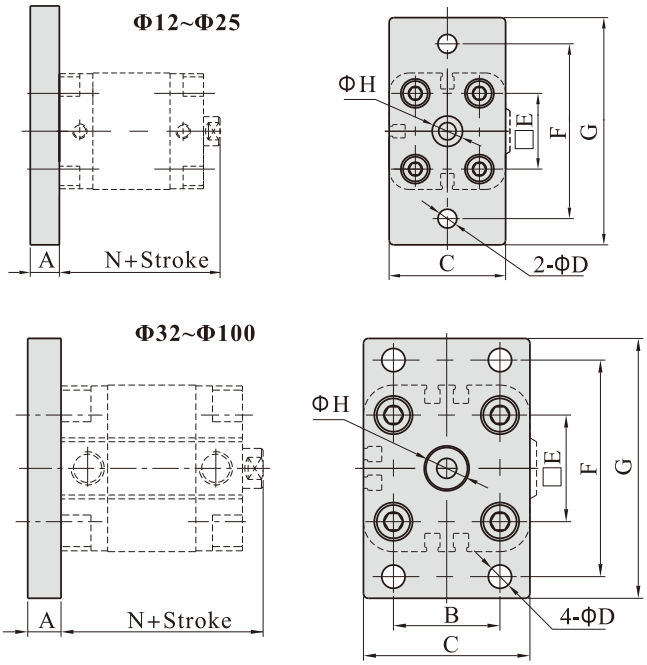
LB type



Bore size\Item	A	B	C	D	E	F	G	H
12	22	3	38	64	73.6	5.5	18	27
16	22	3	38	64	73.6	5.5	18	27
20	27	3.8	38	70	82.6	6.5	22	34
25	29	3.8	39.5	71.5	84	6.5	26	38
32	34	4.8	44.5	80.5	97.1	6.5	32	48
40	40.5	4.8	45.5	85.5	102.1	9	42	58
50	47	5.8	45.5	93.5	110.1	9	50	66
63	56.5	5.8	50	104	127.6	11	62	85
80	68.5	7.5	56	116	139.6	11	82	105
100	81	7.5	66.5	132.5	156.1	13.5	103	126

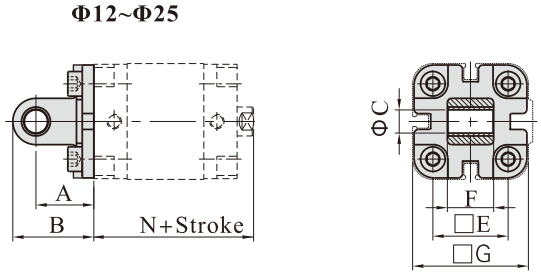
Tight cylinder——ADVU Series

FA/FB type

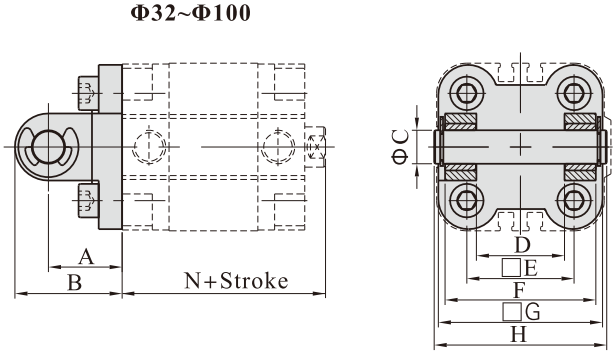


Bore size\Item	A	B	C	D	E	F	G	H	N
12	10	-	30	5.5	18	43	55	14	42.5
16	10	-	30	5.5	18	43	55	14	42.5
20	10	-	36	6.5	22	55	68	16	42.5
25	10	-	40	6.5	26	60	78	16	45
32	10	32	50	7	32	65	78	18	50.5
40	10	36	60	9	42	82	102	18	52
50	12	45	68	9	50	90	110	22	53
63	15	50	87	9	62	110	128	22	57.5
80	15	63	107	12	82	135	160	28	64
100	15	75	128	14	103	163	190	34	76.5

CA type



CB type



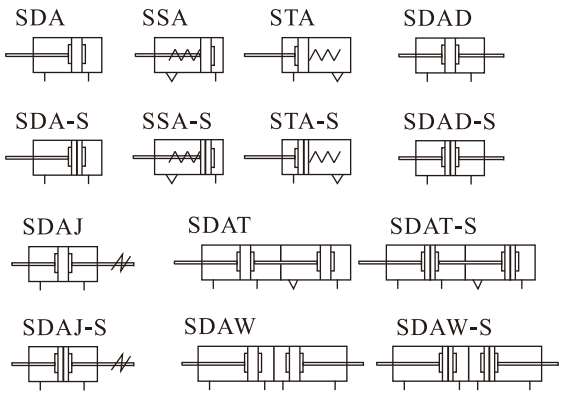
Bore size\Item	A	B	C	D	E	F	G	H	N
12	16	22	6	-	18	12	27.5	-	42.5
16	16	22	6	-	18	12	27.5	-	42.5
20	20	28	8	-	22	16	34.5	-	42.5
25	20	28	8	-	26	16	38.5	-	45
32	22	32	10	26	32	45	48	51.5	50.5
40	25	37	12	28	42	52	58	59	52
50	27	39	12	32	50	60	66	67	53
63	32	48	16	40	62	70	85	77	57.5
80	36	52	16	50	82	90	105	97	64
100	41	61	20	60	103	110	126	119	76.5

Compact cylinder——SDA Series

Product feature

1. Manufactured by our enterprise.
2. Riveted structure is adopted to connect the cylinder body and back cover, and piston and piston rod to make it compact and reliable;
3. The inner diameter of the body is treated with rolling followed by the treatment of hard anodizing, forming an excellent abrasion resistance and durability.
4. The seal of piston adopts heterogeneous two-way seal structure. It has compact dimension and the function of grease reservation.
5. Compact structure can effectively save installation space.
6. There are magnetic switch slots around the cylinder body, which is convenient to install sensor switch
7. Mounting accessories with various specifications are optional.

Symbol



Specification

Bore size(mm)		12	16	20	25	32	40	50	63	80	100
Acting type		Double acting									
		Single acting_Push type				Single acting_Pull type				–	
Fluid		Air(to be filtered by 40μm filter element)									
Operating pressure	Double acting	0.15~1.0MPa(22~145psi)(1.5~10.0bar)									
	Single acting	0.2~1.0MPa(28~145psi)(2.0~10.0bar)									
Proof pressure		1.5MPa(215psi)(15bar)									
Temperature ℃		-20~70									
Speed range mm/s		Double acting: 30~500 Single acting: 50~500									
Stroke tolerance		Stroke≤100 $^{+1.0}_{0}$ Stroke>100 $^{+1.5}_{0}$									
Cushion type		Bumper									
Port size [Note1]		M5×0.8				G1/8		G1/4		G3/8	

[Note1] The standard thread type is G thread, Please control us for other thread type.

Standard Stroke

Bore size (mm)			Standard stroke (mm)	Max.std stroke
12 16	Double acting	With magnet	5 10 15 20 25 30 35 40 45 50	50
		Without magnet	5 10 15 20 25 30 35 40 45 50 55 60	60
	Single acting		5 10 15 20 25 30	30
20	Double acting	With magnet	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90	90
		Without magnet	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 100	100
	Single acting		5 10 15 20 25 30	30
25 32 40 50 63	Double acting	With magnet	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 100 110 120	120
		Without magnet	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 100 110 120 130	130
	Single acting		5 10 15 20 25 30	30
80 100	Double acting	With magnet	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 100 110 120	120
		Without magnet	5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 100 110 120 130	130

[Note] Consult us for non-standard stroke.

Ordering code

SDA - 32 × 50 -S - B - □

SDAD - 32 × 50 -S - B - □

SDAJ - 32 × 50 -20 -S - B - □

① ② ③ ④ ⑤ ⑥ ⑦

①Model
SDA: Compact cylinder(Double acting)
SSA: Compact cylinder(Single acting-push)
STA: Compact cylinder(Single acting-pull)
SDAD: Compact cylinder(Double rod)
SDAJ: Compact cylinder(Adjustable stroke)

②Bore size	
Bore size	Series
12 16 20 25 32 40 50 63 80 100	SDA SDAD SDAJ
12 16 20 25 32 40 50 63	SSA STA

⑥Rod type
Blank: Female thread
B: Male thread

③ Stroke
Refer to stroke table for details

④ Adjustable stroke	
Series	Adjustable stroke
SDAJ series	10：10mm
	20：20mm
	30：30mm
	40：40mm
	50：50mm
	75：75mm
	100：100mm
Others series	No this code

⑦ Thread type
Blank： G thread
PT： PT thread

⑤ Magnet
Blank: Without magnet
S: With magnet

SDAT - 32 × 50 ×20 -S - B - □

① ② ③ ④ ⑤ ⑥ ⑦

①Model
SDAT: Compact cylinder (Duplex type)
SDAW: Compact cylinder(Duplex-end type)

②Bore size
12 16 20 25 32 40 50 63 80 100

⑦ Thread type
Blank： G thread
PT： PT thread

⑥Rod type
Blank: Female thread
B: Male thread

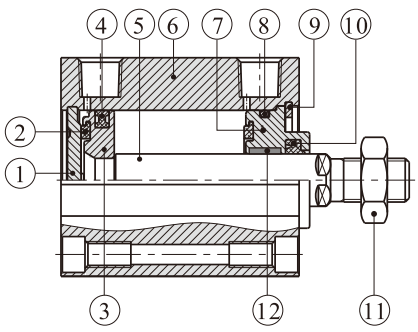
⑤ Magnet
Blank: Without magnet
S: With magnet

③ Stroke I
Refer to stroke table for details

④ Stroke II
Refer to stroke table for details

Inner structure and material of major parts

SDA

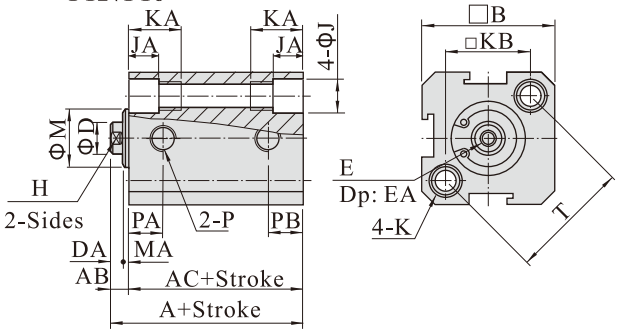


NO.	Item	Material
1	Back cover	No(Φ12, 16)/Aluminum alloy(Others)
2	Bumper	NBR
3	Piston	Brass(Φ12, 16)/Aluminum alloy(Others)
4	Piston seal	NBR
5	Piston rod	Carbon steel with 20μm chrome plated
6	Body	Aluminum alloy
7	Front cover	Aluminum alloy
8	O-ring	NBR
9	C clip	Spring steel
10	Front cover packing	NBR
11	Piston nut	Carbon steel
12	Bushing	No(Φ12~32)/Wear resistant material(Others)

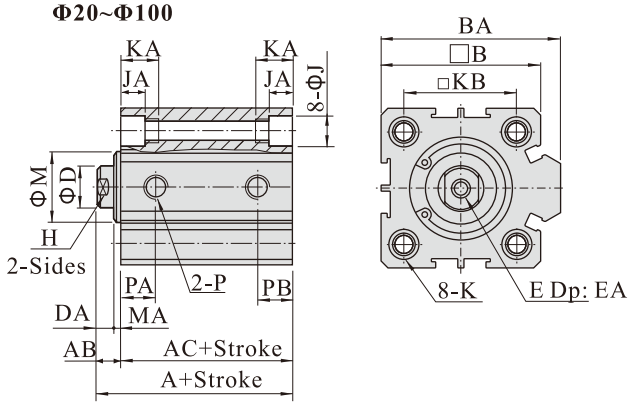
Dimensions

SDA series

Φ12\Φ16



Φ20~Φ100



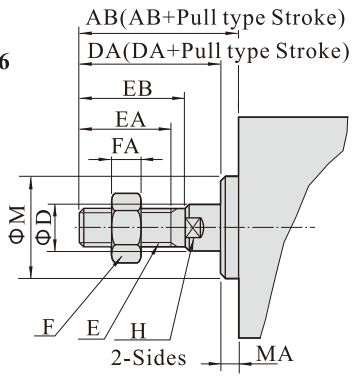
Item / Bore size	A Without magnet	AC Without magnet	A With magnet	AC With magnet	AB	B	BA	D	DA
12	22	17	32	27	5	25	-	6	4
16	24	18.5	34	28.5	5.5	29	-	6	4
20	25	19.5	35	29.5	5.5	34	36	8	4
25	27	21	37	31	6	40	42	10	4
32	31.5	24.5	41.5	34.5	7	44	50	12	4.5
40	33	26	43	36	7	52	58.5	16	4
50	37	28	47	38	9	62	71.5	20	5
63	41	32	51	42	9	75	84.5	20	5
80	52	41	62	51	11	94	104	25	6
100	63	51	73	61	12	114	124	32	7

Item / Bore size	E	EA	H	J	JA	K
12	M3×0.5	6	5	6.5	4.5	M5×0.8Thru.hole:Φ4.2
16	M3×0.5	6	5	6.5	4.5	M5×0.8Thru.hole:Φ4.2
20	M4×0.7	8	6	6.5	4.5	M5×0.8Thru.hole:Φ4.2
25	M5×0.8	10	8	8.2	5.5	M6×1.0Thru.hole:Φ5.2
32	M6×1.0	12	10	8.2	5.5	M6×1.0Thru.hole:Φ5.2
40	M8×1.25	12	14	10.5	6.5	M8×1.25Thru.hole:Φ6.7
50	M10×1.5	15	17	10.5	6.5	M8×1.25Thru.hole:Φ6.7
63	M10×1.5	15	17	10.5	6.5	M8×1.25Thru.hole:Φ6.7
80	M14×1.5	20	22	17	11	M12×1.75Thru.hole:Φ10.4
100	M18×1.5	20	27	19	13	M14×2.0Thru.hole:Φ12.4

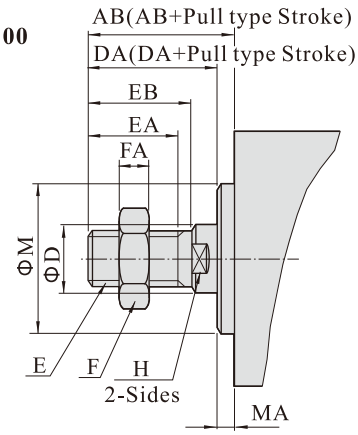
Item / Bore size	KA	KB	M	MA	P	PA St=5	PA St>5	PB St=5	PB St>5	T
12	12	16.3	10.2	1	M5×0.8	7.5	7.5	5	5	23
16	12	19.8	11	1.5	M5×0.8	8	8	5	5.5	28
20	14	24	13	1.5	M5×0.8	8	9	5	5.5	-
25	15	28	17	2	M5×0.8	9	9	5.5	5.5	-
32	16	34	22	2.5	G1/8	9	9	6.5	9	-
40	20	40	28	3	G1/8	9.5	9.5	7.5	7.5	-
50	25	48	38	4	G1/4	8	10.5	8	10.5	-
63	25	60	40	4	G1/4	9.5	12	9.5	11	-
80	25	74	45	5	G3/8	11.5	14.5	11.5	14.5	-
100	30	90	55	5	G3/8	16	20.5	16	20.5	-

Male thread

Φ12\Φ16



Φ20~Φ100

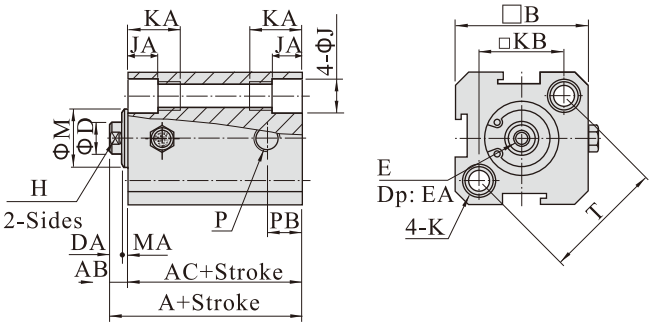


Item / Bore size	AB	D	DA	E	EA	EB	F	FA	H	M	MA SDAD\SDAJ	MA Others
12	17	6	16	M5×0.8	10	12	8	4	5	10.2	1	1
16	17.5	6	16	M5×0.8	10	12	8	4	5	11	1.5	1.5
20	20.5	8	19	M6×1.0	13	15	10	5	6	13	1.5	1.5
25	23	10	21	M8×1.25	15	17	12	6	8	17	2	2
32	25	12	22	M10×1.25	15	18	17	6	10	22	3	2.5
40	35	16	32	M14×1.5	25	28	19	8	14	28	3	3
50	37	20	33	M18×1.5	25	28	27	11	17	38	4	4
63	37	20	33	M18×1.5	25	28	27	11	17	40	4	4
80	44	25	39	M22×1.5	30	33	32	13	22	45	5	5
100	50	32	45	M26×1.5	35	38	36	13	27	55	5	5

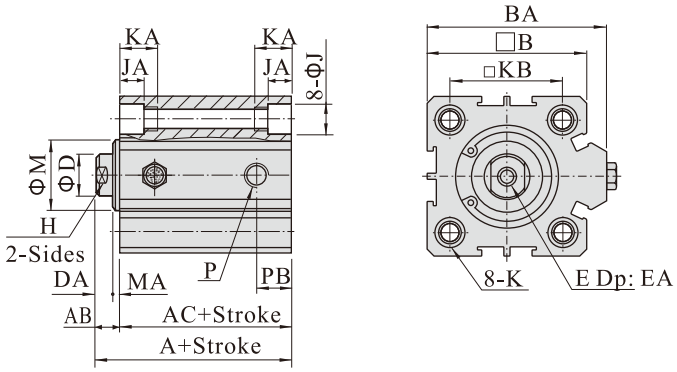
Compact cylinder——SDA Series

SSA series

Φ12\Φ16

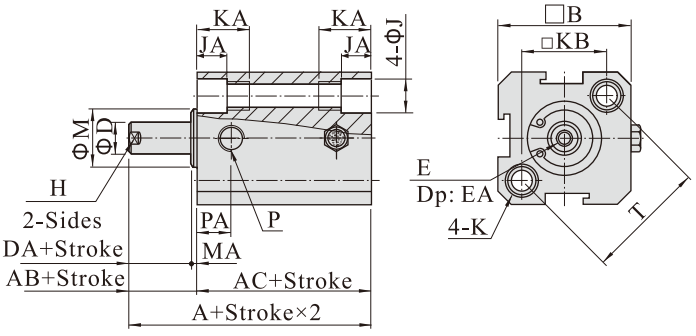


Φ20~Φ100

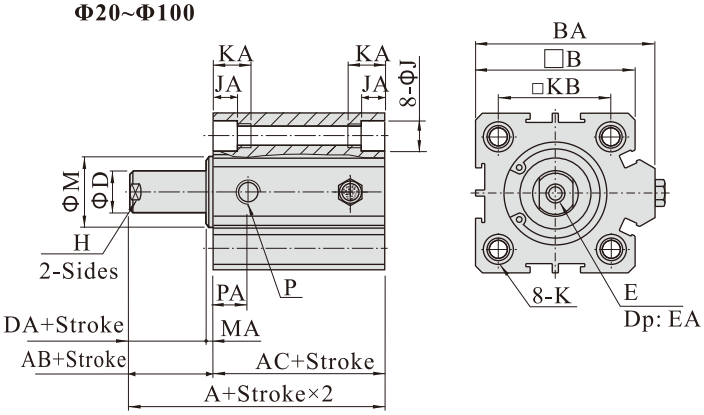


STA series

Φ12\Φ16



Φ20~Φ100



Bore size\Item	A(Without magnet)		A(With magnet)		AB
	St≤10	St>10	St≤10	St>10	
12	32	42	42	52	5
16	34	44	44	54	5.5
20	35	45	45	55	5.5
25	37	47	47	57	6
32	41.5	51.5	51.5	61.5	7
40	43	53	53	63	7
50	47	57	57	67	9
63	51	61	61	71	9

Bore size\Item	AC(Without magnet)		AC(With magnet)		B
	St≤10	St>10	St≤10	St>10	
12	27	37	37	47	25
16	28.5	38.5	38.5	48.5	29
20	29.5	39.5	39.5	49.5	34
25	31	41	41	51	40
32	34.5	44.5	44.5	54.5	44
40	36	46	46	56	52
50	38	48	48	58	62
63	42	52	52	62	75

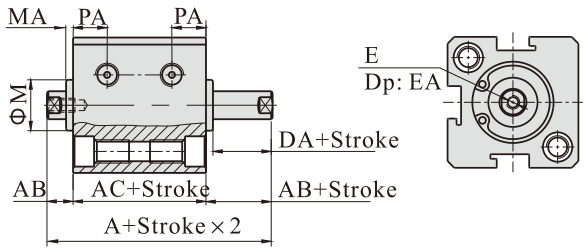
Bore size\Item	BA	D	DA	E	EA	H	J	JA
12	-	6	4	M3×0.5	6	5	6.5	4.5
16	-	6	4	M3×0.5	6	5	6.5	4.5
20	36	8	4	M4×0.7	8	6	6.5	4.5
25	42	10	4	M5×0.8	10	8	8.2	5.5
32	50	12	4	M6×1.0	12	10	8.2	5.5
40	58.5	16	4	M8×1.25	12	14	10.5	6.5
50	71.5	20	5	M10×1.5	15	17	10.5	6.5
63	84.5	20	5	M10×1.5	15	17	10.5	6.5

Bore size\Item	K	KA	KB	M	MA
12	M5×0.8 Thru.hole:Φ4.2	12	16.3	10.2	1
16	M5×0.8 Thru.hole:Φ4.2	12	19.8	11	1.5
20	M5×0.8 Thru.hole:Φ4.2	14	24	13	1.5
25	M6×1.0 Thru.hole:Φ5.2	15	28	17	2
32	M6×1.0 Thru.hole:Φ5.2	16	34	22	2.4
40	M8×1.25 Thru.hole:Φ6.7	20	40	28	3
50	M8×1.25 Thru.hole:Φ6.7	25	48	38	4
63	M8×1.25 Thru.hole:Φ6.7	25	60	40	4

Bore size\Item	P	PA	PB	T
12	M5×0.8	7.5	5	23
16	M5×0.8	8	5.5	28
20	M5×0.8	9	5.5	-
25	M5×0.8	9	5.5	-
32	G1/8	9	9	-
40	G1/8	9.5	7.5	-
50	G1/4	10.5	10.5	-
63	G1/4	12	11	-

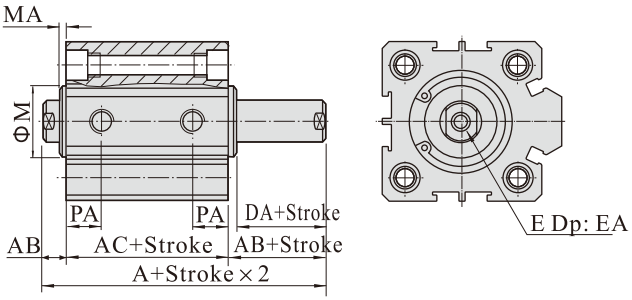
SDAD series

Φ12\Φ16



Item / Bore size	A (Without magnet)	AC (Without magnet)	A (With magnet)	AC (With magnet)	AB	DA
12	27	17	37	27	5	4
16	29.5	18.5	39.5	28.5	5.5	4
20	30.5	19.5	40.5	29.5	5.5	4
25	33	21	43	31	6	4
32	38.5	24.5	48.5	34.5	7	4
40	40	26	50	36	7	4
50	46	28	56	38	9	5
63	50	32	60	42	9	5
80	63	41	73	51	11	6
100	75	51	85	61	12	7

Φ20~Φ100

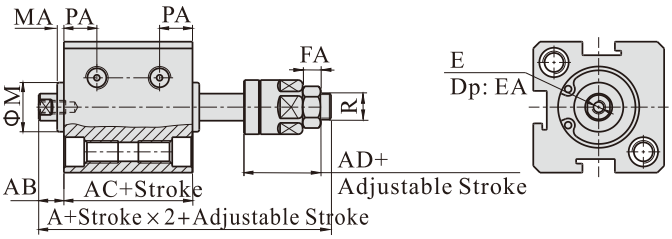


Item / Bore size	E	EA (St≤10)	EA (St>10)	M	MA	PA (St=5)	PA (St>5)
12	M3×0.5	6	6	10.2	1	5.5	6.3
16	M3×0.5	6	6	11	1.5	6.5	7.3
20	M4×0.7	8(6.5 for St=5)		15	1.5	7.5	7.5
25	M5×0.8	10(7 for St=5)		17	2	8	8
32	M6×1.0	8	12	22	3	8	9
40	M8×1.25	8	12	28	3	8	10
50	M10×1.5	8	15	38	4	8	10.5
63	M10×1.5	10	15	40	4	9.5	11.8
80	M14×1.5	13	20	45	5	11.5	14.5
100	M18×1.5	18	20	55	5	16	20.5

Note) The unmarked dimension is the same as SDA standard type.

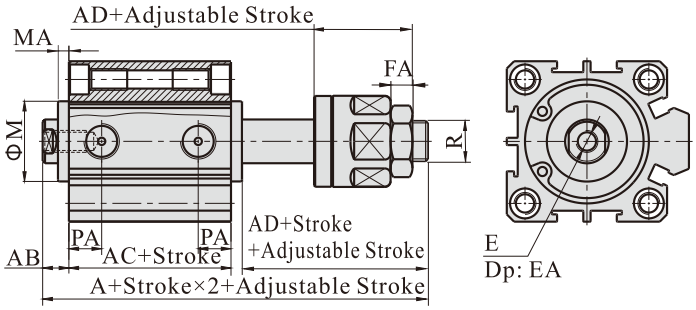
SDAJ series

Φ12\Φ16



Item / Bore size	A (Without magnet)	AC (Without magnet)	A (With magnet)	AC (With magnet)	AB	AD	E
12	40	17	50	27	5	17	M3×0.5
16	42.5	18.5	52.5	28.5	5.5	17	M3×0.5
20	47.5	19.5	57.5	29.5	5.5	21	M4×0.7
25	54	21	64	31	6	25	M5×0.8
32	61.5	24.5	71.5	34.5	7	27	M6×1.0
40	64	26	74	36	7	28	M8×1.25
50	70	28	80	38	9	29	M10×1.5
63	74	32	84	42	9	29	M10×1.5
80	92.5	41	102.5	51	11	35.5	M14×1.5
100	110.5	51	120.5	61	12	42.5	M18×1.5

Φ20~Φ100

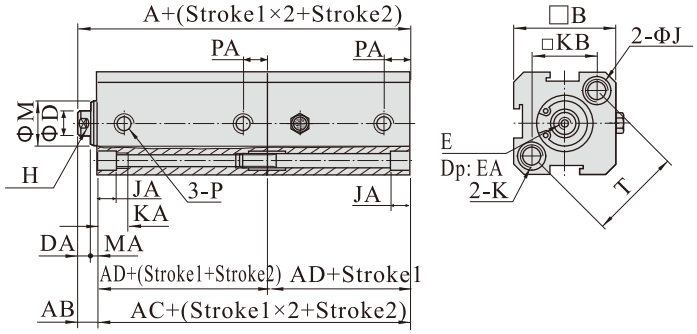


Item / Bore size	EA (St≤10)	EA (St>10)	FA	M	MA	PA (St=5)	PA (St>5)	R
12	6	6	4	10.2	1	5.5	6.3	M5×0.8
16	6	6	4	11	1.5	6.5	7.3	M5×0.8
20	8(6.5 for St=5)		5	15	1.5	7.5	7.5	M6×1.0
25	10(7 for St=5)		6	17	2	8	8	M8×1.25
32	8	12	6	22	3	8	9	M10×1.25
40	8	12	7	28	3	8	10	M12×1.25
50	8	15	8	38	4	8	10.5	M16×1.5
63	10	15	8	40	4	9.5	11.8	M16×1.5
80	13	20	10	45	5	11.5	14.5	M20×1.5
100	18	20	13.5	55	5	16	20.5	M27×2.0

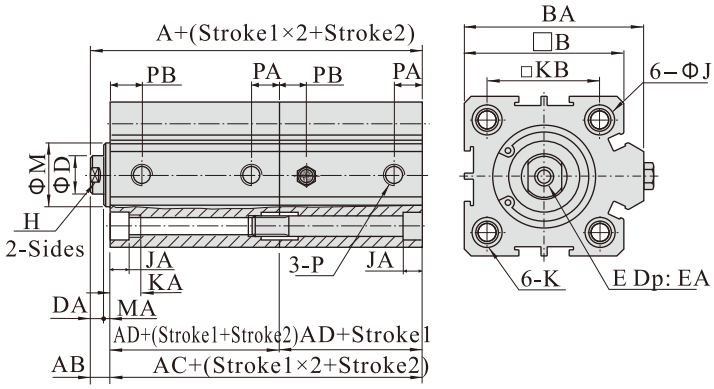
Note) The unmarked dimension is the same as SDA standard type.

SDAT series

Φ12\Φ16



Φ20~Φ100



Item / Bore size	A	AC	AD	A	AC	AD	AB	B
	Without magnet			With magnet				
12	39	34	17	59	54	27	5	25
16	42.5	37	18.5	62.5	57	28.5	5.5	29
20	44.5	39	19.5	64.5	59	29.5	5.5	34
25	48	42	21	68	62	31	6	40
32	56	49	24.5	76	69	34.5	7	44
40	59	52	26	79	72	36	7	52
50	65	56	28	85	76	38	9	62
63	73	64	32	93	84	42	9	75
80	93	82	41	113	102	51	11	94
100	114	102	51	134	122	61	12	114

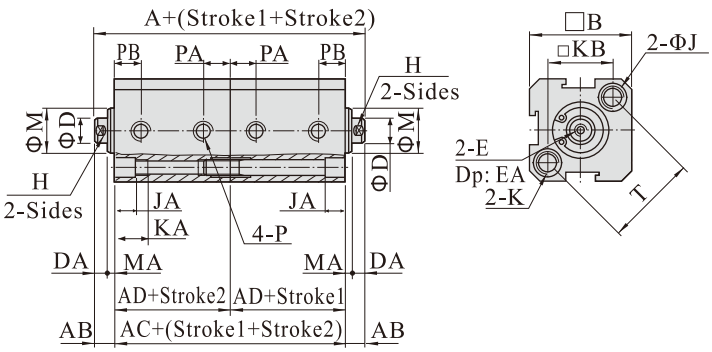
Bore size\Item	BA	D	DA	E	EA	H
12	-	6	4	M3×0.5	6	5
16	-	6	4	M3×0.5	6	5
20	36	8	4	M4×0.7	8	6
25	42	10	4	M5×0.8	10	8
32	50	12	4	M6×1.0	12	10
40	58.5	16	4	M8×1.25	12	14
50	71.5	20	5	M10×1.5	15	17
63	84.5	20	5	M10×1.5	15	17
80	104	25	6	M14×1.5	20	22
100	124	32	7	M18×1.5	20	27

Bore size\Item	J	JA	K	KA
12	6.5	4.5	M5×0.8 Thru.hole:Φ4.2	12
16	6.5	4.5	M5×0.8 Thru.hole:Φ4.2	12
20	6.5	4.5	M5×0.8 Thru.hole:Φ4.2	14
25	8.2	5.5	M6×1.0 Thru.hole:Φ5.2	15
32	8.2	5.5	M6×1.0 Thru.hole:Φ5.2	16
40	10.5	6.5	M8×1.25 Thru.hole:Φ6.7	20
50	10.5	6.5	M8×1.25 Thru.hole:Φ6.7	25
63	10.5	6.5	M8×1.25 Thru.hole:Φ6.7	25
80	17	11	M12×1.75 Thru.hole:Φ10.4	25
100	19	13	M14×2.0 Thru.hole:Φ12.4	30

Item / Bore size	KB	M	MA	P	PA		PB	
					St=5	St>5	St=5	St>5
12	16.3	10.2	1	M5×0.8	5	5	7.5	7.5
16	19.8	11	1.5	M5×0.8	55	5.5	8	8
20	24	13	1.5	M5×0.8	5	5.5	8	9
25	28	17	2	M5×0.8	5.5	5.5	9	9
32	34	22	2.5	G1/8	6.5	9	9	9
40	40	28	3	G1/8	7.5	7.5	9.5	9.5
50	48	38	4	G1/4	8	10.5	8	10.5
63	60	40	4	G1/4	9.5	11	9.5	12
80	74	45	5	G3/8	11.5	14.5	11.5	14.5
100	90	55	5	G3/8	16	20.5	16	20.5

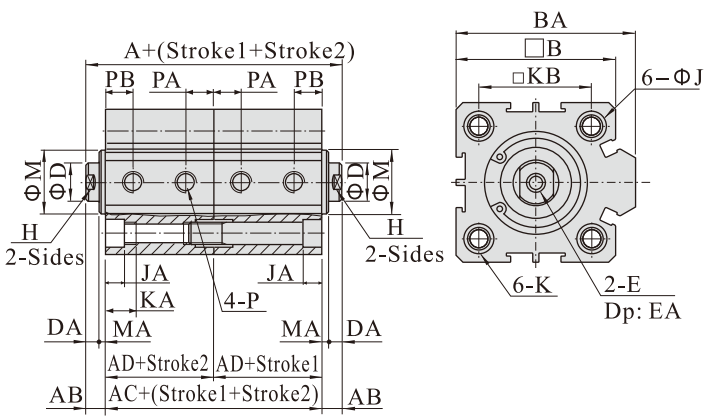
SDAW series

Φ12\Φ16



Item / Bore size	A	AC	AD	A	AC	AD	AB	B
	Without magnet			With magnet				
12	44	34	17	64	54	27	5	25
16	48	37	18.5	68	57	28.5	5.5	29
20	50	39	19.5	70	59	29.5	5.5	34
25	54	42	21	74	62	31	6	40
32	63	49	24.5	83	69	34.5	7	44
40	66	52	26	86	72	36	7	52
50	74	56	28	94	76	38	9	62
63	82	64	32	102	84	42	9	75
80	104	82	41	124	102	51	11	94
100	126	102	51	146	122	61	12	114

Φ20~Φ100



Bore size\Item	BA	D	DA	E	EA	H
12	-	6	4	M3×0.5	6	5
16	-	6	4	M3×0.5	6	5
20	36	8	4	M4×0.7	8	6
25	42	10	4	M5×0.8	10	8
32	50	12	4	M6×1.0	12	10
40	58.5	16	4	M8×1.25	12	14
50	71.5	20	5	M10×1.5	15	17
63	84.5	20	5	M10×1.5	15	17
80	104	25	6	M14×1.5	20	22
100	124	32	7	M18×1.5	20	27

Bore size\Item	J	JA	K	KA
12	6.5	4.5	M5×0.8 Thru.hole:Φ4.2	12
16	6.5	4.5	M5×0.8 Thru.hole:Φ4.2	12
20	6.5	4.5	M5×0.8 Thru.hole:Φ4.2	14
25	8.2	5.5	M6×1.0 Thru.hole:Φ5.2	15
32	8.2	5.5	M6×1.0 Thru.hole:Φ5.2	16
40	10.5	6.5	M8×1.25 Thru.hole:Φ6.7	20
50	10.5	6.5	M8×1.25 Thru.hole:Φ6.7	25
63	10.5	6.5	M8×1.25 Thru.hole:Φ6.7	25
80	17	11	M12×1.75 Thru.hole:Φ10.4	25
100	19	13	M14×2.0 Thru.hole:Φ12.4	30

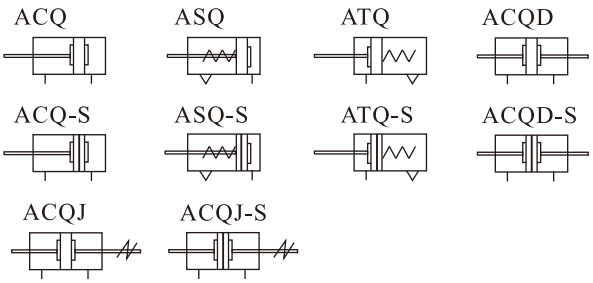
Item / Bore size	KB	M	MA	P	PA		PB	
					St=5	St>5	St=5	St>5
12	16.3	10.2	1	M5×0.8	5	5	7.5	7.5
16	19.8	11	1.5	M5×0.8	5	5.5	8	8
20	24	13	1.5	M5×0.8	5	5.5	8	9
25	28	17	2	M5×0.8	5.5	5.5	9	9
32	34	22	2.5	G1/8	6.5	9	9	9
40	40	28	3	G1/8	7.5	7.5	9.5	9.5
50	48	38	4	G1/4	8	10.5	8	10.5
63	60	40	4	G1/4	9.5	11	9.5	12
80	74	45	5	G3/8	11.5	14.5	11.5	14.5
100	90	55	5	G3/8	16	20.5	16	20.5

Compact cylinder——ACQ Series

Product feature

1. JIS standard is implemented.
2. C clip is adopted to connect the cylinder body and back cover or front cover, and riveted structure is adopted to connect piston and piston rod to make it compact and reliable.
3. The internal diameter of the body is treated with rolling followed by the treatment of hard anodizing, forming an excellent abrasion resistance and durability.
4. The seal of piston adopts heterogeneous two-way seal structure. It has compact dimension and the function of grease reservation.
5. Compact structure can effectively save installation space.
6. There are magnetic switch slots around the cylinder body, which is convenient to install inducting switch.
7. Installing accessories with various specifications are optional.

Symbol



Specification

Bore size(mm)		12	16	20	25	32	40	50	63	80	100	125	140	160
Acting type		Double acting												
		Single acting_Push type, Single acting_Pull type								–				
Fluid		Air(to be filtered by 40μm filter element)												
Operating pressure	Double acting	0.15~1.0MPa(22~145psi)												
	Single acting	0.2~1.0MPa(28~145psi)												
Proof pressure		1.5MPa(215psi)												
Temperature ℃		-20~70												
Speed range mm/s		Double acting: 30~500 Single acting: 50~500												
Stroke tolerance		Stroke≤100 $^{+1.0}_{0}$ Stroke>100 $^{+1.5}_{0}$												
Cushion type		Bumper												
Port size [Note1]		M5×0.8				G1/8		G1/4		G3/8				

[Note1] The standard thread type is G thread, Please control us for other thread type.

Standard Stroke

Bore size (mm)		Standard stroke (mm)	Max.std stroke
12	Double acting	5 10 15 20 25 30 35 40 45 50	50
	Single acting	5 10 15 20	20
16	Double acting	5 10 15 20 25 30 35 40 45 50 55 60	60
	Single acting	5 10 15 20	20
20 25	Double acting	5 10 15 20 25 30 35 40 45 50 60 70 75 80 90 100	100
	Single acting	5 10 15 20 25 30	30
32 40 50 63	Double acting	5 10 15 20 25 30 35 40 45 50 60 70 75 80 90 100 125 150 175 200 250 300	300
	Single acting	5 10 15 20 25 30	
80 100	Double acting	5 10 15 20 25 30 35 40 45 50 60 70 75 80 90 100 125 150 175 200 250 300	300
125 140 160	Double acting	10 20 30 40 50 75 100 125 150 175 200 250 300	300

[Note] Consult us for non-standard stroke.

Ordering code

ACQ - 32 × 50 -S - B - □ - □

ACQD - 32 × 50 -S - B - □ - □

ACQJ - 32 × 50 -20 -S - B - □ - □

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

①Model
ACQ: Compact cylinder(Double acting)
ASQ: Compact cylinder(Single acting-push)
ATQ: Compact cylinder(Single acting-pull)
ACQD: Compact cylinder(Double rod)
ACQJ: Compact cylinder(Adjustable stroke)

②Bore size	
Bore size	Series
12 16 20 25 32 40 50 63 80 100 125 140 160	ACQ ACQD ACQJ
12 16 20 25 32 40 50 63	ASQ ATQ

⑦ Mounting type	
Mounting type	Series
Blank: No accessories	ACQ ASQ ATQ ACQD ACQJ
FA: FA type	
FB: FB type	
LB: LB type	
CB: CB type	ACQ ASQ ATQ

⑥Rod type
Blank: Female thread
B: Male thread

⑧ Thread type [Note1]
Blank： G thread
PT： PT thread

③ Stroke
Refer to stroke table for details

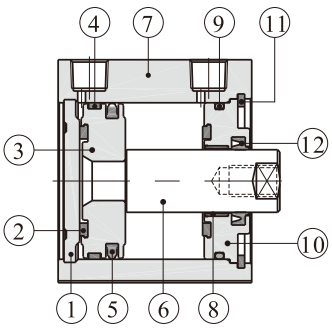
⑤ Magnet
Blank: Without magnet
S: With magnet

④ Adjustable stroke	
Series	Adjustable stroke
ACQJ series	10： 10mm
	20： 20mm
	30： 30mm
	40： 40mm
	50： 50mm
	75： 75mm
	100： 100mm
Others series	No this code

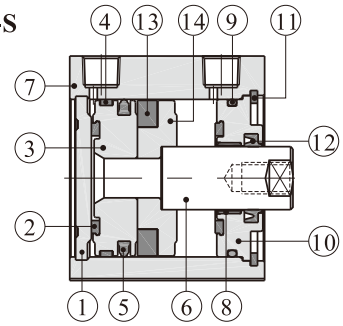
[Note1]Standard thread is blank here.

Inner structure and material of major parts

ACQ



ACQ-S

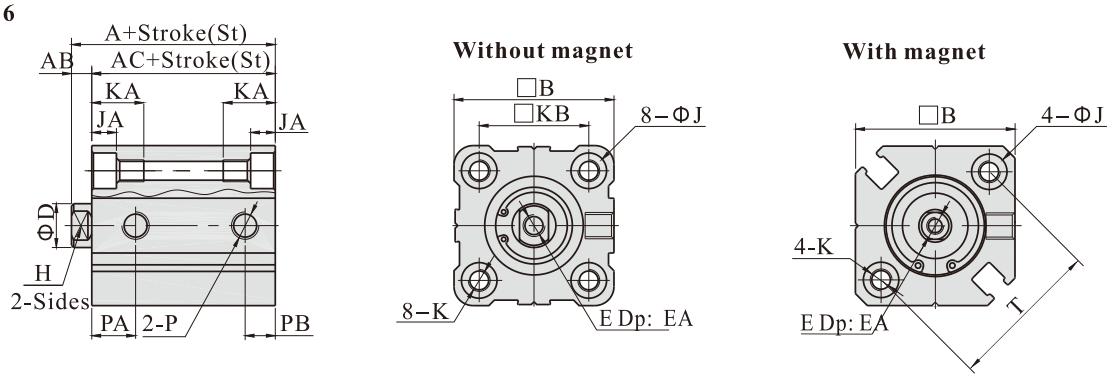


NO.	Item	Material
1	Back cover	Aluminum alloy
2	Bumper	TPU or NBR
3	Piston	Brass or Aluminum alloy
4	Wear ring	Wear resistant material
5	Piston seal	NBR
6	Piston rod	Carbon steel with 20μm chrome plated
7	Body	Aluminum alloy
8	Bushing	Wear resistant material
9	O-ring	NBR
10	Front cover	Aluminum alloy
11	C clip	Spring steel
12	Front cover packing	NBR
13	Magnet	Sintered metal or Plastic
14	Magnet holder	Brass or Aluminum alloy

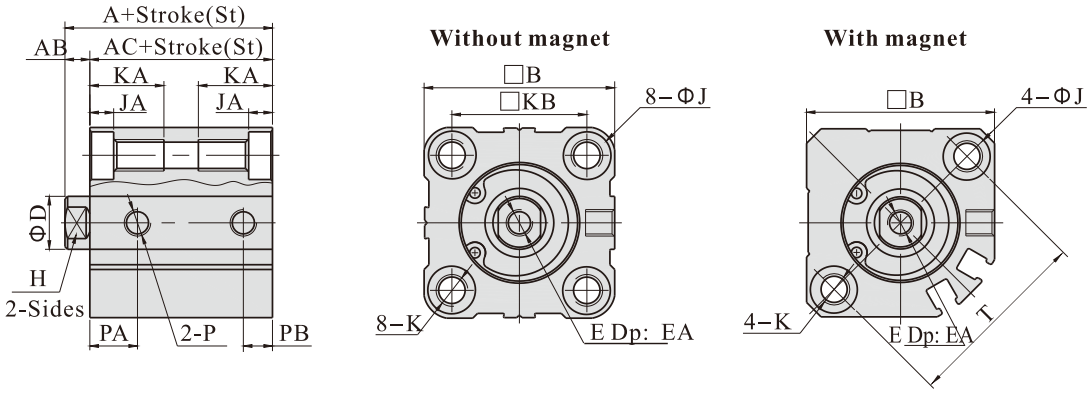
Dimensions

ACQ series

Φ12\Φ16



Φ20~Φ25

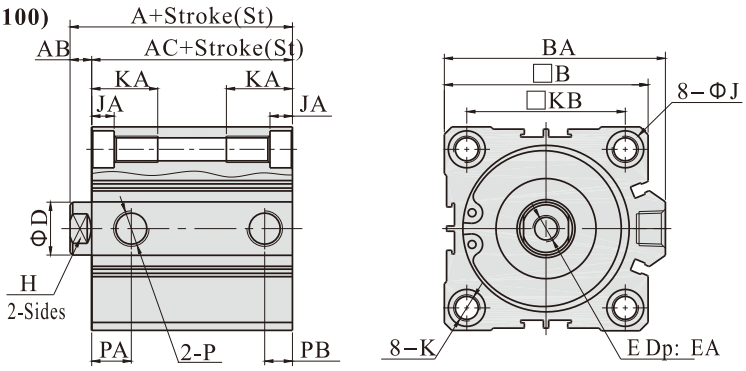


Type	No magnet						With magnet		AB	B	D	E	EA	H	J	JA
Bore size\Item	A			AC			A	AC								
Stroke	St≤50	St=55	St≥60	St≤50	St=55	St≥60										
12	20.5	-	-	17	-	-	31.5	28	3.5	25	6	M3×0.5	6	5	6	3.5
16	22	22	22	18.5	18.5	18.5	34	30.5	3.5	29	8	M4×0.7	8	6	6	3.5
20	24	-	34	19.5	-	29.5	36	31.5	4.5	36	10	M5×0.8	7	8	9	5.5
25	27.5	-	37.5	22.5	-	32.5	37.5	32.5	5	40	12	M6×1.0	12	10	9	5.5

Type	K	KA	KB	P	No magnet		With magnet		T
Bore size\Item					PA	PB	PA	PB	
Stroke									
12	M4×0.7 Thru.hole:Φ3.4	11	15.5	M5×0.8	7.5	5	9	7	22
16	M4×0.7 Thru.hole:Φ3.4	11	20	M5×0.8	8	5.5	9.5	5.5	28
20	M6×1.0 Thru.hole:Φ5.2	17	25.5	M5×0.8	9	5.5	9.5	5.5	36
25	M6×1.0 Thru.hole:Φ5.2	17	28	M5×0.8	11	5.5	11	5.5	40

ACQ series

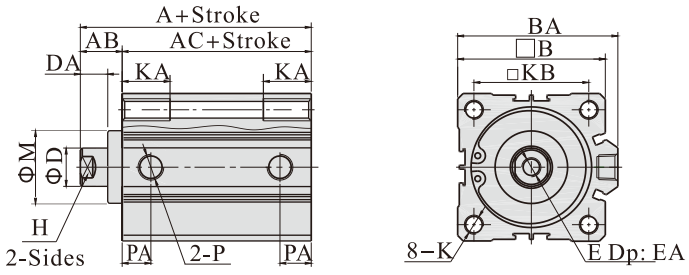
Φ32~Φ100 (Stroke≤100)



Item / Bore size	A(No magnet) St≤50	A(No magnet) St≥60	A (With magnet)	AB	AC(No magnet) St≤50	AC(No magnet) St≥60	AC (With magnet)	B	BA	D	E
32	30	40	40	7	23	33	33	45	49.5	16	M8×1.25
40	36.5	46.5	46.5	7	29.5	39.5	39.5	53	57	16	M8×1.25
50	38.5	48.5	48.5	8	30.5	40.5	40.5	64	71	20	M10×1.5
63	44	54	54	8	36	46	46	77	84	20	M10×1.5
80	53.5	63.5	63.5	10	43.5	53.5	53.5	98	104	25	M16×2.0
100	65	75	75	12	53	63	63	117	123.5	32	M20×2.5

Item / Bore size		EA	H	J	JA	K	KA	KB	P	No magnet PA	No magnet PB	With magnet PA	With magnet PB
32	St=5	13	14	9	5.5	M6×1.0 Thru.hole:Φ5.2	17	34	G1/8	7.5	6.5	10.5	7.5
	St>5									10.5	7.5		
40		13	14	9	5.5	M6×1.0 Thru.hole:Φ5.2	17	40	G1/8	11	8	11	8
50	St=5	15	17	10.5	6.5	M8×1.25 Thru.hole:Φ6.8	22	50	G1/4	9	9	10.5	10.5
	St>5									10.5	10.5		
63	St=5	15	17	14	9	M10×1.5 Thru.hole:Φ8.5	28.5	60	G1/4	14	9.5	15	10.5
	St>5									15	10.5		
80		20	22	17	11	M12×1.75 Thru.hole:Φ10.3	35.5	77	G3/8	16	14	16	14
100		26	27	17	11	M12×1.75 Thru.hole:Φ10.3	35.5	94	G3/8	20	17.5	20	17.5

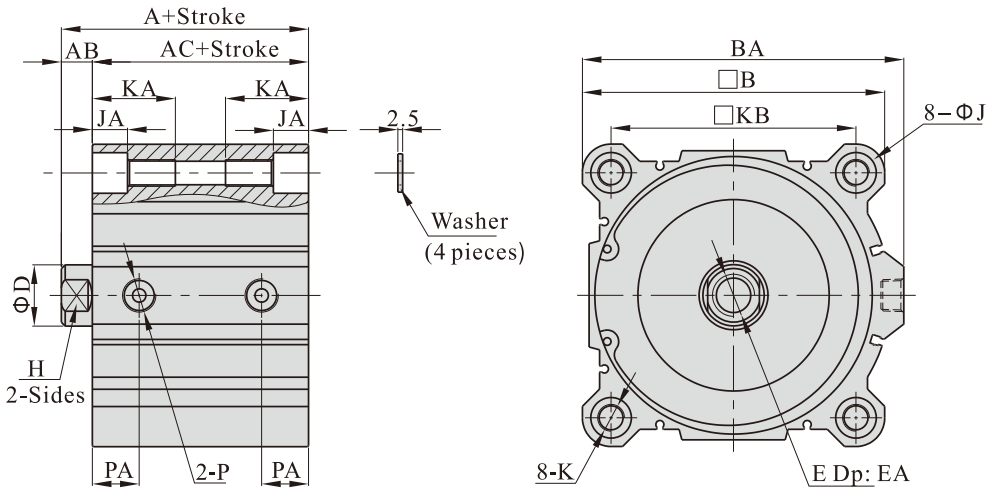
Φ32~Φ100 (Stroke>100)



Bore size\Item	A	AB	AC	B	BA	D	DA	E	EA	H	K	KA	KB	M	P	PA
32	62.5	17	45.5	45	49.5	16	12	M8×1.25	13	14	M6×1.0 Thru.hole:Φ5.2	17	34	22	G1/8	12.5
40	72	17	55	53	57	16	12	M8×1.25	13	14	M6×1.0 Thru.hole:Φ5.2	17	40	28	G1/8	14
50	73.5	18	55.5	64	71	20	13	M10×1.5	15	17	M8×1.25 Thru.hole:Φ6.7	22	50	35	G1/4	14
63	75	18	57	77	84	20	13	M10×1.5	15	17	M10×1.5 Thru.hole:Φ8.5	27	60	35	G1/4	16.5
80	86	20	66	98	104	25	15	M16×2.0	21	22	M12×1.75 Thru.hole:Φ10.4	32	77	43	G3/8	19
100	97.5	22	75.5	117	123.5	32	17	M20×2.5	27	27	M12×1.75 Thru.hole:Φ10.4	33	94	59	G3/8	23

ACQ series

Φ125~Φ160



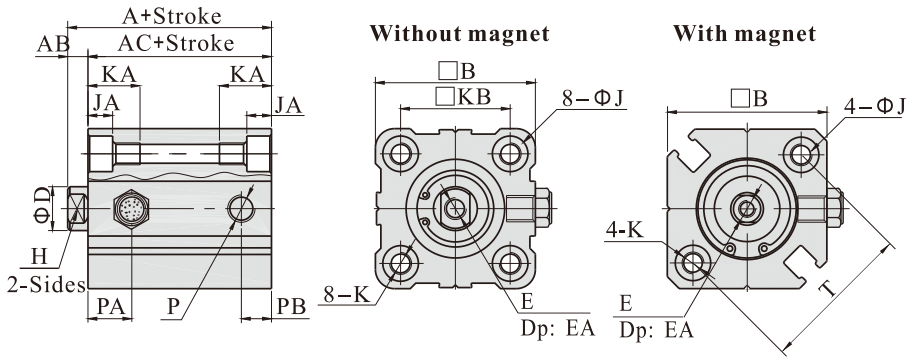
Bore size\Item	A	AB	AC	B	BA	D	E	EA (St≤10)	EA (St>10)	H	J	JA	K	KA	KB	P	PA
125	99	16	83	142	153	32	M22×2.5	22.5	30	27	21.5	18.4	M14×2.0 Thru.hole:Φ12.4	43.5	114	G3/8	24.5
140	99	16	83	158	168	32	M22×2.5	22.5	30	27	21.5	18.4	M14×2.0 Thru.hole:Φ12.4	43.5	128	G3/8	24.5
160	108	17	91	178	188	40	M24×3.0	26.5	33	36	24.5	21.2	M16×2.0 Thru.hole:Φ14.4	49	144	G3/8	27.5

Remark) Washer must be used when the cylinder be mounted by through hole.Please refer to this page for male thread dimensions.

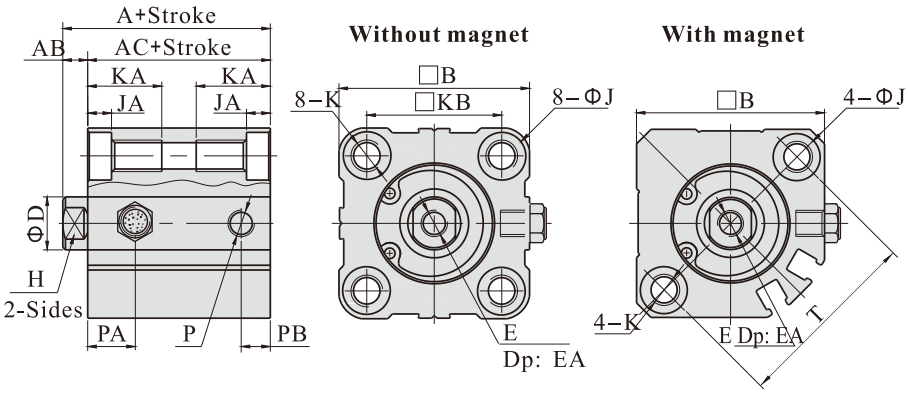
Compact cylinder——ACQ Series

ASQ series

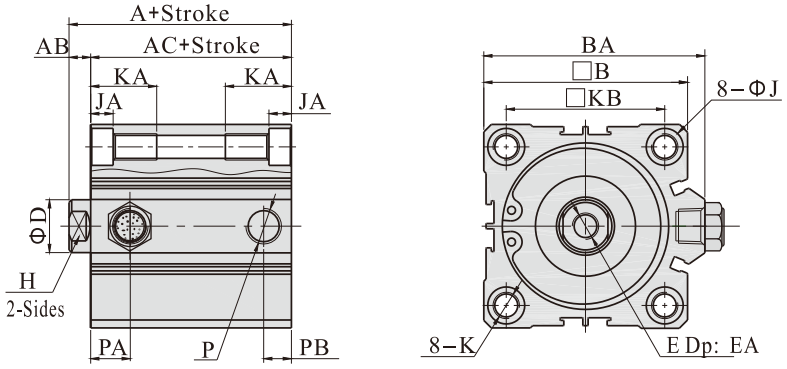
Φ12\Φ16



Φ20\Φ25



Φ32~Φ63



Bore size\Item	A(No magnet)			B	AB
Stroke	5\10	15\20	25\30		
12	25.5	30.5	-	25	3.5
16	27	32	-	29	3.5
20	29	34	39	36	4.5
25	32.5	37.5	42.5	40	5
32	35	40	45	45	7
40	41.5	46.5	51.5	53	7
50	48.5	53.5	58.5	64	8
63	54	59	64	77	8

Bore size\Item	A(With magnet)			BA	D
Stroke	5\10	15\20	25\30		
12	36.5	41.5	-	-	6
16	39	44	-	-	8
20	41	46	51	-	10
25	42.5	47.5	52.5	-	12
32	45	50	55	49.5	16
40	51.5	56.5	61.5	57	16
50	58.5	63.5	68.5	71	20
63	64	69	74	84	20

Bore size\Item	AC(No magnet)			E
Stroke	5\10	15\20	25\30	
12	22	27	-	M3×0.5
16	23.5	28.5	-	M4×0.7
20	24.5	29.5	34.5	M5×0.8
25	27.5	32.5	37.5	M6×1.0
32	28	33	38	M8×1.25
40	34.5	39.5	44.5	M8×1.25
50	40.5	45.5	50.5	M10×1.5
63	46	51	56	M10×1.5

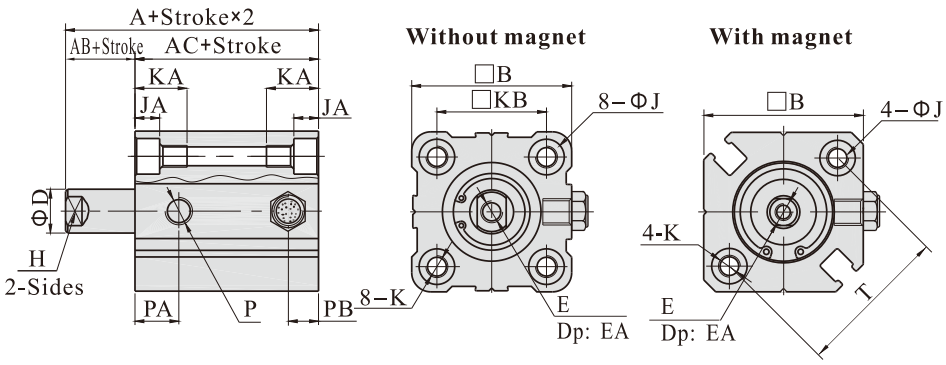
Bore size\Item	AC(With magnet)			EA
Stroke	5\10	15\20	25\30	
12	33	38	-	6
16	35.5	40.5	-	8
20	36.5	41.5	46.5	7
25	37.5	42.5	47.5	12
32	38	43	48	13
40	44.5	49.5	54.5	13
50	50.5	55.5	60.5	15
63	56	61	66	15

Bore size\Item	H	J	JA	K	KA	KB	P	PA (No magnet)	PA (With magnet)	PB (No magnet)	PB (With magnet)	T
12	5	6	3.5	M4×0.7 Thru.hole:Φ3.4	11	15.5	M5×0.8	7.5	9	5	7	22
16	6	6	3.5	M4×0.7 Thru.hole:Φ3.4	11	20	M5×0.8	8	9.5	5.5	5.5	28
20	8	9	5.5	M6×1.0 Thru.hole:Φ5.2	17	25.5	M5×0.8	9	9.5	5.5	5.5	36
25	10	9	5.5	M6×1.0 Thru.hole:Φ5.2	17	28	M5×0.8	11	11	5.5	5.5	40
32	14	9	5.5	M6×1.0 Thru.hole:Φ5.2	17	34	G1/8	10.5	10.5	7.5	7.5	-
40	14	9	5.5	M6×1.0 Thru.hole:Φ5.2	17	40	G1/8	11	11	8	8	-
50	17	10.5	6.5	M8×1.25 Thru.hole:Φ6.8	22	50	G1/4	10.5	10.5	10.5	10.5	-
63	17	14	9	M10×1.5 Thru.hole:Φ8.5	28.5	60	G1/4	15	15	10.5	10.5	-

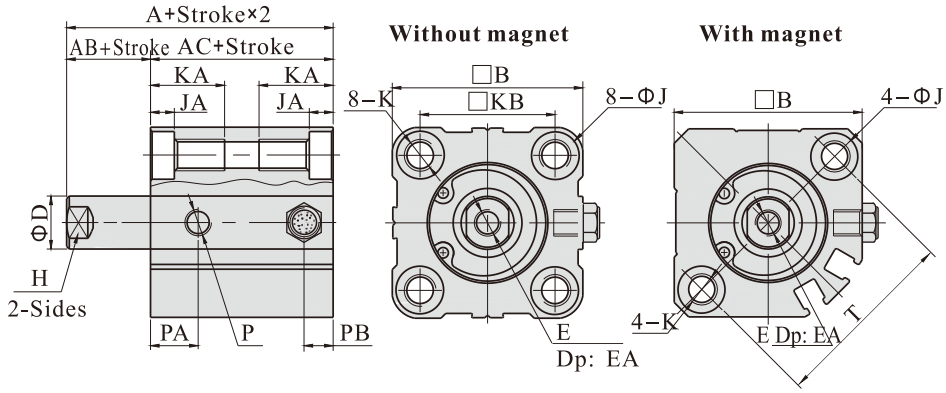
Compact cylinder——ACQ Series

ATQ series

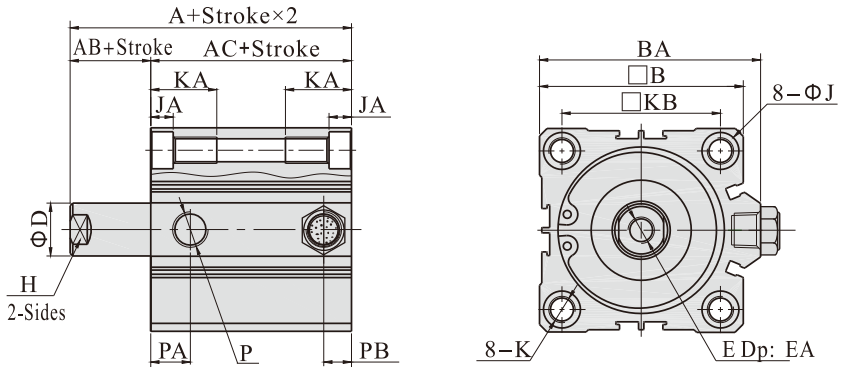
Φ12\Φ16



Φ20\Φ25



Φ32~Φ63



Bore size\Item	A(No magnet)			B	AB
Stroke	5\10	15\20	25\30		
12	25.5	30.5	-	25	3.5
16	27	32	-	29	3.5
20	29	34	39	36	4.5
25	32.5	37.5	42.5	40	5
32	35	40	45	45	7
40	41.5	46.5	51.5	53	7
50	48.5	53.5	58.5	64	8
63	54	59	64	77	8

Bore size\Item	A(With magnet)			BA	D
Stroke	5\10	15\20	25\30		
12	36.5	41.5	-	-	6
16	39	44	-	-	8
20	41	46	51	-	10
25	42.5	47.5	52.5	-	12
32	45	50	55	49.5	16
40	51.5	56.5	61.5	57	16
50	58.5	63.5	68.5	71	20
63	64	69	74	84	20

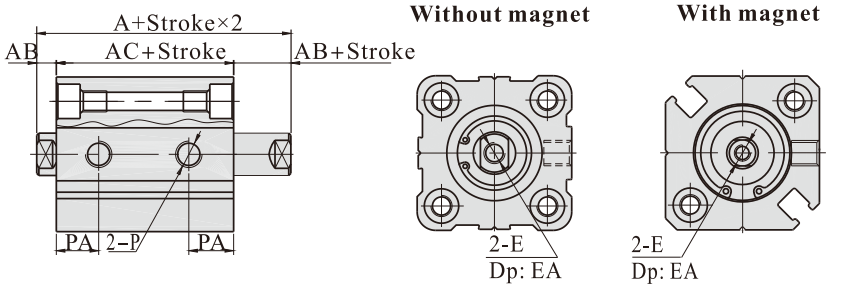
Bore size\Item	AC(No magnet)			E
Stroke	5\10	15\20	25\30	
12	22	27	-	M3×0.5
16	23.5	28.5	-	M4×0.7
20	24.5	29.5	34.5	M5×0.8
25	27.5	32.5	37.5	M6×1.0
32	28	33	38	M8×1.25
40	34.5	39.5	44.5	M8×1.25
50	40.5	45.5	50.5	M10×1.5
63	46	51	56	M10×1.5

Bore size\Item	AC(With magnet)			EA
Stroke	5\10	15\20	25\30	
12	33	38	-	6
16	35.5	40.5	-	8
20	36.5	41.5	46.5	7
25	37.5	42.5	47.5	12
32	38	43	48	13
40	44.5	49.5	54.5	13
50	50.5	55.5	60.5	15
63	56	61	66	15

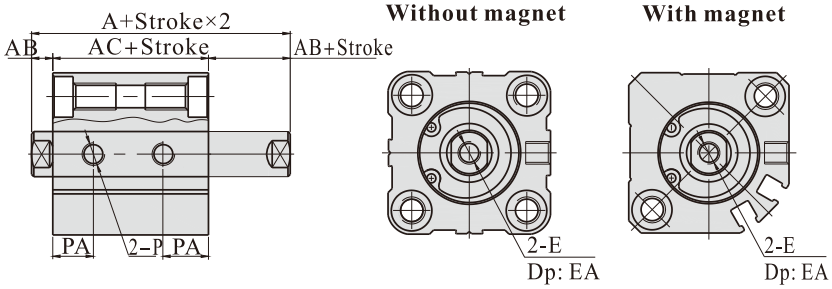
Bore size\Item	H	J	JA	K	KA	KB	P	PA (No magnet)	PA (With magnet)	PB (No magnet)	PB (With magnet)	T
12	5	6	3.5	M4×0.7 Thru.hole:Φ3.4	11	15.5	M5×0.8	7.5	9	5	7	22
16	6	6	3.5	M4×0.7 Thru.hole:Φ3.4	11	20	M5×0.8	8	9.5	5.5	5.5	28
20	8	9	5.5	M6×1.0 Thru.hole:Φ5.2	17	25.5	M5×0.8	9	9.5	5.5	5.5	36
25	10	9	5.5	M6×1.0 Thru.hole:Φ5.2	17	28	M5×0.8	11	11	5.5	5.5	40
32	14	9	5.5	M6×1.0 Thru.hole:Φ5.2	17	34	G1/8	10.5	10.5	7.5	7.5	-
40	14	9	5.5	M6×1.0 Thru.hole:Φ5.2	17	40	G1/8	11	11	8	8	-
50	17	10.5	6.5	M8×1.25 Thru.hole:Φ6.8	22	50	G1/4	10.5	10.5	10.5	10.5	-
63	17	14	9	M10×1.5 Thru.hole:Φ8.5	28.5	60	G1/4	15	15	10.5	10.5	-

ACQD series

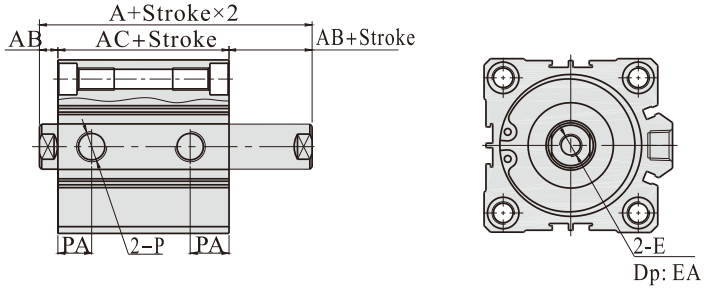
Φ12\Φ16



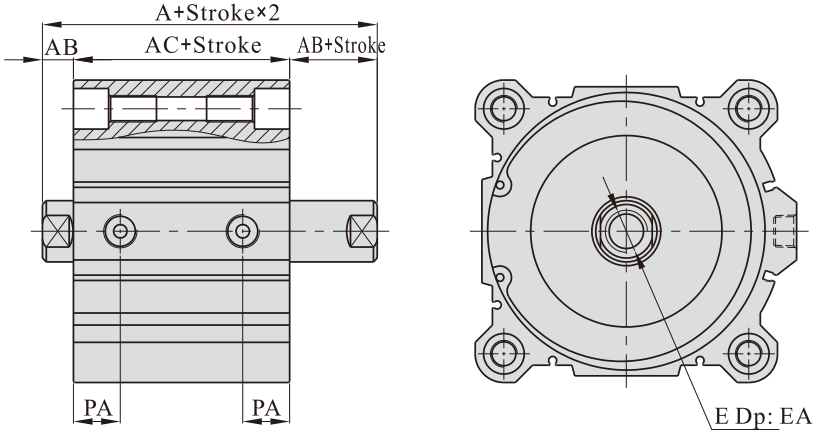
Φ20\Φ25



Φ32~Φ100



Φ125~Φ160



Item / Bore size	A		AB
	No magnet	With magnet	
12	32.2	39.4	3.5
16	33	43	3.5
20	35	47	4.5
25	39	49	5
32	44.5(79.5)	54.5(89.5)	7(17)
40	54(89)	64(99)	7(17)
50	56.5(91.5)	66.5(101.5)	8(18)
63	58(93)	68(103)	8(18)
80	71(106)	81(116)	10(20)
100	84.5(119.5)	94.5(129.5)	12(22)
125	-	115	16
140	-	115	16
160	-	125	17

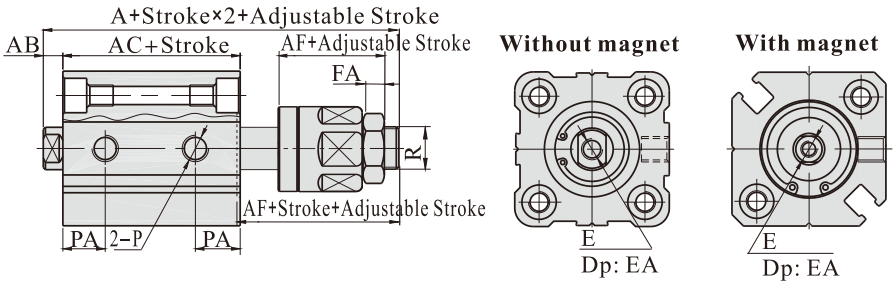
Item / Bore size	AC		E
	No magnet	With magnet	
12	25.2	32.4	M3×0.5
16	26	36	M4×0.7
20	26	38	M5×0.8
25	29	39	M6×1.0
32	30.5(45.5)	40.5(55.5)	M8×1.25
40	40(55)	50(65)	M8×1.25
50	40.5(55.5)	50.5(65.5)	M10×1.5
63	42(57)	52(67)	M10×1.5
80	51(66)	61(76)	M16×2.0
100	60.5(75.5)	70.5(85.5)	M20×2.5
125	-	83	M22×2.5
140	-	83	M22×2.5
160	-	91	M24×3.0

Item / Bore size	EA	PA
12	6	9
16	8	9.5
20	7	9.5
25	9.5(St=5)/12(St>5)	11
32	9(St≤10)/13(St>10)	10
40	11(St≤10)/13(St>10)	13
50	12(St≤10)/15(St>10)	13.5
63	12(St≤10)/15(St>10)	15
80	14(St≤15)/20(St>15)	16
100	20(St≤25)/26(St>25)	21
125	22.5(St≤10)/30(St>10)	24.5
140	22.5(St≤10)/30(St>10)	24.5
160	26.5(St≤10)/33(St>10)	27.5

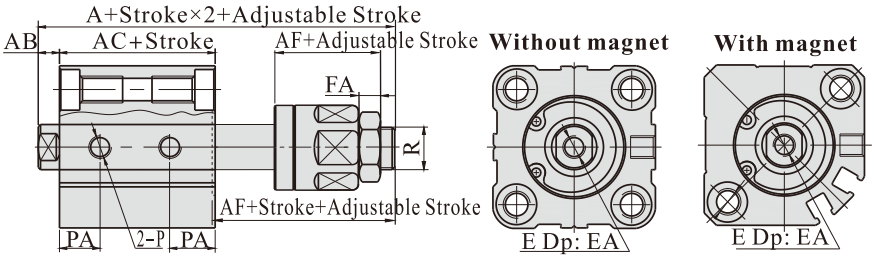
Remark)
1.The value on () is the value when stroke>100mm.
2.The unmarked dimension is the same as ACQ standard type. Please refer to page 129 for male thread dimensions.

ACQJ series

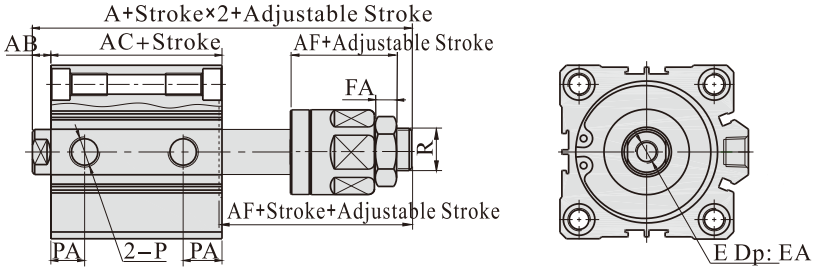
Φ12\Φ16



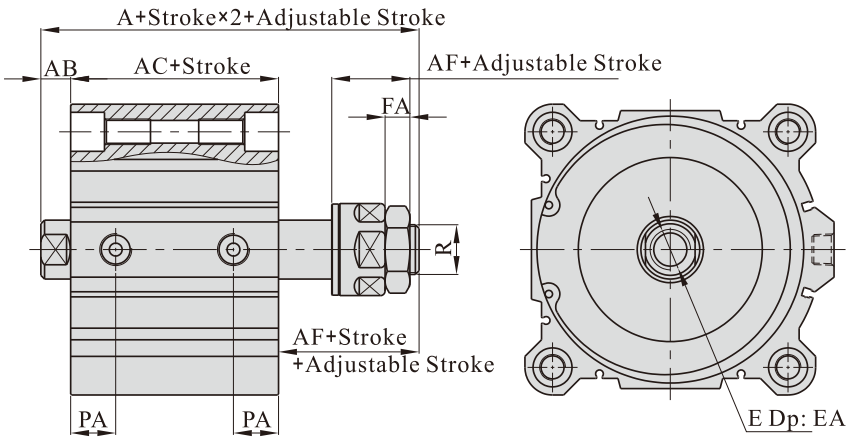
Φ20\Φ25



Φ32~Φ100



Φ125~Φ160



Item / Bore size	A		AB	FA
	No magnet	With magnet		
12	45.2	52.4	3.5	4
16	50	60	3.5	5
20	55	67	4.5	6
25	60.5	70.5	5	6
32	64.9(95.5)	74.9(105.5)	7(17)	7
40	74.5(105)	84.5(115)	7(17)	7
50	77(107.5)	87(117.5)	8(18)	8
63	78.4(109)	88.4(119)	8(18)	8
80	95.8(126.5)	105.8(136.5)	10(20)	10
100	114.3(145)	124.3(155)	12(22)	13.5
125	-	140.8	16	13.5
140	-	140.8	16	13.5
160	-	175.3	17	18

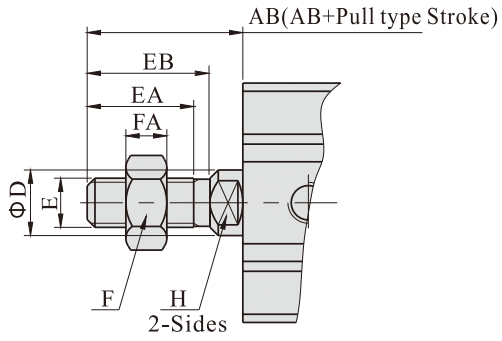
Item / Bore size	AC		AF	R
	No magnet	With magnet		
12	25.2	32.4	17	M5×0.8
16	26	36	21	M6×1.0
20	26	38	25	M8×1.25
25	29	39	27	M10×1.25
32	30.5(45.5)	40.5(55.5)	28	M12×1.25
40	40(55)	50(65)	28	M12×1.25
50	40.5(55.5)	50.5(65.5)	29	M16×1.5
63	42(57)	52(67)	29	M16×1.5
80	51(66)	61(76)	35.5	M20×1.5
100	60.5(75.5)	70.5(85.5)	42.5	M27×2.0
125	-	83	42.5	M27×2.0
140	-	83	42.5	M27×2.0
160	-	91	68	M36×2.0

Item / Bore size	E	EA	PA
12	M3×0.5	6	9
16	M4×0.7	8	9.5
20	M5×0.8	7	9.5
25	M6×1.0	9.5(St=5)/12(St>5)	11
32	M8×1.25	9(St≤10)/13(St>10)	10
40	M8×1.25	11(St≤10)/13(St>10)	13
50	M10×1.5	12(St≤10)/15(St>10)	13.5
63	M10×1.5	12(St≤10)/15(St>10)	15
80	M16×2.0	14(St≤15)/20(St>15)	16
100	M20×2.5	20(St≤25)/26(St>25)	21
125	M22×2.5	22.5(St≤10)/30(St>10)	24.5
140	M22×2.5	22.5(St≤10)/30(St>10)	24.5
160	M24×3.0	26.5(St≤10)/33(St>10)	27.5

Remark)
1. The value in () is the value when stroke>100mm.
2. The unmarked dimension is the same as ACQ standard type. Please refer to page 129 for male thread dimensions.

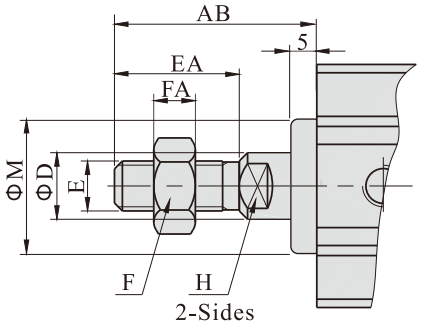
Male thread

(Bore size: Φ12~Φ100, Stroke≤100)



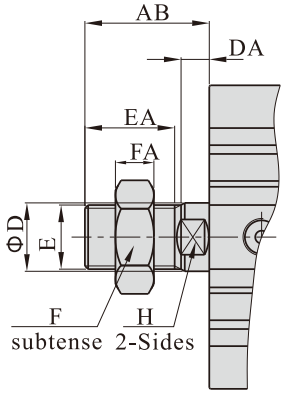
Bore size\Item	AB	D	E	EA	EB	F	FA	H
12	14	6	M5×0.8	9	10	8	4	5
16	15.5	8	M6×1.0	10	11.5	10	5	6
20	18.5	10	M8×1.25	12	13.5	12	6	8
25	22.5	12	M10×1.25	15	17	17	6	10
32	28.5	16	M14×1.5	20.5	23.5	19	8	14
40	28.5	16	M14×1.5	20.5	23.5	19	8	14
50	33.5	20	M18×1.5	26	28.5	27	11	17
63	33.5	20	M18×1.5	26	28.5	27	11	17
80	43.5	25	M22×1.5	32.5	35.5	32	13	22
100	43.5	32	M26×1.5	32.5	35.5	36	13	27

(Bore size: Φ32~Φ100 Stroke>100)



Bore size\Item	AB	D	E	EA	FA	F	H	M
32	38.5	16	M14×1.5	23	8	19	14	22
40	38.5	16	M14×1.5	23	8	19	14	28
50	43.5	20	M18×1.5	28	11	27	17	35
63	43.5	20	M18×1.5	28	11	27	17	35
80	53.5	25	M22×1.5	35	13	32	22	43
100	53.5	32	M26×1.5	35	13	36	27	59

(Bore size: Φ125~Φ160)



Bore size\Item	AB	D	E	EA	EB	F	FA	H
125	58	32	M30×1.5	42	45	46	18	27
140	58	32	M30×1.5	42	45	46	18	27
160	64	40	M36×1.5	47	50	55	21	36

Compact cylinder——TACQ Series

With guider type

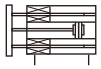
Product feature

1. JIS standard is implemented and with guider.
2. C clip is adopted to connect the cylinder body and back cover or front cover to make it compact and reliable.
3. The internal diameter of the body is treated with rolling followed by the treatment of hard anodizing, forming an excellent abrasion resistance and durability.
4. The seal of piston adopts heterogeneous two-way seal structure. It has compact dimension and the function of greasel reservation.
5. Compact structure can effectively save installation space.
6. There are magnetic switch slots around the cylinder body, which is convenient to install inducting switch.
7. Double rod non-rotating structure enables to bear large working load and lateral load.

Symbol

TACQ

TACQ-S



Specification

Bore size(mm)	12	16	20	25	32	40	50	63	80	100
Acting type	Double acting									
Fluid	Air(to be filtered by 40μm filter element)									
Operating pressure	0.15~1.0MPa(22~145psi)									
Proof pressure	1.5MPa(215psi)									
Temperature ℃	-20~70									
Speed range mm/s	30~500									
Stroke tolerance	$^{+1.0}_{0}$									
Cushion type	Bumper									
Port size [Note1]	M5×0.8				1/8"		1/4"		3/8"	
Non-rotating tolerance [Note2]	±0.2°		±0.1°							

[Note1] The standard thread type is G thread, Please control us for other thread type.
[Note2] Retract position.

Standard Stroke

Bore size (mm)	Standard stroke (mm)	Max.std stroke	Middle stroke range(mm)
12 16	5 10 15 20 25 30	30	1~29
20 25	5 10 15 20 25 30 35 40 45 50	50	1~49
32 40	5 10 15 20 25 30 35 40 45 50 55 75 100	100	1~99
50 63 80 100	10 15 20 25 30 35 40 45 50 55 75 100	100	5~99

[Note] Consult us for non-standard stroke.

Compact cylinder——TACQ Series

With guider type

Ordering code

TACQ - 32 × 50 - S - □

① ② ③ ④ ⑤

①Model
TACQ: Compact cylinder(Double acting with guider)

②Bore size
12 16 20 25 32 40 50 63 80 100

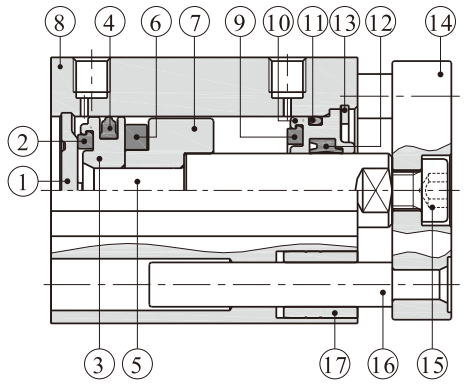
④ Magnet
Blank: Without magnet
S: With magnet

⑤ Thread type [Note1]
Blank： G thread
PT： PT thread

③ Stroke
Refer to stroke table for details

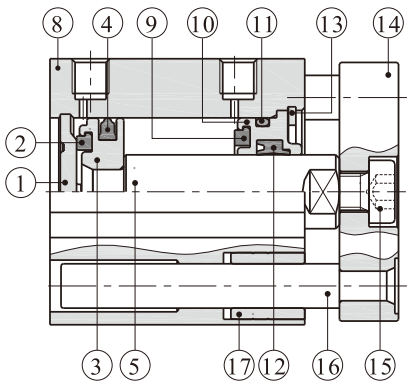
Inner structure and material of major parts

TACQ-S



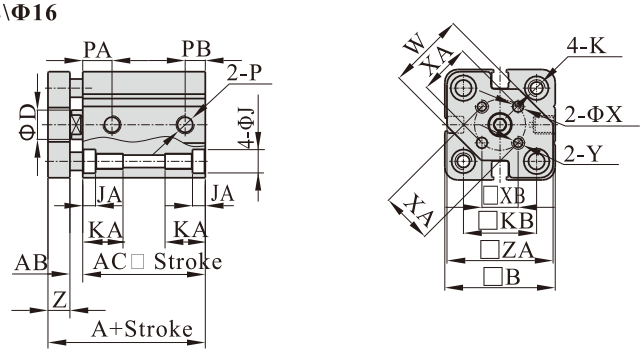
NO.	Item	Material	NO.	Item	Material
1	Back cover	Aluminum alloy	10	Front cover	Aluminum alloy
2	Bumper	NBR	11	O-ring	NBR
3	Piston	Aluminum alloy	12	Front cover packing	NBR
4	Piston seal	NBR			
5	Piston rod	Carbon steel with 20μm chrome plated	13	C clip	Spring steel
			14	Fixing plate	Aluminum alloy
6	Magnet	Sintered metal	15	Screw	Carbon steel
			16	Leader	Stainless steel
7	Magnet holder	Aluminum alloy			
8	Body	Aluminum alloy	17	Bushing	Brass
9	Wear ring	NBR			

TACQ



Dimensions

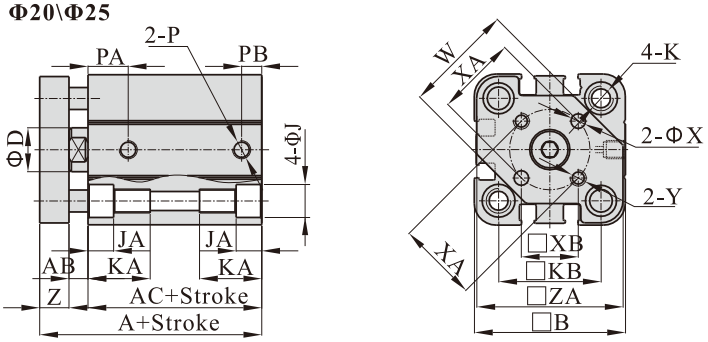
Φ12\Φ16



Item / Bore size	A		AC	
	No magnet	With magnet	No magnet	With magnet
12	26.5	37.5	17.3	28.3
16	28	40	19	31
20	32	44	20.5	32.5
25	35.5	45.5	23	33

Item / Bore size	AB	B	D	J	JA	K	KA	KB
12	3	26	6	6	3.5	M4×0.7 Thru.hole:Φ3.4	11.5	15.5
16	3	30	8	6	3.5	M4×0.7 Thru.hole:Φ3.4	11.5	20
20	3.5	36	10	9	5.5	M6×1.0 Thru.hole:Φ5.2	18	25.5
25	4.5	41	12	9	5.5	M6×1.0 Thru.hole:Φ5.2	17.5	28

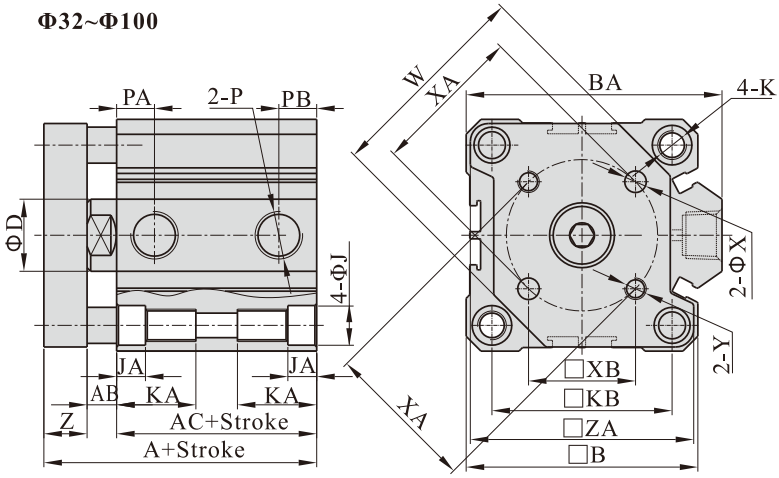
Φ20\Φ25



Item / Bore size	PA		PB	
	No magnet	With magnet	No magnet	With magnet
12	7.5	9	5	7
16	8.5	10	5.5	5.5
20	10	10.5	5.5	5.5
25	11.5	11.5	5.5	5.5

Item / Bore size	P	W	X	XA	XB	Y	Z	ZA
12	M5×0.8	15	3	10	7.1	M3×0.5	6	25
16	M5×0.8	21	3	14	9.9	M3×0.5	6	29
20	M5×0.8	26	4	17	12	M4×0.7	8	35
25	M5×0.8	30	5	22	15.6	M5×0.8	8	40

Φ32~Φ100



Item / Bore size	A(No magnet)		A (With magnet)	AB	B	BA	D	J	JA
	St≤50	St≥75							
32	40	50	50	6.5	45	49.5	16	9	5.5
40	46.5	56.5	56.5	6.6	53	57	16	9	5.5
50	50.5	60.5	60.5	7.5	64	71	20	10.5	6.5
63	56	66	66	8	77	84	20	14	9
80	67.5	77.5	77.5	10	98	104	25	17	11
100	81	91	91	12	117	123.5	32	17	11

Item / Bore size	AC(No magnet)		AC (With magnet)	K
	St≤50	St≥75		
32	23.5	33.5	33.5	M6×1.0 Thru.hole:Φ5.2
40	30	40	40	M6×1.0 Thru.hole:Φ5.2
50	31	41	41	M8×1.25 Thru.hole:Φ6.7
63	36	46	46	M10×1.5 Thru.hole:Φ8.5
80	43.5	53.5	53.5	M12×1.75 Thru.hole:Φ10.4
100	53	63	63	M12×1.75 Thru.hole:Φ10.4

Item / Bore size		KA	KB	P	PA (No magnet)	PA (With magnet)	PB (No magnet)	PB (With magnet)	W	X	XA	XB	Y	Z	ZA
32	St=5	17.5	34	1/8"	8	10.5	6.5	7.5	37	5	28	19.8	M5×0.8	10	43
	St>5				11		7.5								
40		17.5	40	1/8"	11	11	8	8	46	5	33	23.3	M5×0.8	10	51
50		22.5	50	1/4"	10.5	10.5	11	11	58	6	42	29.7	M6×1.0	12	62
63		28.5	60	1/4"	15	15	10.5	10.5	69	6	50	35.4	M6×1.0	12	75
80		35.5	77	3/8"	16	16	14	14	90	8	65	46	M8×1.25	14	95
100		35.5	94	3/8"	20	20	17.5	17.5	113.5	10	80	56.6	M10×1.5	16	114.5

Accessories

List for ordering code of accessories

Accessories / Bore size	Mounting accessories			Knuckle				Sensor switch
	LB	FA/FB	CB	I	Y	F	U	
12	F-ACQ12LB	F-ACQ12FA	F-ACQ12CB	F-ACQ12I	F-ACQ12Y	–	F-M5X080U	CS1-G DS1-G
16	F-ACQ16LB	F-ACQ16FA	F-ACQ16CB	F-ACQ16I	F-ACQ16Y	–	F-M6X100U	
20	F-ACQ20LB	F-ACQ20FA	F-ACQ20CB	F-ACQ20I	F-ACQ20Y	F-M8X125F	F-M8X125U	
25	F-ACQ25LB	F-ACQ25FA	F-ACQ25CB	F-ACQ25I	F-ACQ25Y	F-M10X125F	F-M10X125U	
32	F-ACQ32LB	F-ACQ32FA	F-ACQ32CB	F-ACQ32I	F-ACQ32Y	F-M14X150F	F-M14X150U	CS1-J DS1-J CS1-G DS1-G
40	F-ACQ40LB	F-ACQ40FA	F-ACQ40CB					
50	F-ACQ50LB	F-ACQ50FA	F-ACQ50CB	F-ACQ50I	F-ACQ50Y	F-M18X150F	F-M18X150U	
63	F-ACQ63LB	F-ACQ63FA	F-ACQ63CB					
80	F-ACQ80LB	F-ACQ80FA	F-ACQ80CB	F-ACQ80I	F-ACQ80Y	–	–	
100	F-ACQ100LB	F-ACQ100FA	F-ACQ100CB	F-ACQ100I	F-ACQ100Y	–	F–M26X150U	
125	–	–	–					CS1-H\DS1-H CS1-G\DS1-G
140	–	–	–					
160	–	–	–					

Accessory selection

Cylinder model\Accessories			Mounting accessories				Knuckle				Sensor switch		
			LB	FA	FB	CB [1]	I	Y	U	F	C(D)S1-J	C(D)S1-G	C(D)S1-H
ACQ	Female thread	Without magnet	●	●	●	●	×	×	×	×	×	×	×
		With magnet									●	●	●
	Male thread	Without magnet					●	●	●	●	×	×	×
		With magnet									●	●	●
ASQ ATQ	Female thread	Without magnet	●	●	●	●	×	×	×	×	×	×	×
		With magnet									●	●	●
	Male thread	Without magnet					●	●	●	●	×	×	×
		With magnet									●	●	●
ACQD ACQJ	Female thread	Without magnet	●	●	×	×	×	×	×	×	×	×	×
		With magnet									●	●	●
	Male thread	Without magnet					●	●	●	●	×	×	×
		With magnet									●	●	●

Material of accessories

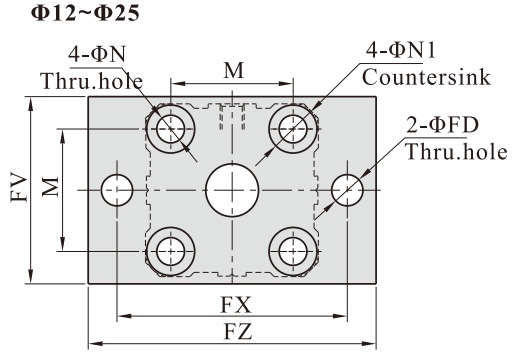
Accessories / Bore size	Mounting accessories				Knuckle			
	LB	FA	FB	CB	I	Y	F	U
12, 15	△	●	●	●	▲	▲	▲	▲
20, 25	△	●	●	●	▲	▲	▲	▲
32~100	△	●	●	■	▲	■	▲	▲
●——Aluminum alloy；■——Carbon Steel；▲——S45C；△——SPCC								

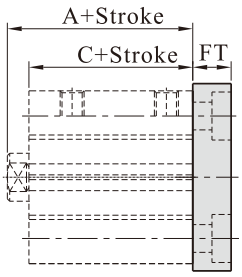
Accessories

Dimensions

FA/FB type

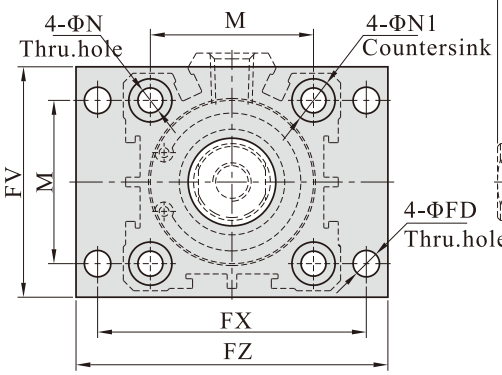
Φ12~Φ25

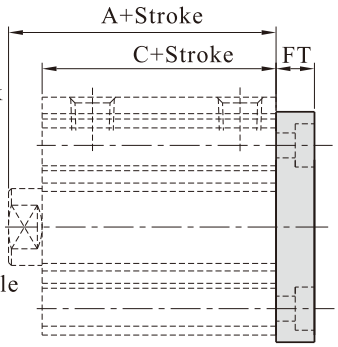




Item / Bore size	A				C			
	No magnet			With magnet	No magnet			With magnet
Stroke	≤50	55	≥60		≤50	55	≥60	
12	20.5	-	-	31.5	17	-	-	28
16	22	22	-	34	18.5	18.5	-	30.5
20	24	-	34	36	19.5	-	29.5	31.5
25	27.5	-	37.5	37.5	22.5	-	32.5	32.5
32	30	-	40	40	23	-	33	33
40	36.5	-	46.5	46.5	29.5	-	39.5	39.5
50	38.5	-	48.5	48.5	30.5	-	40.5	40.5
63	44	-	54	54	36	-	46	46
80	53.5	-	63.5	63.5	43.5	-	53.5	53.5
100	65	-	75	75	53	-	63	63

Φ32~Φ100

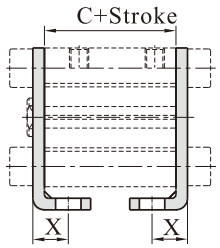


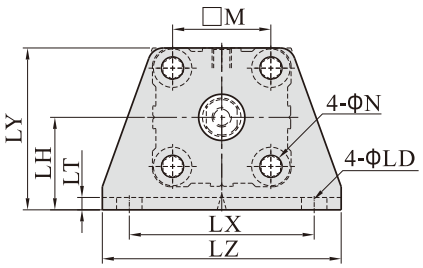


Item / Bore size	N	N1	FD	FT	FV	FX	FZ	M
12	4.5	7.5	4.5	5.5	25	45	55	15.5
16	4.5	7.5	4.5	5.5	30	45	55	20
20	6.5	10.5	6.5	8	39.5	48	60	25.5
25	6.5	10.5	6.5	8	42	52	64	28
32	6.5	10.5	5.5	8	48	56	65	34
40	6.5	10.5	5.5	8	54	62	72	40
50	8.5	13.5	6.5	9	67	76	89	50
63	10.5	16.5	9	10	80	92	108	60
80	12.5	18.5	11	12	99	116	134	77
100	12.5	18.5	11	12	117	136	154	94

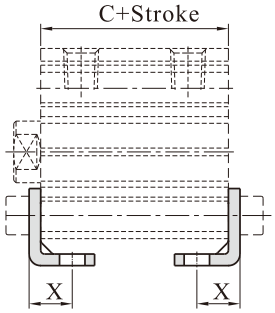
LB type

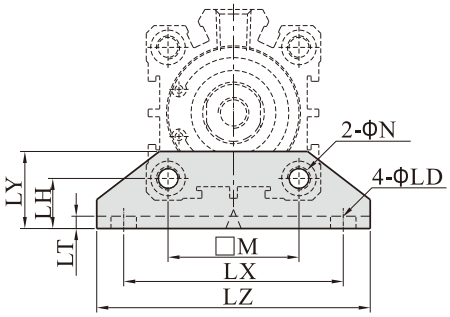
Φ12~Φ25





Φ32~Φ100





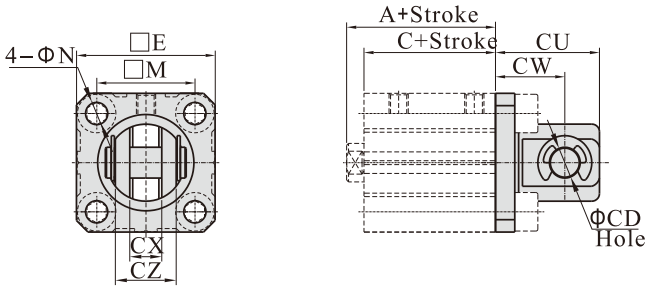
Item / Bore size	C				M	N	X
	No magnet			With magnet			
Stroke	≤50	55	≥60				
12	17	-	-	28	15.5	4.5	8
16	18.5	18.5	-	30.5	20	4.5	8
20	19.5	-	29.5	31.5	25.5	6.5	9.2
25	22.5	-	32.5	32.5	28	6.5	10.7
32	23	-	33	33	34	6.5	11.2
40	29.5	-	39.5	39.5	40	6.5	11.2
50	30.5	-	40.5	40.5	50	8.5	12.2
63	36	-	46	46	60	10.5	13.7
80	43.5	-	53.5	53.5	77	13	16.5
100	53	-	63	63	94	13	23

Item / Bore size	LD	LH	LT	LX	LY	LZ
12	4.5	17	2	34	29.5	44
16	4.5	19	2	38	33.5	48
20	6.5	24	3	48	42	62
25	6.5	26	3	52	46	66
32	6.5	13	3	57	20	71
40	6.5	13	3	64	20	78
50	8.5	14	3	79	22	95
63	10.5	16	3	95	26	113
80	13	20.5	4.5	118	32	140
100	13	24	6	137	36	162

Accessories

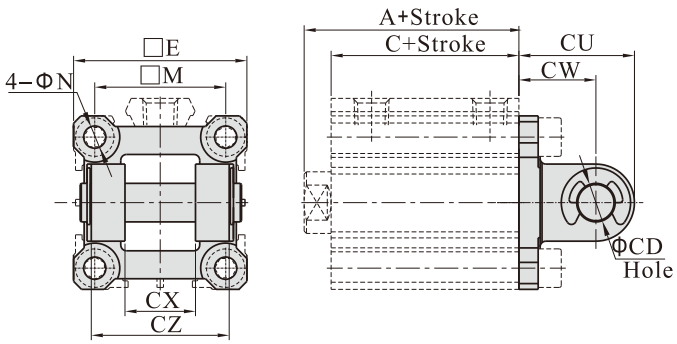
CB type

Φ12~Φ25



Item	A				C			
Bore size	No magnet			With	No magnet			With
Stroke	≤50	55	≥60	magnet	≤50	55	≥60	magnet
12	20.5	-	-	31.5	17	-	-	28
16	22	22	-	34	18.5	18.5	-	30.5
20	24	-	34	36	19.5	-	29.5	31.5
25	27.5	-	37.5	37.5	22.5	-	32.5	32.5
32	30	-	40	40	23	-	33	33
40	36.5	-	46.5	46.5	29.5	-	39.5	39.5
50	38.5	-	48.5	48.5	30.5	-	40.5	40.5
63	44	-	54	54	36	-	46	46
80	53.5	-	63.5	63.5	43.5	-	53.5	53.5
100	65	-	75	75	53	-	63	63

Φ32~Φ100

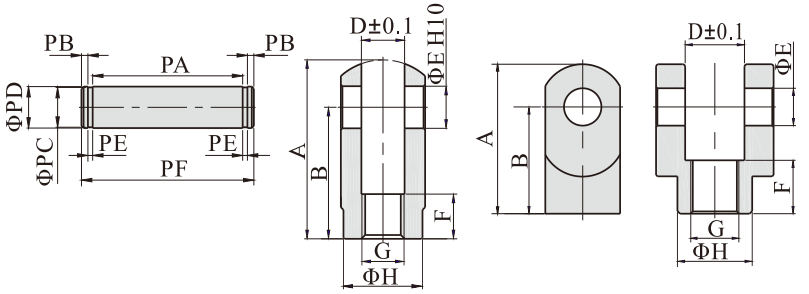


Item / Bore size	E	M	N	CD	CU	CW	CX	CZ
12	25	15.5	4.5	5	20	14	5.3	9.8
16	29	20	4.5	5	21	15	6.8	11.8
20	36	25.5	6.5	8	27	18	8.3	15.8
25	40	28	6.5	10	30	20	10.3	19.8
32	45.5	34	6.5	10	30	20	18.3	35.8
40	53.5	40	6.5	10	32	22	18.3	35.8
50	64.5	50	8.5	14	42	28	22.3	43.8
63	77.5	60	10.5	14	44	30	22.3	43.8
80	98.5	77	12.5	18	56	38	28.3	55.8
100	117.5	94	12.5	22	67	45	32.3	63.8

Y Knuckle

F-ACQ12Y
F-ACQ16Y
F-ACQ20Y
F-ACQ25Y

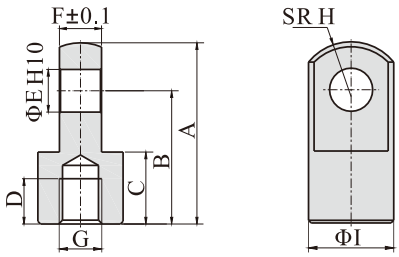
F-ACQ32Y
F-ACQ50Y
F-ACQ80Y
F-ACQ100Y



Type\Item	A	B	D	E	F	G
F-ACQ12Y	22	16	5.3	5	6	M5×0.8
F-ACQ16Y	28	21	6.6	5	11	M6×1.0
F-ACQ20Y	34	25	8.3	8	8.5	M8×1.25
F-ACQ25Y	41	30	10.3	10	10.5	M10×1.25
F-ACQ32Y	42	30	18.4	10	16	M14×1.5
F-ACQ50Y	56	40	22.4	14	20	M18×1.5
F-ACQ80Y	71	50	28.4	18	23	M22×1.5
F-ACQ100Y	79	55	32.4	22	24	M26×1.5

Type\Item	H	I	J	PA	PB	PC	PD	PE	PF
F-ACQ12Y	9	10	-	10.2	1.5	4	5	0.7	14.6
F-ACQ16Y	11	12	-	12.4	1.5	4	5	0.7	16.8
F-ACQ20Y	15	16	-	16.2	1.5	7	8	0.9	21
F-ACQ25Y	19	20	-	20.2	2	8	10	1.1	26.4
F-ACQ32Y	22	22	36	36.2	2	8	10	1.1	42.4
F-ACQ50Y	28	28	44	44.2	2	12	14	1.1	50.4
F-ACQ80Y	38	38	56	56.2	2	15	18	1.7	63.6
F-ACQ100Y	44	44	64	64.2	2.5	19	22	1.7	72.6

I Knuckle



Type\Item	A	B	C	D	E	F	G	H	I
F-ACQ12I	21.5	16	9	6	5	4.7	M5×0.8	6.3	10
F-ACQ16I	32	25	11	8	5	6.2	M6×1.0	8.1	12
F-ACQ20I	34	25	13.5	8.5	8	7.7	M8×1.25	10.3	16
F-ACQ25I	41	30	16	11	10	9.7	M10×1.25	12.8	20
F-ACQ32I	42	30	16	14	10	17.6	M14×1.5	12	22
F-ACQ50I	56	40	20	18	14	21.6	M18×1.5	16	28
F-ACQ80I	71	50	23	21	18	27.6	M22×1.5	21	38
F-ACQ100I	79	55	24	22	22	31.6	M26×1.5	24	44

Compact cylinder——CQ2 Series

ø12~ø100

Specification

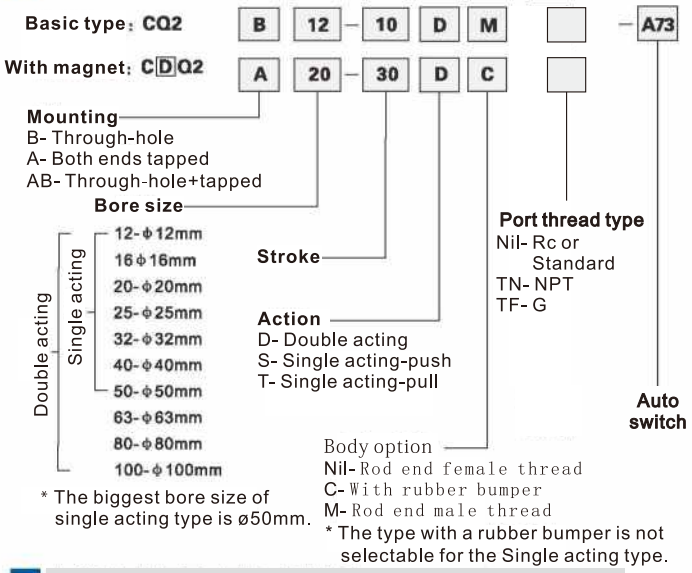
Bore size(mm)	12	16	20	25	32	40	50	63	80	100
Fluid	Air									
Action	Double acting									
	Single acting_Push type Single acting_Pull type									
Proof pressure	1.5MPa									
Maximum operating pressure	1.0MPa									
Ambient and fluid temp.	5~60 ℃									
Rod end thread	Female thread(Standard) Male thread(Operation)									
Cushion	Without cushion									
Piston speed	50 to 500 mm/s									
Stroke length tolerance	$^{+1.0}_{0}$									
Lubrication [Note1]	Not required (Non-lube)									
Mounting type	Through hole(Standard) Both ends tapped(Operation)									
Port size	M5×0.8				1/8"		1/4"		3/8"	

[Note1] If lubrication is necessary, Lubricants like ISO VG32 or equivalent are recommended.

Symbol

Double acting Single acting-push Single acting-pull

Ordering Code



* The biggest bore size of single acting type is ø50mm.

* The type with a rubber bumper is not selectable for the Single acting type.

Ordering example

A) Bore size:16, Stroke:20, double action+through hole, rod female thread, the ordering code is **CQ2B16-20D.**

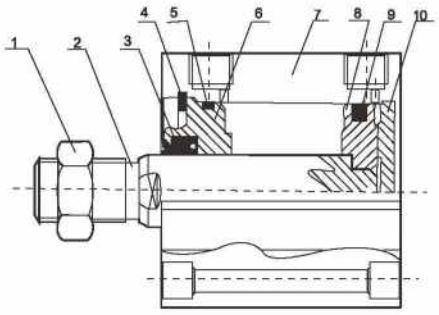
B) Bore size:32, Stroke:100,double action with magnet, both ends tapped, rod male thread, rubber bumper, the ordering code is **CDQ2A32-100DCM.**

Stroke/Auto switch selection

Bore size(mm)	Standard stroke		Auto switch type	
	Double action	Single action	Socket mounting	Direct mounting
12 16	5,10,15 20,25,30	5,10	F7NV A73C A72(H) A73(H) A76H F79 J79 F79W J79W F7BA	A93(V) A96(V) M9N(V) M9P(V) M9B(V) F9NW F9BAL
20 25	5,10,15,20,25 30,35,40,45,50	5,10		
32 40	5,10,15,20,25,30 35,40,45,50,75,100	5,10		
50	10,15,20,25,30 35,40,45,50,75,100	10,20		
63 80 100		/		

Note: Please refer to the relevant content for the specifications and characteristics of auto switches.

Inner structure and material of major parts



Component Parts

No.	Description	Material	No.	Description	Material
1	Rod end nut	Carbon steel	2	Piston rod	Carbon steel
3	Rod seal	NBR	4	Retaining ring	Carbon tool steel
5	Gasket	NBR	6	Collar	6061
7	Cylinder tube	6063-T5	8	Piston	6061
9	Piston seal	NBR	10	Back cover	6063

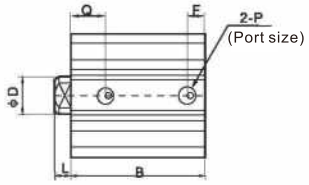
Accessories and Seals

No.	Description	Material	Accessories code									
			ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
9	Rod seal	NBR	MYA-ø6	MYA-ø8	MYA-ø10	MYA-ø12	MYA-ø16	PDU-ø16	PDU-ø20	PDU-ø20	PDU-ø25	PDU-**ø30**
10	Piston seal	NBR	APA-ø12	APA-ø16	APA-ø20	APA-ø25	APA-ø32	APA-ø40	APA-ø50	APA-ø63	APA-ø80	APA-ø100
11	Gasket	NBR	ø7.8X1.8	ø12.5X1.8	ø17X1.8	ø22X1.8	ø29X1.8	ø36X1.8	ø47X1.8	ø59X1.8	ø75X1.8	ø95X1.8
Sealing ring kit model			CQ2B12-PS	CQ2B16-PS	CQ2B20-PS	CQ2B25-PS	CQ2B32-PS	CQ2B40-PS	CQ2B50-PS	CQ2B63-PS	CQ2B80-PS	**CQ2B100-PS**

ø12~ø100

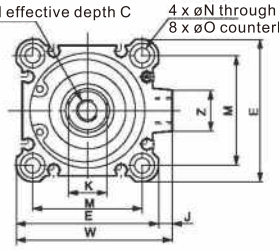
Dimensions

Through-hole: CQ2B ø12~ø25

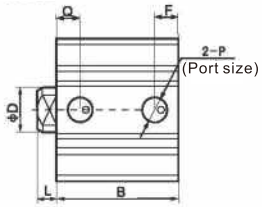


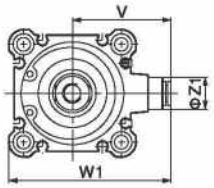
H thread effective depth C

4 x øN through
8 x øO counterbore



ø32~ø100





Double acting type dimensions table

St=Stroke

Model	Stroke (Note 1)	B	øD	E	F	H	C	øI	J	K	L	M	øN	øO	P	Q	W	Z
CQB12-□D	5~30	17+St	6	25	5	M3X0.5	6	32	-	5	3.5	15.5	3.5	6.5dp:3.5	M5X0.8	7.5	-	-
CQB15-□D	5~30	18.5+St	8	29	5.5	M4X0.7	8	38	-	6	3.5	20	3.5	6.5dp:3.5	M5X0.8	8	-	10
CQB20-□D	5~50	19.5+St	10	36	5.5	M5X0.8	7	47	-	8	4.5	25.5	5.5	9dp:7	M5X0.8	9	-	10
CQB25-□D	5~50	22.5+St	12	40	5.5	M6X1.0	12	52	-	10	5	28	5.5	9dp:7	M5X0.8	11	-	10
CQB32-□D	5	23+St	16	45	5.5	M8X1.25	13	60	4.5	14	7	34	5.5	9dp:7	M5X0.8	11.5	49.5	14
	10~50				7.5										1/8	10.5		
CQB40-□D	5~50	29.5+St	16	52	8	M8X1.25	13	69	5	14	7	40	5.5	9dp:7	1/8	11	57	14
CQB50-□D	10~50	30.5+St	20	64	10.5	M10X1.5	15	86	7	17	8	50	6.6	11dp:8	1/4	10.5	71	19
CQB63-□D	10~50	36+St	20	77	10.5	M10X1.5	15	103	7	17	8	60	9	14dp:10.5	1/4	15	84	19
CQB80-□D	10~50	43.5+St	25	98	12.5	M16X2.0	21	132	6	22	10	77	11	17.5dp:13.5	3/8	16	104	26
CQB100-□D	10~50	53+St	30	117	13	M20X25	27	156	6.5	27	12	94	11	17.5dp:13.5	3/8	23	123.5	26

Note 2) Long Stroke type

Bore size	Stroke	B	F	P	Q
32	75,100	33+St	7.5	1/8	10.5
40	75,100	39.5+St	8	1/8	11
50	75,100	40.5+St	10.5	1/4	10.5
63	75,100	46+St	10.5	1/4	15
80	75,100	53.5+St	12.5	3/8	16
100	75,100	63+St	13	3/8	23

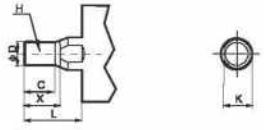
Note 1) The standard stroke is per 5mm step.
Note 2)Besides special demand,
The dimensions of through hole type is the same as both end with thread type.

Single acting type dimensions table

St=Stroke

Model	B			øD	E	F		H	C	øI	J	K	L	M	øN	øO	P			Q		W	Z
	5St	10St	20St			5St	10St										5St	10St	20St	5St	10St		
CQ2B12-□S	22	27	-	6	25	5		M3X0.5	6	32	-	5	3.5	15.5	3.5	6.5dp:3.5	M5X0.8		-	7.5		-	-
CQ2B15-□S	23.5	28.5	-	8	29	5.5		M4X0.7	8	38	-	6	3.5	20	3.5	6.5dp:3.5	M5X0.8		-	8		-	10
CQ2B20-□S	24.5	29.5	-	10	36	5.5		M5X0.8	7	47	-	8	4.5	25.5	5.5	9dp:7	M5X0.8		-	9		-	10
CQ2B25-□S	27.5	32.5	-	12	40	5.5		M6X1.0	12	52	-	10	5	28	5.5	9dp:7	M5X0.8		-	11		-	10
CQ2B32-□S	28	33	-	16	45	5.5	7.5	M8X1.25	13	60	4.5	14	7	34	5.5	9dp:7	M5X0.8	1/8	-	11.5	10.5	49.5	14
CQ2B40-□S	34.5	39.5	-	16	52	8		M8X1.25	13	69	5	14	7	40	5.5	9dp:7	1/8		-	11		57	14
CQ2B50-□S	-	40.5	50.5	20	64	10.5		M10X1.5	15	86	7	17	8	50	6.6	11dp:8	-	1/4		10.5		71	19

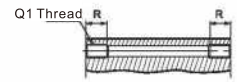
Rod end male thread



Rod end male thread

Bore size	C	X	øD	H	L	K
12	9	10.5	6	M5X0.8	14	5
16	10	12	8	M6X1.0	15.5	6
20	12	14	10	M8X1.25	18.5	8
25	15	17.5	12	M10X1.25	22.5	10
32	20.5	23.5	16	M14X1.5	28.5	14
40	20.5	23.5	16	M14X1.5	28.5	14
50	26	28.5	20	M18X1.5	33.5	17
63	26	28.5	20	M18X1.5	33.5	17
80	32.5	35.5	25	M22X1.5	43.5	22
100	32.5	35.5	30	M26X1.5	43.5	27

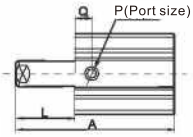
Both ends tapped/CQ2A



Note 3) Both ends tapped

Bore size	O	R
12	M5X0.8	7
16	M6X1.0	7
20	M8X1.25	10
25	M10X1.25	10
32	M14X1.5	10
40	M14X1.5	10
50	M18X1.5	14
63	M18X1.5	18
80	M22X1.5	22
100	M26X1.5	22

Single acting-push ø12~ø50



Single acting-push

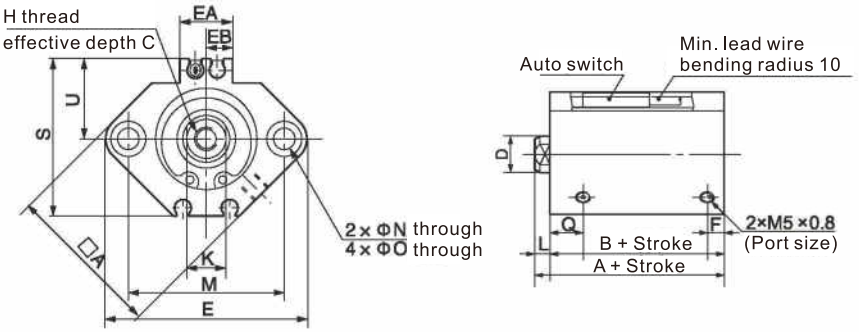
Bore size	A			L		
	5St	10St	20St	5St	10St	20St
12	30.5	40.5	-	8.5	13.5	-
16	32	42	-	8.5	13.5	-
20	34	44	-	9.5	14.5	-
25	37.5	47.5	-	10	15	-
32	40	50	-	12	17	-
40	46.5	56.5	-	12	17	-
50	-	58.5	78.5	-	18	28

*) Besides special demand, The dimensions of through hole type is the same as both end with thread type.

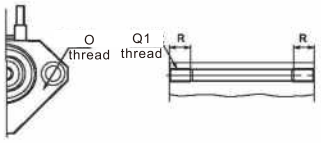
ø12~ø100

Dimensions

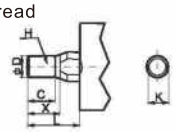
CDQ2B Φ12~Φ25



Both ends tapped: CDQ2A



Rod end male thread



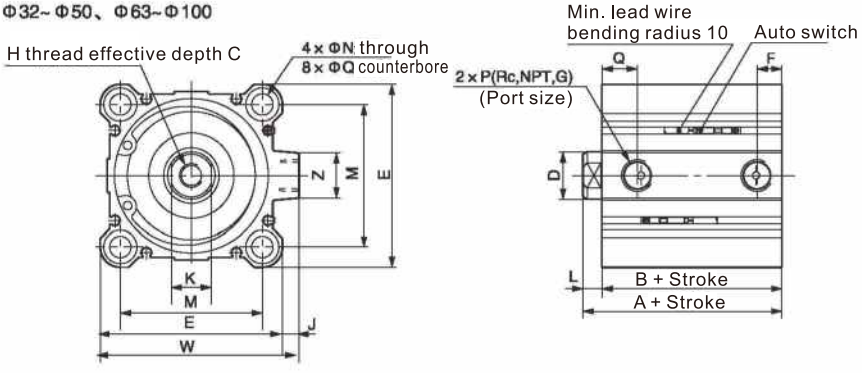
Note3) Both ends tapped

Bore size	O	R
12	M4X0.7	7
16	M4X0.7	7
20	M6X1.0	10
25	M6X1.0	10
32	M6X1.0	10
40	M6X1.0	10
50	M8X1.25	14
63	M10X1.5	18
80	M12X1.75	22
100	M12X1.75	22

Rod end male thread

Bore size	C	X	øD	H	L	K
12	9	10.5	6	M5X0.8	14	5
16	10	12	8	M6X1.0	15.5	6
20	12	14	10	M8X1.25	18.5	8
25	15	17.5	12	M10X1.25	22.5	10
32	20.5	23.5	16	M14X1.5	28.5	14
40	20.5	23.5	16	M14X1.5	28.5	14
50	26	28.5	20	M18X1.5	33.5	17
63	26	28.5	20	M18X1.5	33.5	17
80	32.5	35.5	25	M22X1.5	43.5	22
100	32.5	35.5	30	M26X1.5	43.5	27

Φ32~Φ50、Φ63~Φ100



*The above are only the dimensions of D-A7 auto switch.
*( ): The dimensions in parentheses are for D-F79L, D-J78L type.

Model	Stroke (Note 1)	A	B	øD	E	F	H	C	øI	J	K	L	M	øN	øO	P	Q	S	U	V	Z
CDQ2B12	5~30	31.5	28	6	32	6.5	M3X0.5	6	-	-	5	3.5	22	3.5	6.5dp:3.5	M5X0.8	11	27.5	19.5	25	-
CDQ2B15	5~30	34	30.5	8	38	5.5	M4X0.7	8	-	-	6	3.5	28	3.5	6.5dp:3.5	M5X0.8	10	29.5	22.5	29	-
CDQ2B20	5~50	36	31.5	10	46.5	5.5	M5X0.8	7	-	-	8	4.5	36	5.5	9dp:7	M5X0.8	10.5	35.5	24.5	36	-
CDQ2B25	5~50	37.5	32.5	12	52	5.5	M6X1.0	12	-	-	10	5	40	5.5	9dp:7	M5X0.8	11	40.5	27.5	40	-
CDQ2B32	5	40	33	16	45	7.5	M8X1.25	13	60	4.5	14	7	34	5.5	9dp:7	M5X0.8	10.5	58.5	31.5	-	18
CDQ2B40	5~50	46.5	39.5	16	52	8	M8X1.25	13	69	5	14	7	40	5.5	9dp:7	1/8	11	66	35	-	18
CDQ2B50	10~50	48.5	40.5	20	64	10.5	M10X1.5	15	86	7	17	8	50	6.6	11dp:8	1/4	10.5	80	41	-	22
CDQ2B63	10~50	54	46	20	77	10.5	M10X1.5	15	103	7	17	8	60	9	14dp:10.5	1/4	15	93	47.5	-	22
CDQ2B80	10~50	63.5	53.5	25	98	12.5	M16X2.0	21	132	6	22	10	77	11	17.5dp:13.5	3/8	16	112.5	57.5	-	26
CDQ2B100	10~50	75	63	30	117	13	M20X25	27	156	6.5	27	12	94	11	17.5dp:13.5	3/8	23	132.5	67.5	-	26

Note 2) Long Stroke type ø50~ø100

Bore size	Stroke	A	B	F	P	Q
32	55~100	40	33	7.5	1/8	10.5
40	55~100	46.5	39.5	8	1/8	11
50	55~100	48.5	40.5	10.5	1/4	10.5
63	55~100	54	46	10.5	1/4	15
80	55~100	63.5	53.5	12.5	3/8	16
100	55~100	75	63	13	3/8	23

Note 1) The standard stroke is per 5mm step.
Note 2)Besides special demand,
The dimensions of through hole type is the same as both end with thread type.
Note 3) Only mounted one auto switch for the cylinders of 5mm strokes.

Compact cylinder——CQ2 Series

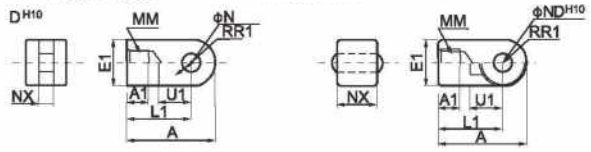
ø12~ø100

Dimensions

I-G012、I-Z015A
I-G02、I-G03

(Accessories)
Single Knuckle Joint

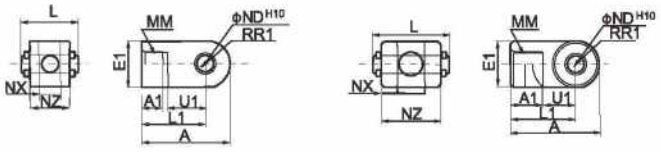
I-G04、I-G05
I-G08、I-G10



Y-G012、Y-Z015A
Y-G02、Y-G03

(Accessories)
Double Knuckle Joint

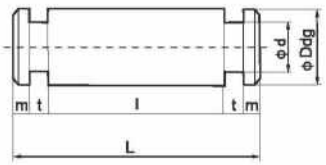
Y-G04、Y-G05
Y-G08、Y-G10



Bore size(mm)	Single Knuckle Joint										Double Knuckle Joint											
	Part code	A	A1	E1	L1	MM	RR1	U1	ND_{H10}	NX	Part code	A	A1	E1	L1	MM	Rr1	U1	$øND_{H10}$	NX	NZ	L
12	1-G012	21.5	6	□10	16	M5×0.8	6.3	7	$5^{+0.048}_{0}$	$5^{-0.2}_{-0.4}$	Y-G012	21.5	6	□10	16	M5×0.8	6.3	7	$5^{+0.048}_{0}$	$5^{+0.4}_{+0.2}$	10	14.6
16	1-Z015A	32	8	□12	25	M6×1	8.1	14	$5^{+0.048}_{0}$	$6.4^{-0.1}_{-0.3}$	Y-Z015A	28	11	□12	21	M6×1	8.1	10	$5^{+0.048}_{0}$	$6.5^{+0.2}_{+0}$	12	16.6
20	1-G02	34	8.5	□16	25	M8×1.25	10.3	11.5	$8^{+0.058}_{0}$	$8^{-0.2}_{-0.4}$	Y-G02	34	8.5	□16	25	M8×1.25	10.3	11.5	$8^{+0.058}_{0}$	$8^{+0.4}_{+0.2}$	16	21
25	1-G03	41	10.5	□20	30	M10×1.25	12.8	14	$10^{+0.058}_{0}$	$10^{-0.2}_{-0.4}$	Y-G03	41	10.5	□20	30	M10×1.25	12.8	14	$10^{+0.058}_{0}$	$10^{+0.4}_{+0.2}$	20	25.6
32,40	1-G04	42	14	φ22	30	M14×1.5	12	14	$10^{+0.058}_{0}$	$18^{-0.3}_{-0.5}$	Y-G04	42	16	φ22	30	M14×1.5	12	14	$10^{+0.058}_{0}$	$18^{+0.5}_{+0.3}$	36	41.6
50,63	1-G05	56	18	φ28	40	M18×1.5	16	20	$14^{+0.070}_{0}$	$22^{-0.3}_{-0.5}$	Y-G05	56	20	φ28	40	M18×1.5	16	20	$14^{+0.070}_{0}$	$22^{+0.5}_{+0.3}$	44	50.6
80	1-G08	71	21	φ38	50	M22×1.5	21	27	$18^{+0.070}_{0}$	$28^{-0.3}_{-0.5}$	Y-G08	71	23	φ38	50	M22×1.5	21	27	$18^{+0.070}_{0}$	$28^{+0.5}_{+0.3}$	56	64
100	1-G10	79	21	φ44	55	M26×1.5	24	31	$22^{+0.084}_{0}$	$32^{-0.3}_{-0.5}$	Y-G10	79	24	φ44	55	M26×1.5	24	31	$22^{+0.084}_{0}$	$32^{+0.5}_{+0.3}$	64	72

Bore size(mm)	Knuckle Pin						
	Part code	øDdg	L	ød	l	m	t
12	1Y-G012	$5^{-0.030}_{-0.060}$	14.6	4.8	10.2	1.5	0.7
16	1Y-J015	$5^{-0.030}_{-0.080}$	16.6	4.8	12.2	1.5	0.7
20	1Y-G02	$8^{-0.040}_{-0.076}$	21	7.6	16.2	1.5	0.9
25	1Y-G03	$10^{-0.040}_{-0.076}$	25.6	9.6	20.2	1.55	1.15
30,40	1Y-G04	$10^{-0.040}_{-0.076}$	41.6	9.6	36.3	1.55	1.15
5063	1Y-G05	$14^{-0.050}_{-0.093}$	50.6	13.4	44.2	2.05	1.15
80	1Y-G08	$18^{-0.050}_{-0.093}$	64	17	56.2	2.55	1.35
100	1Y-G10	$22^{-0.065}_{-0.117}$	72	21	64.2	2.55	1.35

● Knuckle Pin (Common with double clevis pin)



Special function cylinder

Type	Model	
Double rod type	C□Q2WB	Bore size - Stroke D
No rotation rod type	C□Q2KB	Bore size - Stroke D
Low oil pressure type	C□Q2BH	Bore size - Stroke D
Adjustable stroke type (Push adjustable) Range of adjustment: 0~10mm	C□Q2B	Bore size - Stroke D - XC8
Adjustable stroke type (Pull adjustable) Range of adjustment: 0~10mm	C□Q2B	Bore size - Stroke D - XC9
Double strokes type (Double rod)	C□Q2B	Bore size - StrokeA + StrokeB D - XC10
Double strokes type (Single rod)	C□Q2B	Bore size - StrokeA + StrokeB D - XC11
High temperature type	C□Q2B	Bore size - Stroke D - XB6
Lower temperature type	C□Q2B	Bore size - Stroke D - XB7

*) Please contact the us for details.
**) Our company can provide for various other purposes cylinders. Please contact us.

Compact cylinder(Long stroke)——CQ2 Series

ø32~ø100

Specification

Bore size(mm)	32	40	50	63	80	100
Fluid	Air					
Action	Double acting					
Operating pressure	0.05~1.0MPa					
Ambient and fluid temp.	Without auto switch magnet : –10 to 70°C With auto switch magnet : –10 to 60°C					
Rod end thread	Female thread(Standard) Male thread(Operation)					
Piston speed	50 ~ 500 mm/s					
Cushion	Rubber bumper					
Stroke length tolerance mm	$^{+1.4}_{0}$					
Lubrication *	Not required (Non-lube)					
Mounting type	Both ends tapped(Standard)					
Port size Rc	1/8		1/4		3/8	

* If lubrication is necessary, Lubricants like ISO VG32 or equivalent are recommended.

Ordering Code

C D Q2 A 32 - □ - 200 D C □ □ - A73 □

With auto switch magnet

Nil	No auto switch magnet
D	With auto switch magnet

Mounting

A	Both ends tapped
F	Rod flange
G	Head flange
L	Foot
D	Double clevis

Bore size

32	32mm
40	40mm
50	50mm
63	63mm
80	80mm
100	100mm

Cylinder stroke (For details on the table below)

Port thread type

Nil	Rc
F*	Built-in One-touch fittings

*) Only for ø32~ø63.

Double acting

With rubber bumper

Body option

Nil	Rod end female thread
M	Rod end male thread

Port thread type

Nil	Rc
TN	NPT
TF	G

Auto switch

Nil	Without auto switch

* For applicable auto switches, refer to the table below.

Number of auto switches

Nil	2
S	1
n	n

Stroke/Auto switch selection

Bore size(mm)	Standard stroke(mm)	Auto switch type	
		Socket mounting	Direct mounting
32	125,150 175,200 250,300	A73	M9N M9P M9B
40			
50			
63			
80			
100			

*) Please refer to the relevant content for the specifications and characteristics of auto switches. Mounting accessories code: BQ-2.

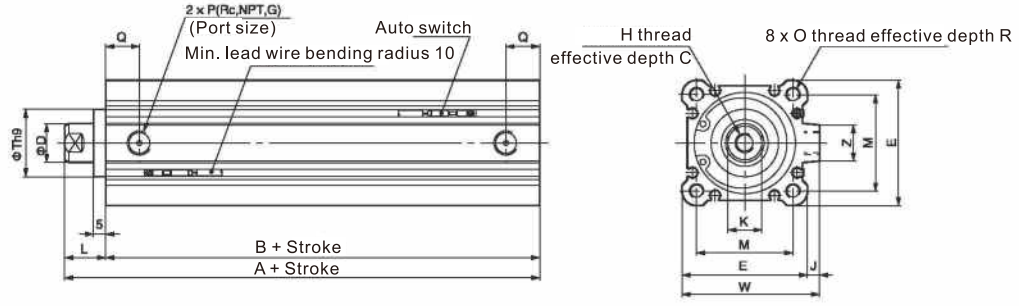
**) The wire length code is Nil-0.5m, L-3m. Example: A73, A73L.

Ordering example

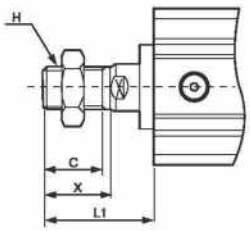
A) Bore size:32, Stroke:125, double action with auto switch magnet, both ends tapped, rod female thread, with rubber bumper, the ordering code is **CDQ2A32-125DCM.**

Dimensions

● Rod end female thread CQ2A/CDQ2



● Rod end male thread



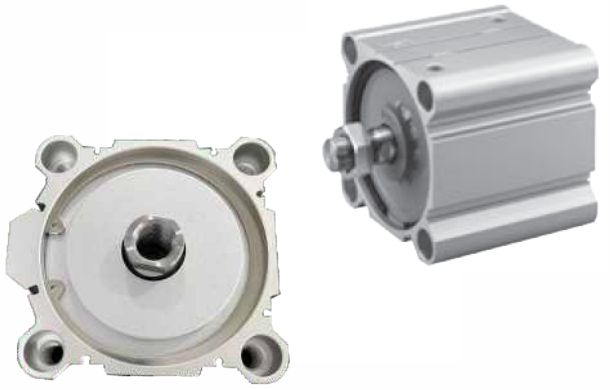
( ): The dimensions in parentheses are for others auto switch besides D-A7 type.

Bore size(mm)	Stroke (mm)	A	B	C	D	E	G	H	I	J	K	L	M	O	P	Q	R	S	Thg	U	Z
32	125~200 250,300	62.5	45.5	13	16	45	5	M8×1.25	60	4.5	14	17	34	M6×1.0	RC1/8	12.5	10	58.5	$22^{0}_{-0.052}$	31.5	14
40		72	55	13	16	52	5	M8×1.25	69	5	14	17	40	M6×1.0	RC1/8	14	10	66	$28^{0}_{-0.052}$	35	14
50		73.5	55.5	15	20	64	5	M10×1.5	86	7	17	18	50	M8×1.5	RC1/4	14	14	80	$35^{0}_{-0.062}$	41	19
63		75	57	15	20	77	5	M10×1.5	103	7	17	18	60	M10×1.5	RC1/4	16.5	18	93	$35^{0}_{-0.062}$	47.5	19
80		86	66	21	25	98	5	M16×2.0	132	6	22	20	77	M12×1.75	RC3/8	19	22	112.5	$43^{0}_{-0.062}$	57.5	26
100		97.5	75.5	27	30	117	5	M20×2.5	156	6.5	27	22	94	M12×1.75	RC3/8	23	22	132.5	$59^{0}_{-0.074}$	67.5	26

Bore size(mm)	C	H	L1	X
32	20.5	M14×1.5	38.5	23.5
40	20.5	M14×1.5	38.5	23.5
50	26	M18×1.5	43.5	28.5
63	26	M18×1.5	43.5	28.5
80	32.5	M22×1.5	53.5	35.5
100	32.5	M26×1.5	53.5	35.5

Compact cylinder(Large bore size)——CQ2 Series

ø125~ø200



Specification

Bore size(mm)	125	140	160	180	200
Fluid	Air				
Action	Double acting				
Maximum operating pressure	1.0MPa			0.7MPa	
Minimum operating pressure	0.05MPa				
Ambient and fluid temp.	Without auto switch magnet : –10 to 70°C With auto switch magnet : –10 to 60°C				
Rod end thread	Female thread(Standard) Male thread(Operation)				
Cushion	Rubber bumper				
Piston speed	50 ~ 500 mm/s			20 ~ 400 mm/s	
Stroke length tolerance mm	$^{+1.4}_{0}$				
Lubrication *	Not required (Non-lube)				
Mounting type	Through hole, Both ends tapped(Comm)				
Port size Rc(PT)	3/8			1/2	

* If lubrication is necessary, Lubricants like ISO VG32 or equivalent are recommended.

Ordering Code

C D Q2 □ B — 125 — 30 D C □ — □ A73 □

With auto switch magnet

Nil	No auto switch magnet
D	With auto switch magnet

Type

Nil	Single rod
W	Double rod

Mounting

	Mounting	Stroke
A	Both ends tapped	> 300
AB	Through-hole +tapped	≤300

Cylinder stroke (For details on the table below)

Double acting

Bore size

125	125mm
140	140mm
160	160mm
180	180mm
200	200mm

With rubber bumper

Body option

Nil	Rod end female thread
M	Rod end male thread

Port thread type

Nil	Rc
TN	NPT
TF	G

Auto switch

Nil	Without auto switch

* For applicable auto switches, refer to the table below.

Number of auto switches

Nil	2
S	1
n	n

Ordering example

A) Bore size:125, Stroke:20, rod male thread, the ordering code is **CQ2B125-20DC.**
B) Bore size:140, Stroke:100, with auto switch manget, rod female thread, the ordering code is **CDQ2B140-20DCM.**

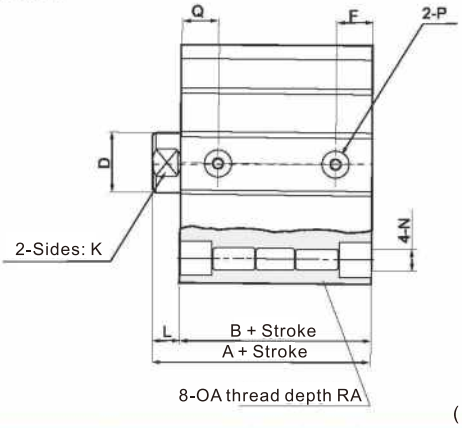
Stroke/Auto switch selection

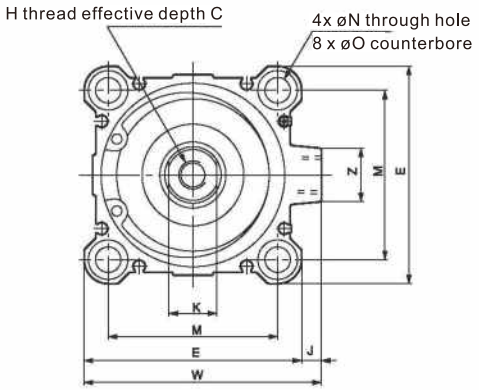
Bore size(mm)	Standard stroke(mm)	Auto switch type	
		Socket mounting (ø125~ø160)	Direct mounting
125 140 160 180 200	10,20,30,40 50,75,100,125 150,175,200 250,300	A73 (Mounting accessories code:BQ-2)	Z73

*) Please refer to the relevant content for the specifications and characteristics of auto switches.
**) The wire length code is Nil-0.5m, L-3m, Z-5m. Example: A73, A73L.

Dimensions

● CQ2B/CDQ2B Φ125~ Φ160





( ): The dimensions in parentheses are for others auto switch besides D-A7 type.

Bore size	Standard stroke	A	B	C	D	E	G	H	I	J	K	L	M	N	OA	OB	P	Q	RA	RB	Z
125	10,20,30,40,50	99	83	30	φ36	142	24.5	M22×2.5	190	11	32	16	114	12.5	M14×2	21.2	Rc3/8	24.5	25	18.4	32
140	75,100,125,150	99	83	30	φ36	158	24.5	M22×2.5	210	10	32	16	128	12.5	M14×2	21.2	Rc3/8	24.5	25	18.4	32
160	175,200,250,300	108	91	33	φ40	178	27.5	M24×3	238	10	36	17	144	14.5	M16×2	24.2	Rc3/8	27.5	28	21.2	32

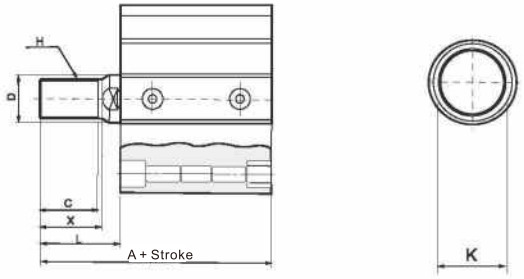
Note1) A non-standard stroke cylinder is a cylinder that installs a gasket inside a standard stroke cylinder.
Note2) Be sure to use the attached flat washer for mounting cylinder with through-holes.

Dimensions

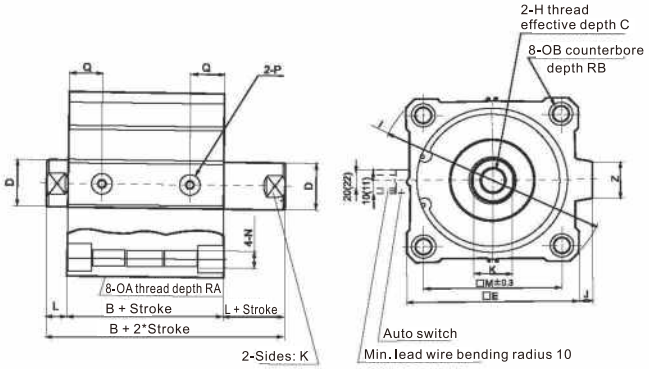
Rod end male thread

Bore size	A	C	D	H	K	L	X
125	141	42	ϕ36	M30×1.5	32	58	45
140	141	42	ϕ36	M30×1.5	32	58	45
160	155	47	ϕ40	M36×1.5	36	64	50

CQ2B/CDQ2B(Rod end male thread)



Double Rod type(Rod end female thread)
C□Q2WB Bore size-Stroke DC

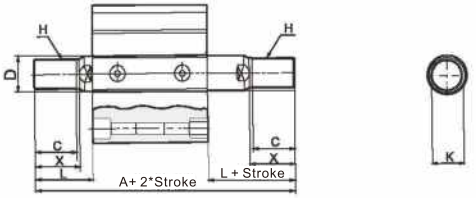


( ): The dimensions in parentheses are for others auto switch besides D-A7 type.

Bore size	Standard stroke	A	B	C	D	E	H	I	J	K	L	M	N	OA	OB	P	Q	RA	RB	Z
125	10,20,30,40,50, 75,100,125,150, 175,200,250,300	115	83	30(22.5)	ϕ36	142	M22×2.5	190	11	32	16	114	12.5	M14×2	21.2	3/8	24.5	25	18.4	32
140		115	83	30(22.5)	ϕ36	158	M22×2.5	210	10	32	16	128	12.5	M14×2	21.2	3/8	24.5	25	18.4	32
160		125	91	33(26.5)	ϕ40	178	M24×3	238	10	36	17	144	14.5	M16×2	24.2	3/8	27.5	28	21.2	32

Note1) A non-standard stroke cylinder is a cylinder that installs a gasket inside a standard stroke cylinder.
Note2) Be sure to use the attached flat washer for mounting cylinder with through-holes.

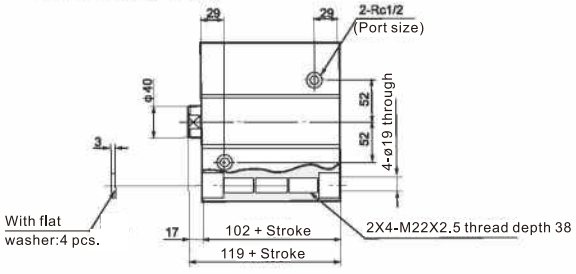
Double Rod type(Rod end male thread)
C□Q2WB Bore size-Stroke DCM

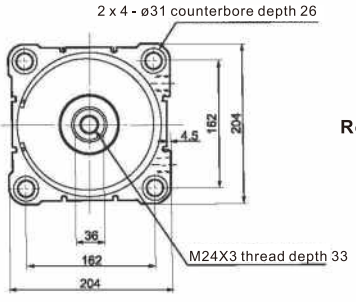


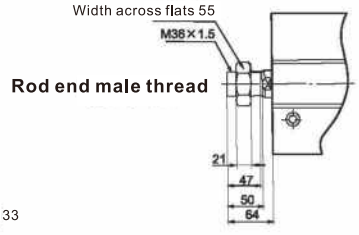
Rod end male thread

Bore size	A	C	D	H	K	L	X
125	199	42	ϕ36	M30×1.5	32	58	45
140	199	42	ϕ36	M30×1.5	32	58	45
160	219	47	ϕ40	M36×1.5	36	64	50

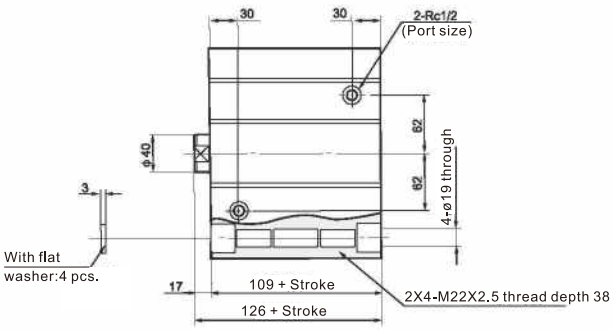
CQ2B/CDQ2B(Φ180)

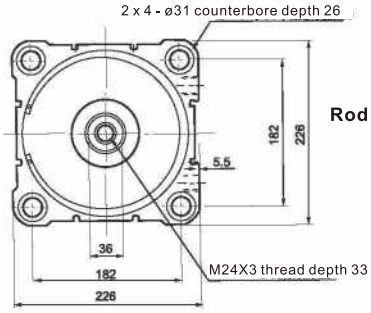


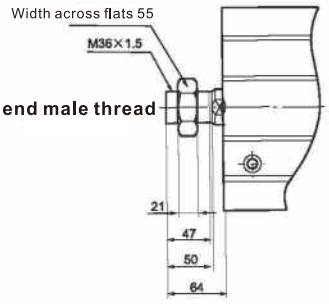




CQ2B/CDQ2B(Φ200)







Compact cylinder(With guider)——CQM Series

ø12~ø100

*The installation dimensions are interchangeable with the CQS, CQ2 series.
*Non-rotating tolerance ≤ ±0.2°
*Cannot be used as a stopper.

Specification

Action		Double Acting, Single Rod
Maximum operating pressure		1.0MPa
Minimum operating pressure	ø12,ø16	0.12MPa
	ø20~ø100	0.1MPa
Ambient and fluid temp.		Without auto switch magnet : –10 to 70°C With auto switch magnet : –10 to 60°C
Cushion		Rubber bumper
Stroke length tolerance mm		$^{+1.0}_{0}$
Piston speed	ø12~ø40	50 ~ 500 mm/s
	ø50~ø100	50 ~ 300 mm/s

Ordering Code

C | D | QM | B | 20 | □ | — | 10 | ·— | M9B | S

With auto switch magnet

Nil	No auto switch magnet
D	With auto switch magnet

Mounting

B	Through-hole
A	Both ends tapped(ø32~ø100)

*For ø12~ø25, the code "A" is be replaced with "B".

Bore size

12	12 mm
16	16 mm
20	20 mm
25	25 mm
32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

Stroke (mm)

Port thread type

Nil	Standard thread	ø12~ø25
	Rc	ø32~ø100
TN	NPT	
TF	G	

Note3) Without auto switch for ø32.
When stroke=5mm, the thread type is standard thread.

Auto switch

Nil	Without auto switch

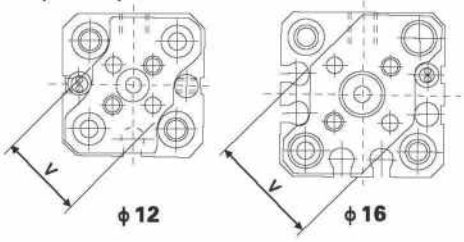
* For applicable auto switches, refer to the table below.

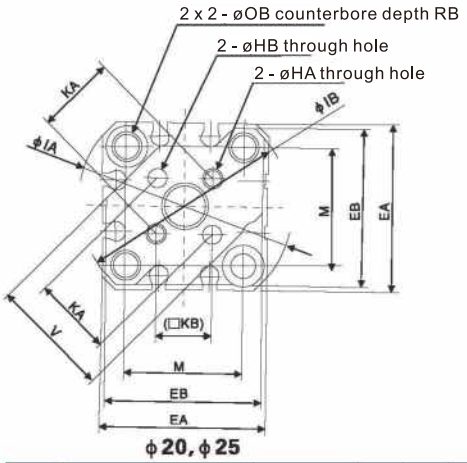
Number of auto switches

Nil	2
S	1
n	n

Dimensions

■ ϕ12~ϕ25

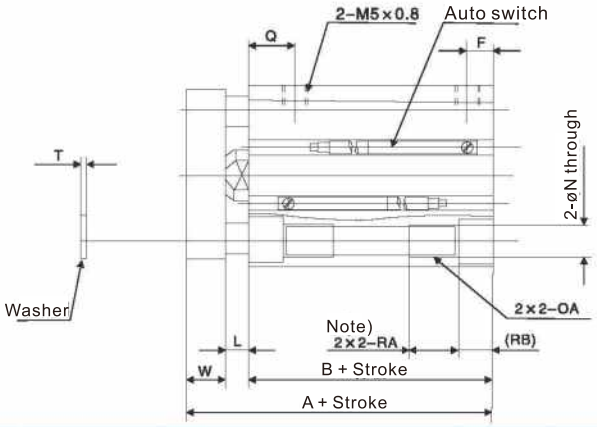




Stroke/Auto switch selection

Bore size(mm)	Standard stroke(mm)	Auto switch type	
		Socket mounting	Direct mounting
12,16	5,10,15,20,25,30	-	A90(V) A93(V) A96(V) M9N(V) M9P(V) M9B(V) F9BA
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	A72(H),A73(H) A76H,A80 A73C,F79(W) F7BA,P5DW	
50,63 80,100	10,15,20,25,30,35,40,45,50 75,100		

*Mounting accessories code: BQ-2 (But the code is BQP1-050 for P5DW).



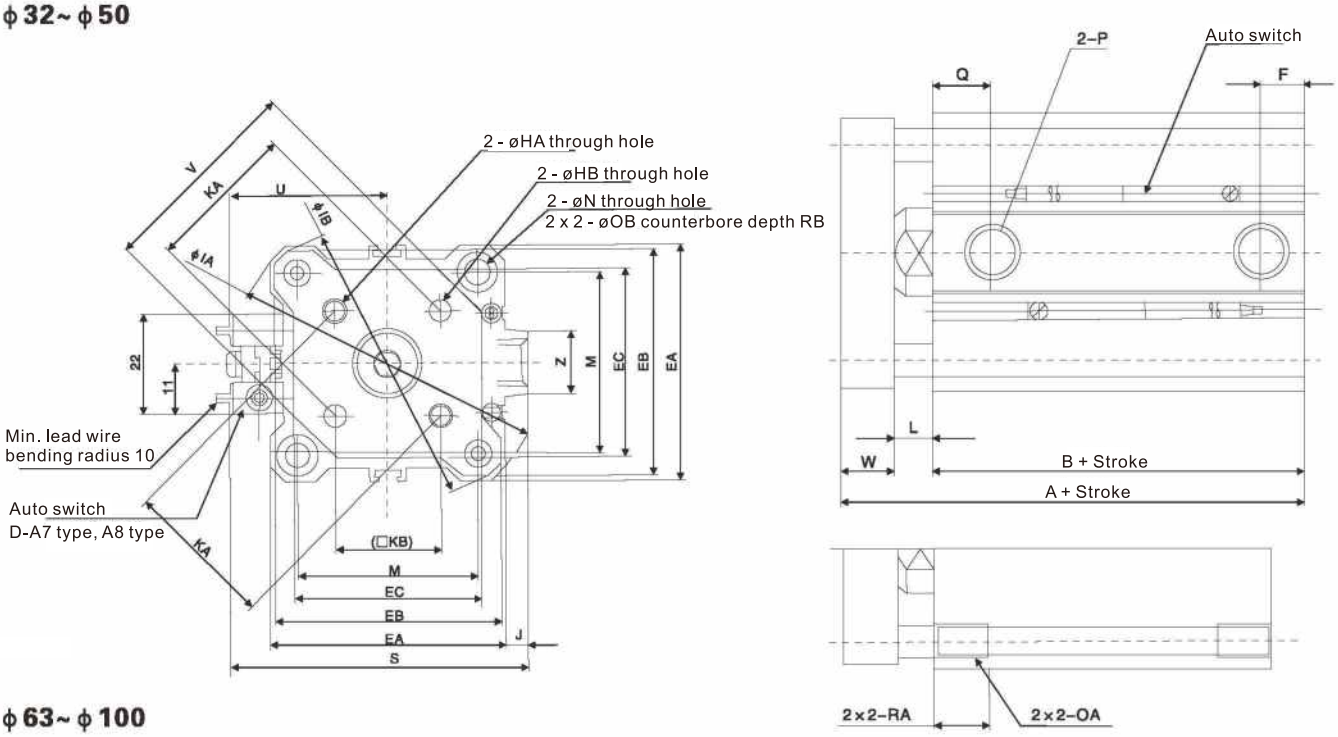
(mm)

Bore size	Stroke	No auto switch A	No auto switch B	With auto switch A	With auto switch B	EA	EB	F	EA	OA	HB	IA	IB	KA	KE	L	M	N	OB	Q	RA	RB	T	V	W
12	5~30	26.5	17	31.5	22	25	24	5	M3×0.5	M4×0.7	3	32	31.5	10	7.1	3.5	15.5	3.5	6.5	7.5	7	4	0.5	14.9	6
16	5~30	26.5	17	31.5	22	29	28	5	M3×0.5	M4×0.7	3	38	37	14	9.9	3.5	20	3.5	6.5	7.5	7	4	0.5	20	6
20	5~50	32	19.5	42	29.5	36	34	5.5	M4×0.7	M6×1.0	4	47	45.5	17	12	4.5	25.5	5.4	9	9	10	7	1	26	8
25	5~50	35.5	22.5	45.5	32.5	40	38	5.5	M5×0.8	M6×1.0	5	52	50.5	22	15.6	5	28	5.4	9	11	10	7	1	30	8

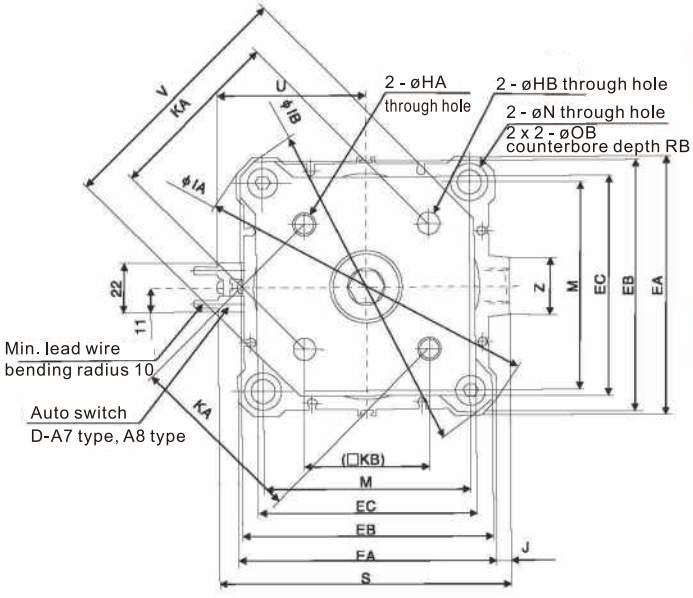
Note) Standard type don't auto switch. The mounting type is Through–hole for below: ø12, ø16(stroke=5mm)\ ø20(stroke:5~15mm)\ø25(stroke=5 or 10mm)
ø20(with auto switch magnet, stroke=5mm)

ø12~ø100

■ φ32~φ50



■ φ63~φ100



Both ends tapped(CQMA)

Bore size	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 size	KB	L	M	N	OB	RA	OA	HB	IA	IB	J	KA
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 size	Stroke	No auto switch							With auto switch							EA	EB	EC
		A	B	F	Q	P			A	B	F	Q	P					
						-	TN	TF					-	TN	TF			
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															

Compact cylinder(New type)——CQS Series

ø12~ø25

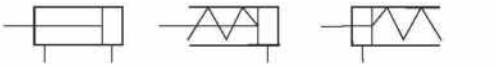
Specification

Bore size(mm)	12	16	20	25
Fluid	Air			
Action	Double acting Single acting_Push type Single acting_Pull type			
Proof pressure	1.5MPa			
Maximum operating pressure	1.0MPa			
Ambient and fluid temp.	–10 to 60°C			
Rod end thread	Female thread(Standard) Male thread(Operation)			
Cushion	No			
Piston speed	50 ~ 500 mm/s			
Stroke length tolerance mm	$^{+1.0}_{0}$			
Lubrication *	Not required (Non-lube)			
Mounting type	Through hole, Both ends tapped(Comm)			
Port size Rc(PT)	M5X0.8			

* If lubrication is necessary, Lubricants like ISO VG32 or equivalent are recommended.

Symbol

Double acting Single acting-push Single acting-pull



Ordering example

A) Bore size:16, Stroke:10, double acting, rod female thread, the ordering code is **CQSB16-10D.**
B) Bore size:25, Stroke:50, double acting, with auto switch manget, rod male thread, rubber bumper, the ordering code is **CDQSB25-50DCM.**

Ordering Code

C D Q S B 20 – 30 D □ – M9N □

With auto switch magnet

Nil	No auto switch magnet
D	With auto switch magnet

Mounting

B	Through-hole and Both ends tapped(Standard)
L	Foot
F	Rod flange
G	Head flange
D	Double clevis

Bore size

12	ø12mm
16	ø16mm
20	ø20mm
25	ø25mm

Stroke (refer to the table below)

Action

D	Double acting
S	Single acting-push
T	Single acting-pull

Body option

Nil	Rod end female thread
C	Rubber bumper *
M	Rod end male thread

* Optional options can be combined, and single acting don't come with rubber bumper.

Auto switch

Nil	Without auto switch

* For applicable auto switches, refer to the table below.

Number of auto switches

Nil	2
S	1
n	n

Stroke/Auto switch selection

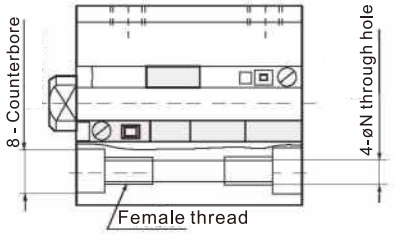
Bore size(mm)	Standard stroke(mm)		Auto switch type
	Double acting	Single acting	Socket mounting
12	5,10,15,20,25,30	5,10	M9N M9B M9P
16			
20	5,10,15,20,25,30,35,40,45,50		
25			

*) Please refer to the relevant content for the specifications and characteristics of auto switches. Note) Longer stroke is available.
**) The wire length code is Nil-0.5m, L-3m, Z-5m. Example: M9N, M9NL.

Product feature

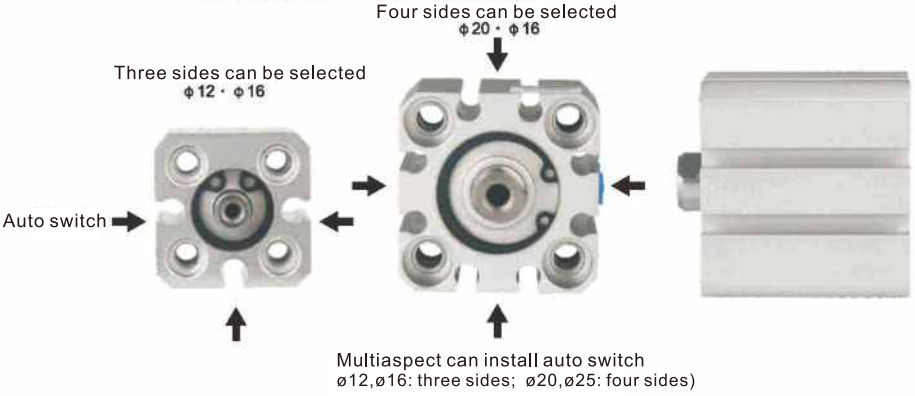
Easy installation

Through hole and both ends tapped are share.



Save installation space

Mini auto switch installed in the grovel which don't be showed outside of body.

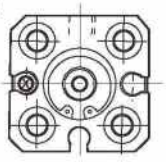


ø12~ø25

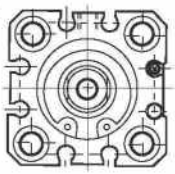
Dimensions

● Through hole and both ends tapped are share/CQSB, CDQSB

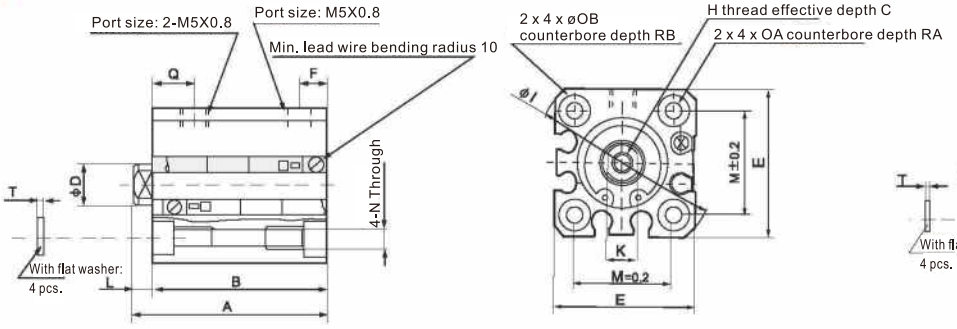
Φ12 · Φ16



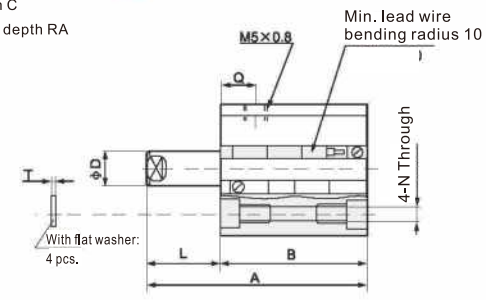
Φ20 · Φ25



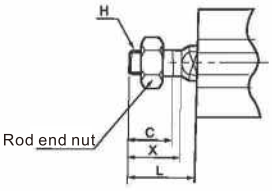
● ø16 Double acting/Single acting(Pull)



● ø16 Single acting(Push)

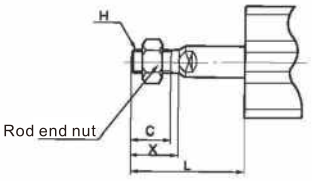


● Rod end male thread(Double acting/Single acting:Pull)



Bore size	C	H	L	X
12	9	M5×0.8	14	10.5
16	10	M6×1.0	15.5	12
20	12	M8×1.25	18.5	14
25	15	M10×1.25	22.5	17.5

● Rod end male thread(Single acting:Push)



Bore size	C	H	L		X
			5 ST	10 ST	
12	9	M5×0.8	19	24	10.5
16	10	M6×1.0	20.5	25.5	12
20	12	M8×1.25	23.5	28.5	14
25	15	M10×1.25	27.5	32.5	17.5

● Double acting/Single acting dimensions table

Bore size	No auto switch													
	C	D	E	H	I	K	M	N	OA	OB	RA	RB	T	Q
12	6	6	25	M3×0.5	32	5	15.5	3.5	M4×0.7	6.5	7	4	0.5	7.5
16	8	8	29	M4×0.7	38	6	20	3.5	M4×0.7	6.5	7	4	0.5	7.5
20	7	10	36	M5×0.8	47	8	25.5	5.4	M6×1.0	9	10	7	1	9
25	12	12	40	M6×1.0	52	10	28	5.4	M6×1.0	9	10	7	1	11

● Double acting

ST=Stroke

Bore size	Stroke	No auto switch					With auto switch	
		A	B	F	L	Q	A	B
12	5~30	20.5+st	17+st	5	3.5	7.5	25.5+st	22+st
16	5~30	20.5+st	17+st	5	3.5	7.5	25.5+st	22+st
20	5~50	24+st	19.5+st	5.5	4.5	9	34+st	29.5+st
25	5~50	27.5+st	22.5+st	5.5	5	11	37.5+st	32.5+st

● Single acting: Pull

ST=Stroke

Bore size	Stroke	No auto switch						With auto switch			
		A		B		F	L	A		B	
		5 ST	10 ST	5 ST	10 ST			5 ST	10 ST	5 ST	10 ST
12	5,10	25.5	30.5	22	27	5	3.5	30.5	35.5	27	32
16		25.5	30.5	22	27	5	3.5	30.5	35.5	27	32
20		29	34	24.5	29.5	5.5	4.5	39	44	34.5	39.5
25		32.5	37.5	27.5	32.5	5.5	5	42.5	47.5	37.5	42.5

Special function cylinder

Type	Model
Double rod type	C□QSWB Bore size - Stroke D □
No rotation rod type	C□QSKB Bore size - Stroke D □

● Single acting: Push

ST=Stroke

Bore size	Stroke	No auto switch							With auto switch			
		A		B		L		Q	A		B	
		5 ST	10 ST	5 ST	10 ST	5 ST	10 ST		5 ST	10 ST	5 ST	10 ST
12	5,10	30.5	40.5	22	27	8.5	13.5	7.5	35.5	45.5	27	32
16		30.5	40.5	22	27	8.5	13.5	7.5	35.5	45.5	27	32
20		34	39	24.5	29.5	9.5	14.5	9	44	49	34.5	39.5
25		37.5	42.5	27.5	32.5	10	15	11	47.5	52.5	37.5	42.5

* The accessories are the same as CQ2 series.