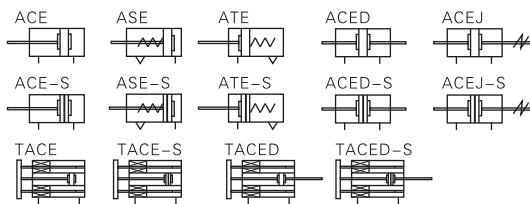




Symbol



Product feature

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

Ordering code

Model		Bore size		Adjustable Stroke		Magnet code		Rod type		Mounting type		Thread type	
ACE	Compact cylinder(Double acting)	20 × 30	30	10: 10mm		Blank	Without magnet	ACE/ASE/ATE	Blank: Female thread	All model	Blank: No accessories	Blank	PT
ASE	Compact cylinder(Single acting-push)	20 × 30	30	20: 20mm		S	With magnet	ACED/ACEJ	B: Male thread	ACE	FA: FA type	G	G
ATE	Compact cylinder(Single acting-pull)	20 × 30	30	30: 30mm		S		TACE	No this code	ASE	FB: FB type	T	NPT
ACED	Compact cylinder(Double rod)			40: 40mm				TACED		ATE	CA: CA type		
ACEJ	Compact cylinder(Adjustable stroke)			50: 50mm							CB: CB type		
TACE	Compact cylinder (Double acting non-rotating with yoke)			75: 75mm							CR: CR type		
TACED	Compact cylinder (Double rod non-rotating with yoke)			100: 100mm							FTC: FTC type		
				Others	No this code						LB: LB type		
											SDB: SDB type		
											FA: FA type		
											FTC: FTC type		
											LB: LB type		
											FB: FB type		
											CA: CA type		
											CB: CB type		
											CR: CR type		
											FTC: FTC type		
											FB: FB type		

Note: 1. Standard thread is blank here.
2. CR must be used with CA, FTC must be used with TCM2.

Specifications

Bore size(mm)		12	16	20	25	32	40	50	63	80	100	125
Acting type		Double acting										
		Single acting_ Push type, Single acting_ Pull type										
Fluid		Air (to be filtered by 40μm filter element)										
Operating pressure	Double acting	0.15~1.0MPa(22~145psi)										
	Single acting	0.2~1.0MPa(28~145psi)										
Proof pressure		1.5MPa(215psi)										
Temperature (°C)		-20~70										
Speed range (mm/s)		Double acting: 30~500, Single acting: 50~500										
Stroke tolerance		Stroke≤100 ^{+1.0} Stroke>100 ^{+1.5}										
Cushion type		Bumper										
Port size Note)		M5×0.8					1/8"				1/4"	

Note: PT thread, G thread and NPT thread are available.

Stroke

Bore size(mm)		Standard stroke (mm)											Max. stroke
Common type	Double acting	12	5	10	15	20	25	30	35	40	45	50	50
		16	5	10	15	20	25	30	35	40	45	50	75
		20	5	10	15	20	25	30	35	40	45	50	100
		25	5	10	15	20	25	30	35	40	45	50	150
		32	5	10	15	20	25	30	35	40	45	50	200
		50	5	10	15	20	25	30	35	40	45	50	250
	Single acting	12	5	10									10
		16~100	5	10	15	20	25						25
Non-rotating with yoke	Double acting	12	5	10	15	20	25	30	35	40	45	50	50
		16	5	10	15	20	25	30	35	40	45	50	75
		20	5	10	15	20	25	30	35	40	45	50	100
		32	5	10	15	20	25	30	35	40	45	50	100
		50	5	10	15	20	25	30	35	40	45	50	100
		80	5	10	15	20	25	30	35	40	45	50	100

Note: 1. Please contact the company for other special strokes.
2. The dimensions of non-std stroke cylinder has the same dimensions as the longer std. stroke cylinder. e.g. 23mm stroke cylinder has the same dimensions of 25 std. stroke cylinder.

Cylinder

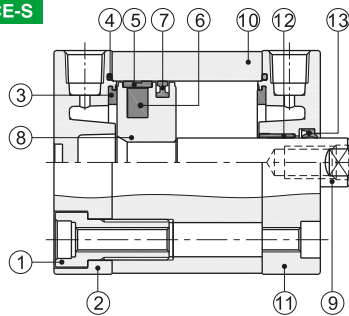
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SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRQ2
NCRB2
ACK
SRC
QCK
NCK1

Cylinder

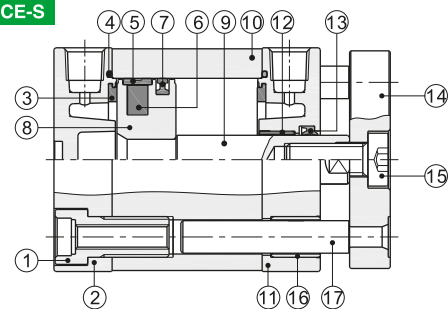
SC
SC(Big)
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NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRO2
NCRB2
ACK
SRC
QCK
NCK1

Inner structure and material of major parts

ACE-S



TACE-S

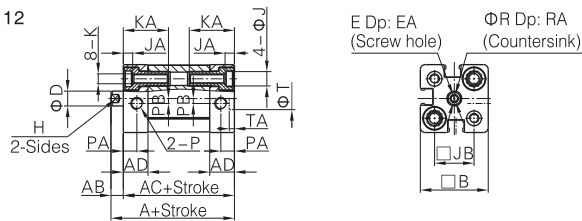


NO.	Item	Material
1	Screw	Carbon steel
2	Back cover	Aluminum alloy
3	Bumper	TPU
4	O-ring	NBR
5	Wear ring	No(Φ 12~20)\Wear resistant material(Others)
6	Magnet	Sintered metal(Neodymium-iron-boron)(Φ 12~20)\Plastic(Others)
7	Piston seal	NBR
8	Piston	Aluminum alloy
9	Piston rod	S45C
10	Body	Aluminum alloy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

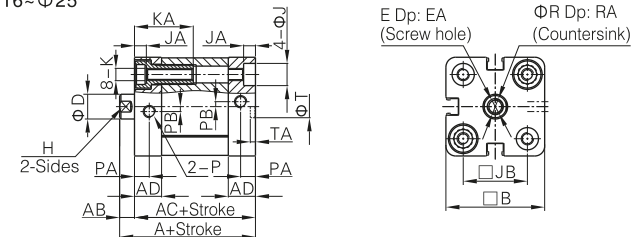
Dimensions

ACE

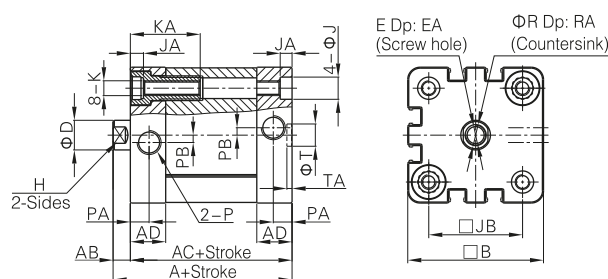
Φ 12



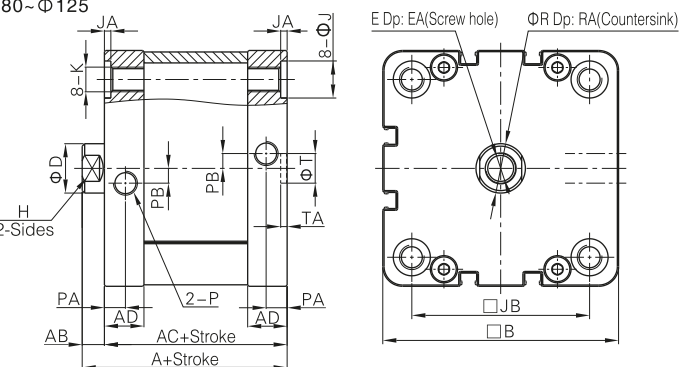
Φ 16~Φ 25



Φ 32~Φ 63



Φ 80~Φ 125

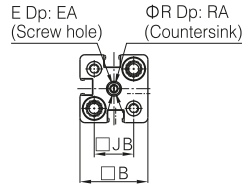
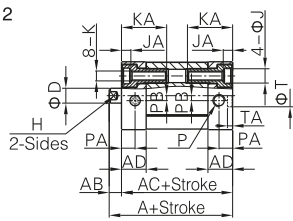


Bore size\Item	A	AB	AC	AD	B	D	E	EA	H	J	JA	JB	K	KA	P	PA	PB	R	RA	T	TA
12	40	5	35	10	27.5	6	M3×0.5	8	5	6	3.5	16	M4×0.7	18.5	M5×0.8	5.5	2	3.5	1.5	9	2.1
16	40	5	35	10	30	8	M4×0.7	10	7	6	3.5	18	M4×0.7	18.5	M5×0.8	5.5	2	4.5	1.5	9	2.1
20	43	6	37	10.5	35.5	10	M6×1.0	14	9	9	4.5	22	M5×0.8	23.5	M5×0.8	6	2	6.5	2.5	9	2.1
25	45	6	39	11	40	10	M6×1.0	14	9	9	4.5	26	M5×0.8	23.5	M5×0.8	6	2	6.5	2.5	9	2.1
32	51	7	44	14	49.5	12	M8×1.25	16	10	9	4.5	32.5	M6×1.0	28.5	1/8"	7.5	3	8.5	3.5	9	2.1
40	52.5	7	45.5	14.5	55	12	M8×1.25	16	10	9	4.5	38	M6×1.0	28.5	1/8"	7.5	3	8.5	3.5	9	2.1
50	53.5	8	45.5	14.5	65.5	16	M10×1.5	20	13	11	4.5	46.5	M8×1.25	30.5	1/8"	7.5	3	10.5	4.5	12	2.6
63	57	8	49	15	75.5	16	M10×1.5	20	13	11	4.5	56.5	M8×1.25	30.5	1/8"	7.5	4	10.5	4.5	12	2.6
80	63	9	57	16	95.5	20	M12×1.75	20	17	15	2.5	72	M10×1.5	-	1/8"	8.5	6	12.5	6	12	2.6
100	76	9	67	19	113.5	20	M12×1.75	20	17	15	2.5	89	M10×1.5	-	1/8"	10.5	7	12.5	6	12	2.6
125	92	11	81	20	134.5	25	M16×2.0	25	21	-	-	110	M12×1.75	-	1/4"	10.5	8	16.5	7	12	2.6

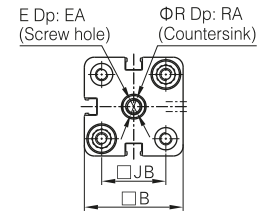
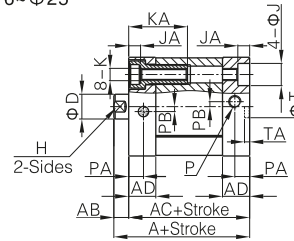
Note: The dimensions of magnet type cylinder are the same as non-magnet type cylinder.

ASE

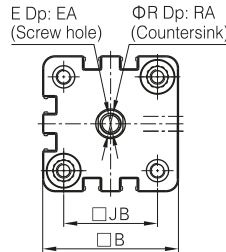
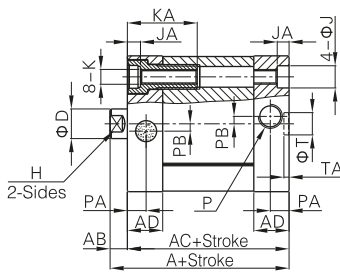
Φ12



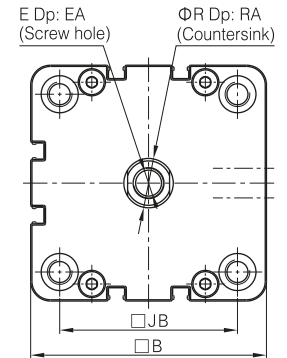
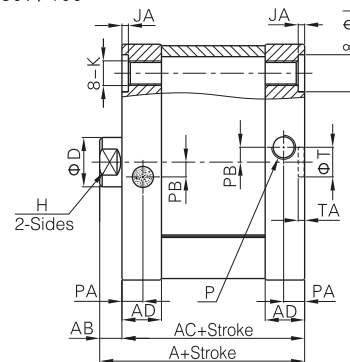
Φ16~Φ25



Φ32~Φ63

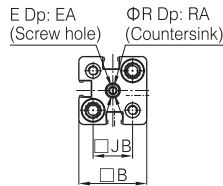
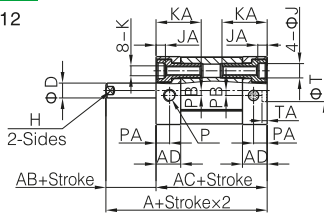


Φ80\Φ100

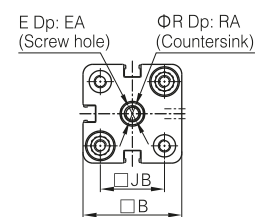
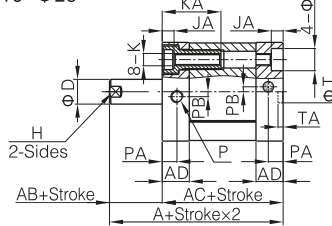


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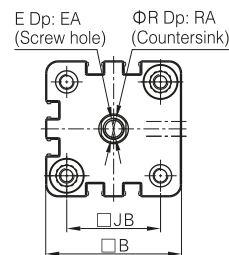
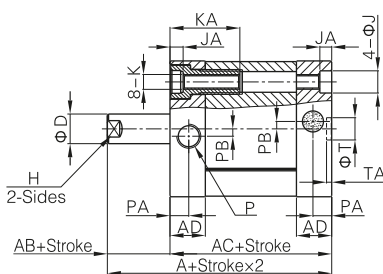
Φ12



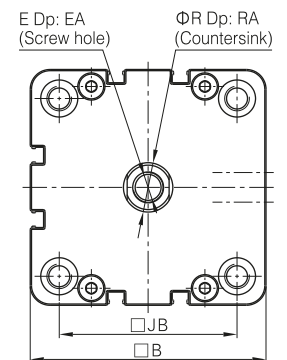
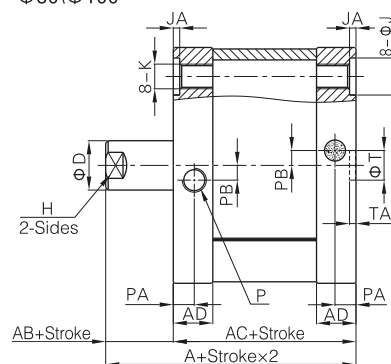
Φ16~Φ25



Φ32~Φ63



Φ80\Φ100



Bore size/Item	A	AB	AC	AD	B	D	E	EA	H	J	JA	JB	K	KA	P	PA	PB	R	RA	T	TA
12	40	5	35	10	27.5	6	M3×0.5	8	5	6	3.5	16	M4×0.7	18.5	M5×0.8	5.5	2	3.5	1.5	9	2.1
16	40	5	35	10	30	8	M4×0.7	10	7	6	3.5	18	M4×0.7	18.5	M5×0.8	5.5	2	4.5	1.5	9	2.1
20	43	6	37	10.5	35.5	10	M6×1.0	14	9	9	4.5	22	M5×0.8	23.5	M5×0.8	6	2	6.5	2.5	9	2.1
25	45	6	39	11	40	10	M6×1.0	14	9	9	4.5	26	M5×0.8	23.5	M5×0.8	6	2	6.5	2.5	9	2.1
32	51	7	44	14	49.5	12	M8×1.25	16	10	9	4.5	32.5	M6×1.0	28.5	1/8"	7.5	3	8.5	3.5	9	2.1
40	52.5	7	45.5	14.5	55	12	M8×1.25	16	10	9	4.5	38	M6×1.0	28.5	1/8"	7.5	3	8.5	3.5	9	2.1
50	53.5	8	45.5	14.5	65.5	16	M10×1.5	20	13	11	4.5	46.5	M8×1.25	30.5	1/8"	7.5	3	10.5	4.5	12	2.6
63	57	8	49	15	75.5	16	M10×1.5	20	13	11	4.5	56.5	M8×1.25	30.5	1/8"	7.5	4	10.5	4.5	12	2.6
80	63	9	57	16	95.5	20	M12×1.75	20	17	15	2.5	72	M10×1.5	-	1/8"	8.5	6	12.5	6	12	2.6
100	76	9	67	19	113.5	20	M12×1.75	20	17	15	2.5	89	M10×1.5	-	1/8"	10.5	7	12.5	6	12	2.6

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

Cylinder

SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRQ2
NCRB2
ACK
SRC
QCK
NCK1

Cylinder

SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ

NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU

ACE(AND)

MAL
MA
MI

NCM2

NCJ2

NCG1

NCJP

TD

TN(TDA)

NCXS

NCXSW

NMGP

NMGG

NCU

NCUJ

NCY3B

NCY3R

NCY1S

NCY1L

STM

NMXH

NMXS

NMXQ

NMH22

NMHC2

NMHL2

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NMHS3

NMHS4

NMRHQ

NMSQ

NCRA1

NCRQ2

NCRB2

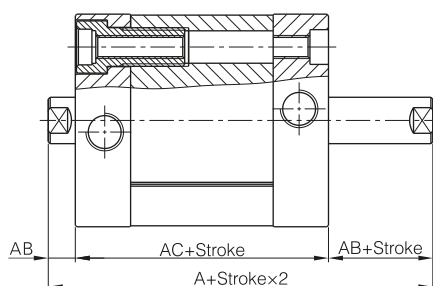
ACK

SRC

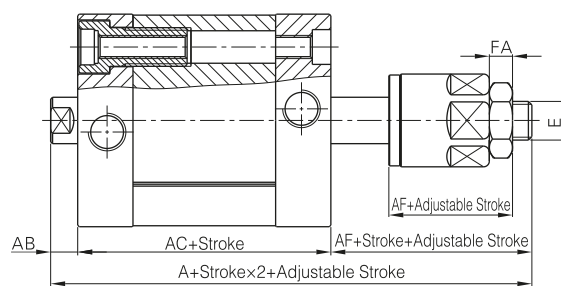
QCK

NCK1

ACED



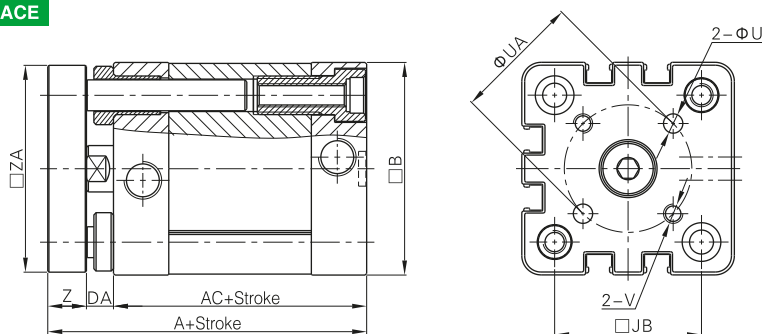
ACEJ



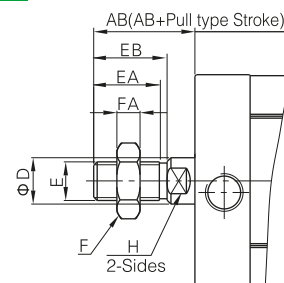
Bore size/Item	A(ACED)	A(ACEJ)	AB	AC	AF	FA	E
12	45	57	5	35	17	4	M5x0.8
16	45	61	5	35	21	5	M6x1.0
20	49	68	6	37	25	6	M8x1.25
25	51	70	6	39	25	6	M8x1.25
32	58	78	7	44	27	6	M10x1.25
40	59.5	79.5	7	45.5	27	6	M10x1.25
50	61.5	81.5	8	45.5	28	7	M12x1.25
63	65	85	8	49	28	7	M12x1.25
80	72	92	9	54	29	8	M16x1.5
100	85	105	9	67	29	8	M16x1.5
125	103	127.5	11	81	35.5	10	M20x1.5

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

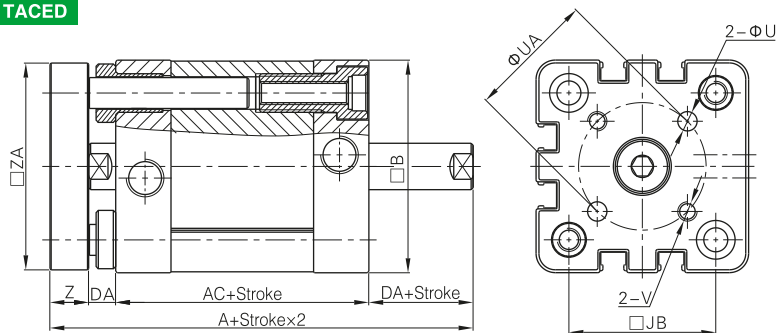
TACE



Male thread



TACED



Bore size/Item	AB	D	E	EA	EB	F	FA	H
12	15	6	M5x0.8	9	10	8	4	5
16	17	8	M6x1.0	11	12	10	5	7
20	22	10	M8x1.25	15	16	12	6	9
25	22	10	M8x1.25	15	16	12	6	9
32	26	12	M10x1.25	17	19	17	6	10
40	26	12	M10x1.25	17	19	17	6	10
50	30	16	M12x1.25	20	22	17	7	13
63	30	16	M12x1.25	20	22	17	7	13
80	34	20	M16x1.5	26	28	23	8	17
100	34	20	M16x1.5	26	28	23	8	17
125	51	25	M20x1.5	38	40	26	10	21

Bore size/Item	A(TACE)	A(TACED)	AC	B	DA	JB	U	UA	V	Z	ZA
12	46	51	35	27.5	5	16	3	12	M3x0.5	6	26.5
16	46	51	35	30	5	18	3	14	M3x0.5	6	29
20	51	57	37	35.5	6	22	5	17	M4x0.7	8	34.5
25	53	59	39	40	6	26	5	22	M5x0.8	8	39
32	61	68	44	49.5	7	32.5	5	28	M5x0.8	10	48
40	62.5	69.5	45.5	55	7	38	5	33	M5x0.8	10	53.5
50	65.5	73.5	45.5	65.5	8	46.5	6	42	M6x1.0	12	64
63	69	77	49	75.5	8	56.5	6	50	M6x1.0	12	74
80	77	86	54	95.5	9	72	8	65	M8x1.25	14	94
100	90	99	67	113.5	9	89	10	80	M10x1.5	14	112

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

List for ordering code of accessories

Accessories Bore size	Mounting accessories								Knuckle				Sensor switch	
	LB	FA/FB	CA	CB	CR	SDB	FTC	TCM2	I	Y	F	U	CS1-E	DS1-E
12	F-ACE12LB	F-ACE12FA	F-ACE12CA	-	-	F-MI12SDB	-	-	F-ACQ12I	F-ACQ12Y	F-M5×080F	F-M5×080U	CS1-E	DS1-E
16	F-ACP12LB	F-ACE16FA	F-ACE16CA	-	-	F-MI12SDB	-	-	F-M6×100I	F-M6×100Y	F-M6×100F	F-M6×100U		
20	F-ACP20LB	F-ACE20FA	F-ACE20CA	-	-	F-MI20SDB	-	-	F-M8×125I	F-M8×125Y	F-M8×125F	F-M8×125U		
25	F-ACP25LB	F-ACE25FA	F-ACE25CA	-	-	F-MI20SDB	-	-	F-M8×125I	F-M8×125Y	F-M8×125F	F-M8×125U		
32	F-ACE32LB	F-SI32FA	F-SE32CA	F-SE32CB	F-SI32CR	-	F-SI32FTC	F-SI32TCM2	F-M10×125I	F-M10×125Y	F-M10×125F	F-M10×125U		
40	F-ACE40LB	F-SI40FA	F-SE40CA	F-SE40CB	F-SI40CR	-	F-SI40FTC	F-SI40TCM2	F-M10×125I	F-M10×125Y	F-M10×125F	F-M10×125U		
50	F-ACE50LB	F-SI50FA	F-SE50CA	F-SE50CB	F-SI50CR	-	F-SI50FTC	F-SI50TCM2	F-M12×125I	F-M12×125Y	F-M12×125F	F-M12×125U		
63	F-ACE63LB	F-SI63FA	F-SE63CA	F-SE63CB	F-SI63CR	-	F-SI63FTC	F-SI63TCM2	F-M12×125I	F-M12×125Y	F-M12×125F	F-M12×125U		
80	F-ACE80LB	F-SI80FA	F-SE80CA	F-SE80CB	F-SI80CR	-	F-SI80FTC	F-SI80TCM2	F-M16×150I	F-M16×150Y	F-M16×150F	F-M16×150U		
100	F-ACE100LB	F-SI100FA	F-SE100CA	F-SE100CB	F-SI100CR	-	F-SI100FTC	F-SI100TCM2	F-M16×150I	F-M16×150Y	F-M16×150F	F-M16×150U		
125	-	F-SI125FA	F-SE125CA	F-SE125CB	F-SI125CR	-	F-SI125FTC	F-SI125TCM2	F-M20×150I	F-M20×150Y	F-M20×150F	F-M20×150U		

Accessory selection

Cylinder model\Accessories			Mounting accessories									Knuckle				Sensor switch				
			LB	FA	FB	CA	CB	CR	SDB	FTC	TCM2	I	Y	F	U	CS1-E	DS1-E			
ACE	Female thread	Without magnet	●	●	●	●	●	●	●	●	×	×	×	×	×	×				
		With magnet									●	●	●	●	●	●				
	Male thread	Without magnet									●	●	●	●	●	●	×	×		
		With magnet									●	●	●	●	●	●	●	●		
ASE ATE	Female thread	Without magnet	●	●	●	●	●	●	●	×	×	×	×	×	×					
		With magnet								●	●	●	●	●	●	●				
	Male thread	Without magnet								●	●	●	●	●	●	×	×			
		With magnet								●	●	●	●	●	●	●	●			
ACED ACEJ	Female thread	Without magnet	●	●	×	×	×	×	●	●	×	×	×	×	×	×				
		With magnet									●	●	●	●	●	●	●			
	Male thread	Without magnet									●	●	×	×	×	×	●	●	×	×
		With magnet									●	●	●	●	●	●	●	●	●	●
TACE	Female thread	Without magnet	×	×	●	●	●	●	●	●	×	×	×	×	×	×				
		With magnet	●	●	●	●	●	●	●	●	●	●	●	●	●					
TACED	Female hread	Without magnet	×	×	×	●	×	×	×	×	×	×	×	×	×	×				
		With magnet	●	●	●	●	●	●	●	●	●	●	●	●	●	●				

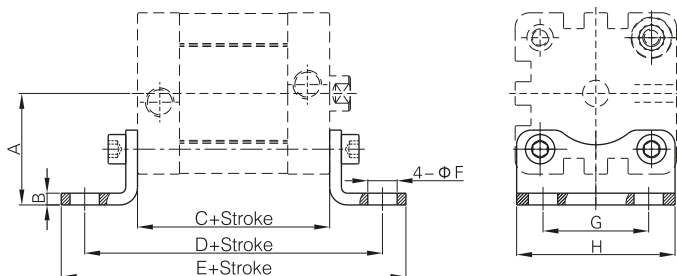
Material of accessories

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

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

Accessories dimensions

LB



Bore size\Item	A	B	C	D	E	F	G	H
12	21	3	35	61	71	5.5	16	25
16	22	3	35	61	70.6	5.5	18	27
20	27	3.8	37	69	81.6	6.5	22	34
25	29	3.8	39	71	83.6	6.5	26	38
32	33.5	4	44	76	89	7	32	48
40	38	4	45.5	81.5	97.5	10	36	54
50	45	5	45.5	87.5	103.5	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

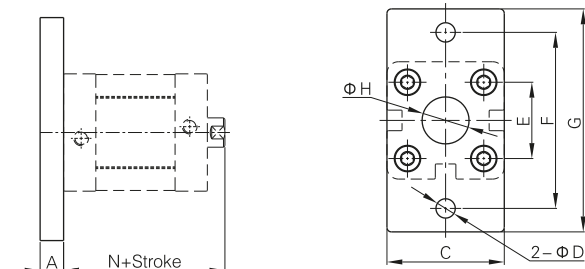
Note: Value C in the above table is only for ACE series.
Please refer to relevant content for value C of other series.

Cylinder

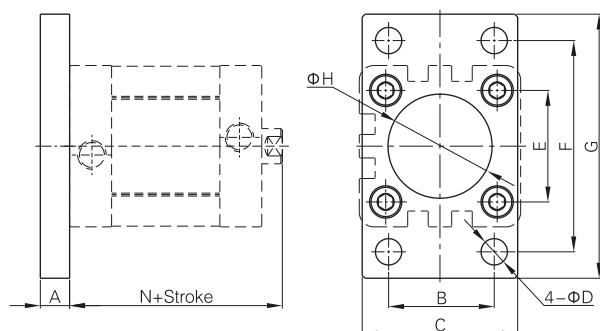
SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRQ2
NCRB2
ACK
SRC
QCK
NCK1

FA/FB

Φ12~Φ25



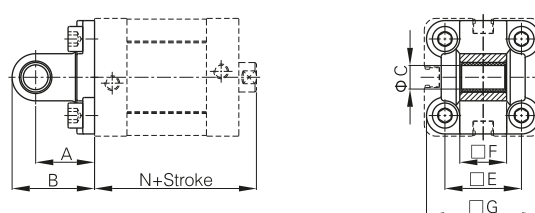
Φ32~Φ125



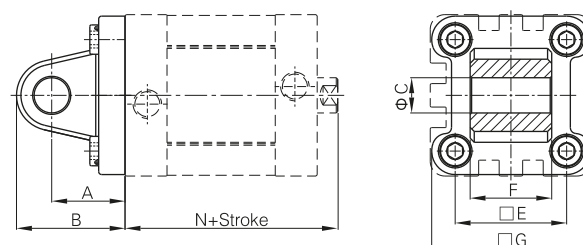
Bore size\Item	A	B	C	D	E	F	G	H	N
12	8	-	25	5.5	16	40	55	10	40
16	8	-	30	5.5	18	53	55	10	40
20	8	-	35	6.6	22	55	68	16	43
25	8	-	39.5	6.6	26	60	76	16	45
32	10	32	47	7	32.5	64	80	30.5	51
40	10	36	53	9	38	72	90	35.5	52.5
50	12	45	65	9	46.5	90	108	40.5	53.5
63	12	50	75	9	56.5	100	118	45.5	57
80	16	63	95	12.5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

CA

Φ12~Φ25

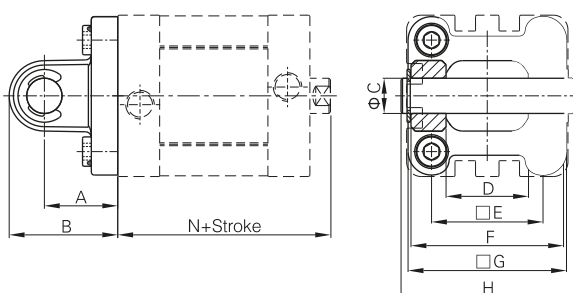


Φ32~Φ125



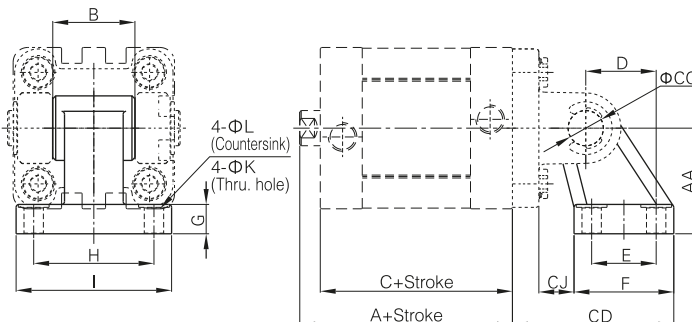
Bore size\Item	A	B	C	E	F	G	N
12	16	22	6	16	11.9	24	40
16	16	22	6	18	11.9	28.5	40
20	20	28	8	22	15.9	34.5	43
25	20	28	8	26	15.9	38.5	45
32	22	32.5	10	32.5	25.8	46.5	51
40	25	37	12	38	27.8	54	52.5
50	27	39	12	46.5	31.7	64	53.5
63	32	47	16	56.5	39.7	75	57
80	36	51.5	16	72	49.7	93	63
100	41	61	20	89	59.7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

CB Φ32~Φ125



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

CR Φ32~Φ125



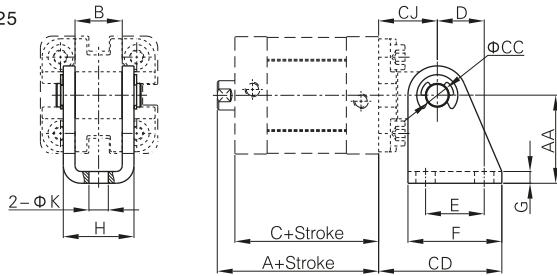
Bore size\Item	A	AA	B	C	CC	CD	CJ	D	E	F	G	H	I	K	L
32	51	32	26	44	10	50	10	21	18	31	8	38	51	6.6	11
40	52.5	36	28	45.5	12	56	12	24	22	35	10	41	54	6.6	11
50	53.5	45	32	45.5	12	68	13	33	30	45	12	50	65	9	14
63	57	50	40	49	16	77	17	37	55	50	12	52	67	9	14
80	63	63	50	54	16	93	19	47	40	60	14	66	86	11	17
100	76	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: CB is attached with relevant PIN.

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

SDB

Φ12~Φ25

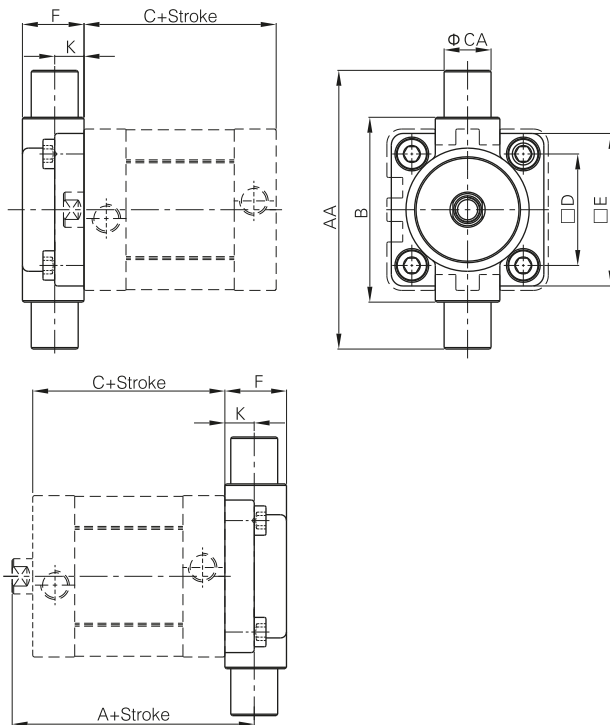


Bore size/Item	A	AA	B	C	CC	CD	CJ	D	E	F	G	H	K
12	40	27	12.1	35	6	34	16	13	15	25	2	18.1	5.5
16	40	27	12.1	35	6	34	16	13	15	25	2	18.1	5.5
20	43	30	16.1	37	8	42	20	16	20	32	2.5	24.1	6.6
25	45	30	16.1	39	8	42	20	16	20	32	2.5	24.1	6.6

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

FTC

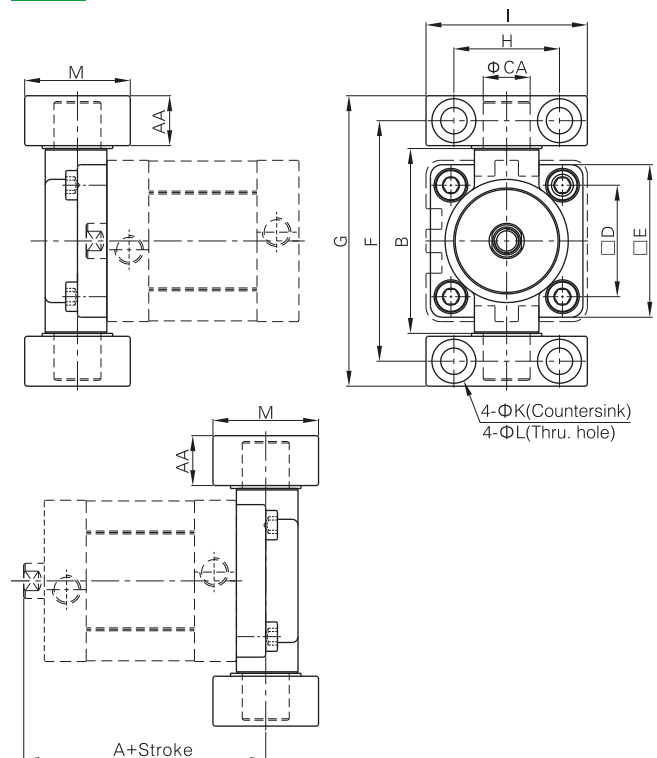
Φ32~Φ125



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

TCM2

Φ32~Φ125

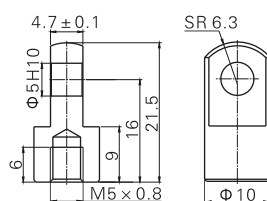


Bore size/Item	A	AA	B	CA	D	E	F	G	H	I	K	L	M
32	63	14	52	12	32.5	46	66	80	32	46	11	7	30
40	66.5	17	65	16	38	52	85	99	36	55	15	9	36
50	71.5	17	75	16	46.5	64	94	111	36	55	15	9	36
63	77	20.5	90	20	56.5	74	113.5	134	42	65	18	11	40
80	85	20.5	112	20	72	94	133.5	154	42	65	18	11	40
100	102	24.5	135	25	89	114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

I Knuckle

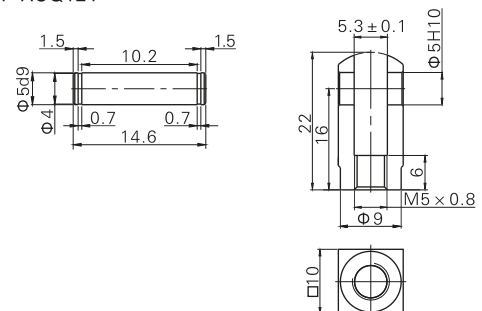
F-ACQ12I



Note: Other I knuckle are common parts.

Y Knuckle

F-ACQ12Y



Note: Other Y knuckle are common parts.

Cylinder

SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRQ2
NCRB2
ACK
SRC
QCK
NCK1