



Product feature

1. ISO15552 (original ISO6431) standard cylinder.
2. The piston seal is composed of two Y-shape seals of single direction structure, which has compensation function, long service life and low start-up pressure.
3. DNG series cylinders are made of aluminum pipe.
4. The buffer adjustment of cylinder is smooth and steady.
5. Cylinders and accessories for installation with several specifications are optional.
6. The seal material with high temperature resistance is adopted to guarantee the normal operation of cylinder at 150°C.

Symbol



Specification

Bore size(mm)	32	40	50	63	80	100	125	160	200	250	320
Acting type	Double acting										
Fluid	Air(to be filtered by 40μm filter element)										
Operating pressure	0.15~1.0MPa(22~145psi)(1.5~10.0bar)										
Proof pressure	1.5MPa(215psi)(15bar)										
Temperature	-20~70°C										
Speed range	30~800 mm/s										
Stroke tolerance	0 ~ 1000 ^{+1.0} 1001 ~ 2000 ^{+1.8}										
Cushion type	Variable cushion										
Cushion stroke	20		25		30		32		40		50
Port size [Note1]	G1/8		G1/4		G3/8		G1/2		G3/4		G1

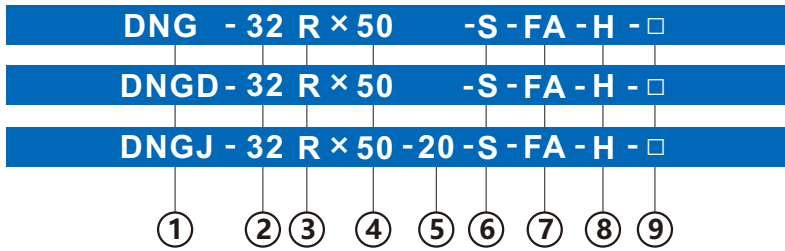
[Note1] The standard thread type is G thread, Please control us for other thread type.

Standard Stroke

Bore size(mm)	Standard stroke	Max.std stroke	Max. stroke
32	25 50 75 100 125 150 175 200 250 300 350 400 450 500	1000	1500
40	25 50 75 100 125 150 175 200 250 300 350 400 450 500 600 700 800	1200	1500
50	25 50 75 100 125 150 175 200 250 300 350 400 450 500 600 700 800 900 1000	1200	1500
63	25 50 75 100 125 150 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	1800
80	25 50 75 100 125 150 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	1800
100	25 50 75 100 125 150 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	1800
125	25 50 75 100 125 150 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	1800
160	25 50 75 100 125 150 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
200	25 50 75 100 125 150 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
250	25 50 75 100 125 150 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000
320	25 50 75 100 125 150 175 200 250 300 350 400 450 500 600 700 800 900 1000	1500	2000

[Note] Consult us for non-standard stroke.

Ordering code



① Model	② Bore size
DNG: Double acting type	32 40 50 63 80
DNGD: Double rod type	100 125 160
DNGJ: Adjustable stroke type	200 250 320

③ Rod material
Blank: EU
R: DPR

④ Stroke
Refer to stroke table for details

⑤ Adjustable stroke	
Series	Adjustable stroke
DNGJ series	10: 10mm
	20: 20mm
	30: 30mm
	40: 40mm
	50: 50mm
	75: 75mm
100: 100mm	
Others series	No this code

⑦ Mounting style	
Mounting style	Adaptable series
Blank: No accessories	
LB: LB type	DNG
FA: FA type	DNGD
FTC: FTC type	DNGJ
TC: TC type	
FB: FB type	
CA: CA type	DNG
CB: CB type	
CR: CR type	

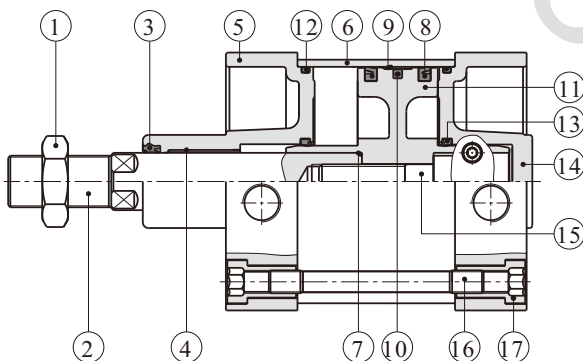
⑥ Magnet
Blank: Without magnet
S: With magnet

⑧ Seals material
Blank: NBR
H: Viton
T: TPU

⑨ Thread type
Blank: G thread
PT: PT thread

[Note1] CR is used with CB, FTC. TC are used with TCM1,TCM2.

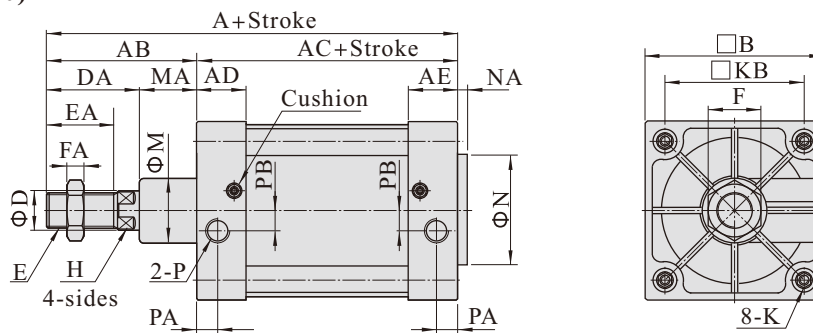
Inner structure and material of major parts



NO.	Item	Material
1	Rod nut	Carbon steel
2	Piston rod	Carbon steel with 20μm chrome plated
3	Front cover packing	NBR(SGC250)\TPU(Other)
4	Bushing	Wear resistant material
5	Front cover	Aluminum alloy
6	Aluminum pipe	Aluminum alloy
7	O-ring	NBR
8	Piston Seal	NBR
9	Wear ring	Wear resistant material
10	Magnet	Rubber
11	Piston	Aluminum alloy
12	O-ring	NBR
13	Buffer gasket	NBR(SGC250)\TPU(Other)
14	Back cover	Aluminum alloy
15	Screw	Carbon steel
16	Tie-rod	Carbon steel
17	Tie-rod nut	Carbon steel

Dimensions

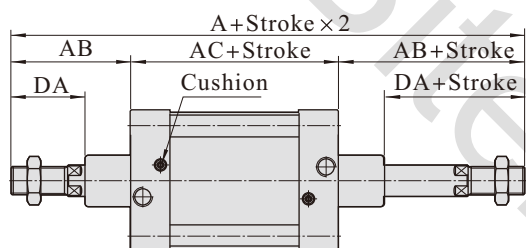
DNG Series(Φ32~Φ320)



Bore size\Item	A	AB	AC	AD	AE	B	D	DA	E	EA	F	FA	H	K	KB	M	MA	N	NA	P	PA	PB
32	142	48	94	27	27	47	12	29	M10×1.25	22	17	6	10	M6	32.5	30	19	30	3	G1/8	12	5.5
40	159	54	105	31	31	53	16	33	M12×1.25	24	17	7	13	M6	38	35	21	35	3.5	G1/4	15	6
50	175	69	106	31	31	65	20	42	M16×1.5	32	23	8	17	M8	46.5	40	27	40	3.5	G1/4	15.5	7.5
63	190	69	121	33	33	75	20	42	M16×1.5	32	23	8	17	M8	56.5	45	27	45	4	G3/8	16.5	7.5
80	214	86	128	36	36	95	25	53	M20×1.5	40	26	10	22	M10	72	45	33	45	4	G3/8	19	8.5
100	229	91	138	37	37	115	25	55	M20×1.5	40	26	10	22	M10	89	55	36	55	4	G1/2	18	9.5
125	279	119	160	45	45	140	32	79	M27×2.0	54	41	13.5	27	M12	110	60	40	60	4	G1/2	23	10
160	332	152	180	50	50	180	40	94	M36×2.0	72	55	18	36	M16	140	65	55	65	4	G3/4	25	15
200	347	167	180	50	50	220	40	100	M36×2.0	72	55	18	36	M16	175	75	67	75	5	G3/4	25	15
250	389	189	200	60	60	270	50	114	M42×2.0	84	64	20	46	M20	220	90	75	90	8	G1	30	20
320	436	216	220	65	65	350	63	126	M48×2.0	96	72	20	55	M24	270	110	90	110	10	G1	30	30

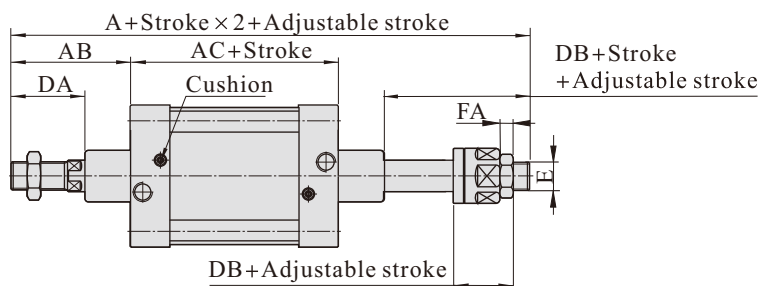
Remark: The dimensions of magnet type cylinder are the same as non-magnet type cylinder.

DNGD Series(Φ32~Φ320)



Bore size\Item Model	A		AB	AC	DA
	DNGD	DNGJ			
32	190	188	48	94	29
40	213	208	54	105	33
50	244	231	69	106	42
63	259	246	69	121	42
80	300	282.5	86	128	53
100	320	300.5	91	138	55
125	398	366.5	119	160	74
160	484	458	152	180	94
200	514	482	167	180	100
250	578	547	189	200	114
320	652		216	220	126

DNGJ Series(Φ32~Φ320)



Bore size\Item	DB	E	FA
32	27	M10X1.25	6
40	28	M12X1.25	7
50	29	M16X1.5	8
63	29	M16X1.5	8
80	35.5	M20X1.5	10
100	35.5	M20X1.5	10
125	42.5	M27X2.0	13.5
160	68	M36X2.0	18
200	68	M36X2.0	18
250	80	M42X2.0	21
320	80	M42X2.0	21

Remark:

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

List for ordering code of accessories

Accessories Bore size	Mounting accessories							
	LB	FA/FB	CA	CB	CR	TC	FTC	TCM1
32	F-DNG32LB	F-DNG32FA	F-DNG32CA	F-DNG32CB	F-DNG32CR	F-DNG32TC	F-DNG32FTC	F-DNG32TCM1
40	F-DNG40LB	F-DNG40FA	F-DNG40CA	F-DNG40CB	F-DNG40CR	F-DNG40TC	F-DNG40FTC	F-DNG40TCM1
50	F-DNG50LB	F-DNG50FA	F-DNG50CA	F-DNG50CB	F-DNG50CR	F-DNG50TC	F-DNG50FTC	F-DNG40TCM1
63	F-DNG63LB	F-DNG63FA	F-DNG63CA	F-DNG63CB	F-DNG63CR	F-DNG63TC	F-DNG63FTC	F-DNG63TCM1
80	F-DNG80LB	F-DNG80FA	F-DNG80CA	F-DNG80CB	F-DNG80CR	F-DNG80TC	F-DNG80FTC	F-DNG63TCM1
100	F-DNG100LB	F-DNG100FA	F-DNG100CA	F-DNG100CB	F-DNG100CR	F-DNG100TC	F-DNG100FTC	F-DNG125TCM1
125	F-DNG125LB	F-DNG125FA	F-DNG125CA	F-DNG125CB	F-DNG125CR	F-DNG125TC	F-DNG125FTC	F-DNG125TCM1
160	F-DNG160LB	F-DNG160FA	-	F-DNG160CB	-	F-DNG160TC	F-DNG160FTC	F-DNG160TCM1
200	F-DNG200LB	F-DNG200FA	-	F-DNG200CB	-	F-DNG200TC	F-DNG200FTC	F-DNG200TCM1
250	F-DNG250LB	F-DNG250FA	-	F-DNG250CB	-	-	-	-
320	F-DNG320LB	F-DNG320FA	-	F-DNG320CB	-	-	-	-

Accessories Bore size	Knuckle				Sensor switch	
	I: I Knuckle	Y: Y Knuckle	F: F Knuckle	U: U Knuckle	CS1-G	DS1-G
32	F-M10X125I	F-M10X125Y	F-M10X125F	F-M10X125U	CS1-G	DS1-G
40	F-M12X125I	F-M12X125Y	F-M12X125F	F-M12X125U		
50	F-M16X150I	F-M16X150Y	F-M16X150F	F-M16X150U		
63	F-M16X150I	F-M16X150Y	F-M16X150F	F-M16X150U		
80	F-M20X150I	F-M20X150Y	F-M20X150F	F-M20X150U		
100	F-M20X150I	F-M20X150Y	F-M20X150F	F-M20X150U		
125	F-M27X200I	F-M27X200Y	F-M27X200F	F-M27X200U		
160	F-M36X200I	F-M36X200Y	F-M36X200F	F-M36X200U		
200	F-M36X200I	F-M36X200Y	F-M36X200F	F-M36X200U		
250	F-M42X200I	F-M42X200Y	F-M42X200F	F-M42X200U		
320	F-M42X200I	F-M42X200Y	F-M42X200F	F-M42X200U		

Accessory selection

Accessories Cylinder model	Mounting accessories										Knuckle				Sensor switch	
	LB	FA	FB	CA	CB	CR	TC	FTC	TCM1	I	Y	U	F	CMSE	DMSE	
DNG	Standard	●	●	●	●	●	●	●	●	●	●	●	●	×	×	
	With magnet	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
DNGD DNGJ	Standard	●	●	×	×	×	×	●	●	●	●	●	●	×	×	
	With magnet	●	●	×	×	×	×	●	●	●	●	●	●	●	●	

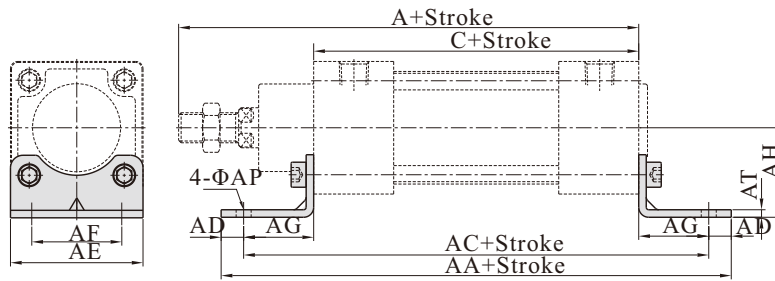
Material of accessories

Accessories Bore size	Mounting accessories									Knuckle			
	LB	FA	FB	CA	CB	CR	FTC	TCM1	I	Y	F	U	
32~100	○	●	●	●	●	●	■	■	□	□	□	□	
125~320	□	□	□	□	□	□	□	□	□	□	□	□	

●—Aluminum alloy, ■—Cast steel, ○—Low carbon steel, □—Carbon steel.

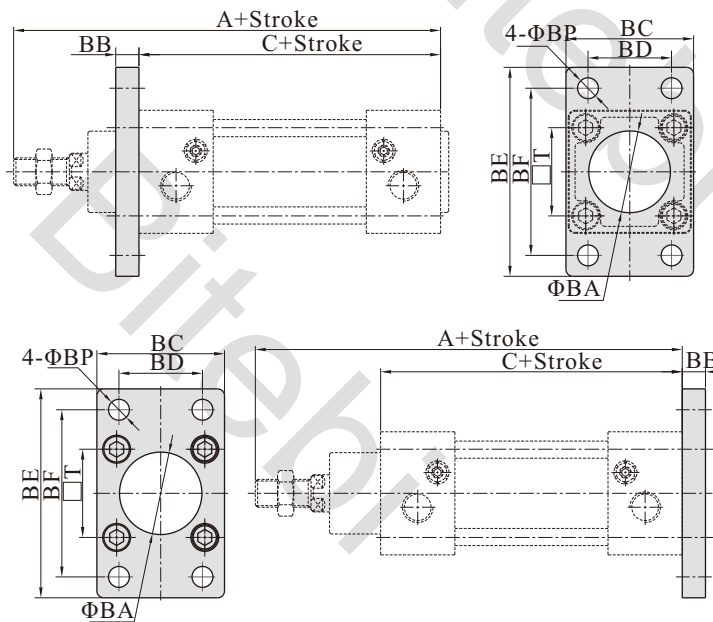
Accessories Dimensions

LB type



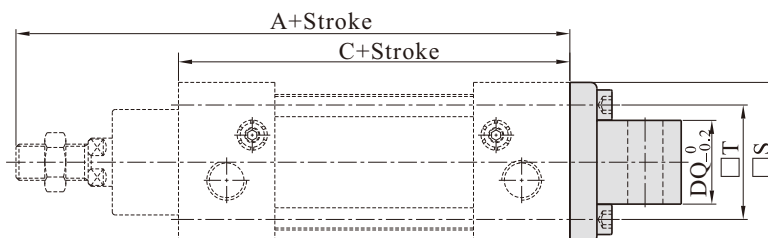
Bore size\Item	A	C	AA	AC	AD	AE	AF	AG	AH	AP	AT
32	142	94	158	142	8	47	32	24	32	7	3
40	159	105	179	161	9	53	36	28	36	9	3
50	175	106	190	170	10	65	45	32	45	9	3
63	190	121	209	185	12	75	50	32	50	9	3
80	214	128	248	210	19	95	63	41	63	12.5	4
100	229	138	258	220	19	115	75	41	71	14.5	4
125	279	160	290	250	20	140	90	45	90	16.5	8
160	332	180	340	300	20	180	115	60	115	18.5	8
200	347	180	380	320	30	220	135	70	135	24	9
250	389	200	410	350	30	275	165	75	165	28	19
320	436	220	470	390	40	350	200	85	185	35	23

FA\FB type

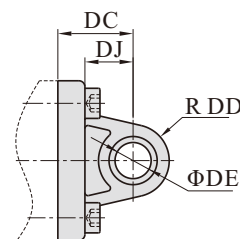


Bore size\Item	A	C	BA	BB	BC	BD	BE	BF	BP	T
32	142	94	30.5	10	47	32	80	64	7	32.5
40	159	105	35.5	10	53	36	90	72	9	38
50	175	106	40.5	12	65	45	108	90	9	46.5
63	190	121	45.5	12	75	50	118	100	9	56.5
80	214	128	45.5	16	95	63	150	126	12.5	72
100	229	138	55.5	16	115	75	176	150	14.5	89
125	279	160	60.5	20	139	90	218	180	16.5	110
160	332	180	65.5	20	180	115	280	230	18.5	140
200	347	180	75.5	25	220	135	320	270	24	175
250	389	200	90.5	25	270	165	390	330	26	220
320	436	220	110	30	349	200	470	400	33	270

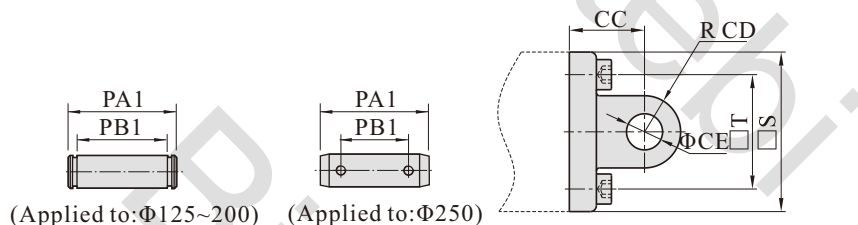
CA type



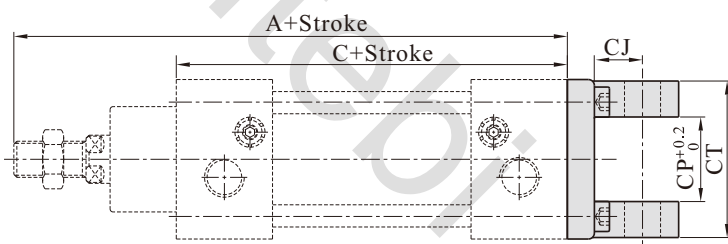
Bore size\Item	A	C	S	T	DC	DD	DE	DJ	DQ
32	142	94	46.5	32.5	22	10.5	10	13	25.8
40	159	105	54	38	25	12	12	16	27.8
50	175	106	64	46.5	27	12	12	17	31.7
63	190	121	75	56.5	32	15	16	22	39.7
80	214	128	93	72	36	15.5	16	22	49.7
100	229	138	110	89	41	20	20	27	59.7
125	279	160	134	110	50	24	25	33	69.7
160	332	180	180	140	55	30	30	35.5	89.7
200	347	180	220	175	60	30	30	37	89.7
250	389	200	270	220	70	35	40	46	110
320	436	220	350	270	80	45	45	52	120



CB type

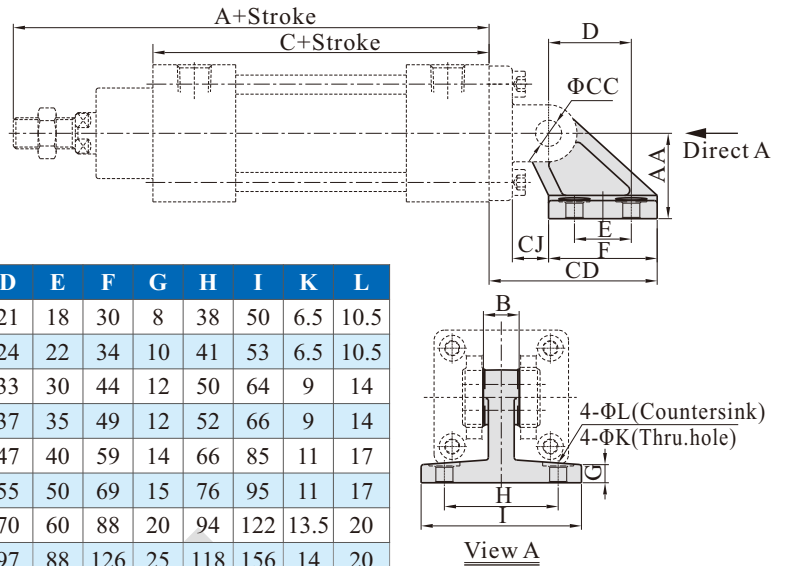


(Applied to: Φ125~200) (Applied to: Φ250)



Bore size\Item	A	C	CC	CD	CE	CJ	CP	CT	PA1	PB1	S	T
32	142	94	22	10.5	10	13	26	45	51	45.5	46.5	32.5
40	159	105	25	12	12	16	28	52	59	52.5	54	38
50	175	106	27	12	12	17	32	60	67	60.5	64	46.5
63	190	121	32	15	16	22	40	70	77	70.5	75	56.5
80	214	128	36	15.5	16	22	50	90	97	90.5	93	72
100	229	138	41	20	20	27	60	110	119	110.5	110	89
125	279	160	50	24	25	33	70	130	139	130.5	134	110
160	332	180	55	30	30	35.5	90	170	181	170.5	180	140
200	347	180	60	30	30	36	90	170	181	170.5	220	175
250	389	200	70	35	40	46	110	200	230	208	270	220
320	436	220	80	45	45	52	120	220	240	222	350	270

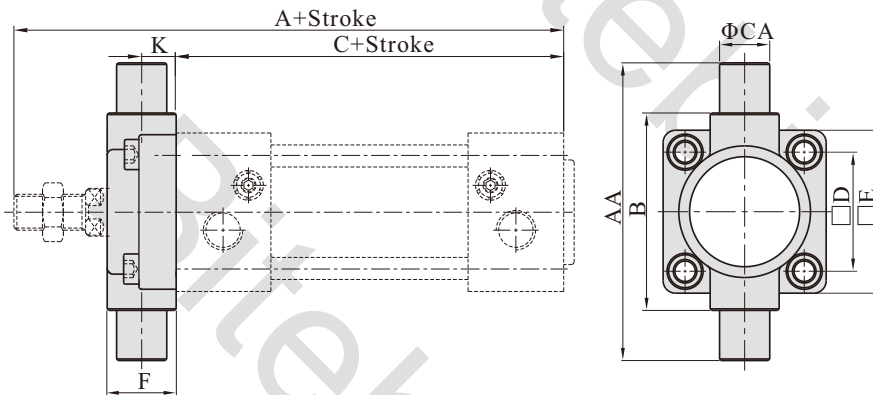
CR type



Bore size\Item	A	AA	B	C	CC	CD	CJ	D	E	F	G	H	I	K	L
32	142	32	26	94	10	49	10	21	18	30	8	38	50	6.5	10.5
40	159	36	28	105	12	55	12	24	22	34	10	41	53	6.5	10.5
50	175	45	32	106	12	67	13	33	30	44	12	50	64	9	14
63	190	50	40	121	16	76	17	37	35	49	12	52	66	9	14
80	214	63	50	128	16	92.5	19.5	47	40	59	14	66	85	11	17
100	229	71	60	138	20	105.5	22.5	55	50	69	15	76	95	11	17
125	279	90	70	160	25	134	29	70	60	88	20	94	122	13.5	20
160	332	115	90	180	30	171	25	97	88	126	25	118	156	14	20
200	347	135	90	180	30	185	31	105	90	130	30	122	162	18	26

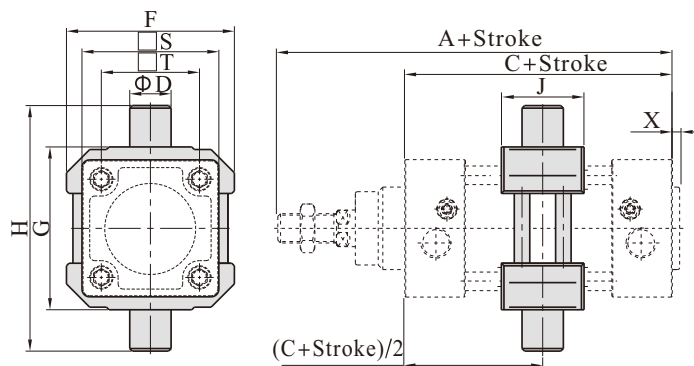
[Note] CR can't be used alone, it must be used with CB.

FTC type



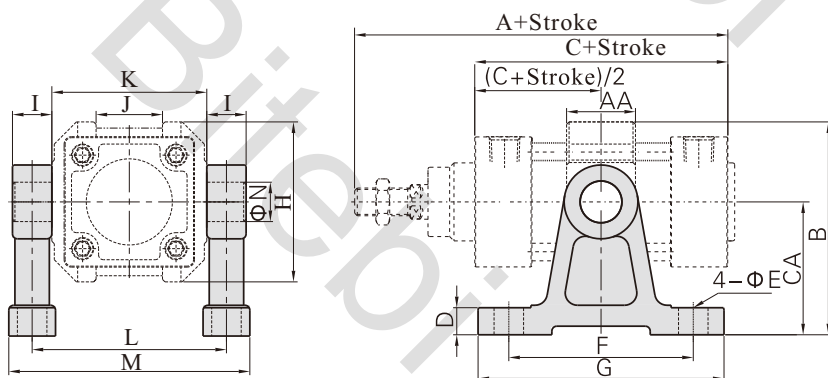
Bore size\Item	A	C	AA	B	CA	D	E	F	K
32	142	94	74	50	12	32.5	46	19	10
40	159	105	95	63	16	38	52	21	10
50	175	106	107	75	16	46.5	64	26	12
63	190	121	130	90	20	56.5	74	28	12
80	214	128	150	110	20	72	94	31	16
100	229	138	182	132	25	89	114	35	16
125	279	160	210	160	25	110	139	43	20
160	332	180	264	200	32	140	179	56	20
200	347	180	314	250	32	175	218	64	20

TC type



Bore size\Item	A	C	D	F	G	H	J	S	X	T
32	142	94	12	52	50	74	22	47	3	32.5
40	159	105	16	63	63	95	28	53	3.5	38
50	175	106	16	75	75	107	28	65	3.5	46.5
63	190	121	20	90	90	130	30	75	4	56.5
80	214	128	20	110	110	150	32	95	4	72
100	229	138	25	132	132	182	38	115	4	89
125	279	160	25	160	160	210	40	140	4	110
160	332	180	32	210	200	264	50	180	4	140
200	347	180	32	255	250	314	50	220	5	175
250										
320										

TCM1 type



Bore size\Item	A	AA	B	C	CA	D	E	F	G	H	I	J	K	L	M	N
32	142	22	66	94	40	11	9	60	80	52	12	20	50	62	77	12
40	159	28	86.5	105	54	11	12	75	100	65	16	27	63	79	98	16
50	175	28	91.5	106	54	11	12	75	100	75	16	31	75	91	110	16
63	190	30	115	121	70	11	12	85	110	90	20	42	90	110	133	20
80	214	32	126	128	70	11	12	85	110	112	20	54	110	130	153	20
100	229	38	157.5	138	90	19	18	115	155	135	25	68	132	157	185	25
125	279	40	175	160	90	19	18	115	155	170	25	80	160	185	213	25
160	332	50	215	180	110	24	22	140	190	210	32	100	200	232	267	32
200	347	50	262.5	180	135	27	22	150	200	255	32	125	250	282	317	32
250																
320																

[Note] The installation position of the accessories can not be adjusted arbitrarily.