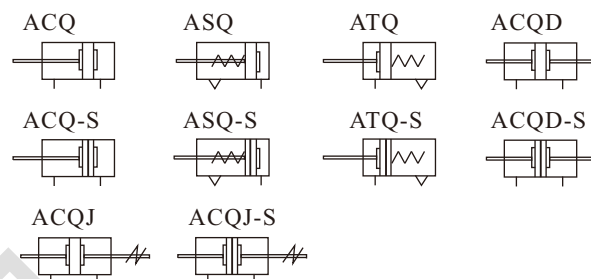




## Product feature

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 °C	-20~70												
Speed range mm/s	Double acting: 30~500 Single acting: 50~500												
Stroke tolerance	Stroke≤100 <sup>+1.0</sup> <sub>0</sub> Stroke>100 <sup>+1.5</sup> <sub>0</sub>												
Cushion type	Bumper												
Port size [Note1]	M5×0.8				G1/8		G1/4		G3/8				

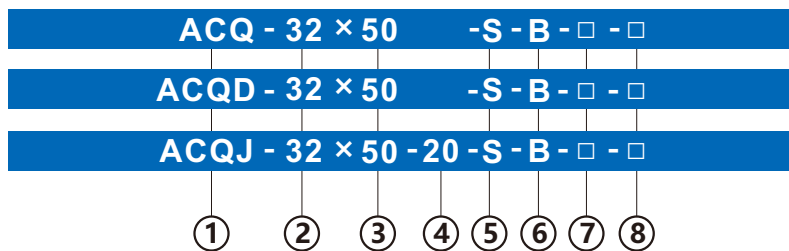
[Note1] The standard thread type is G thread, Please control us for other thread type.

## 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



### ① Model

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)

### ② Bore size

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

### ⑥ Rod 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

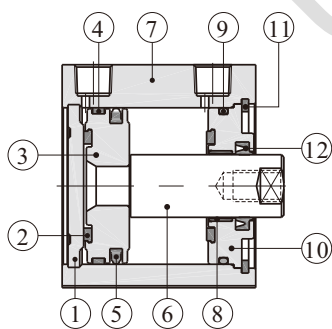
### ④ Adjustable stroke

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

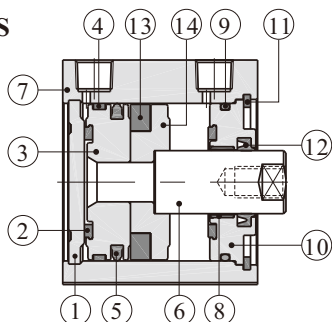
[Note1]Standard thread is blank here.

## Inner structure and material of major parts

ACQ



ACQ-S

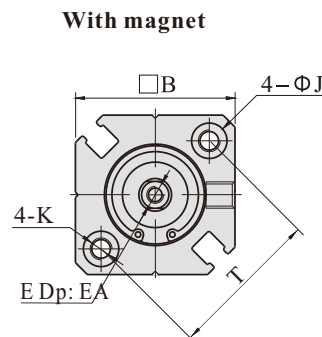
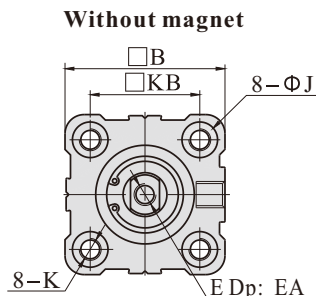
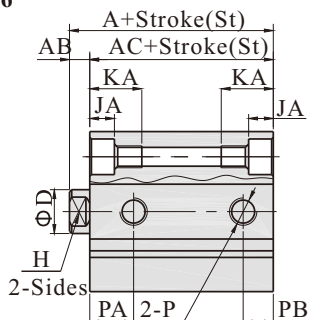


NO.	Item	Material
1	Back cover	Aluminum alloy
2	Bumper	TPU or NBR
3	Piston	Brass or Aluminum alloy
4	Wear ring	Wear resistant material
5	Piston seal	NBR
6	Piston rod	Carbon steel with 20μm chrome plated
7	Body	Aluminum alloy
8	Bushing	Wear resistant material
9	O-ring	NBR
10	Front cover	Aluminum alloy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

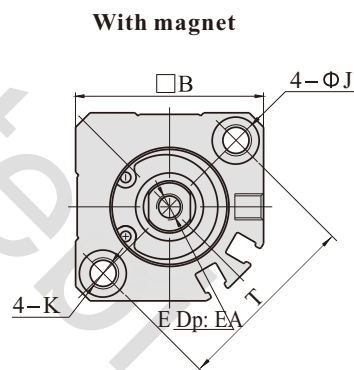
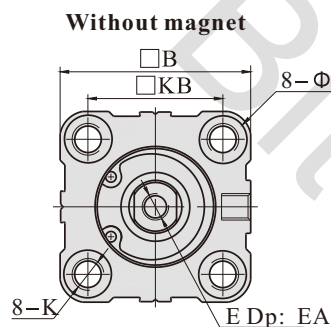
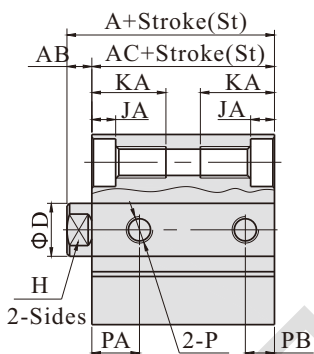
## ■ Dimensions

### ACQ series

#### Φ12\Φ16



#### Φ20~Φ25

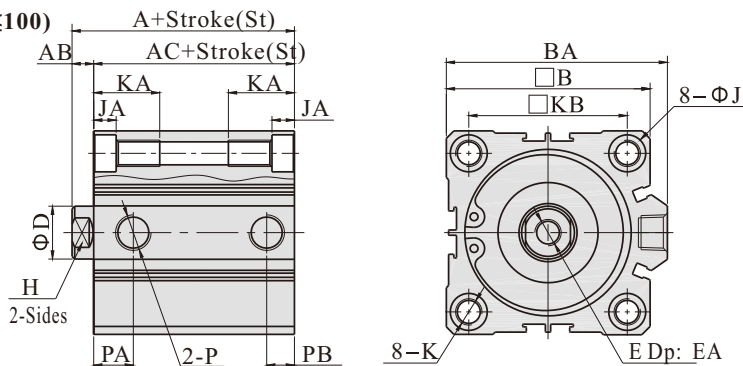


Type	No magnet						With magnet		AB	B	D	E	EA	H	J	JA
	A		AC				A	AC								
Bore size\Item	A		AC				A	AC	AB	B	D	E	EA	H	J	JA
Stroke	St≤50	St=55	St≥60	St≤50	St=55	St≥60	A	AC	AB	B	D	E	EA	H	J	JA
12	20.5	-	-	17	-	-	31.5	28	3.5	25	6	M3×0.5	6	5	6	3.5
16	22	22	22	18.5	18.5	18.5	34	30.5	3.5	29	8	M4×0.7	8	6	6	3.5
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	Bore size\Item	K	KA	KB	P	No magnet		With magnet		T
						PA	PB	PA	PB	
Stroke						PA	PB	PA	PB	T
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

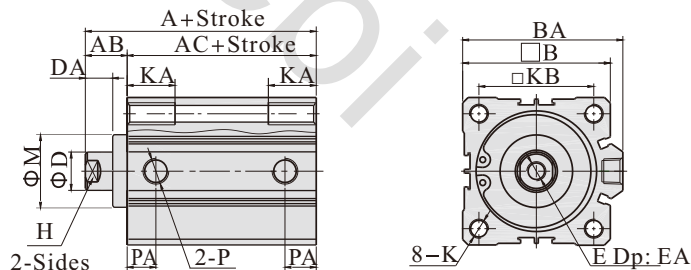
Φ32~Φ100 (Stroke≤100)



Item Bore size	A(No magnet)		A (With magnet)	AB	AC(No magnet)		AC (With magnet)	B	BA	D	E
	St≤50	St≥60			St≤50	St≥60					
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

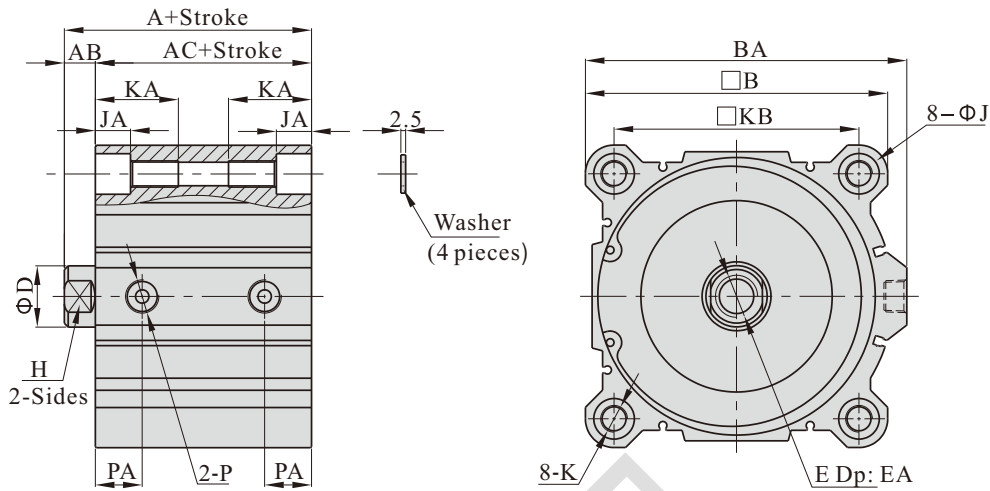
Item Bore size	EA	H	J	JA	K	KA	KB	P	No magnet		With magnet	
									PA	PB	PA	PB
32	13	14	9	5.5	M6×1.0 Thru.hole:Φ5.2	17	34	G1/8	7.5	6.5	10.5	7.5
									10.5	7.5		
40	13	14	9	5.5	M6×1.0 Thru.hole:Φ5.2	17	40	G1/8	11	8	11	8
50	15	17	10.5	6.5	M8×1.25 Thru.hole:Φ6.8	22	50	G1/4	9	9	10.5	10.5
									10.5	10.5		
63	15	17	14	9	M10×1.5 Thru.hole:Φ8.5	28.5	60	G1/4	14	9.5	15	10.5
									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

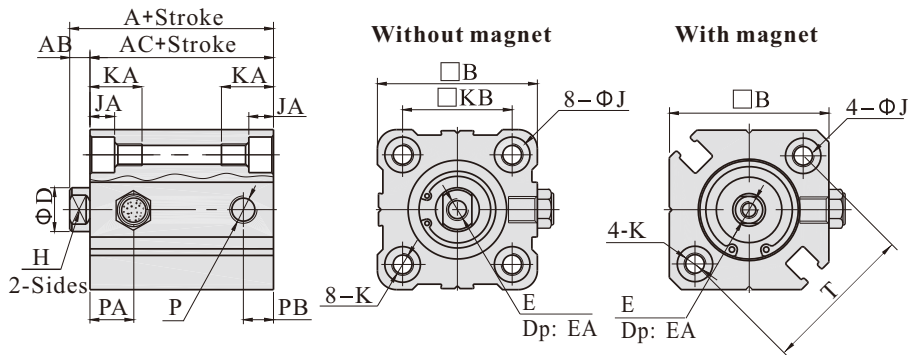


Bore size\Item	A	AB	AC	B	BA	D	E	EA (St≤10)	EA (St>10)	H	J	JA	K	KA	KB	P	PA
125	99	16	83	142	153	32	M22×2.5	22.5	30	27	21.5	18.4	M14×2.0 Thru.hole:Φ12.4	43.5	114	G3/8	24.5
140	99	16	83	158	168	32	M22×2.5	22.5	30	27	21.5	18.4	M14×2.0 Thru.hole:Φ12.4	43.5	128	G3/8	24.5
160	108	17	91	178	188	40	M24×3.0	26.5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

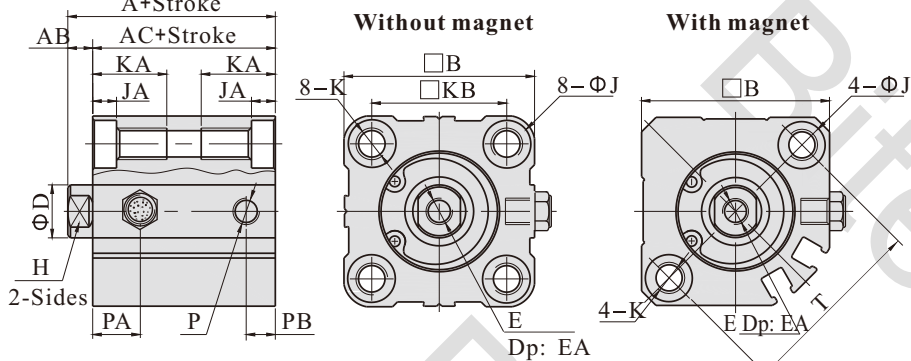
## ASQ series

Φ12\Φ16



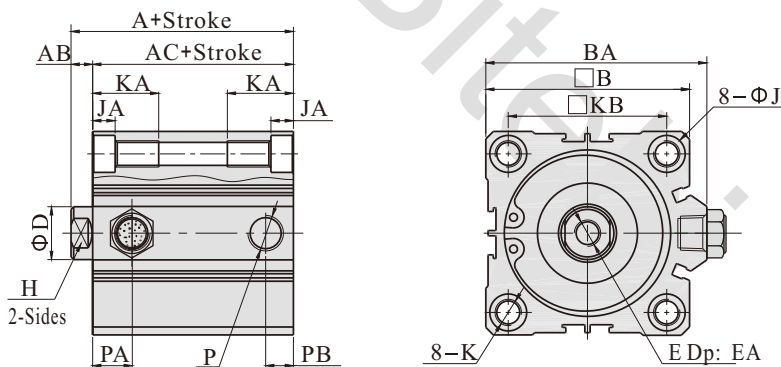
Bore size\Item Stroke	A(No magnet)			B	AB
	5\10	15\20	25\30		
12	25.5	30.5	-	25	3.5
16	27	32	-	29	3.5
20	29	34	39	36	4.5
25	32.5	37.5	42.5	40	5
32	35	40	45	45	7
40	41.5	46.5	51.5	53	7
50	48.5	53.5	58.5	64	8
63	54	59	64	77	8

Φ20\Φ25



Bore size\Item Stroke	A(With magnet)			BA	D
	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

Φ32~Φ63



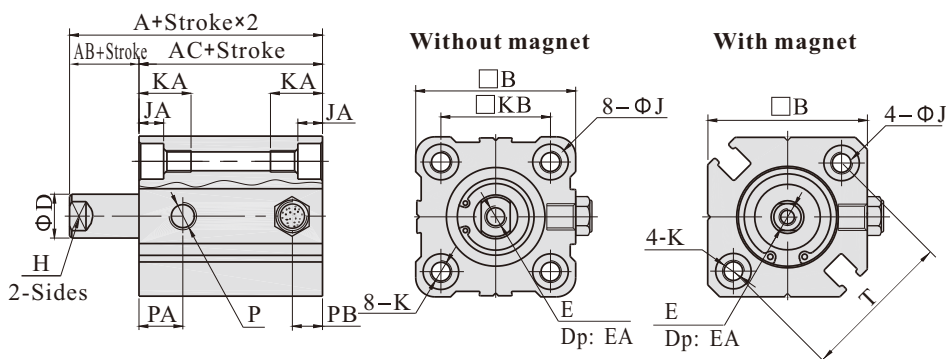
Bore size\Item Stroke	AC(No magnet)			E
	5\10	15\20	25\30	
12	22	27	-	M3×0.5
16	23.5	28.5	-	M4×0.7
20	24.5	29.5	34.5	M5×0.8
25	27.5	32.5	37.5	M6×1.0
32	28	33	38	M8×1.25
40	34.5	39.5	44.5	M8×1.25
50	40.5	45.5	50.5	M10×1.5
63	46	51	56	M10×1.5

Bore size\Item Stroke	AC(With magnet)			EA
	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	-

## ATQ series

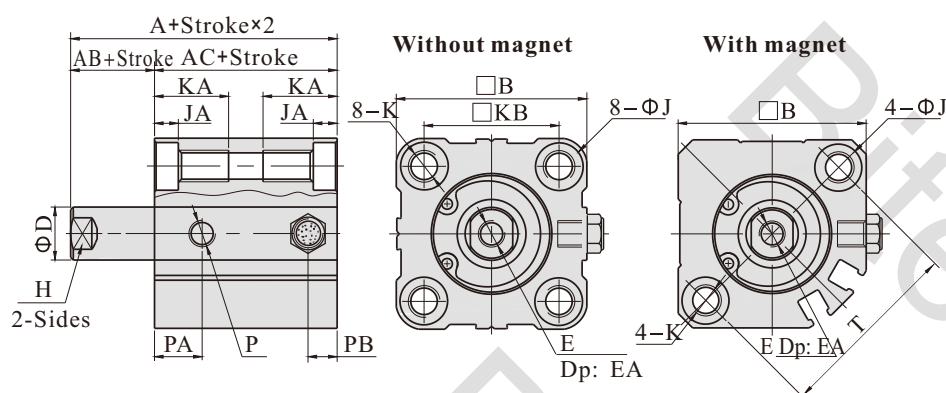
Φ12\Φ16



Bore size\Item Stroke	A(No magnet)			B	AB
	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

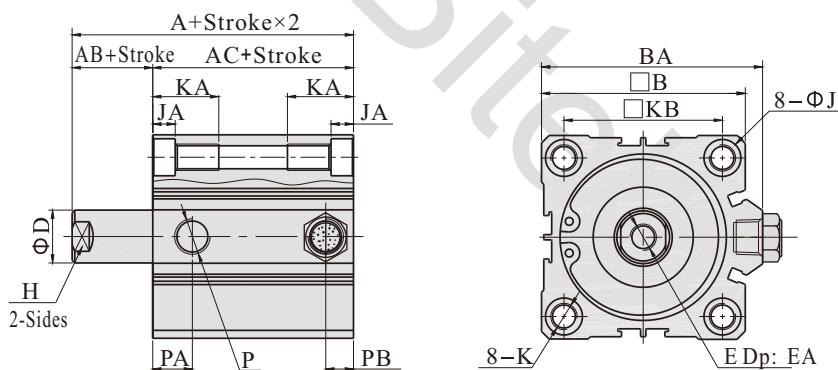
Bore size\Item Stroke	A(With magnet)			BA	D
	5\10	15\20	25\30		
12	36.5	41.5	-	-	6
16	39	44	-	-	8
20	41	46	51	-	10
25	42.5	47.5	52.5	-	12
32	45	50	55	49.5	16
40	51.5	56.5	61.5	57	16
50	58.5	63.5	68.5	71	20
63	64	69	74	84	20

Φ20\Φ25



Bore size\Item Stroke	AC(No magnet)			E
	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

Φ32-Φ63



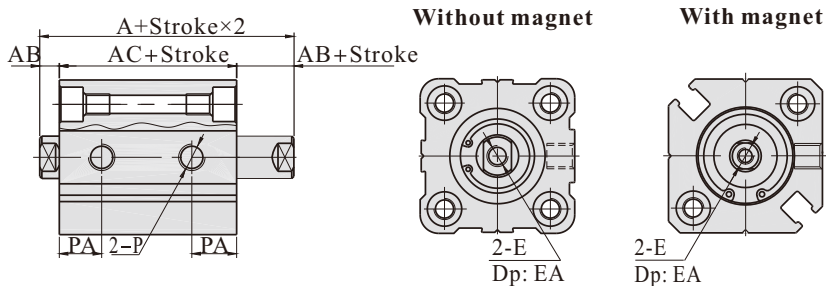
Bore size\Item Stroke	AC(With magnet)			EA
	5\10	15\20	25\30	
12	33	38	-	6
16	35.5	40.5	-	8
20	36.5	41.5	46.5	7
25	37.5	42.5	47.5	12
32	38	43	48	13
40	44.5	49.5	54.5	13
50	50.5	55.5	60.5	15
63	56	61	66	15

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	-



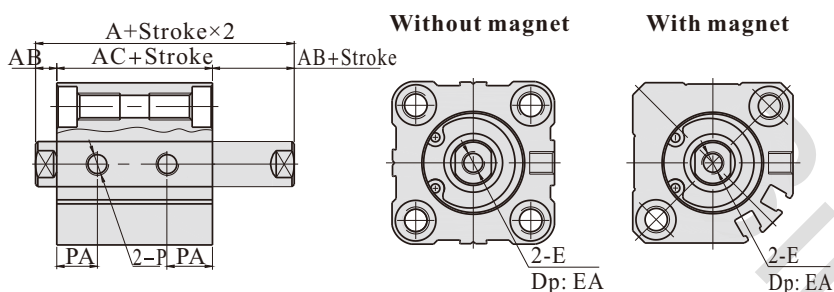
## ACQD series

Φ12\Φ16



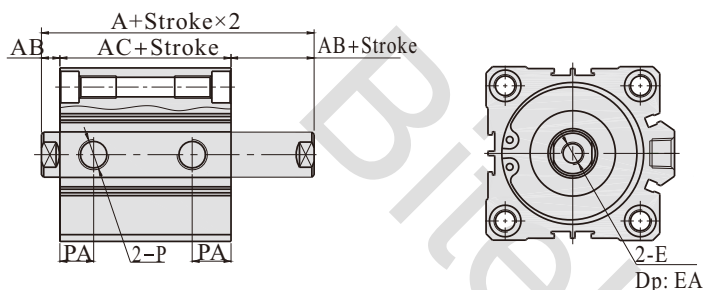
Item Bore size	A		AB
	No magnet	With magnet	
12	32.2	39.4	3.5
16	33	43	3.5
20	35	47	4.5
25	39	49	5
32	44.5(79.5)	54.5(89.5)	7(17)
40	54(89)	64(99)	7(17)
50	56.5(91.5)	66.5(101.5)	8(18)
63	58(93)	68(103)	8(18)
80	71(106)	81(116)	10(20)
100	84.5(119.5)	94.5(129.5)	12(22)
125	-	115	16
140	-	115	16
160	-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

Φ20\Φ25

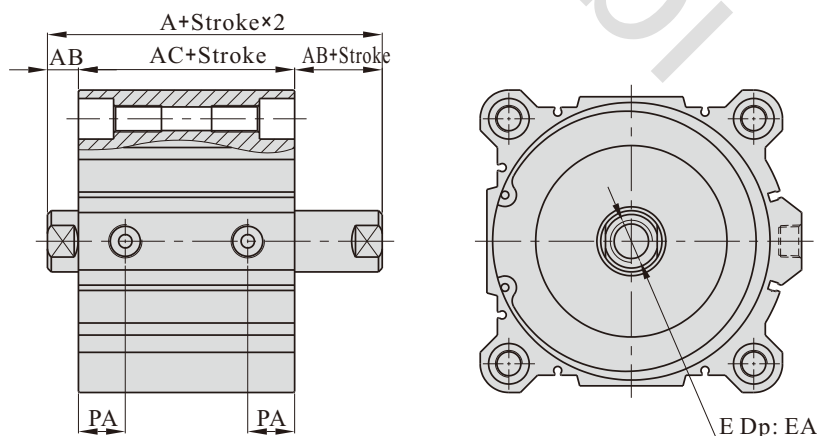


Item Bore size	AC		E
	No magnet	With magnet	
12	25.2	32.4	M3×0.5
16	26	36	M4×0.7
20	26	38	M5×0.8
25	29	39	M6×1.0
32	30.5(45.5)	40.5(55.5)	M8×1.25
40	40(55)	50(65)	M8×1.25
50	40.5(55.5)	50.5(65.5)	M10×1.5
63	42(57)	52(67)	M10×1.5
80	51(66)	61(76)	M16×2.0
100	60.5(75.5)	70.5(85.5)	M20×2.5
125	-	83	M22×2.5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

Φ32~Φ100



Φ125~Φ160



Item Bore size	EA	PA
	12	6
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

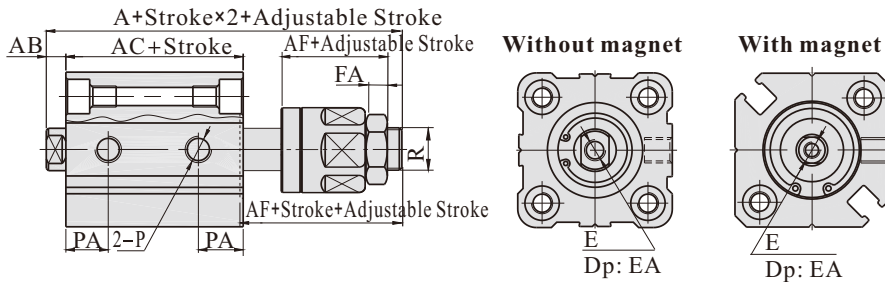
Remark)

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.

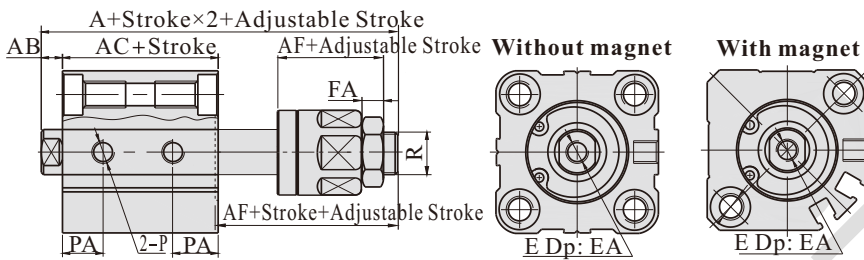


## ACQJ series

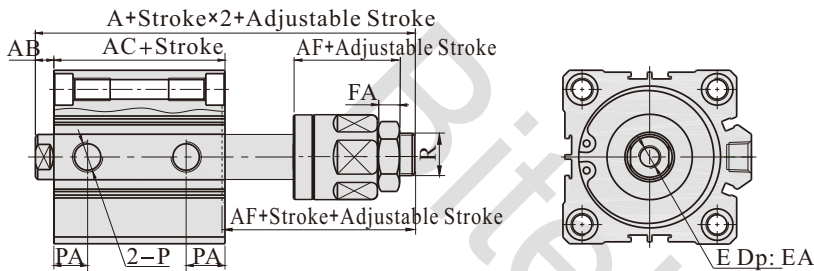
Φ12\Φ16



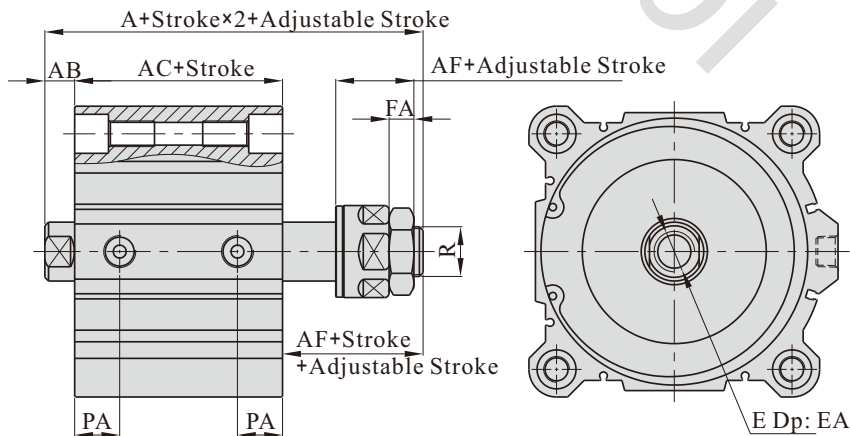
Φ20\Φ25



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

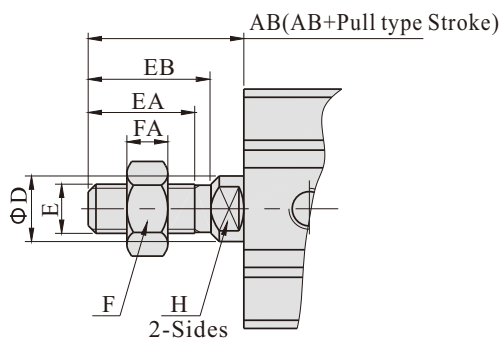
Item Bore size	E	EA		PA
		St≤10	St>10	
12	M3×0.5	6		9
16	M4×0.7	8		9.5
20	M5×0.8	7		9.5
25	M6×1.0	9.5(St=5)	12(St>5)	11
32	M8×1.25	9(St≤10)	13(St>10)	10
40	M8×1.25	11(St≤10)	13(St>10)	13
50	M10×1.5	12(St≤10)	15(St>10)	13.5
63	M10×1.5	12(St≤10)	15(St>10)	15
80	M16×2.0	14(St≤15)	20(St>15)	16
100	M20×2.5	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.

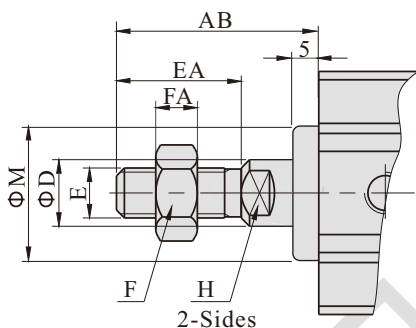
## Male thread

(Bore size:  $\Phi 12\sim\Phi 100$ , Stroke $\leq 100$ )



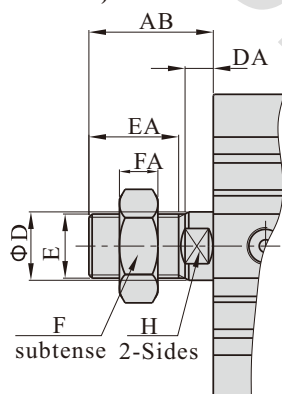
Bore size\Item	AB	D	E	EA	EB	F	FA	H
12	14	6	M5×0.8	9	10	8	4	5
16	15.5	8	M6×1.0	10	11.5	10	5	6
20	18.5	10	M8×1.25	12	13.5	12	6	8
25	22.5	12	M10×1.25	15	17	17	6	10
32	28.5	16	M14×1.5	20.5	23.5	19	8	14
40	28.5	16	M14×1.5	20.5	23.5	19	8	14
50	33.5	20	M18×1.5	26	28.5	27	11	17
63	33.5	20	M18×1.5	26	28.5	27	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:  $\Phi 32\sim\Phi 100$  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:  $\Phi 125\sim\Phi 160$ )



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

## 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 °C	-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.

## With guider type

### Ordering code

TACQ - 32 × 50 - S - □

①      ②      ③      ④      ⑤

#### ① Model

TACQ: Compact cylinder(Double acting with guider)

#### ② Bore size

12 16 20 25 32 40 50 63 80 100

#### ③ Stroke

Refer to stroke table for details

#### ④ Magnet

Blank: Without magnet

S: With magnet

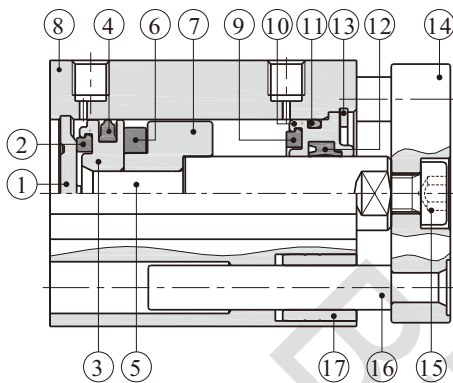
#### ⑤ Thread type [Note1]

Blank: G thread

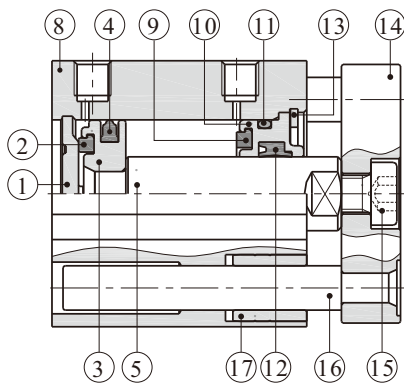
PT: PT thread

### Inner structure and material of major parts

TACQ-S



TACQ

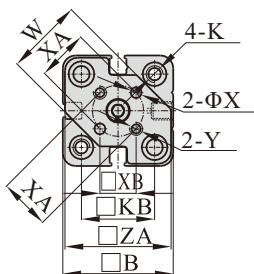
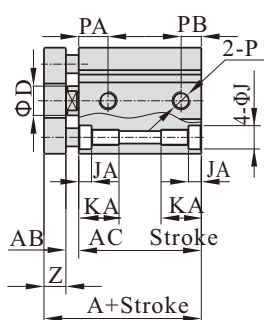


NO.	Item	Material	NO.	Item	Material
1	Back cover	Aluminum alloy	10	Front cover	Aluminum alloy
2	Bumper	NBR	11	O-ring	NBR
3	Piston	Aluminum alloy	12	Front cover packing	NBR
4	Piston seal	NBR			
5	Piston rod	Carbon steel with 20μm chrome plated	13	C clip	Spring steel
			14	Fixing plate	Aluminum alloy
6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

## With guider type

### Dimensions

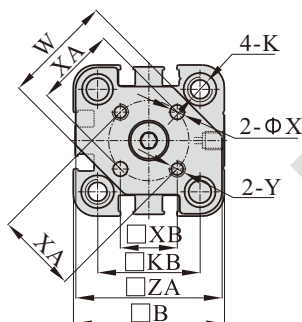
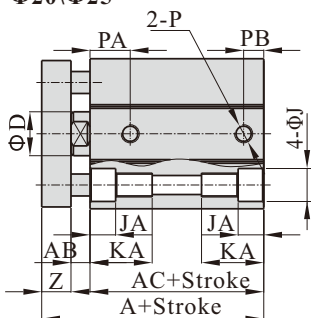
Φ12\Φ16



Item	A		AC	
	No magnet	With magnet	No magnet	With magnet
Bore size 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
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	

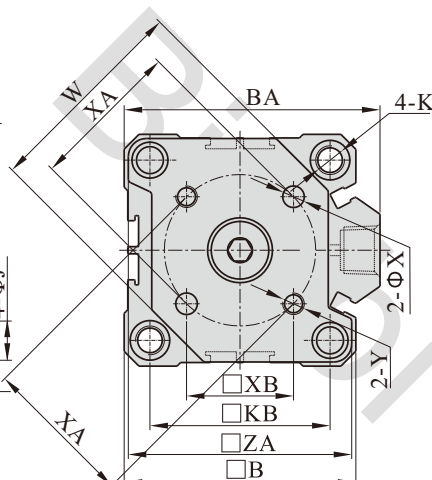
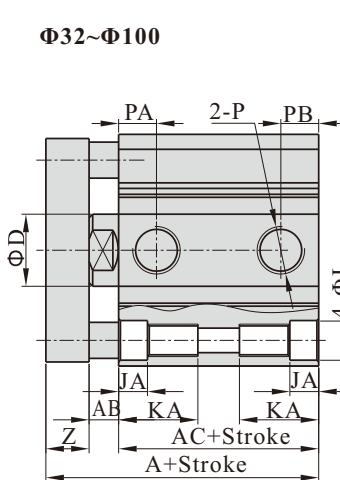
Φ20\Φ25



Item	PA		PB	
	No magnet	With magnet	No magnet	With magnet
Bore size 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
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	A(No magnet)		A (With magnet)	AB	B	BA	D	J	JA
	Bore size	St≤50							
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	AC(No magnet)		AC (With magnet)	K
	Bore size	St≤50		
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	PA	PB	PB	W	X	XA	XB	Y	Z	ZA
					(No magnet)	(With magnet)	(No magnet)	(With magnet)							
32		17.5	34	1/8"	8	10.5	6.5	7.5	37	5	28	19.8	M5×0.8	10	43
					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	△	●	●	■	▲	■	▲	▲

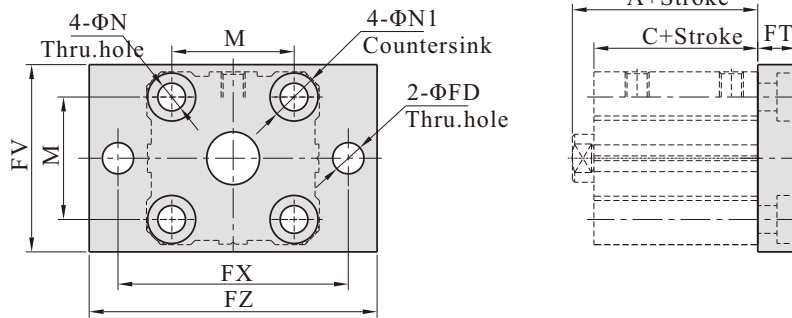
●—Aluminum alloy; ■—Carbon Steel; ▲—S45C; △—SPCC

## Accessories

### Dimensions

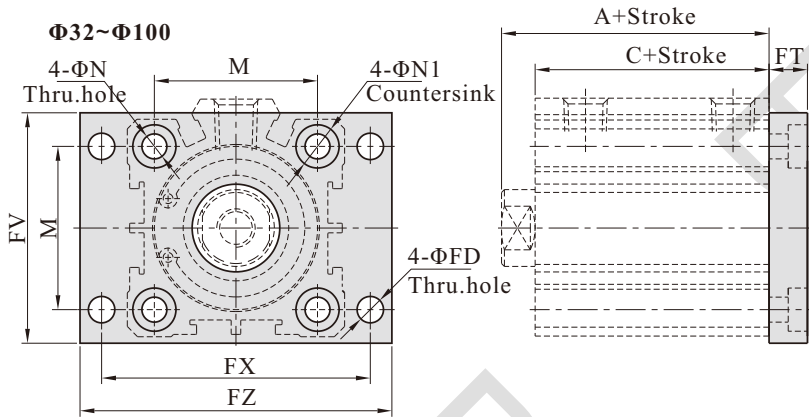
#### FA/FB type

Φ12~Φ25



Item Bore size Stroke	A			With magnet	C			With magnet
	No magnet ≤50	55	≥60		No magnet ≤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

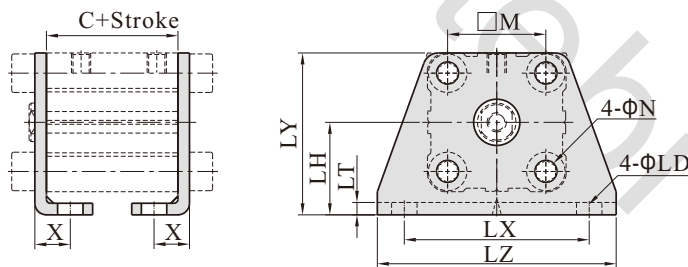
Φ32~Φ100



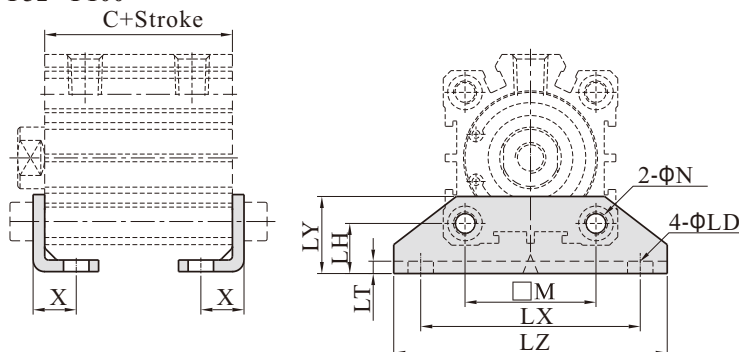
Item Bore size	N	N1	FD	FT	FV	FX	FZ	M
12	4.5	7.5	4.5	5.5	25	45	55	15.5
16	4.5	7.5	4.5	5.5	30	45	55	20
20	6.5	10.5	6.5	8	39.5	48	60	25.5
25	6.5	10.5	6.5	8	42	52	64	28
32	6.5	10.5	5.5	8	48	56	65	34
40	6.5	10.5	5.5	8	54	62	72	40
50	8.5	13.5	6.5	9	67	76	89	50
63	10.5	16.5	9	10	80	92	108	60
80	12.5	18.5	11	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 Stroke	C			With magnet	M	N	X
	No magnet ≤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

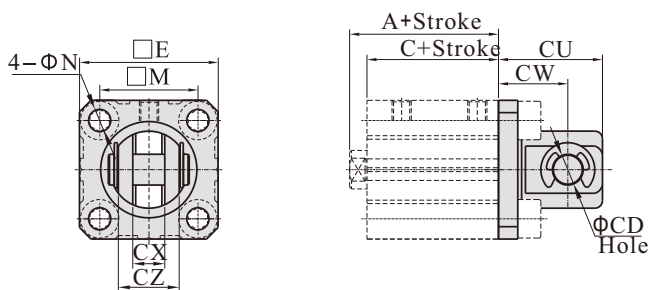
Item Bore size	LD	LH	LT	LX	LY	LZ
12	4.5	17	2	34	29.5	44
16	4.5	19	2	38	33.5	48
20	6.5	24	3	48	42	62
25	6.5	26	3	52	46	66
32	6.5	13	3	57	20	71
40	6.5	13	3	64	20	78
50	8.5	14	3	79	22	95
63	10.5	16	3	95	26	113
80	13	20.5	4.5	118	32	140
100	13	24	6	137	36	162



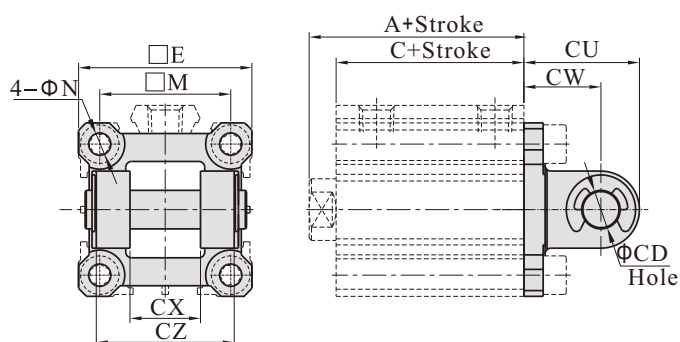
## Accessories

### CB type

Φ12~Φ25



Φ32~Φ100



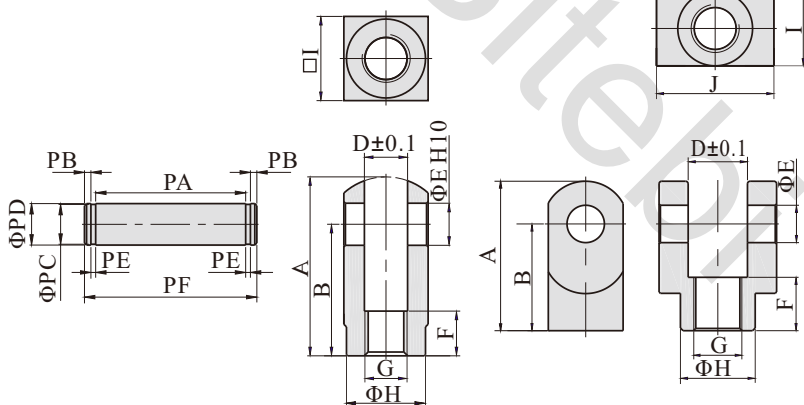
Item Bore size Stroke	A			With magnet	C			With magnet
	No magnet				No magnet			
	≤50	55	≥60		≤50	55	≥60	
12	20.5	-	-	31.5	17	-	-	28
16	22	22	-	34	18.5	18.5	-	30.5
20	24	-	34	36	19.5	-	29.5	31.5
25	27.5	-	37.5	37.5	22.5	-	32.5	32.5
32	30	-	40	40	23	-	33	33
40	36.5	-	46.5	46.5	29.5	-	39.5	39.5
50	38.5	-	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

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

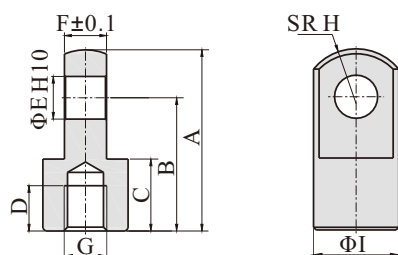
F-ACQ32Y  
F-ACQ50Y  
F-ACQ80Y  
F-ACQ100Y



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