

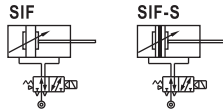
ISO15552 Standard cylinder



SIF Series(With valve)



Symbol



Product feature

1. For Standard Cylinders: use 4M210 valve for bore size 32,40 & 50; 4M310 valve for bore size 63,80 & 100mm;
2. Individually control, no need for extra solenoid valves;
3. Installation time & space saving; suitable for decentralise installation in large system.
4. Options of mounting accessories & easy installation.

Stroke

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

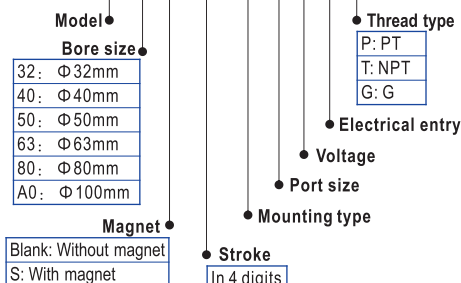
Note) Consult us for non-standard stroke.

Ordering code

Model can be changed Ordering code. Example:
 Production type: SIF
 Bore size: 50mm
 Stroke: 1000mm
 Magnet: With magnet
 Mounting type: FA
 Solenoid valve: 4M210, Port size: 1/4",
 Voltage: DC24V, Electrical entry: Terminal
 Thread type: NPT

Model: SIF-50 × 1000-S-FA-08-B-T

Ordering code: SIF 50 S 1000 FA-08 B T



Specification

Cylinder specification						
Bore size(mm)	32	40	50	63	80	100
Acting type	Double acting					
Fluid	Air(to be filtered by 40 μm filter element)					
Mounting type	Basic FA FB CA CB CR LB TC FTC TCM1 TCM2					
Operating pressure	0.1~1.0MPa(15~145psi)(1.0~10.0bar)					
Proof pressure	1.5MPa(215psi)(15bar)					
Temperature °C	-20~80					
Speed range mm/s	30~800					
Stroke tolerance	0~250 ^{+1.0} ₀		251~1000 ^{+1.4} ₀		1001~1500 ^{+1.8} ₀	
Cushion type	Variable cushion					
Adjustable cushionstroke	27		30		36	
Port size	1/8"		1/4"		3/8" 1/2"	
PU tube size(ODXID)	Φ8 × Φ5		Φ8 × Φ5		Φ10 × Φ6.5	
Solenoid valve specification						
Model	4M210-06 & 4M210-08		4M310-08 & 4M310-10			
Fluid	Air(to be filtered by 40 μm filter element)					
Acting type	Internal piloted					
Port size ①	In=Exhaust=1/8" & In=1/4" Exhaust=1/8"			In=Exhaust=1/4" & In=PT3/8 Exhaust=1/4"		
Orifice size	4M210-06: 14.0mm ² (Cv=0.78)		4M310-08: 25.0mm ² (Cv=1.40)			
	4M210-08: 16.0mm ² (Cv=0.89)		4M310-10: 30.0mm ² (Cv=1.68)			
Valve type	5 port 2 position					
Operating pressure	0.15~0.8MPa(21~114psi)					
Proof pressure	1.5MPa(215psi)					
Temperature °C	-20~70					
Body material	Aluminum alloy					
Lubrication ②	Not required					
Max. frequency ③	5 cycle/sec			4 cycle/sec		
Coil specification						
Standard voltage	AC220V、AC110V、AC24V、DC24V、DC12V					
Scope voltage	AC: ±15% DC: ±10%					
Power consumption	AC: 3.5VA DC: 3.0W					
Protection	IP65(DIN40050)					
Temperature classification	B Class					
Electrical entry	Terminal, Grommet					
Activating time	0.05 sec and below					

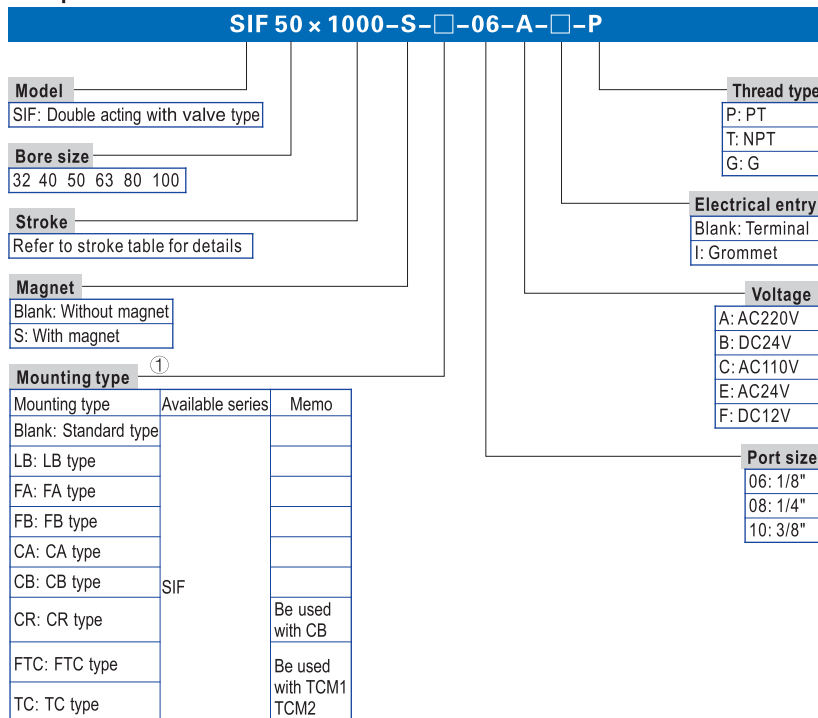
① PT thread, NPT thread and G thread are available.

② It can't stop in the midway of lubricating. Lubricants like ISO VG32 or equivalent are recommended.

③ The maximum actuation frequency is in the no-load state.

Add) Refer to P403~426 for detail of sensor switch.

Explain of model



① Please refer to page 192~194 for accessory parts.

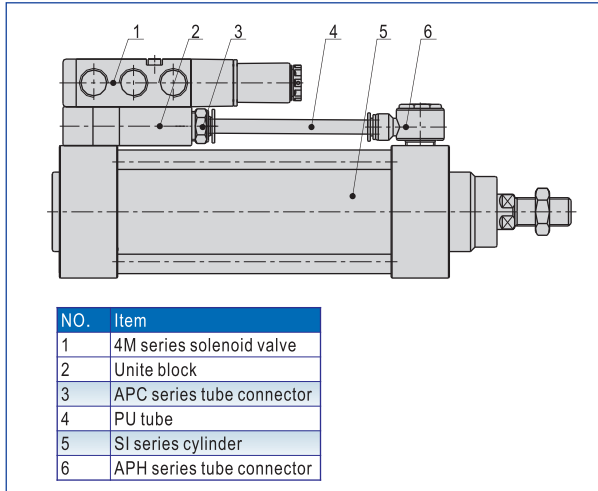


ISO1552 Standard cylinder

SIF Series(With valve)



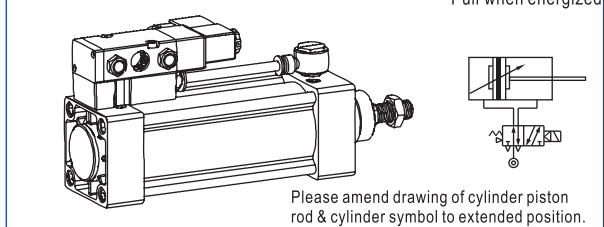
Main combination



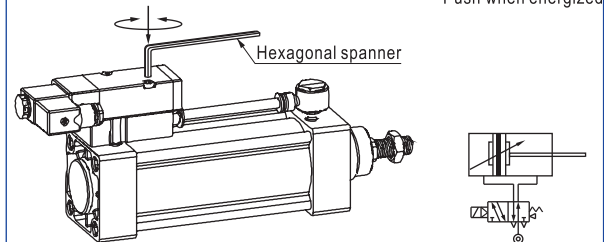
How to use

- Options for piston rod to retract or extend when solenoid coil is energized.
- Default factory setting will be piston rod to retract when energized (see Drawing one). Should you require piston rod to extend when energized, reposition the solenoid valves as shown in Drawing two.

Drawing one



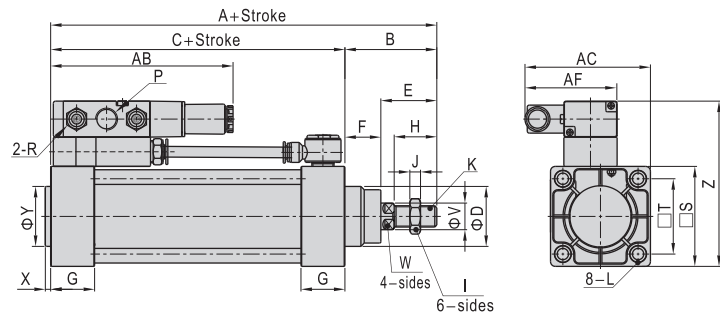
Drawing two



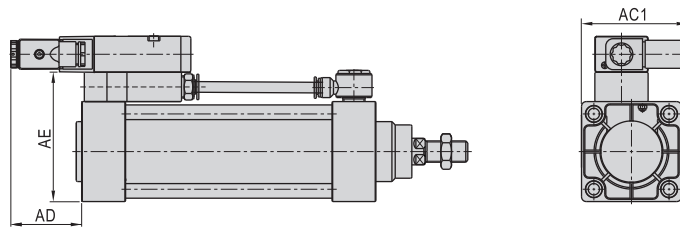
Attention Ensure that the seals between the mounting block & valve are placed correctly when repositioning the valve.

Dimensions

Pull when electrify



Push when electrify



Bore size\Item	A	AB	AC	AC1	AD	AE	AF	B	C	D	E	F	G	H	K
32	142	117.5	78.2	67.2	53.3	69	66.7	48	94	30	29	19	27.5	22	M10X1.25
40	159	120	81.7	69.7	50.8	75	66.7	54	105	35	33	21	32	24	M12X1.25
50	175	118.5	89.2	74.2	52.3	87	66.7	69	106	40	42	27	31	32	M16X1.5
63	190	137	94.2	79.2	53	97	69.2	69	121	45	42	27	33	32	M16X1.5
80	214	137	105.5	87.9	53	117	69.2	86	128	45	53	33	33	40	M20X1.5
100	229	137.5	117.7	95.7	52.5	137	69.2	91	138	55	55	36	37	40	M20X1.5

Bore size\Item	Compatible valve's type	P	R	L	S	I	J	T	V	W	X	Y	Z
32	4M210-06	1/8"											
	4M210-08	1/4"	1/8"	M6 × 1.0	47	17	6	32.5	12	10	3	30	91
40	4M210-06	1/8"											
	4M210-08	1/4"	1/8"	M6 × 1.0	53	17	7	38	16	13	3.5	35	97
50	4M210-06	1/8"											
	4M210-08	1/4"	1/8"	M8 × 1.25	65	23	8	46.5	20	17	3.5	40	109
63	4M310-08	1/4"											
	4M310-10	3/8"	1/4"	M8 × 1.25	75	23	8	56.5	20	17	4	45	124
80	4M310-08	1/4"											
	4M310-10	3/8"	1/4"	M10 × 1.5	95	26	10	72	25	22	4	45	144
100	4M310-08	1/4"											
	4M310-10	3/8"	1/4"	M10 × 1.5	110	26	10	89	25	22	4	55	164

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



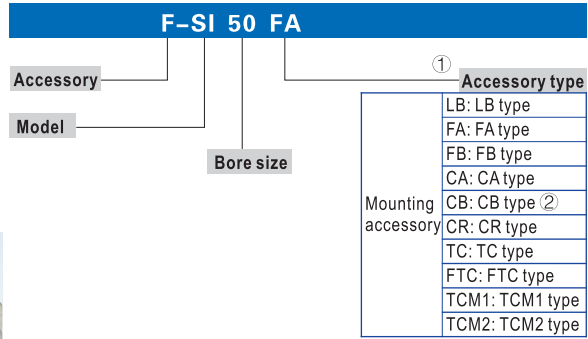
SIF

ISO15552 Standard cylinder



Accessories

Ordering code



- ① Please refer to accessory list on P194 for selection and ordering information.
 ② CB is attached with relevant PIN.



SI

Accessory selection

Cylinder model	SI\SIL\SIF		SID		SIJ		
	Standard	With magnet	Standard	With magnet	Standard	With magnet	
Accessories							
Mounting accessory	LB	●	●	●	●	●	
	FA	●	●	●	●	●	
	FB	●	●	×	×	×	×
	CA	●	●	×	×	×	×
	CB	●	●	×	×	×	×
	CR	●	●	×	×	×	×
	TC	●	●	●	●	●	●
	FTC	●	●	●	●	●	●
	TCM1	●	●	●	●	●	●
	TCM2	●	●	●	●	●	●
Knuckle	I	●	●	●	●	●	
	Y	●	●	●	●	●	
	U	●	●	●	●	●	
	F	●	●	●	●	●	
Sensor switch	CS1-B	×	●	×	●	×	●
	DS1-B	×	●	×	●	×	●
	CS1-F	×	●	×	●	×	●
	DS1-F	×	●	×	●	×	●
	CS1-U	×	●	×	●	×	●
	DS1-U	×	●	×	●	×	●

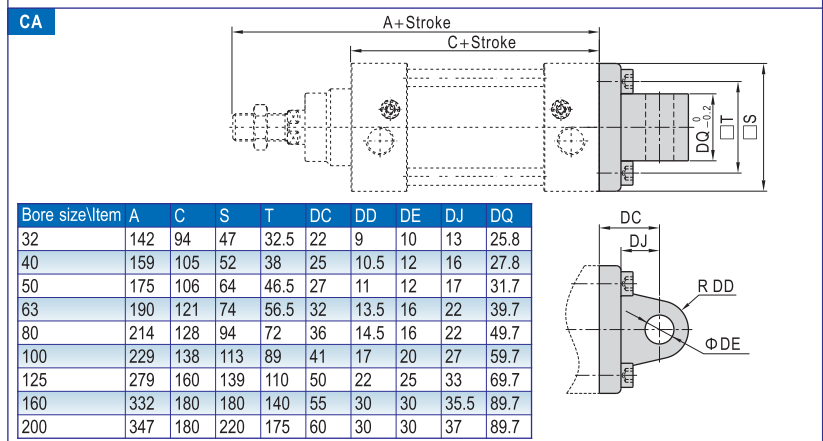
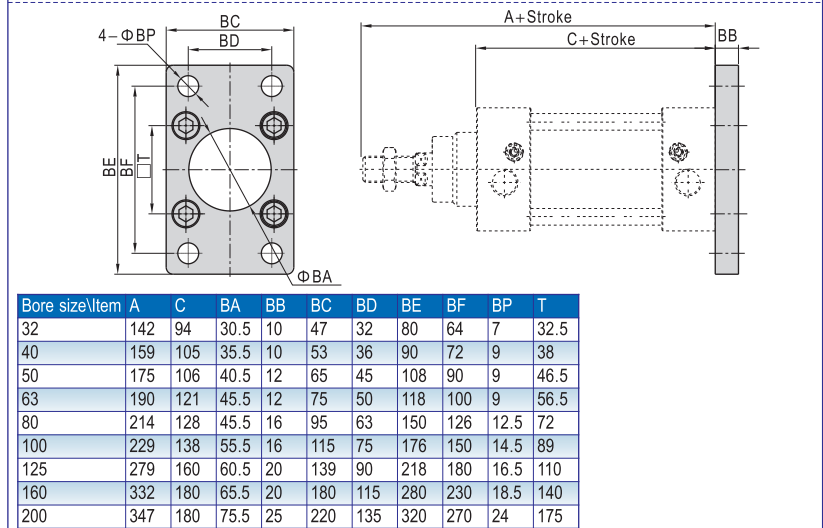
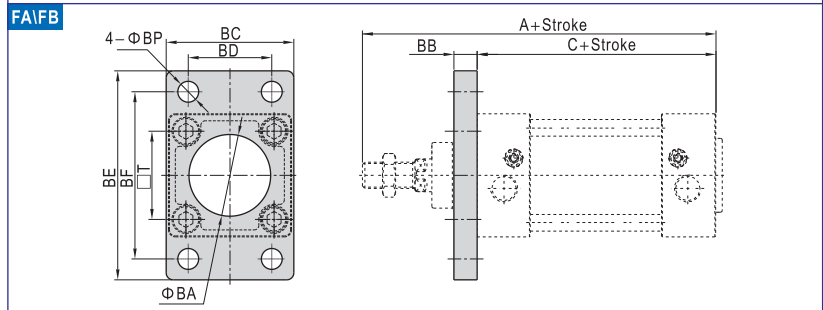
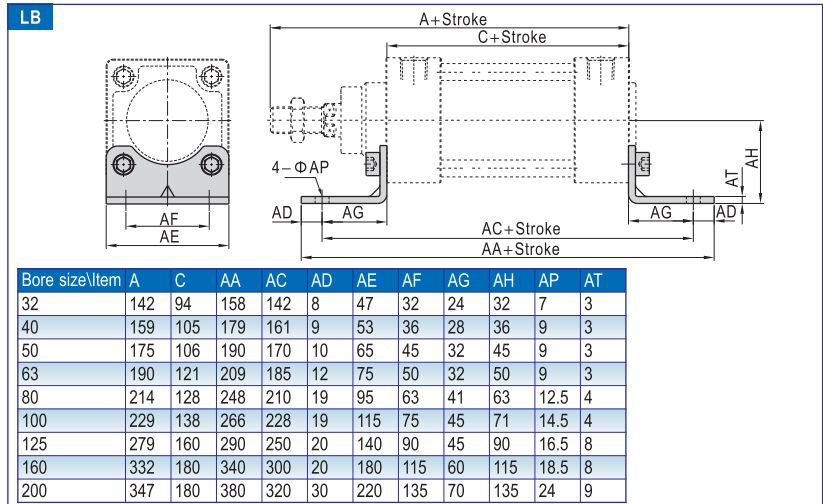
- ① Please refer to P397-402 for knuckle detail,
 ② Please refer to P403-426 for detail of sensor switch.

Material of accessories

Accessories	Mounting accessories						Knuckle						
	LB	FA	FB	CA	CB	CR	FTC	TCM1	TCM2	I	Y	F	U
Bore size													
32-100	○	●	◇	◇	◇	■	■	●	□	□	□	□	□
125-200	□	□	□	□	□	□	□	●	□	□	□	□	□

- Aluminum alloy, ■ Cast steel,
 ○ Low carbon steel, ◇ Nodular cast iron, □ Carbon steel.

Dimensions



ISO1552 Standard cylinder



Accessories

CB

Bore size\Item	A	C	CC	CD	CE	CJ	CP	CT	PA1	PB1	S	T
32	142	94	22	9	10	13	26	45	51	45.5	47	32.5
40	159	105	25	10.5	12	16	28	52	59	52.5	52	38
50	175	106	27	11	12	17	32	60	67	60.5	64	46.5
63	190	121	32	13	16	22	40	70	77	70.5	74	56.5
80	214	128	36	14	16	22	50	90	97	90.5	94	72
100	229	138	41	17.5	20	27	60	110	119	110.5	113	89
125	279	160	50	21.5	25	33	70	130	139	130.5	139	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

FTC

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



CR

Bore size\Item	A	AA	B	C	CC	CD	CJ	D	E	F	G	H	I	K	L
32	142	32	26	94	10	50	10	21	18	31	8	38	51	6.6	-
40	159	36	28	105	12	56	12	24	22	35	10	41	54	6.6	-
50	175	45	32	106	12	68	13	33	30	45	12	50	65	9	-
63	190	50	40	121	16	77	17	37	35	50	12	52	67	9	-
80	214	63	50	128	16	93	19	47	40	60	14	66	86	11	18
100	229	71	60	138	20	106	22	55	50	70	15	76	96	11	18
125	279	90	70	160	25	135	26	70	60	90	20	94	124	14	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.

TCM1

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

Note) The installation position of the accessories can not be adjusted arbitrarily. When TCM1 be used with FTC, please refer to page 183.

TC

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	65	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	112	110	150	32	95	4	72
100	229	138	25	135	132	182	38	115	4	89
125	279	160	25	170	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

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

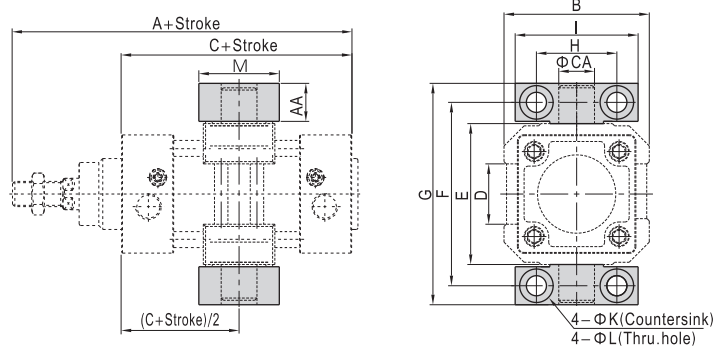


ISO15552 Standard cylinder



Accessories

TCM2



Bore size\Item	A	AA	B	C	CA	D	E	F	G	H	I	K	L	M
32	142	14	52	94	12	20	50	66	80	32	46	11	7	30
40	159	17	65	105	16	27	63	82	99	36	55	15	9	36
50	175	17	75	106	16	31	75	94	111	36	55	15	9	36
63	190	20.5	90	121	20	42	90	113.5	134	42	65	18	11	40
80	214	20.5	112	128	20	54	110	133.5	154	42	65	18	11	40
100	229	24.5	135	138	25	68	132	159.5	184	50	75	20	14	50
125	279	24.5	170	160	25	80	160	187.5	212	50	75	20	14	50
160	332	30	210	180	32	100	200	234	264	60	92	26	18	60
200	347	30	255	180	32	125	250	284	314	60	92	26	18	60

Note) The installation position of the accessories can not be adjusted arbitrarily.
When TCM2 be used with FTC, please refer to page 183.

List for ordering code of accessories

Bore size	Accessories		Mounting accessory	
	LB	FA	FB	CA
32	F-SI32LB	F-SI32FA		F-SI32CA
40	F-SI40LB	F-SI40FA		F-SI40CA
50	F-SI50LB	F-SI50FA		F-SI50CA
63	F-SI63LB	F-SI63FA		F-SI63CA
80	F-SI80LB	F-SI80FA		F-SI80CA
100	F-SI100LB	F-SI100FA		F-SI100CA
125	F-SI125LB	F-SI125FA		F-SI125CA
160	F-SI160LB	F-SI160FA		F-SI160CA
200	F-SI200LB	F-SI200FA		F-SI200CA

Bore size	Accessories		Mounting accessory	
	CB	CR	TC	
32	F-SI32CB	F-SI32CR		F-SI32TC
40	F-SI40CB	F-SI40CR		F-SI40TC
50	F-SI50CB	F-SI50CR		F-SI50TC
63	F-SI63CB	F-SI63CR		F-SI63TC
80	F-SI80CB	F-SI80CR		F-SI80TC
100	F-SI100CB	F-SI100CR		F-SI100TC
125	F-SI125CB	F-SI125CR		F-SI125TC
160	F-SI160CB	F-SI160CR		F-SI160TC
200	F-SI200CB	F-SI200CR		F-SI200TC

Bore size	Accessories		Mounting accessory	
	FTC	TCM1	TCM2	
32	F-SI32FTC	F-SI32TCM1		F-SI32TCM2
40	F-SI40FTC	F-SI40TCM1		F-SI40TCM2
50	F-SI50FTC	F-SI40TCM1		F-SI40TCM2
63	F-SI63FTC	F-SI63TCM1		F-SI63TCM2
80	F-SI80FTC	F-SI63TCM1		F-SI63TCM2
100	F-SI100FTC	F-SI125TCM1		F-SI125TCM2
125	F-SI125FTC	F-SI125TCM1		F-SI125TCM2
160	F-SI160FTC	F-SI160TCM1		F-SI160TCM2
200	F-SI200FTC	F-SI200TCM1		F-SI160TCM2

Bore size	Accessories		Knuckle	
	I: I Knuckle	Y: Y Knuckle	F: F Knuckle	U: U Knuckle
32	F-M10125II	F-M10125YI	F-M10125F	F-M10125U
40	F-M12125II	F-M12125YI	F-M12125F	F-M12125U
50	F-M16150II	F-M16150YI	F-M16150F	F-M16150U
63	F-M16150II	F-M16150YI	F-M16150F	F-M16150U
80	F-M20150II	F-M20150YI	F-M20150F	F-M20150U
100	F-M20150II	F-M20150YI	F-M20150F	F-M20150U
125	F-M27200II	F-M27200YI	-	F-M27200U
160	F-M36200II	F-M36200YI	-	F-M36200U
200	F-M36200II	F-M36200YI	-	F-M36200U

Bore size	Accessories		Sensor switch			
	CS1-B□	DS1-B□	CS1-F	DS1-F	CS1-U	DS1-U
32	CS1-B1	DS1-B1				
40	CS1-B1	DS1-B1				
50	CS1-B2	DS1-B2				
63	CS1-B2	DS1-B2				
80	CS1-B3	DS1-B3	CS1-F	DS1-F	CS1-U	DS1-U
100	CS1-B4	DS1-B4				
125	CS1-B5	DS1-B5				
160	CS1-B6	DS1-B6				
200	CS1-B7	DS1-B7				

