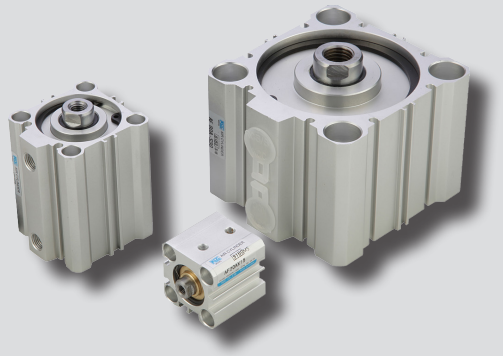
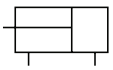
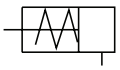
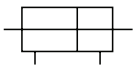
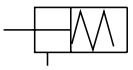
AFC/ADFC series



Features

- Compact installation space due to shorter tube length compared to the existing thin cylinder
- The thin cylinder is optimal for press fit, clamp and short stroke
- The exterior of the body is specially anodized to give it a beautiful appearance
- Both ends tapped type and through hole type can be selected for mounting type

Symbol	
 Double acting/ Single rod	 Single acting/ Spring return
 Double acting/ Double Rod	 Single acting/ Spring extension

How to order

AFC - ① A ② LB ③ 20 ④ - S ⑤ 30 ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

① Series

AFC	Single rod compact cylinder (Without magnet)
AFCW	Double rod compact cylinder (Without magnet)
ADFC	Single rod compact cylinder (With magnet)
ADFCW	Double rod compact cylinder (With magnet)

② Mounting hole type

A	Through hole + tapped at both ends (standard)

③ Mounting style

LB	Foot
FA	Rod side flange
FB	Head side flange
CB	Double clevis

※ The bracket type is different from the standard type in some dimensions.

④ Bore size

12	Ø12
16	Ø16
20	Ø20
25	Ø25

⑤ Cylinder stroke

Item / Bore size	Standard stroke	Long stroke
Ø12	5, 10, 15. 20. 25, 30	35, 40, 45, 50, 75, 100, 125, 150, 175, 200
Ø16		
Ø20	5, 10, 15, 20, 25, 30, 35, 40, 45, 50	75, 100, 125, 150, 175, 200
Ø25		75, 100, 125, 150, 175, 200, 250, 300

※ Long stroke can be ordered only for AFC and ADFC series.(Both rods cannot be manufactured)
※ Intermediate Stroke Production Strokes between 55 and 100 strokes (55, 60, 65 ...) are manufactured by inserting a space of 5, 10, 20 mm.
Ex) AFCA20-S55 inserts 20mm space inside AFCA20A-S75.(Dimensions are the same as AFCA20-S75)

⑥ Rod end thread

Nil	Female thread
N	Male thread

⑦ Auto switch

Reed A/S	Model	Solid state A/S	Model
A-90(V)	D-A90(V)K	F-9N(V)	D-F9N(V)K
A-93(V)	D-A93(V)K	F-9P(V)	D-F9P(V)K
A-93N	D-A93KN	F-9B(V)	D-F9B(V)K
A-93(V)S	D-A93(V)K-S	F-9N(V)S	D-F9N(V)K-S
		F-9P(V)S	D-F9P(V)K-S
		F-9B(V)S	D-F9B(V)K-S

※ Available only for built-in magnets.
※ For details, refer to [10]-11,12,20,21 PAGE.

⑧ Number of auto switches

Nil	2 pcs
S	1 pc
N	N pcs (N: 3, 4, 5...)

⑨ Cushion

Nil	None
C	Rubber cushion

※ Rubber cushion is standard for long stroke and lateral load type.
※ Rubber cushion is not applicable to Ø12.

⑩ Special order

Nil	None
TS	Multi-step stroke cylinder (Single rod)
TW	Multi-step stroke cylinder (Double rod)
ASJ	Stroke adjustable type (in forward direction within 10mm)
BSJ	Stroke adjustable type (in forward direction within 20mm)
SV	Heat resistant cylinder
E	Anti-lateral load cylinder
SS	Stainless steel piston rod

⑪ Cylinder operation type

Nil	Double acting cylinder
S	Single acting spring return
T	Single acting spring extension

※ The single acting type has different dimensions from the double acting type, please contact us.

Specifications

Fluid	Air	
Proof pressure	15.3kgf/㎠ (1.5MPa)	
Max. operating pressure	10.2kgf/㎠ (1.0MPa)	
Min. operating pressure	Refer to the table below	
Ambient & fluid temperature	-10 ~ 70℃ (No Freezing)	
Operating piston speed	50~500mm/sec	
Cushion	None	Rubber cushion: long stroke, lateral load
Tolerance of thread	KS Class 2	
Tolerance of stroke(mm)	Standard stroke $^{+1.0}_{0}$	Long stroke $^{+1.4}_{0}$
Rod end thread	Female thread, Male thread	

Min. operating pressure

Bore size (mm)	Ø12	Ø16	Ø20	Ø25
Double acting	0.7	0.7	0.5	0.5
Single acting (Spring return, Spring extension)	2.5	2.5	1.8	1.8

Min. Stroke for auto switch

Number of auto switch	Min. stroke
1 pc	5mm
2 pcs	10mm

※ ADFC (Built-in Magnet)

Mounting & Accessories

Type		Double acting single rod				
Mounting style		Standard	Foot	Rod side flange	Head side flange	Double clevis
Standard	Rod end nut	●	●	●	●	●
	Clevis pin	-	-	-	-	●

※ Double clevis and double knuckle joints include pins and snap rings.
※ Each mounting bracket includes a hex-wrench bolt for mounting.
※ Rod end nut only applies to male thread.

Mounting bracket

Mounting \ Bore size	Ø12	Ø16	Ø20	Ø25
Foot	LB (CP)12	LB (CP)16	LB (CP)20	LB (CP)25
Flange	FA/FB (CP)12	FA/FB (CP)16	FA/FB (CP)20	FA/FB (CP)25
Double clevis(with pin)	CB (CP)12	CB (CP)16	CB (CP)20	CB (CP)25

※ For foot mounting, 2pcs in one set.

Mass

Unit : g

Cylinder stroke		Bore size							
		AFC				ADFC			
		Ø12	Ø16	Ø20	Ø25	Ø12	Ø16	Ø20	Ø25
5		31	43	69	92	38	57	100	140
10		37	51	81	106	44	64	112	155
15		43	60	94	121	50	72	124	170
20		49	68	107	135	56	80	137	186
25		56	77	120	150	62	88	149	201
30		62	85	133	164	68	95	161	216
35		-	-	146	179	-	-	173	232
40		-	-	158	193	-	-	185	247
45		-	-	171	208	-	-	197	262
50		-	-	184	222	-	-	209	278
Rod end male thread	Male thread part	1.5	3	6	12	1.5	3	6	12
	Nut	1	2	4	8	1	2	4	8
Rubber cushion attached		0	0	-2	-3	0	0	-2	-3
Foot		55	67	164	186	55	67	164	186
Rod side flange		57	69	139	161	57	69	139	161
Head side flange		54	65	133	152	54	65	133	152
Double clevis		32	39	88	123	32	39	88	123

※ Mounting bolts are included for foot, rod side flange, and head side flange.
※ Double clevis includes a pin, snap ring, and bolt.

Calculation

1. AFC
   Ex) AFC-CB25-S20NC
   Basic mass: 135 / Rod end male thread: 20
   Rubber cushion: -3 / Double clevis: 123
   135+20-3+123=275g
2. ADFC
   Ex) ADFC-CB25-S20NC
   Basic mass: 186 / Rod end male thread: 20
   Rubber cushion: -3 / Double clevis: 123
   186+20-3+123=326g

Unit : g

Cylinder stroke		Bore size							
		AFCW				ADFCW			
		Ø12	Ø16	Ø20	Ø25	Ø12	Ø16	Ø20	Ø25
5		40	60	95	125	46	70	126	176
10		47	69	110	142	54	80	141	193
15		54	78	125	159	61	89	156	210
20		61	87	140	176	69	99	171	227
25		68	96	155	193	76	108	186	244
30		75	105	170	210	83	118	201	261
35		-	-	185	227	-	-	216	278
40		-	-	200	244	-	-	231	295
45		-	-	215	261	-	-	246	312
50		-	-	230	278	-	-	261	329
Rod end male thread	Male thread part	3	6	12	24	3	6	12	24
	Nut	2	4	8	16	2	4	8	16
Rubber cushion attached		0	0	-2	-2	0	0	-2	-2

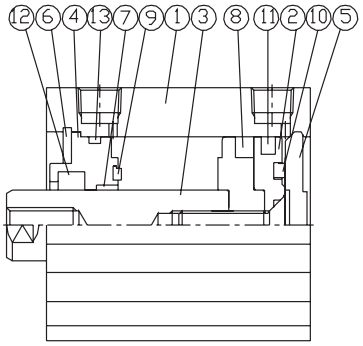
※ Mounting bolts are included for foot and head side flange.

Calculation

1. AFCW
   Ex) AFCW-LB25-S20NC
   Basic mass: 176 / Rod end male thread: 40
   Rubber cushion: -2 / Foot: 186
   176+40-2+186=400g
2. ADFCW
   Ex) ADFCW-LB25-S20NC
   Basic mass: 227 / Rod end male thread: 40
   Rubber cushion: -2 / Foot: 186
   227+40-2+186=451g

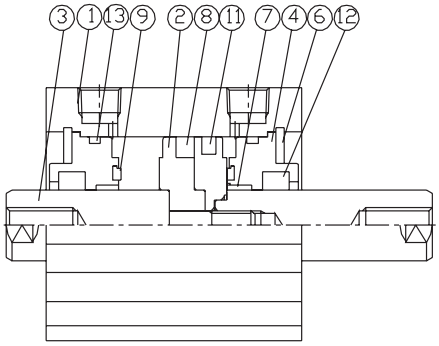
Structure

Single rod, Double acting



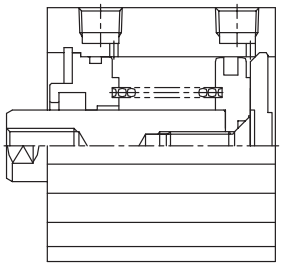
Applies to AFC/ADFC
#9 and #10 apply only to rubber cushion

Double rod, Double acting



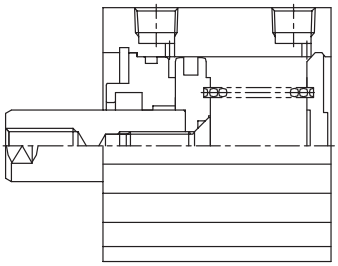
Applies to AFC/ADFC

Single acting spring return



Applies to AFC only

Single acting spring extension



Applies to AFC only

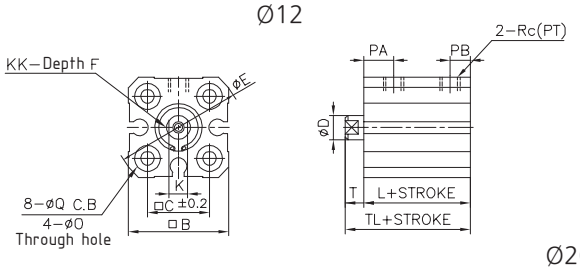
No.	Parts	Material	Remark
1	Cylinder tube	AL Alloy	Hard anodized aluminium
2	Piston	AL Alloy	-
3	Piston Rod	Stainless Steel	Hard chromium plating
		Carbon Steel	
4	Rod cover	Brass	-
5	Head cover	AL Alloy	White anodizing
6	Snap ring	Spring steel	-
7	Bush	Copper	-
8	Magnet	-	In case of built-in magnet
9	Cushion damper A	Urethane	-
10	Cushion Damper B	Urethane	-

No.	Parts	Material	Bore size			
			Ø12	Ø16	Ø20	Ø25
11	Piston packing	NBR	OPA12	OPA16	OPA20	OPA25
12	Rod packing	NBR	DYR6K	DYR8K	DYR10K	DYR12K
13	Tube O-Ring	NBR	S-10	S-14	S-18	S-22

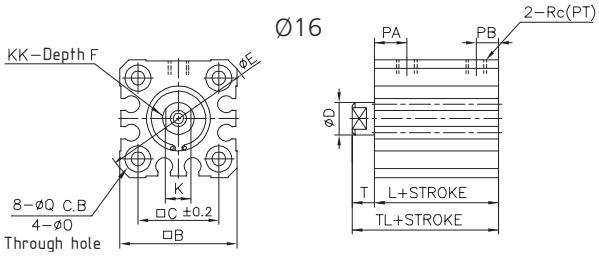
Dimensions-Standard

Rod end female thread (Standard)

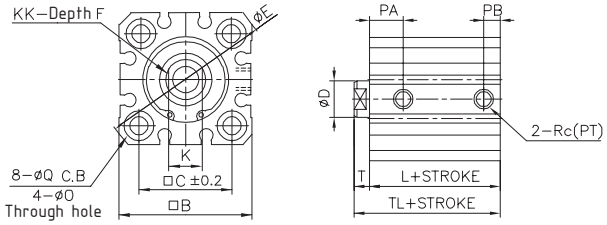
Ø12



Ø16

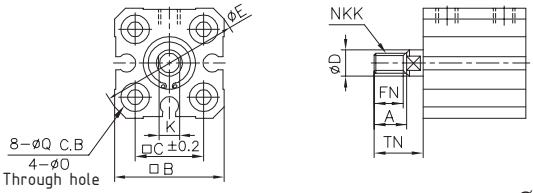


Ø20 ~ Ø25

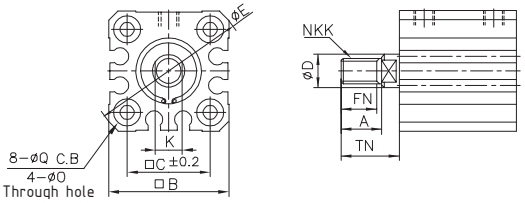


Rod end male thread

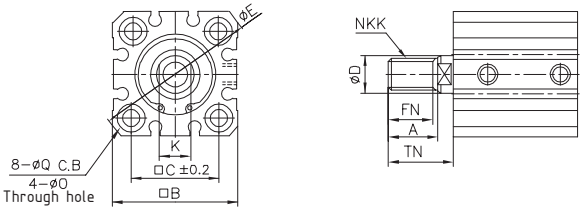
Ø12



Ø16



Ø20 ~ Ø25

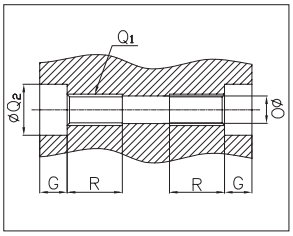


Unit:mm

Bore size	Stroke	Without magnet(AFC)		With magnet(ADFC)		A	□B	□C	ØD	ØE	F	FN
		L	TL	L	TL							
Ø12	5~30	17	22	25.5	25	15.5	6	32	6	9	6	9
Ø16	5~30	17	22	25.5	29	20	8	38	8	10	8	10
Ø20	5~50	19.5	29.5	34	36	25.5	10	47	8	12	8	12
Ø25	5~50	22.5	32.5	37.5	40	28	12	52	12	15	12	15

Bore size	K	KK	NKK	ØO	PA	PB	ØQ	Rc(PT)	T	TN
Ø12	5	M3X0.5	M5X0.8	3.5	7.5	5	6.5 Depth 3.5	M5X0.8	3.5	14
Ø16	6	M4X0.7	M6X1.0	3.5	7.5	5	6.5 Depth 3.5	M5X0.8	3.5	15.5
Ø20	8	M5X0.8	M8X1.25	5.5	8	5.5	9 Depth 7	M5X0.8	4.5	18.5
Ø25	10	M6X1.0	M10X1.25	5.5	9	5.5	9 Depth 7	M5X0.8	5	22.5

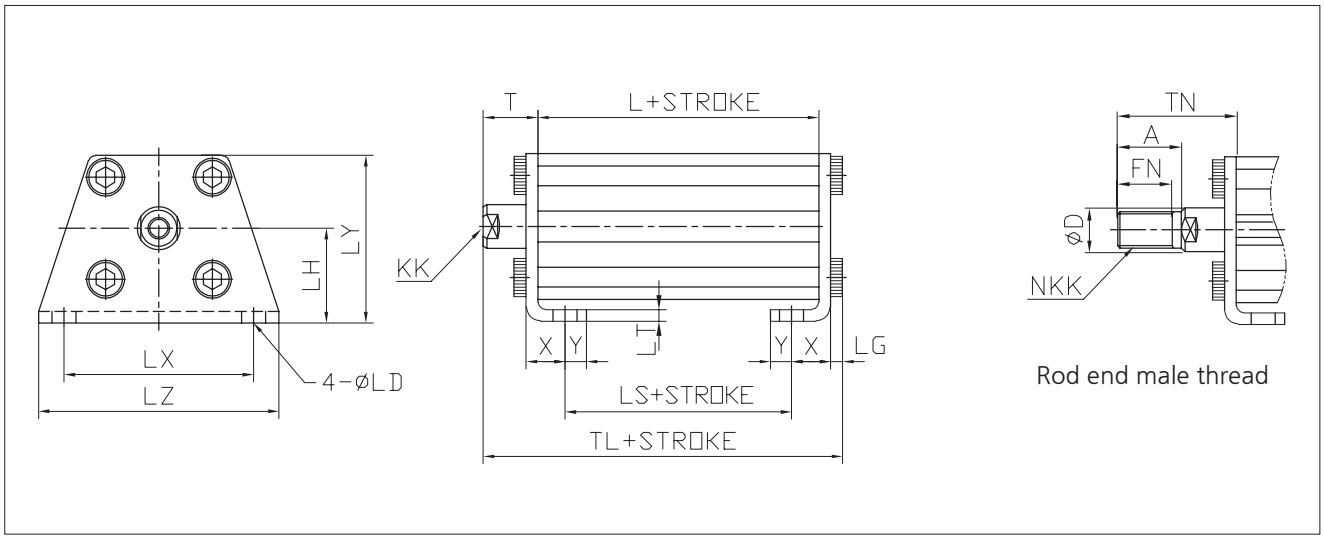
Both end tapped (Standard)



Unit:mm

Bore size	G	Q_1	$ØQ_2$	R
Ø12	3.5	M4X0.7	6.5	7
Ø16	3.5	M4X0.7	6.5	7
Ø20	7	M6X1.0	9	10
Ø25	7	M6X1.0	9	10

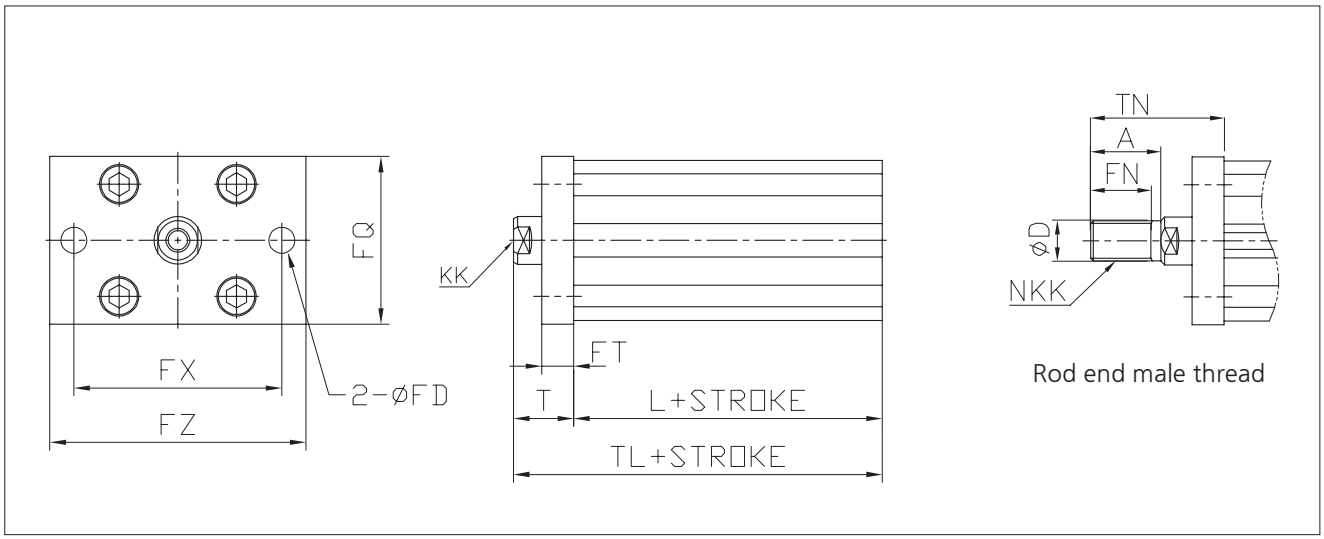
Dimensions-Foot (LB)



Unit:mm

Bore size	Stroke	Without magnet(AFC)			With magnet(ADFC)			A	ØD	FN	LD	LG	LH	LT	LX	LY	LZ	KK	NKK	T	TN	X	Y
		TL	L	LS	TL	L	LS																
Ø12	5~30	35.3	17	5	40.3	22	10	10.5	6	9	4.5	2.8	17	2	34	29.5	44	M3X0.5	M5X0.8	13.5	24	8	4.5
Ø16	5~30	35.3	17	5	40.3	22	10	12	8	10	4.5	2.8	19	2	38	33.5	48	M4X0.7	M6X1.0	13.5	25.5	8	5
Ø20	5~50	41.2	19.5	7.5	51.2	29.5	17.5	14	10	12	6.6	4	24	3.2	48	42	62	M5X0.8	M8X1.25	14.5	28.5	9.2	5.8
Ø25	5~50	44.7	22.5	7.5	54.7	32.5	17.5	17.5	12	15	6.6	4	26	3.2	52	46	66	M6X1.0	M10X1.25	15	32.5	10.7	5.8

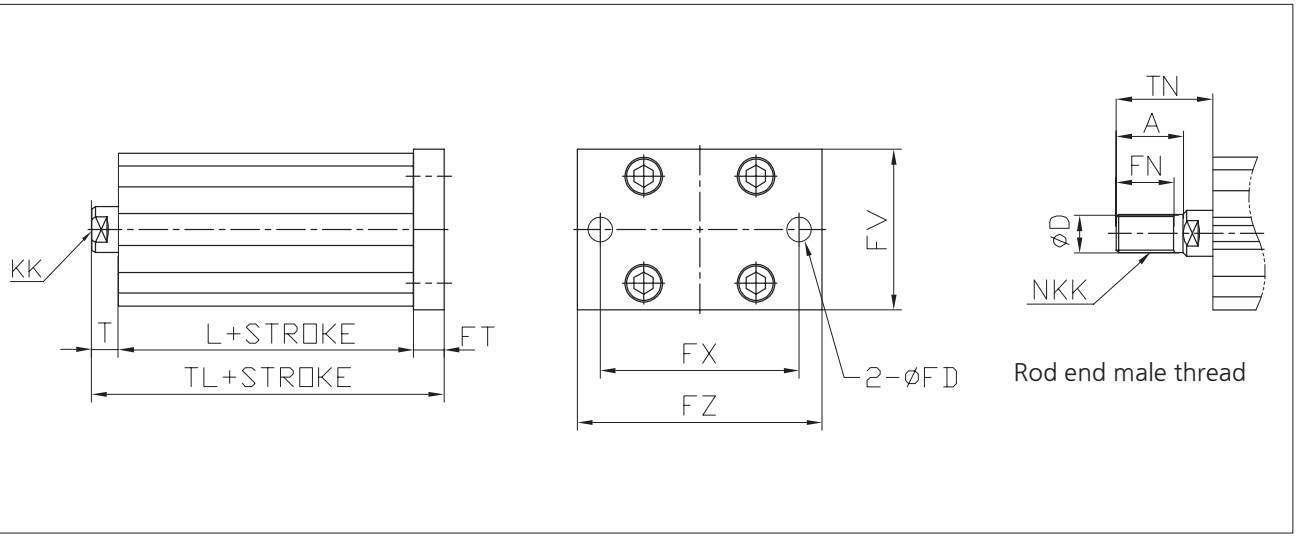
Dimensions-Rod side flange (FA)



Unit:mm

Bore size	Stroke	Without magnet(AFC)		With magnet(ADFC)		A	ØD	FD	FN	FQ	FT	FX	FZ	KK	NKK	T	TN
		TL	L	TL	L												
Ø12	5~30	30.5	17	35.5	22	10.5	6	4.5	9	25	5.5	45	55	M3X0.5	M5X0.8	13.5	24
Ø16	5~30	30.5	17	35.5	22	12	8	4.5	10	30	5.5	45	55	M4X0.7	M6X1.0	13.5	25.5
Ø20	5~50	34	19.5	44	29.5	14	10	6.6	12	39	8	48	60	M5X0.8	M8X1.25	14.5	28.5
Ø25	5~50	37.5	22.5	47.5	32.5	17.5	12	6.6	15	42	8	52	64	M6X1.0	M10X1.25	15	32.5

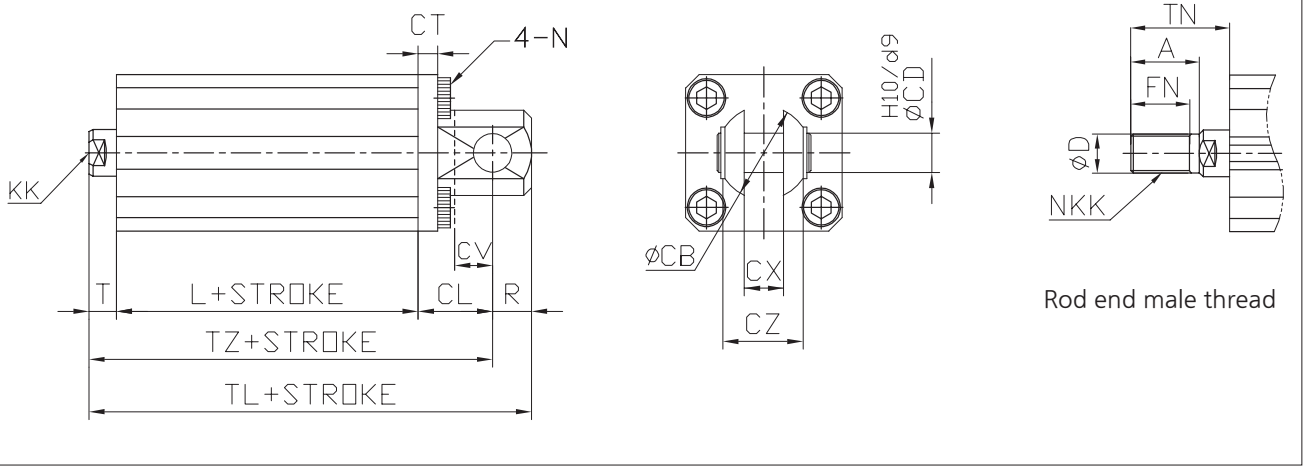
Dimensions-Head Side Flange (FB)



Unit:mm

Bore size	Stroke	Without magnet(AFC)		With magnet(ADFC)		A	ØD	FD	FN	FT	FV	FX	FZ	KK	NKK	T	TN
		TL	L	TL	L												
Ø12	5~30	26	17	31	22	10.5	6	4.5	9	5.5	25	45	55	M3X0.5	M5X0.8	3.5	14
Ø16	5~30	26	17	31	22	12	8	4.5	10	5.5	30	45	55	M4X0.7	M6X1.0	3.5	15.5
Ø20	5~50	32	19.5	42	29.5	14	10	6.6	12	8	39	48	60	M5X0.8	M8X1.25	4.5	18.5
Ø25	5~50	35.5	22.5	45.5	32.5	17.5	12	6.6	15	8	42	52	64	M6X1.0	M10X1.25	5	22.5

Dimensions-Double Clevis (CB)

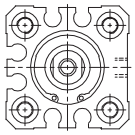


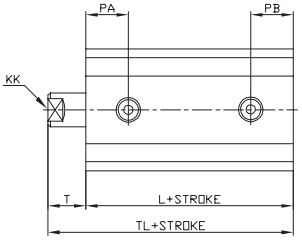
Unit:mm

Bore size	Stroke	Without magnet(AFC)			With magnet(ADFC)			A	ØD	FN	CB	CD	CL	CT	CV	CX	CZ	KK	N	NKK	R	T	TN
		TL	L	TZ	TL	L	TZ																
Ø12	5~30	40.5	17	34.5	45.5	22	39.5	10.5	6	9	12	5	14	4	7	5	10	M3X0.5	M4XP0.7	M5X0.8	6	3.5	14
Ø16	5~30	41.5	17	35.5	46.5	22	40.5	12	8	10	14	5	15	4	10	6.5	12	M4X0.7	M4XP0.7	M6X1.0	6	3.5	15.5
Ø20	5~50	51	19.5	42	61	29.5	52	14	10	12	20	8	18	5	12	8	16	M5X0.8	M6XP1.0	M8X1.25	9	4.5	18.5
Ø25	5~50	57.5	22.5	47.5	67.5	32.5	57.5	17.5	12	15	24	10	20	5	14	10	20	M6X1.0	M6XP1.0	M10X1.25	10	5	22.5

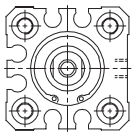
Dimensions-Long Stroke Cylinder

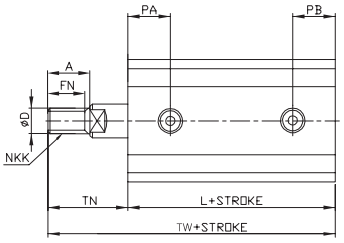
Rod end female thread





Rod end male thread





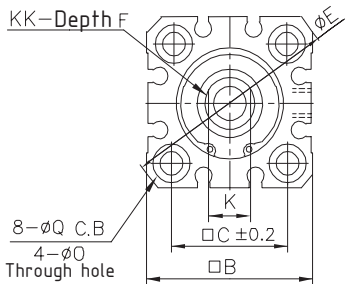
Unit:mm

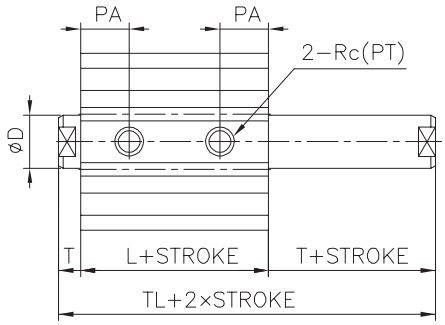
Bore size	Stroke	A	ØD	FN	L	KK	NKK	PA	PB	T	TL	TW	TN
Ø12	35~200	10.5	6	9	32	M3X0.5	M5X0.8	7.5	7.5	13.5	45.5	56	24
Ø16	35~200	12	8	10	32	M4X0.7	M6X1.0	7.5	7.5	13.5	45.5	57.5	25.5
Ø20	75~200	14	10	12	41	M5X0.8	M8X1.25	8	8	14.5	55.5	69.5	28.5
Ø25	75~300	17.5	12	15	44	M6X1.0	M10X1.25	9	9	15	59	76.5	32.5

※ Other dimensions not indicated are the same as for the standard type.

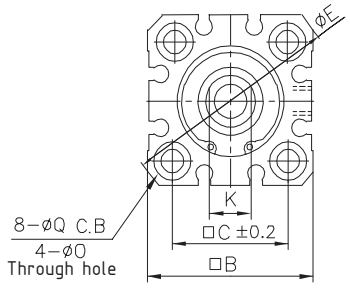
Dimensions-Double Acting Double Rod(W)

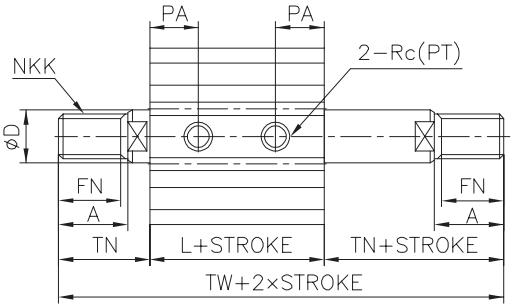
Rod end female thread





Rod end male thread



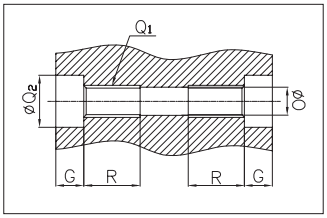


Unit:mm

Bore size	Stroke	Without magnet(AFC)			With magnet(ADFC)			A	□B	□C	ØD	ØE	F	FN	K
		L	TL	TW	L	TL	TW								
Ø12	5~30	22	29	50	27	34	55	10.5	25	15.5	6	32	6	9	5
Ø16	5~30	22	29	53	27	34	58	12	29	20	8	38	8	10	6
Ø20	5~50	26	35	63	36	45	73	14	36	25.5	10	47	8	12	8
Ø25	5~50	29	39	74	39	49	84	17.5	40	28	12	52	12	15	10

Bore size	KK	NKK	ØO	PA	ØQ	Rc(PT)	T	TN
Ø12	M3X0.5	M5X0.8	3.5	7.5	6.5 Depth 3.5	M5X0.8	3.5	14
Ø16	M4X0.7	M6X1.0	3.5	7.5	6.5 Depth 3.5	M5X0.8	3.5	15.5
Ø20	M5X0.8	M8X1.25	5.5	8	9 Depth 7	M5X0.8	4.5	18.5
Ø25	M6X1.0	M10X1.25	5.5	9	9 Depth 7	M5X0.8	5	22.5

Both end tapped (Standard)

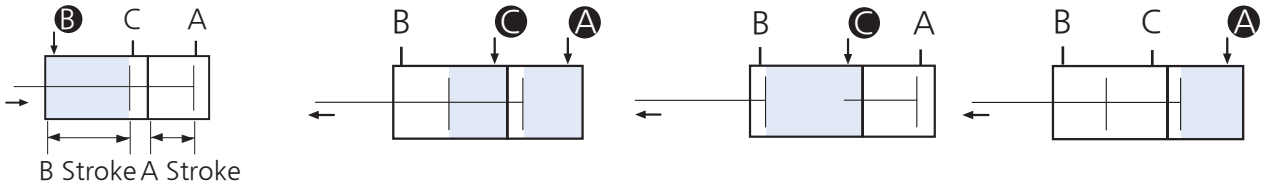


Unit:mm

Bore size	G	Q_1	$ØQ_2$	R
Ø12	3.5	M4X0.7	6.5	7
Ø16	3.5	M4X0.7	6.5	7
Ø20	7	M6×1.0	9	10
Ø25	7	M6×1.0	9	10

Single rod multi step stroke cylinder (TS)

By connecting two cylinders in series and integrating them, the cylinder stroke can be controlled in two stages with reciprocating motion.
Ordering notation: A stroke + total stroke
Ex) 20+30 (A side = 20, B side = 10)



When air pressure is supplied to port B, A and B strokes are reversed.

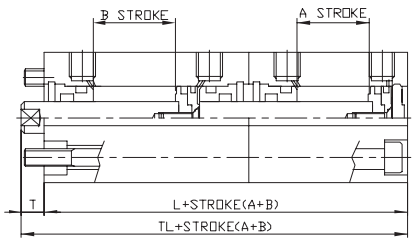
When air pressure is supplied to both ports A and C, double the output is obtained when moving forward.

When air pressure is supplied to port C, the rod and B stroke move forward.

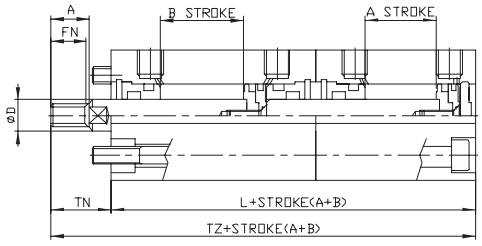
When pneumatic pressure is supplied to port A, the rod and A stroke move forward.

Dimensions-Single rod multi step stroke cylinder (TS)

Rod end female thread



Rod end male thread



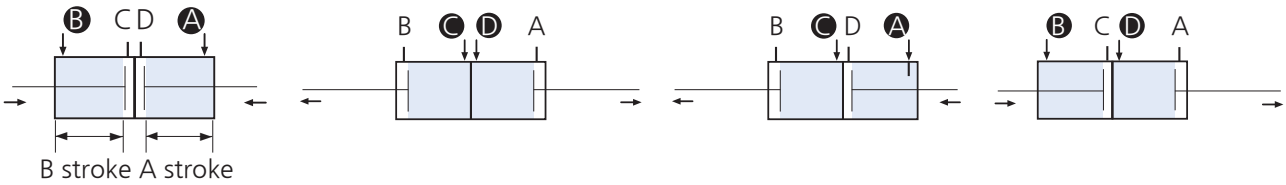
Unit:mm

Bore size	Stroke	Without magnet(AFC)			With magnet(ADFC)			A	ØD	FN	T	TN
		L	TL	TZ	L	TL	TZ					
Ø12	5~50	39	42.5	53	49	52.5	63	10.5	6	9	3.5	14
Ø16	5~50	39	42.5	54.5	49	52.5	64.5	12	8	10	3.5	15.5
Ø20	5~100	45.5	50	64	65.5	70	84	14	10	12	4.5	18.5
Ø25	5~100	51.5	56.5	74	71.5	76.5	94	17.5	12	15	5	22.5

※ Other dimensions not indicated are the same as for the standard type.

Multi step stroke cylinder (TW)

By combining the head side and integrating the two cylinders, the cylinder stroke can be controlled in three stages with reciprocating motion.
Ordering notation: A stroke + B stroke
Ex) 20+30 (A side = 20, B side = 30)



When air pressure is supplied to A and B ports, A and B strokes are reversed.

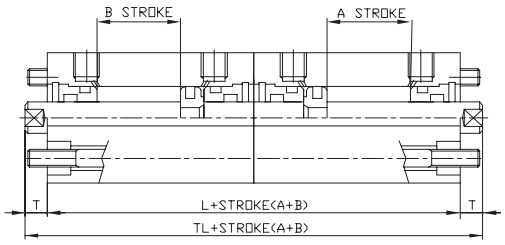
When air pressure is supplied to C and D ports, A and B strokes move forward.

When air pressure is supplied to A and C ports, the B stroke move forward.

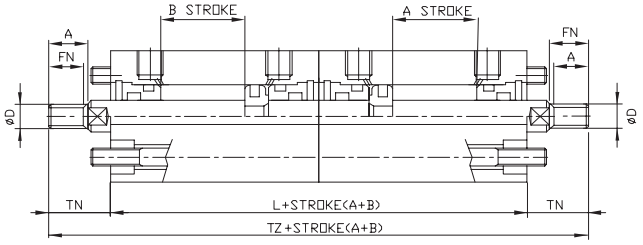
When air pressure is supplied to ports B and D, A stroke move forward.

Dimensions-Multi step stroke cylinder (TW)

Rod end female thread



Rod end male thread



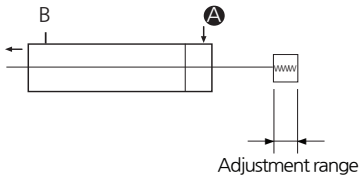
Unit:mm

Bore size	Stroke	Without magnet(AFC)			With magnet(ADFC)			A	ØD	FN	T	TN
		L	TL	TZ	L	TL	TZ					
Ø12	5~50	44	51	72	54	61	82	10.5	6	9	3.5	14
Ø16	5~50	44	51	75	54	61	85	12	8	10	3.5	15.5
Ø20	5~100	52	61	89	72	81	109	14	10	12	4.5	18.5
Ø25	5~100	58	68	103	78	88	123	17.5	12	15	5	22.5

※ Other dimensions not indicated are the same as for the standard type.

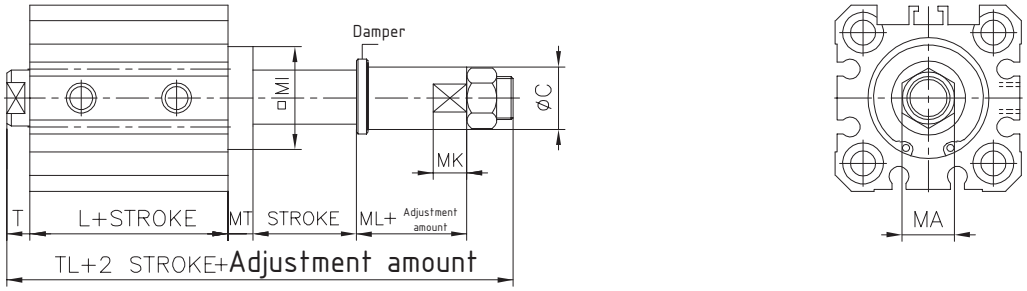
Forward stroke adjustable cylinder (ASJ, BSJ)

To adjust the entire forward stroke from 0mm to 20mm an adjustment mechanism is attached to the head side.



ASJ : 0~10mm adjustment
BSJ : 0~20mm adjustment

Dimensions-Forward stroke adjustable (ASJ, BSJ)



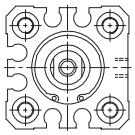
Unit:mm

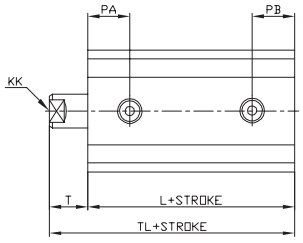
Bore size	Without magnet(AFC)		With magnet(ADFC)		ØC	MI	MT	MK	ML	MA	T
	L	TL	L	TL							
Ø20	26	61	36	71	20	□36	8	10	12.5	13	4.5
Ø25	29	64.5	39	74.5	20	□36	8	10	12.5	17	5

※ Other dimensions not indicated are the same as for the standard type.

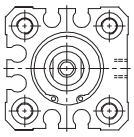
Dimensions-Anti-Lateral Load(E)

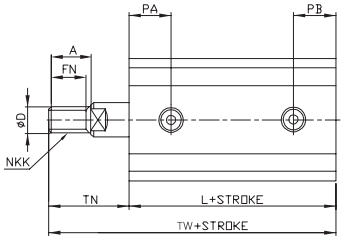
Rod end female thread





Rod end male thread





Unit:mm

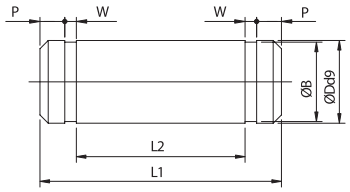
Bore size	Stroke	Without magnet(AFC)			With magnet(ADFC)			A	ØD	FN	KK	NKK	PA	PB	T	TN
		L	TL	TW	L	TL	TW									
Ø12	5~30	22	25.5	36	27	30.5	41	10.5	6	9	M3X0.5	M5X0.8	7.5	5	3.5	14
Ø16	5~30	22	25.5	37.5	27	30.5	42.5	12	8	10	M4X0.7	M6X1.0	7.5	5	3.5	15.5
Ø20	5~50	24.5	29	43	34.5	39	53	14	10	12	M5X0.8	M8X1.25	8	5.5	4.5	18.5
Ø25	5~50	27.5	32.5	50	37.5	42.5	60	17.5	12	15	M6X1.0	M10X1.25	9	5.5	5	22.5

※ Other dimensions not indicated are the same as the standard type.

Dimensions-Accessory

Clevis Pin

Material: Carbon Steel

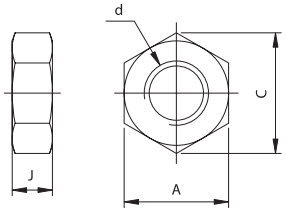


Unit:mm

Part no.	Bore size	ØDd9	L1	L2	P	W	B	Retaining ring
CJP(CP)12	Ø12	5 $^{-0.03}_{-0.06}$	14.6	10.2	1.5	0.7	6	Type C 5 for axis
CJP(CP)16	Ø16	5 $^{-0.03}_{-0.06}$	16.6	12.2	1.5	0.7	8	Type C 5 for axis
CJP(CP)20	Ø20	8 $^{-0.04}_{-0.076}$	21	16.2	1.5	0.9	8.5	Type C 8 for axis
CJP(CP)25	Ø25	10 $^{-0.04}_{-0.076}$	25.6	20.2	1.55	1.15	10.5	Type C 10 for axis

Rod End Nut

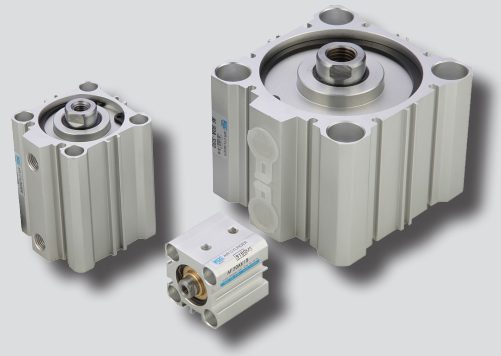
Material: Carbon Steel



Unit:mm

Part no.	Bore size	d	J	A	C
RN(CP)12	Ø12	M5X0.8	4	8	9.2
RN(CP)16	Ø16	M6X1.0	5	10	11.5
RN(CP)20	Ø20	M8X1.25	5	13	15
RN(CP)25	Ø25	M10X1.25	6	17	19.6

AFCK/ADFCK series



Features

- Compact installation space due to shorter tube length compared to the existing thin cylinder
- The thin cylinder is optimal for press fit, clamp and short stroke
- The exterior of the body is specially anodized to give it a beautiful appearance
- Both ends tapped type and through hole type can be selected for mounting type

How to Order

AFCK - [A] [20] - S [30] [ ] [ ] [ ] [ ]

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Series

AFCK	Single rod compact cylinder (Without magnet)
AFCWK	Double rod compact cylinder (Without magnet)
ADFCK	Single rod compact cylinder (With magnet)
ADFCWK	Double rod compact cylinder (With magnet)

② Mounting hole type

A	Through hole + tapped at both ends (standard)

③ Bore size

16	Ø16
20	Ø20
25	Ø25

④ Cylinder stroke

Item / Bore size	Standard stroke
Ø16	5, 10, 15. 20. 25, 30
Ø20	5, 10, 15, 20, 25, 30, 35, 40, 45, 50
Ø25	

⑤ Rod end thread

Nil	Female thread
N	Male thread

⑥ Auto switch

Reed A/S	Model	Solid state A/S	Model
A-90(V)	D-A90(V)K	F-9N(V)	D-F9N(V)K
A-93(V)	D-A93(V)K	F-9P(V)	D-F9P(V)K
A-93N	D-A93KN	F-9B(V)	D-F9B(V)K
A-93(V)S	D-A93(V)K-S	F-9N(V)S	D-F9N(V)K-S
		F-9P(V)S	D-F9P(V)K-S
		F-9B(V)S	D-F9B(V)K-S

※ Available only for built-in magnets.
※ For details, refer to [10]-11,12,20,21 PAGE.

⑦ Number of auto switches

Nil	2 pcs
S	1 pc
N	N pcs (N: 3, 4, 5...)

⑧ Special order

Nil	None
TS	Multi step stroke cylinder (Single rod)
TW	Multi-step stroke cylinder (Double rod)
ASJ	Stroke adjustable type (in forward direction within 10mm)
BSJ	Stroke adjustable type (in forward direction within 20mm)

Specifications

Bore size	Ø16	Ø20	Ø25
Fluid	Air		
Proof pressure	14.7kgf/㎠ (1.5MPa)		
Max. operating pressure	9.9kgf/㎠ (1.0MPa)		
Min. operating pressure	0.7kgf/㎠	0.5kgf/㎠(0.05MPa)	
Ambient & fluid temperature	Without auto switch: -10 ~ 70℃ (Without freezing) With auto switch: -10 ~ 60℃ (Without freezing)		
Operating piston speed	50~500mm/sec		
Tolerance of thread	KS 2 Class		
Tolerance of stroke	$^{+1.0}_{0}$		
Rod end thread	Female thread, Male thread		
Lubrication	Not required		
Degree of non-rotating rod	±0.8°	±0.7°	±0.6°
Allowable rotation torque (N·m Below)	0.15	0.2	0.25

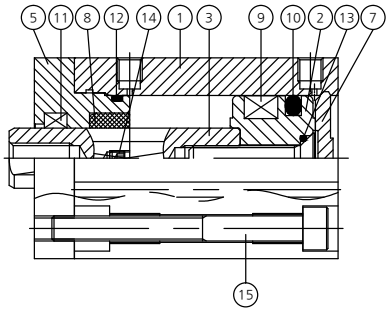
Precautions for installation

1. When using a rod anti-rotation cylinder, avoid using the piston rod with rotational torque.
   The non-rotating guide is deformed and the degree of non-rotation increases.

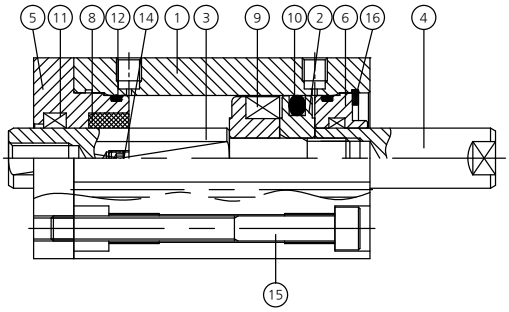
2. When mounting or dismounting the workpiece at the rod end, hold the spanner at the end of the piston rod with the piston rod fully retracted before use. At this time, tighten so that the tightening torque is not applied to the anti-rotation guide.

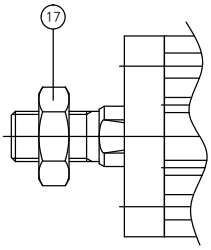
Structure(Standard)

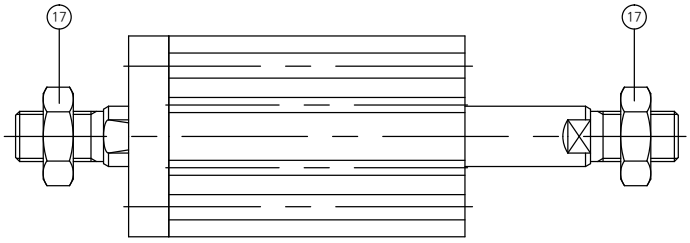
Single rod



Double rod





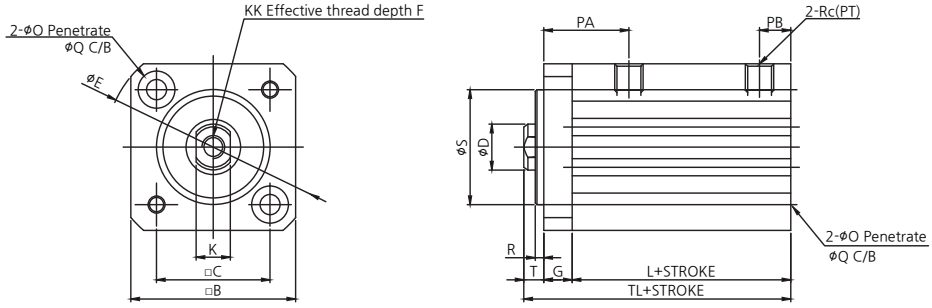


No.	Parts	Material	Remark
1	Cylinder tube	AL Alloy	Hard anodized aluminium
2	Piston	AL Alloy	-
3	Piston rod A	Stainless steel	Hard chrome plating
4	Piston rod B	Stainless steel	Hard chrome plating
5	Rod cover A	AL	White anodizing
6	Rod cover B	AL	White anodizing
7	Head cover	AL Alloy	White anodizing
8	Bush	Copper	-
9	Magnet	-	In case of built-in magnet
14	Fixing bolt	Carbon steel	Nickel plating
15	Assembly bolt	Carbon steel	Nickel plating
16	Snap ring	Carbon tool steel	Phosphate coating
17	Rod end nut	Carbon steel	Zinc chromate

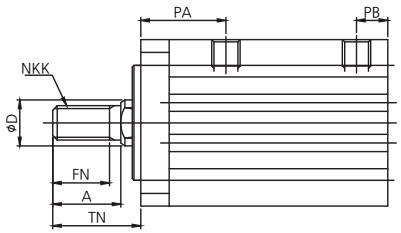
No.	Parts	Material	Bore size (mm)		
			Ø16	Ø20	Ø25
10	Piston packing	NBR	OPA16	OPA20	OPA25
11	Rod packing	NBR	SORA8	SORA10	SORA12
12	Tube o-ring	NBR	S-14	S-18	S-22
13	Rod o-ring	NBR	-	S-5	S-7

Dimensions-Single rod(AFCK,ADFCK)

Rod end female thread



Rod end male thread



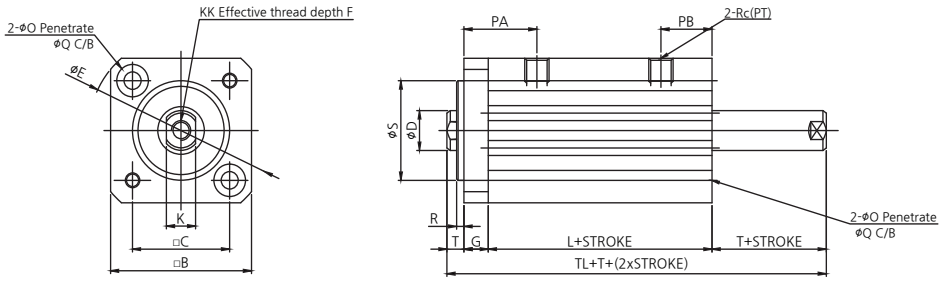
Unit:mm

Bore size	Stroke	Non built-in magnet(AFK)		Built-in magnet(ADFK)		A	□B	□C	ØD	ØE	F	FN	G	K
		L	TL	L	TL									
Ø16	5~30	17	25.5	22	30.5	12	29	20	8	38	8	10	5	6
Ø20	5~50	19.5	29	29.5	39	14	36	25.5	10	47	8	12	5	8
Ø25	5~30	22.5	32.5	32.5	42.5	17.5	40	28	12	52	12	15	5	10

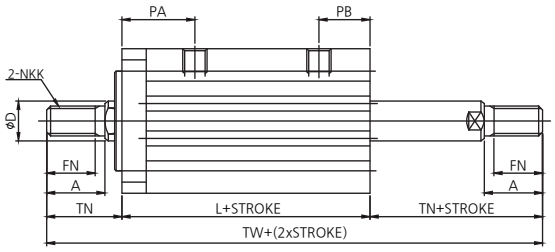
Bore size	KK	NKK	ØO	PA	PB	ØQ	Rc(PT)	T	TN
Ø16	M4X0.7	M6X1.0	3.5	12.5	5	6.5 Depth 3.5	M5X0.8	3.5	15.5
Ø20	M5X0.8	M8X1.25	5.5	13	5.5	9 Depth 7	M5X0.8	4.5	18.5
Ø25	M6x1.0	M10x1.25	5.5	14	5.5	9 Depth 7	M5X0.8	5	25.5

Dimensions-Double rod(AFCWK,ADFCWK)

Rod end female thread



Rod end male thread



Unit:mm

Bore size	Stroke	Non built-in magnet(AFWK)			Built-in magnet(ADFWK)			A	□B	□C	ØD	ØE	F	FN	G	K
		L	TL	TW	L	TL	TW									
Ø16	5~30	22	34	58	27	39	63	12	29	20	8	38	8	10	5	6
Ø20	5~50	26	40	68	36	50	78	14	36	25.5	10	47	8	12	5	8
Ø25	5~50	29	44	79	39	54	89	17.5	40	28	12	52	12	15	5	10

Bore size	KK	NKK	ØO	PA	PB	ØQ	Rc(PT)	T	TN
Ø16	M4x0.7	M6x1.0	3.5	12.5	7.5	6.5 Depth 3.5	M5X0.8	3.5	15.5
Ø20	M5X0.8	M8X1.25	5.5	16	8	9 Depth 7	M5X0.8	4.5	18.5
Ø25	M6x1.0	M10x1.25	5.5	17	9	9 Depth 7	M5X0.8	5	25.5