



Compact cylinder—ACE Series

In accordance with ISO21287 standard

Product series

Series name	Mounting type									Acting type	Bore size	Collocation of sensor switch	
	Basic	FA	FB	CA	CB	CR	FTC	LB	SDB			CS1-E	DS1-E
Double acting type: ACE 	●	●	●	●	●	●	●	●	●	Double acting	12 16 20 25 32 40 50 63 80 100 125	●	●
Double rod type: ACED 	●	●	●	●	●	●	●	●	●				
Adjustable stroke type: ACEJ 	●	●	●	●	●	●	●	●	●	Single acting	12 16 20 25 32 40 50 63 80 100	●	●
Single acting type: ASE, ATE 	●	●	●	●	●	●	●	●	●				
Double acting non-rotating with guide rods: TACE 	●	●	●	●	●	●	●	●	●	Double acting	12 16 20 25 32 40 50 63 80 100	●	●
Double rod non-rotating with guide rods: TACED 	●	●	●	●	●	●	●	●	●				

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ACE

Installation and application

- When load changes in the work, the cylinder with abundant output capacity shall be selected.
- Relative cylinder with high temperature resistance or corrosion resistance shall be chosen under the condition of high temperature or corrosion.
- Necessary protection measure shall be taken in the environment with higher humidity, much dust or water drops, oil dust and welding dregs.
- Dirty substances in the pipe must be eliminated before cylinder is connected with pipeline to prevent the entrance of particles into the cylinder.
- The medium used by cylinder shall be filtered to 40 μm or below.
- As both of the front cover and piston of the cylinder are short, typically too large stroke can not be selected.
- Anti-freezing measure shall be adopted under low temperature environment to prevent moisture freezing.
- The cylinder shall avoid the influence of side load in operation to maintain the normal work of cylinder and extend the service life.
- If the cylinder is dismantled and stored for a long time, please conduct anti-rust treatment to the surface. Anti-dust caps shall be added in air inlet and outlet ports. The front and back cover can not be dismantled, which shall be especially noticed.

Criteria for selection: Cylinder thrust

Unit: Newton(N)

Bore size (mm)	Rod size (mm)	Acting type	Pressure area (mm ²)	Operating pressure (MPa)							Bore size (mm)	Rod size (mm)	Acting type	Pressure area (mm ²)	Operating pressure (MPa)								
				0.1	0.2	0.3	0.4	0.5	0.6	0.7					0.1	0.2	0.3	0.4	0.5	0.6	0.7		
12	6	Single acting	Push side	131.1	-	6.1	17.4	28.7	40.0	51.4	62.7	40	12	Single acting	Push side	1256.6	54.2	179.8	305.5	431.2	556.8	682.5	808.1
			Pull side	84.8	-	0.5	8.9	17.4	25.9	34.4	42.9				Pull side	1143.5	42.9	157.2	271.6	385.9	500.3	614.6	729.0
		Double acting	Push side	131.1	11.3	22.6	33.9	45.2	56.5	67.9	79.2			Double acting	Push side	1256.6	125.7	251.3	377.0	502.7	628.3	754.0	879.6
			Pull side	84.8	8.5	17.0	25.4	33.9	42.4	50.9	59.4				Pull side	1143.5	114.4	228.7	343.1	457.4	571.8	686.1	800.5
16	8	Single acting	Push side	201.1	-	18.1	38.2	58.3	78.4	98.5	118.6	50	16	Single acting	Push side	1963.5	90.1	286.5	482.8	679.2	875.5	1071.9	1268.2
			Pull side	150.8	-	8.1	23.1	38.2	53.3	68.4	83.5				Pull side	1762.4	70.0	246.3	422.5	598.8	775.0	951.3	1127.5
		Double acting	Push side	201.1	20.1	40.2	60.3	80.4	100.5	120.6	140.7			Double acting	Push side	1963.5	196.3	392.7	589.0	785.4	981.7	1178.1	1374.4
			Pull side	150.8	15.1	30.2	45.2	60.3	75.4	90.5	105.6				Pull side	1762.4	176.2	352.5	528.7	705.0	881.2	1057.5	1233.7
20	10	Single acting	Push side	314.2	-	33.1	64.5	96.0	127.4	158.8	190.2	63	16	Single acting	Push side	3117.2	173.6	485.3	797.1	1108.8	1420.5	1732.2	2044.0
			Pull side	235.6	-	17.4	41.0	64.5	88.1	111.7	135.2				Pull side	2916.2	153.5	445.1	736.8	1028.4	1320.0	1611.6	1903.2
		Double acting	Push side	314.2	31.4	62.8	94.2	125.7	157.1	188.5	219.9			Double acting	Push side	3117.2	311.7	623.4	935.2	1246.9	1558.6	1870.3	2182.1
			Pull side	235.6	23.6	47.1	70.7	94.2	117.8	141.4	164.9				Pull side	2916.2	291.6	583.2	874.9	1166.5	1458.1	1749.7	2041.3
25	10	Single acting	Push side	490.9	13.8	62.9	112.0	161.0	210.1	259.2	308.3	80	20	Single acting	Push side	5026.5	305.6	808.2	1310.9	1813.5	2316.2	2818.8	3321.5
			Pull side	412.3	5.9	47.2	88.4	129.6	170.9	212.1	253.3				Pull side	4712.4	274.1	745.4	1216.6	1687.9	2159.1	2630.3	3101.6
		Double acting	Push side	490.9	49.1	98.2	147.3	196.3	245.4	294.5	343.6			Double acting	Push side	5026.5	502.7	1005.3	1508.0	2010.6	2513.3	3015.9	3518.6
			Pull side	412.3	41.2	82.5	123.7	164.9	206.2	247.4	288.6				Pull side	4712.4	471.2	942.5	1413.7	1885.0	2356.2	2827.4	3298.7
32	12	Single acting	Push side	804.2	30.8	111.2	191.7	272.1	352.5	432.9	513.4	100	20	Single acting	Push side	7854.0	499.1	1284.5	2069.9	2855.3	3640.7	4426.1	5211.5
			Pull side	691.2	19.5	88.6	157.7	226.9	296.0	365.1	434.2				Pull side	7539.8	467.7	1221.7	1975.7	2729.6	3483.6	4237.6	4991.6
		Double acting	Push side	804.2	80.4	160.8	241.3	321.7	402.1	482.5	563.0			Double acting	Push side	7854.0	785.4	1570.8	2356.2	3141.6	3927.0	4712.4	5497.8
			Pull side	691.2	69.1	138.2	217.3	297.5	377.7	457.9	538.1				Pull side	7539.8	754.0	1508.0	2262.0	3015.9	3769.9	4523.9	5277.9
Double acting	Push side	12271.8	1227.2	2454.4	3681.5	4908.7	6135.9	7363.1	8590.3	Double acting	Push side	12271.8	1227.2	2454.4	3681.5	4908.7	6135.9	7363.1	8590.3				
	Pull side	11780.9	1178.1	2356.2	3534.3	4712.4	5890.5	7086.5	8246.6		Pull side	11780.9	1178.1	2356.2	3534.3	4712.4	5890.5	7086.5	8246.6				



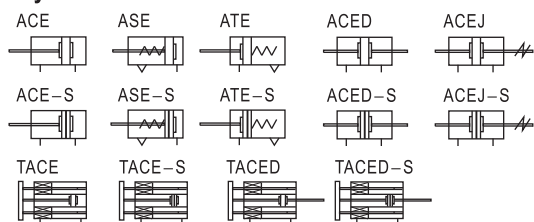
Compact cylinder



ACE Series



Symbol



Product feature

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

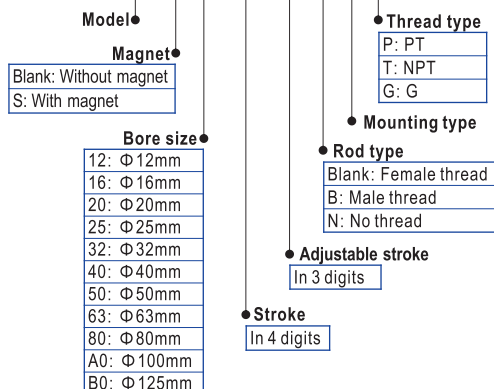
Ordering code

Model can be changed Ordering code. Example:

Production type: ACEJ
Magnet: With magnet
Bore size: 100mm
Stroke: 80mm
Adjustable stroke: 50mm
Rod type: Male thread
Mounting type: LB
Thread type: NPT

Model: ACEJ S-100 × 80-50-B-LB-T

Ordering code: ACEJ S A0 0080 050 B LB T



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 40 μm filter element)										
Operating pressure	0.1~1.0MPa (14~145psi)										
	0.2~1.0MPa (28~145psi)										
Proof pressure	1.5MPa (215psi)										
Temperature °C	-20~80										
Speed range mm/s	Double acting: 30~500 Single acting: 50~500										
Stroke tolerance	Stroke ≤ 150 ^{+1.0} Stroke > 150 ^{+1.4}										
Cushion type	Bumper										
Port size ①	M5 × 0.8						1/8"			1/4"	

① PT thread, NPT thread and G thread are available. Add) Refer to P403~426 for detail of sensor switch.

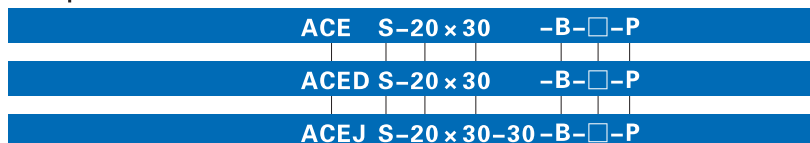
Stroke

Bore size (mm)		Standard stroke (mm)										Max. std stroke	Max. stroke		
12	Double acting	5	10	15	20	25	30	40	50	50	200				
	Single acting	5	10	-	-	-	-	-	-	-	-				
16	Double acting	5	10	15	20	25	30	40	50	50	200				
	Single acting	5	10	15	20	25	-	-	-	-	-				
20	Double acting	5	10	15	20	25	30	40	50	60	75	80	100	100	200
	Single acting	5	10	15	20	25	-	-	-	-	-	-	-	-	
25	Double acting	5	10	15	20	25	30	40	50	60	75	80	100	100	300
	Single acting	5	10	15	20	25	-	-	-	-	-	-	-	-	
32, 40	Double acting	5	10	15	20	25	30	40	50	60	75	80	100	100	300
	Single acting	5	10	15	20	25	-	-	-	-	-	-	-	-	
50, 63	Double acting	5	10	15	20	25	30	40	50	60	75	80	100	100	300
	Single acting	5	10	15	20	25	-	-	-	-	-	-	-	-	
80	Double acting	5	10	15	20	25	30	40	50	60	75	80	100	100	300
	Single acting	5	10	15	20	25	-	-	-	-	-	-	-	-	
100	Double acting	5	10	15	20	25	30	40	50	60	75	80	100	100	300
	Single acting	5	10	15	20	25	-	-	-	-	-	-	-	-	
125	Double acting	5	10	15	20	25	30	40	50	60	75	80	100	100	300
	Single acting	5	10	15	20	25	-	-	-	-	-	-	-	-	

Note 1. Please contact the company for other special strokes.

2. The dimensions of non-std stroke cylinder has the same dimensions as the next longer stroke std. stroke cylinder. e.g. 23mm stroke cylinder has the same dimensions of 25 std. stroke cylinder.

Explain of model



Model

ACE: Compact cylinder (Double acting)
ASE: Compact cylinder (Single acting-push)
ATE: Compact cylinder (Single acting-pull)
ACED: Compact cylinder (Double rod)
ACEJ: Compact cylinder (Adjustable stroke)
TACE: Compact cylinder (Double acting non-rotating with yoke)
TACED: Compact cylinder (Double rod non-rotating with yoke)

Magnet

Blank: Without magnet
S: With magnet

Bore size

Model	Bore size
ACE	12 16 20 25 32 40 50 63 80 100 125
ASE/ATE	12 16 20 25 32 40 50 63 80 100
ACED/ACEJ	12 16 20 25 32 40 50 63 80 100 125
TACE/TACED	12 16 20 25 32 40 50 63 80 100

Stroke

Refer to stroke table for details

Adjustable stroke

Model	Adjustable stroke
ACEJ	10: 10mm
	20: 20mm
	30: 30mm
	40: 40mm
	50: 50mm
	75: 75mm
100: 100mm	
Others	No this code

Thread type

P: PT
T: NPT
G: G

Mounting type

Model	Mounting type
All model	Blank: No accessories
ACE ASE ATE	FA: FA type
	FB: FB type
	CA: CA type
	CB: CB type
	CR: CR type
	FTC: FTC type
ACED ACEJ	LB: LB type
	SDB: SDB type
	FA: FA type
	FTC: FTC type
TACE	LB: LB type
	FB: FB type
	CA: CA type
	CB: CB type
TACED	CR: CR type
	FTC: FTC type
	FB: FB type

Rod type

Model	Rod type
ACE, ASE, ATE	Blank: Female thread
ACED, ACEJ	B: Male thread
	N: No thread
TACE, TACED	No this code

① Please refer to page 264~268 for accessory parts.

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

② Standard thread is blank here.



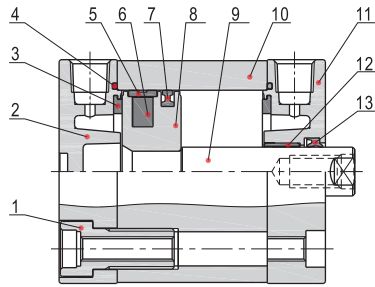
Compact cylinder



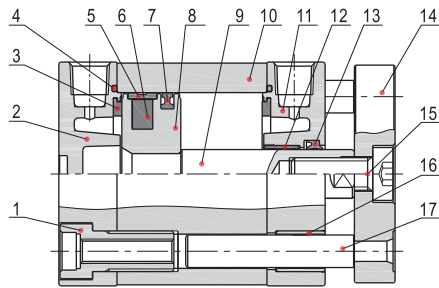
ACE Series

Inner structure and material of major parts

ACE-S



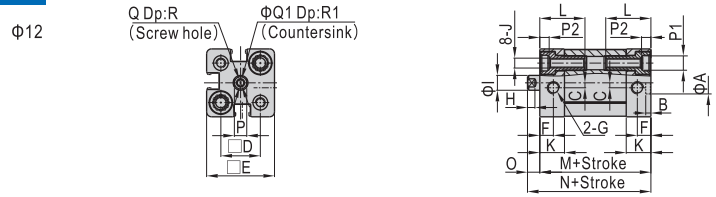
TACE-S



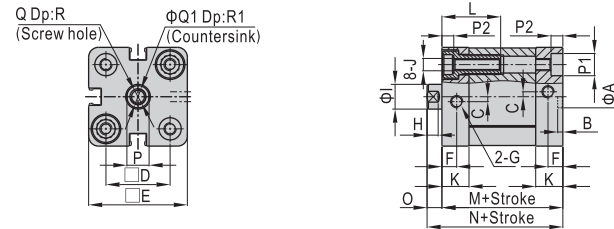
NO.	Item	Material
1	Screw	Carbon steel
2	Back cover	Aluminum alloy
3	Bumper	TPU
4	O-ring	NBR
5	Wear ring	No(Φ 12~20)\Wear resistant material(Others)
6	Magnet	Φ 12~20 Sintered metal(Neodymium-iron-boron) Others Plastic
7	Piston seal	NBR
8	Piston	Aluminum alloy
9	Piston rod	Stainless steel(Φ 12~25)\S45C(Others)
10	Body	Aluminum alloy
11	Front cover	Aluminum alloy
12	Bushing	No(Φ 12~25)\Wear resistant material(Others)
13	Front cover packing	TPU
14	Panel	Aluminum alloy
15	Screw	Carbon steel
16	Bushing	No(Φ 12~25)\Wear resistant material(Others)
17	Guide rod	Stainless steel(Φ 12~40)\S45C(Others)

Dimensions

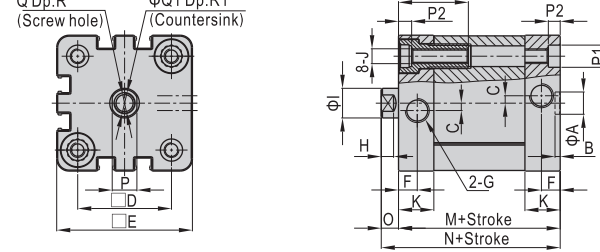
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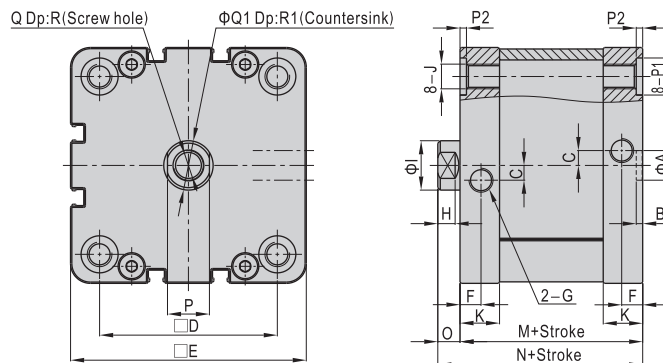
Φ16~Φ25



Φ32~Φ63



Φ80~Φ125



ACE

Bore size\Item	A	B	C	D	E	F	G	H	I	J	K	L	M	N
12	9	2.1	2	16	27.5	5.5	M5 × 0.8	3	6	M4 × 0.7	10	18.3	35	40
16	9	2.1	2	18	30	5.5	M5 × 0.8	3	8	M4 × 0.7	10	18.3	35	40
20	9	2.1	2	22	35.5	6	M5 × 0.8	4.5	10	M5 × 0.8	10.5	23.8	37	43
25	9	2.1	2	26	40	6	M5 × 0.8	4.5	10	M5 × 0.8	11	23.8	39	45
32	9	2.1	3	32.5	49.5	7.6	1/8"	5	12	M6 × 1.0	14	28.3	44	51
40	9	2.1	3	38	55	7.6	1/8"	5	12	M6 × 1.0	14.3	28.3	45.5	52.5
50	12	2.6	3	46.5	65.5	7.6	1/8"	6	16	M8 × 1.25	14.3	30.3	45.5	53.5
63	12	2.6	4	56.5	75.5	7.6	1/8"	6	16	M8 × 1.25	15	30.3	49	57
80	12	2.6	6	72	95.5	8.5	1/8"	7	20	M10 × 1.5	16	—	54	63
100	12	2.6	7	89	113.5	10.5	1/8"	7	20	M10 × 1.5	19	—	67	76
125	12	2.6	8	110	134.5	10.5	1/4"	9	25	M12 × 1.75	20	—	81	92

Bore size\Item	O	P	P1	P2	Q	Q1	R	R1
12	5	5	6	3.5	M3 × 0.5	3.3	8	1.5
16	5	7	6	3.5	M4 × 0.7	4.5	10	1.5
20	6	9	9	4.8	M6 × 1.0	6.5	14	2.6
25	6	9	9	4.8	M6 × 1.0	6.5	14	2.6
32	7	10	9	4.8	M8 × 1.25	8.5	16	3.3
40	7	10	9	4.8	M8 × 1.25	8.5	16	3.3
50	8	13	11	4.8	M10 × 1.5	10.5	20	4.7
63	8	13	11	4.8	M10 × 1.5	10.5	20	4.7
80	9	17	15	2.6	M12 × 1.75	12.5	20	6.1
100	9	17	15	2.6	M12 × 1.75	12.5	20	6.1
125	11	21	—	—	M16 × 1.75	16.5	25	7

Remark: The dimensions of magnet type cylinder are the same as non-magnet type cylinder.
Please refer to page 263 for male thread dimensions.

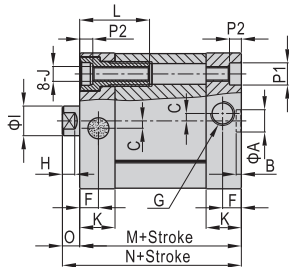
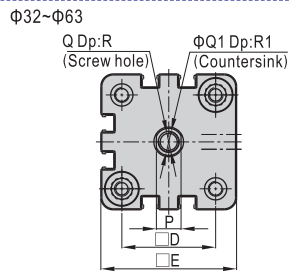
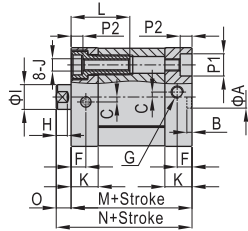
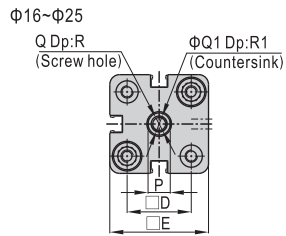
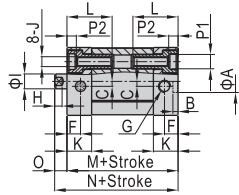
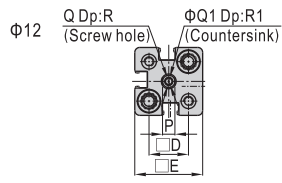


Compact cylinder

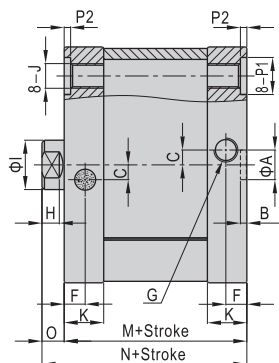
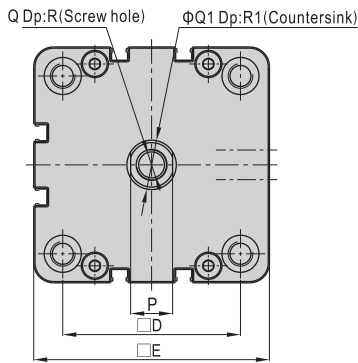


ACE Series

ASE



Φ80, Φ100

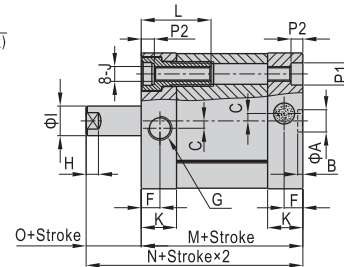
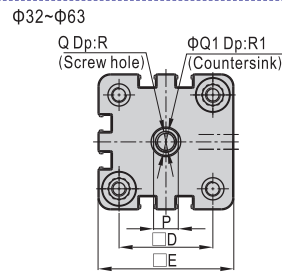
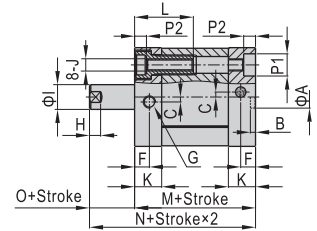
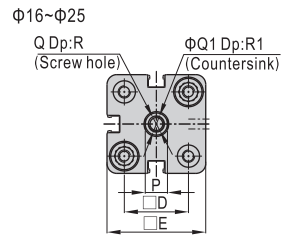
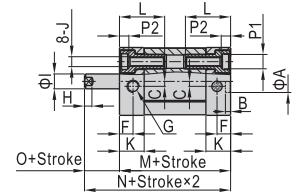
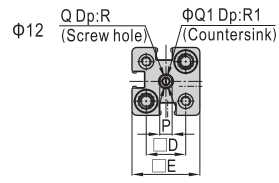


Bore size\Item	A	B	C	D	E	F	G	H	I	J	K
12	9	2.1	2	16	27.5	5.5	M5 × 0.8	3	6	M4 × 0.7	10
16	9	2.1	2	18	30	5.5	M5 × 0.8	3	8	M4 × 0.7	10
20	9	2.1	2	22	35.5	6	M5 × 0.8	4.5	10	M5 × 0.8	10.5
25	9	2.1	2	26	40	6	M5 × 0.8	4.5	10	M5 × 0.8	11
32	9	2.1	3	32.5	49.5	7.6	1/8"	5	12	M6 × 1.0	14
40	9	2.1	3	38	55	7.6	1/8"	5	12	M6 × 1.0	14.3
50	12	2.6	3	46.5	65.5	7.6	1/8"	6	16	M8 × 1.25	14.3
63	12	2.6	4	56.5	75.5	7.6	1/8"	6	16	M8 × 1.25	15
80	12	2.6	6	72	95.5	8.5	1/8"	7	20	M10 × 1.5	16
100	12	2.6	7	89	113.5	10.5	1/8"	7	20	M10 × 1.5	19

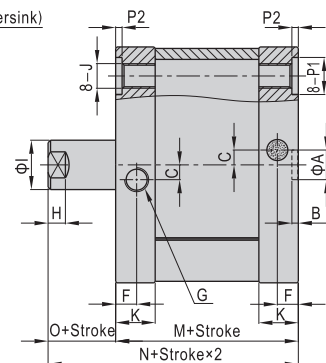
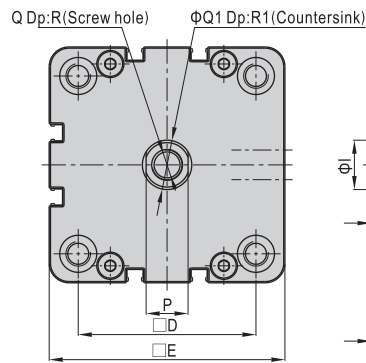
Bore size\Item	L	M	N	O	P	P1	P2	Q	Q1	R	R1
12	18.3	35	40	5	5	6	3.5	M3 × 0.5	3.3	8	1.5
16	18.3	35	40	5	7	6	3.5	M4 × 0.7	4.5	10	1.5
20	23.8	37	43	6	9	9	4.8	M6 × 1.0	6.5	14	2.6
25	23.8	39	45	6	9	9	4.8	M6 × 1.0	6.5	14	2.6
32	28.3	44	51	7	10	9	4.8	M8 × 1.25	8.5	16	3.3
40	28.3	45.5	52.5	7	10	9	4.8	M8 × 1.25	8.5	16	3.3
50	30.3	45.5	53.5	8	13	11	4.8	M10 × 1.5	10.5	20	4.7
63	30.3	49	57	8	13	11	4.8	M10 × 1.5	10.5	20	4.7
80	-	54	63	9	17	15	2.6	M12 × 1.75	12.5	20	6.1
100	-	67	76	9	17	15	2.6	M12 × 1.75	12.5	20	6.1

Remark: The dimensions of magnet type cylinder are the same as non-magnet type cylinder. Please refer to page 263 for male thread dimensions.

ATE



Φ80, Φ100



Bore size\Item	A	B	C	D	E	F	G	H	I	J	K
12	9	2.1	2	16	27.5	5.5	M5 × 0.8	3	6	M4 × 0.7	10
16	9	2.1	2	18	30	5.5	M5 × 0.8	3	8	M4 × 0.7	10
20	9	2.1	2	22	35.5	6	M5 × 0.8	4.5	10	M5 × 0.8	10.5
25	9	2.1	2	26	40	6	M5 × 0.8	4.5	10	M5 × 0.8	11
32	9	2.1	3	32.5	49.5	7.6	1/8"	5	12	M6 × 1.0	14
40	9	2.1	3	38	55	7.6	1/8"	5	12	M6 × 1.0	14.3
50	12	2.6	3	46.5	65.5	7.6	1/8"	6	16	M8 × 1.25	14.3
63	12	2.6	4	56.5	75.5	7.6	1/8"	6	16	M8 × 1.25	15
80	12	2.6	6	72	95.5	8.5	1/8"	7	20	M10 × 1.5	16
100	12	2.6	7	89	113.5	10.5	1/8"	7	20	M10 × 1.5	19

Bore size\Item	L	M	N	O	P	P1	P2	Q	Q1	R	R1
12	18.3	35	40	5	5	6	3.5	M3 × 0.5	3.3	8	1.5
16	18.3	35	40	5	7	6	3.5	M4 × 0.7	4.5	10	1.5
20	23.8	37	43	6	9	9	4.8	M6 × 1.0	6.5	14	2.6
25	23.8	39	45	6	9	9	4.8	M6 × 1.0	6.5	14	2.6
32	28.3	44	51	7	10	9	4.8	M8 × 1.25	8.5	16	3.3
40	28.3	45.5	52.5	7	10	9	4.8	M8 × 1.25	8.5	16	3.3
50	30.3	45.5	53.5	8	13	11	4.8	M10 × 1.5	10.5	20	4.7
63	30.3	49	57	8	13	11	4.8	M10 × 1.5	10.5	20	4.7
80	-	54	63	9	17	15	2.6	M12 × 1.75	12.5	20	6.1
100	-	67	76	9	17	15	2.6	M12 × 1.75	12.5	20	6.1

Remark: The dimensions of magnet type cylinder are the same as non-magnet type cylinder. Please refer to page 263 for male thread dimensions.



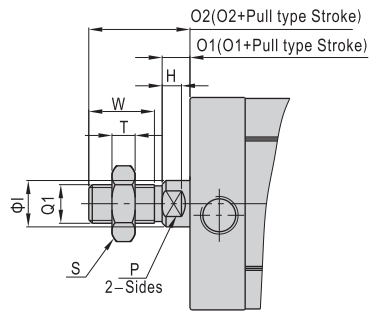
ACE



Compact cylinder

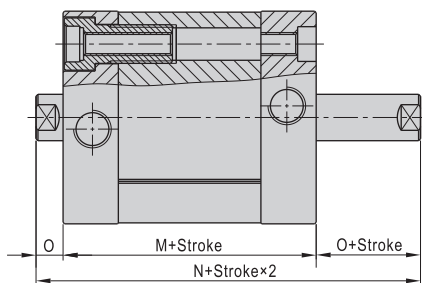
ACE Series

Male thread

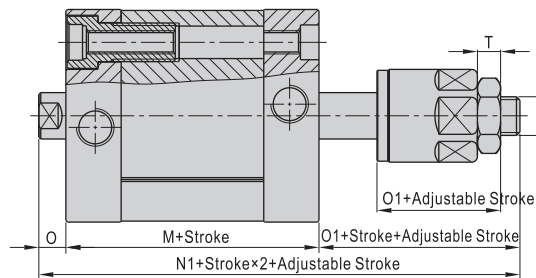


Bore size\Item	O1	O2	W	S	T	Q1	H	I	P
12	5	15	9	8	4	M5 × 0.8	3	6	5
16	5	17	11	10	5	M6 × 1.0	3	8	7
20	6	22	15	12	6	M8 × 1.25	4.5	10	9
25	6	22	15	12	6	M8 × 1.25	4.5	10	9
32	7	26	17	17	6	M10 × 1.25	5	12	10
40	7	26	17	17	6	M10 × 1.25	5	12	10
50	8	30	20	17	7	M12 × 1.25	6	16	13
63	8	30	20	17	7	M12 × 1.25	6	16	13
80	9	37	26	23	8	M16 × 1.5	7	20	17
100	9	37	26	23	8	M16 × 1.5	7	20	17
125	11	51	38	26	10	M20 × 1.5	9	25	21

ACED



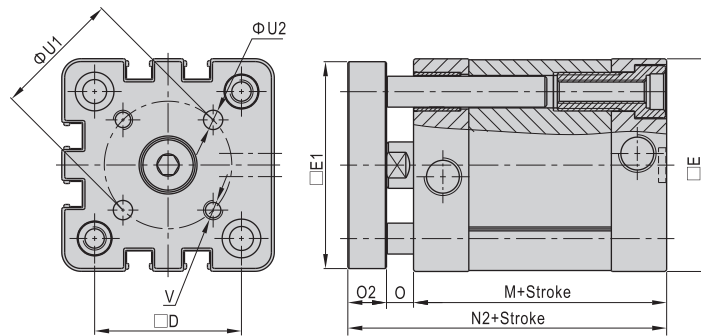
ACEJ



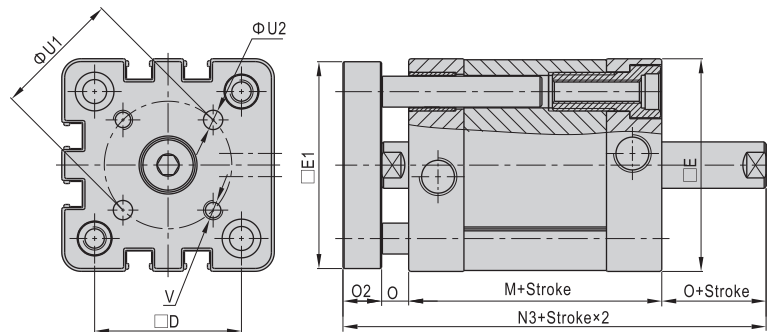
Bore size\Item	M	N	N1	O	O1	T	Q
12	35	45	57	5	17	4	M5 × 0.8
16	35	45	61	5	21	5	M6 × 1.0
20	37	49	68	6	25	6	M8 × 1.25
25	39	51	70	6	25	6	M8 × 1.25
32	44	58	78	7	27	6	M10 × 1.25
40	45.5	59.5	79.5	7	27	6	M10 × 1.25
50	45.5	61.5	81.5	8	28	7	M12 × 1.25
63	49	65	85	8	28	7	M12 × 1.25
80	54	72	92	9	29	8	M16 × 1.5
100	67	85	105	9	29	8	M16 × 1.5
125	81	103	127.5	11	35.5	10	M20 × 1.5

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

TACE



TACED



Bore size\Item	D	E	E1	M	N2	N3	O	O2	U1	U2	V
12	16	27.5	26.5	35	46	51	5	6	12	3	M3 × 0.5
16	18	30	29	35	46	51	5	6	14	3	M3 × 0.5
20	22	35.5	34.5	37	51	57	6	8	17	4	M4 × 0.7
25	26	40	39	39	53	59	6	8	22	5	M5 × 0.8
32	32.5	49.5	48	44	61	68	7	10	28	5	M5 × 0.8
40	38	55	53.5	45.5	62.5	69.5	7	10	33	5	M5 × 0.8
50	46.5	65.5	64	45.5	65.5	73.5	8	12	42	6	M6 × 1.0
63	56.5	75.5	74	49	69	77	8	12	50	6	M6 × 1.0
80	72	95.5	94	54	77	86	9	14	65	8	M8 × 1.25
100	89	113.5	112	67	90	99	9	14	80	10	M10 × 1.5

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



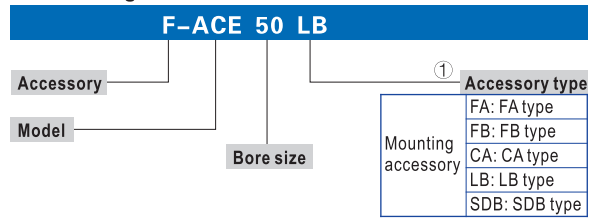
ACE

Compact cylinder



Accessories

Ordering code



① The listed accessories are for ACE cylinder. Accessories that are adaptable to other cylinders are not shown. Please refer to accessory list on P266 for selection and ordering information.

Accessory selection

Cylinder model	Accessories			Mounting accessory					
	LB	FA	FB	CA	CB	CR	SDB	FTC	TCM2
ACE	●	●	●	●	●	●	●	●	●
ASE, ATE	●	●	●	●	●	●	●	●	●
ACED, ACEJ	●	●	×	×	×	×	×	●	●
TACE	×	×	●	●	●	●	●	●	●
TACED	×	×	●	×	×	×	×	×	×



ACE

Cylinder model \ Accessories			Knuckle ①				Sensor switch ②	
			I	Y	F	U	CS1-E	DS1-E
ACE	Female thread	Standard	×	×	×	×	×	×
		With magnet	×	×	×	×	●	●
Male thread	Standard	●	●	●	●	×	×	
	With magnet	●	●	●	●	●	●	
ASE ATE	Female thread	Standard	×	×	×	×	×	×
		With magnet	×	×	×	×	●	●
Male thread	Standard	●	●	●	●	×	×	
	With magnet	●	●	●	●	●	●	
ACED ACEJ	Female thread	Standard	×	×	×	×	×	×
		With magnet	×	×	×	×	●	●
Male thread	Standard	●	●	●	●	×	×	
	With magnet	●	●	●	●	●	●	
TACE TACED	Female thread	Standard	×	×	×	×	×	×
		With magnet	×	×	×	×	●	●

① Please refer to P397~402 for knuckle detail.

② Please refer to P403~426 for detail of sensor switch.

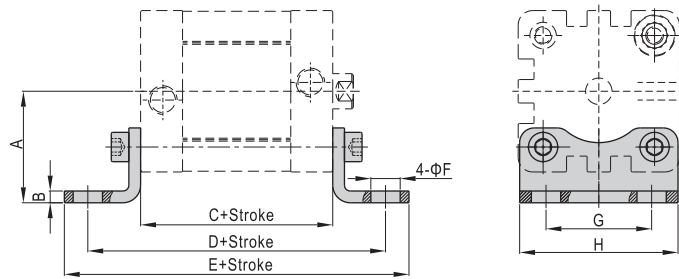
Material of accessories

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

● — Aluminum alloy, ■ — Cast steel,
◇ — Nodular cast iron, △ — SPCC; □ — Carbon steel.

Dimensions

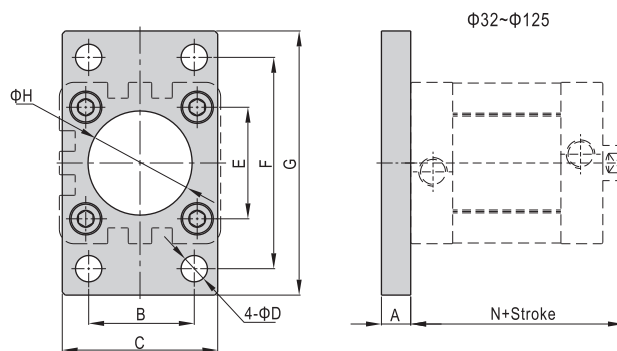
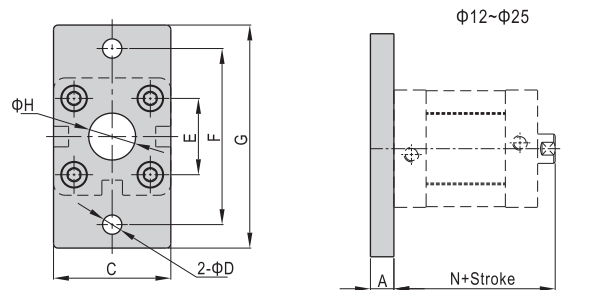
LB



Bore size\Item	A	B	C	D	E	F	G	H
12	21	3	35	61	71	5.5	16	26
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	103.5	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) Value C in the above table is only for ACE series. Please refer to relevant content for value C of other series.

FA, FB



Bore size\Item	A	B	C	D	E	F	G	H	N
12	8	-	30	5.5	16	40	55	10	40
16	8	-	30	5.5	18	43	55	10	40
20	8	-	36	6.6	22	55	68	16	43
25	8	-	40	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

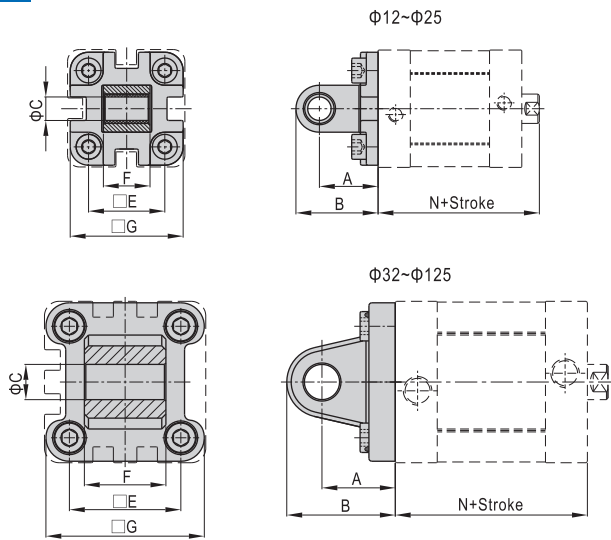


Compact cylinder



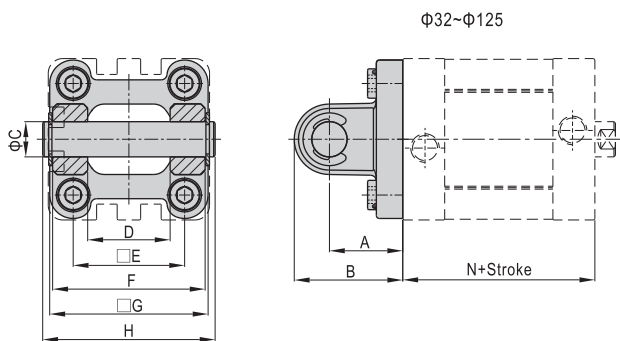
Accessories

CA



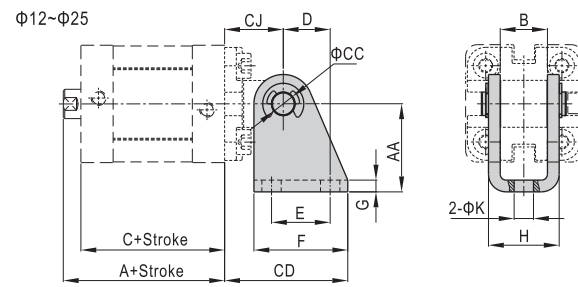
Bore size\Item	A	B	C	E	F	G	N
12	10	14	6	16	11.9	27	40
16	16	22	6	18	11.9	27.5	40
20	20	28	8	22	15.9	34.5	43
25	20	28	8	26	15.9	38.5	45
32	22	32.5	10	32.5	25.8	46.5	51
40	25	37	12	38	27.8	54	52.5
50	27	39	12	46.5	31.7	64	53.5
63	32	47	16	56.5	39.7	75	57
80	36	51.5	16	72	49.7	93	63
100	41	61	20	89	59.7	110	76
125	50	74	25	110	69.7	134	92

CB



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

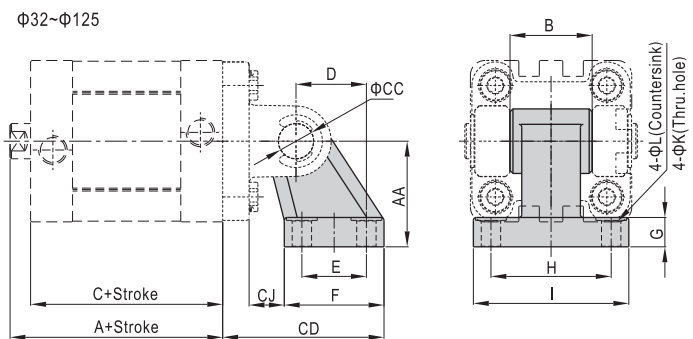
SDB



Bore size\Item	A	AA	B	C	CC	CD	CJ	D	E	F	G	H	K
12	40	27	12.1	35	6	28	10	13	15	25	3	18.1	5.5
16	40	27	12.1	35	6	34	16	13	15	25	3	18.1	5.5
20	43	30	16.1	37	8	42	20	16	20	32	4	24.1	6.6
25	45	30	16.1	39	8	42	20	16	20	32	4	24.1	6.6

Note) SDB can't be used alone, it must be used with CA.

CR



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 can't be used alone, it must be used with CB.



ACE

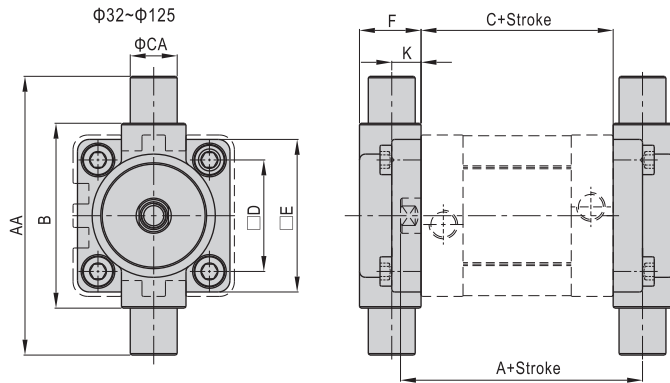


Compact cylinder



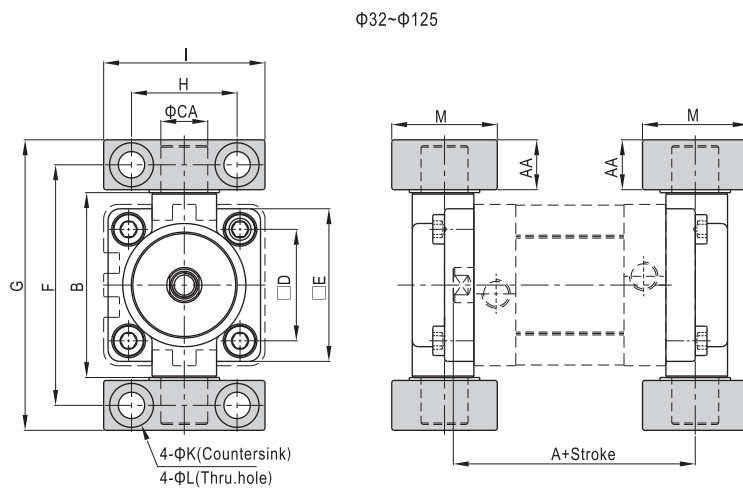
Accessories

FTC



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



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

List for ordering code of accessories

Bore size	Accessories			
	LB	FA/FB	CA	CB
12	F-ACE12LB	F-ACE12FA	F-ACE12CA	-
16	F-ACP12LB	F-ACE16FA	F-ACP12CA	-
20	F-ACP20LB	F-ACE20FA	F-ACP20CA	-
25	F-ACP25LB	F-ACE25FA	F-ACP25CA	-
32	F-ACE32LB	F-SI32FA	F-SE32CA	F-SE32CB
40	F-ACE40LB	F-SI40FA	F-SE40CA	F-SE40CB
50	F-ACE50LB	F-SI50FA	F-SE50CA	F-SE50CB
63	F-ACE63LB	F-SI63FA	F-SE63CA	F-SE63CB
80	F-ACE80LB	F-SI80FA	F-SE80CA	F-SE80CB
100	F-ACE100LB	F-SI100FA	F-SE100CA	F-SE100CB
125	-	F-SI125FA	F-SE125CA	F-SE125CB

Bore size	Accessories			
	CR	SDB	FTC	TCM2
12	-	F-MI12SDB	-	-
16	-	F-MI12SDB	-	-
20	-	F-MI20SDB	-	-
25	-	F-MI20SDB	-	-
32	F-SI32CR	-	F-SI32FTC	F-SI32TCM2
40	F-SI40CR	-	F-SI40FTC	F-SI40TCM2
50	F-SI50CR	-	F-SI50FTC	F-SI40TCM2
63	F-SI63CR	-	F-SI63FTC	F-SI63TCM2
80	F-SI80CR	-	F-SI80FTC	F-SI63TCM2
100	F-SI100CR	-	F-SI100FTC	F-SI125TCM2
125	F-SI125CR	-	F-SI125FTC	F-SI125TCM2

Bore size	Accessories			
	I: I Knuckle	Y: Y Knuckle	F: F Knuckle	U: U Knuckle
12	F-M05080IQ	F-M05080YQ	F-M05080F	F-M05080U
16	F-M06100II	F-M06100YI	F-M06100F	F-M06100U
20	F-M08125II	F-M08125YI	F-M08125F	F-M08125U
25				
32	F-M10125II	F-M10125YI	F-M10125F	F-M10125U
40				
50	F-M12125II	F-M12125YI	F-M12125F	F-M12125U
63				
80	F-M16150II	F-M16150YI	F-M16150F	F-M16150U
100				
125	F-M20150II	F-M20150YI	F-M20150F	F-M20150U

Bore size	Accessories	
	CS1-E	DS1-E
12~125	CS1-E	DS1-E

