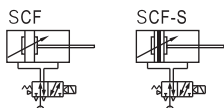


Standard cylinder(Tie-rod)

SCF Series(With valve type)



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 80 100 125 150 160 175 200 250 300 350 400 450 500	50	1000	2000
	With TC type 100 125 150 160 175 200 250 300 350 400 450 500			
40	Standard type 50 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	50	1200	2000
	With TC type 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000			
63 80	Standard type 75 80 100 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000	75	1500	2000
	With TC type 125 150 160 175 200 250 300 350 400 450 500 600 700 800 900 1000			

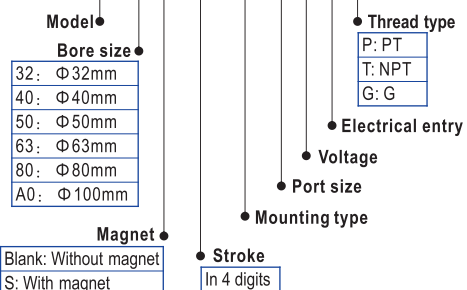
Note) Consult us for non-standard stroke.

Ordering code

Model can be changed Ordering code. Example:
 Production type: SCF
 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: SCF-50 × 1000-S-FA-08-B-T

Ordering code: SCF 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 LB TC TCM1
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	21 28 29
Port size	1/8" 1/4" 3/8" 1/2"
PU tube size(ODXID)	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

SCF 50 × 1000-S-□-06-A-□-P

Model
 SCF: Double acting with valve type

Bore size
 32 40 50 63 80 100

Stroke
 Refer to stroke table for details

Magnet
 Blank: Without magnet
 S: With magnet

Mounting type ①

Mounting type	Available series	Memo
Blank: Standard type		
LB: LB type	SCF	
FA: FA type		
FB: FB type		
CA: CA type		
CB: CB type		
TC: TC type		Be used with TCM1

Thread type
 P: PT
 T: NPT
 G: G

Electrical entry
 Blank: Terminal
 I: Grommet

Voltage
 A: AC220V
 B: DC24V
 C: AC110V
 E: AC24V
 F: DC12V

Port size
 06: 1/8"
 08: 1/4"
 10: 3/8"

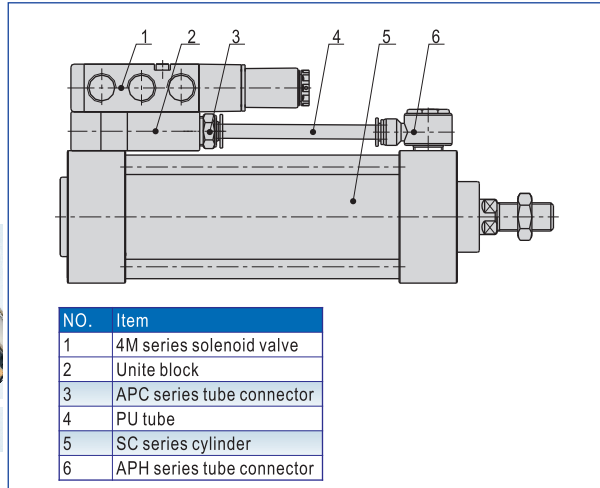
① Please refer to page 217~220 for accessory parts.

Standard cylinder(Tie-rod)

SCF Series(With valve type)



Main combination

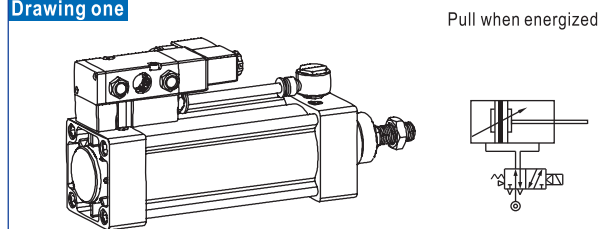


SCF

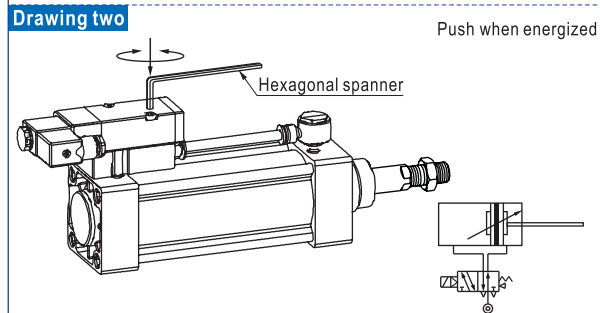
How to use

- 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 valve as shown in Drawing two.

Drawing one



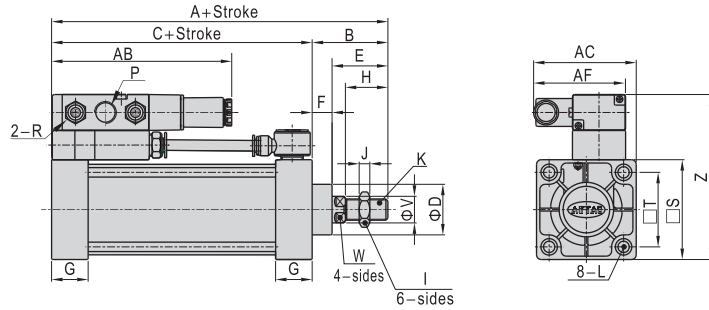
Drawing two



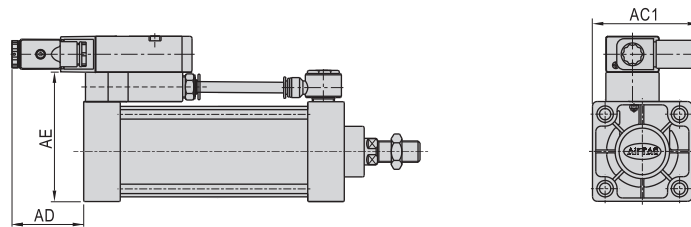
Attention Ensure that the seals between the mounting block & valve are placed correctly when repositioning the valve.

Dimensions

Pull when electrify



Push when electrify



Bore size\Item	A	AB	AC	AC1	AD	AE	AF	B	C	D	E	F	K
32	140	118	66.7	76.7	52.8	67	66.7	47	93	28	32	15	M10X1.25
40	142	118	68.2	80.2	52.8	72	66.7	49	93	32	34	15	M12X1.25
50	150	120	71.7	88.7	50.8	84	66.7	57	93	38	42	15	M16X1.5
63	153	135.5	77.2	96.2	54.5	97	69.2	57	96	38	42	15	M16X1.5
80	182	137	86.2	106.2	53	116	69.2	75	107	47	54	21	M20X1.5
100	188	135.5	95.7	114.7	54.5	134	69.2	75	113	47	54	21	M20X1.5

Bore size\Item	Compatible valve's type	P	R	L	G	H	I	J	S	T	V	W	Z
32	4M210-06	1/8"											
	4M210-08	1/4"	1/8"	M6X1	27.5	22	17	6	45	33	12	10	89
40	4M210-06	1/8"											
	4M210-08	1/4"	1/8"	M6X1	27.5	24	17	7	50	37	16	14	94
50	4M210-06	1/8"											
	4M210-08	1/4"	1/8"	M6X1	27.5	32	23	8	62	47	20	17	106
63	4M310-08	1/4"											
	4M310-10	3/8"	1/4"	M8X1.25	27.5	32	23	8	75	56	20	17	124
80	4M310-08	1/4"											
	4M310-10	3/8"	1/4"	M10X1.5	33	40	26	10	94	70	25	22	143
100	4M310-08	1/4"											
	4M310-10	3/8"	1/4"	M10X1.5	33	40	26	10	114	82	25	22	161

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

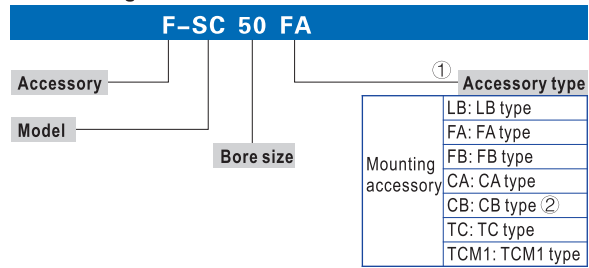


Standard cylinder(Tie-rod)



Accessories

Ordering code



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

Accessory selection

Cylinder model	SC, SCL, SCF	SCD, SCJ	SCT
Accessories	Standard With magnet	Standard With magnet	Standard With magnet
Mounting accessory			
LB	●	●	●
FA	●	●	●
FB	●	×	●
CA	●	×	●
CB	●	×	●
TC	●	●	●
TCM1	●	●	●
Knuckle			
I	●	●	●
Y	●	●	●
U	●	●	●
F	●	●	●
Sensor switch			
CS1-A	×	●	×
DS1-A	×	●	×
CS1-F	×	●	×
DS1-F	×	●	×
CS1-U	×	●	×
DS1-U	×	●	×
CS1-B	×	●	×
DS1-B	×	●	×

- ① Please refer to P397~402 for knuckle detail. F knuckle unviable for 125 or above cylinder.
- ② Please refer to P403~426 for detail of sensor switch. CS1-B, DS1-B sensor switch only viable for 125 or above cylinder.

Material of accessories

Accessories	Mounting accessories						Knuckle				
Bore size	LB	FA	FB	CA	CB	TC	TCM1	I	Y	F	U
32~100	□	●	●	◇	◇	◇	◇	□	□	□	□
125~200	◇	◇	◇	◇	◇	◇	◇	□	□	-	□
250	◇	■	■	◇	◇	◇	◇	■	■	-	-

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

Dimensions

LB

Φ32~Φ100

Φ125~Φ250

Bore size\Item	A	C	AA	AC	AD	AE	AF	AG	AH	AP	AT
32	140	93	153	134	9.5	50	33	20.5	28	9	3
40	142	93	169	140	14.5	57	36	23.5	30	12	3
50	150	93	173	149	12	68	47	28	36.5	12	3
63	153	96	184	158	13	80	56	31	41	12	3
80	182	107	199	167	16	97	70	30	49	14	4
100	188	113	209	173	18	112	84	30	57	14	4
125	203	115	221	185	18	136	104	35	70	17	6
160	239	126	246	206	20	174	134	40	91	17	8
200	244	126	276	226	25	214	163	50	119	22	9
250	294	153	323	273	25	267	201	60	141	26	15

CA

Φ32~Φ100

Φ125~Φ250

Bore size\Item	A	C	DC	DD	DE	DJ	DQ	S	T
32	140	93	34	44.5	12	9	16	45	33
40	142	93	34	45.5	14	9	20	49	37
50	150	93	34	46	14	10	20	61	47
63	153	96	34	46.5	14	10	20	74	56
80	182	107	48	64.5	20	14	32	93	70
100	188	113	48	65	20	14	32	111	84
125	203	115	32	52	20	17	31.7	135	104
160	239	126	40	68	28	19.5	39.7	173	134
200	244	126	60	90	28	23	39.7	213	163
250	294	153	70	106	36	24	49.7	255	202



SC



Standard cylinder(Tie-rod)

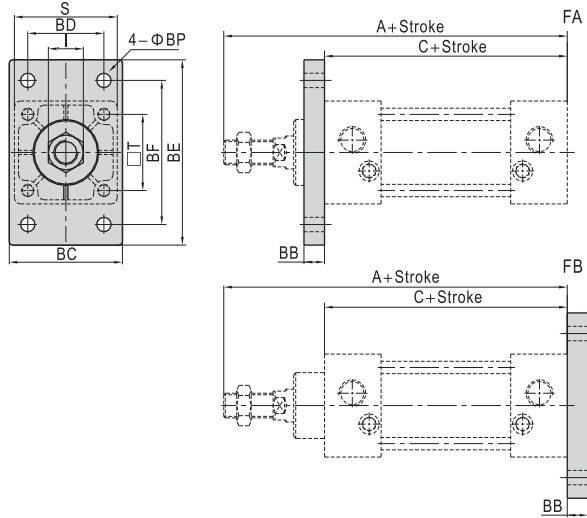


Accessories



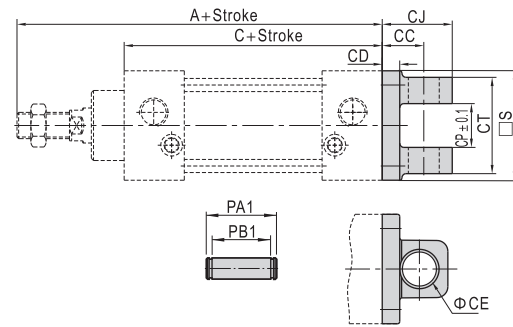
FA/FB

Φ32~Φ100

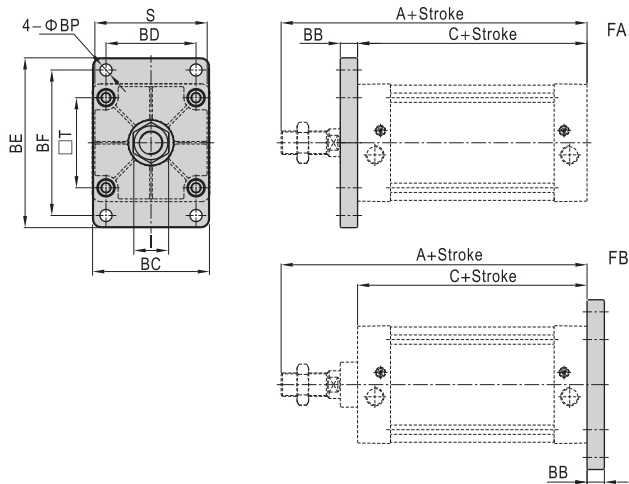


CB

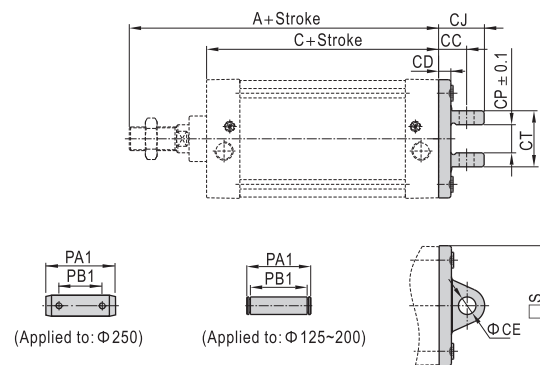
Φ32~Φ100



Φ125~Φ250



Φ125~Φ250



Bore size\Item	A	C	BB	BC	BD	BE	BF	BP	I	S	T
32	140	93	10	47	33	80	58	7	17	45	33
40	142	93	10	53	36	90	70	7	17	50	37
50	150	93	10	65	47	104	86	9	23	62	47
63	153	96	12	75	56	118	98	9	23	75	56
80	182	107	16	95	70	140	119	11	26	94	70
100	188	113	16	115	84	160	138	11	26	112	84
125	203	115	20	135	104	196	168	14	41	136	104
160	239	126	20	173	134	248	212	18	55	174	134
200	244	126	25	213	163	286	250	18	55	214	163
250	294	153	25	255	201	356	312	22	65	267	202

Bore size\Item	A	C	S	CC	CD	CE	CJ	CP	CT	PA1	PB1
32	140	93	45	19	9	12	29.5	16.3	32	39	32.8
40	142	93	49	19	9	14	30.5	20.3	44	51	44.8
50	150	93	61	19	10	14	31	20.3	52	59	52.8
63	153	96	74	19	10	14	31.5	20.3	52	59	52.8
80	182	107	93	32	14	20	48.5	32.3	64	73	64.8
100	188	113	111	32	14	20	49	32.3	64	73	64.8
125	203	115	135	32	14	20	52	32.1	64	73	64.8
160	239	126	173	40	15	28	68	40.1	80	90.2	80.8
200	244	126	213	60	23	28	90	40.1	80	90.2	80.8
250	294	153	255	70	24	36	106	50.1	100	130	108



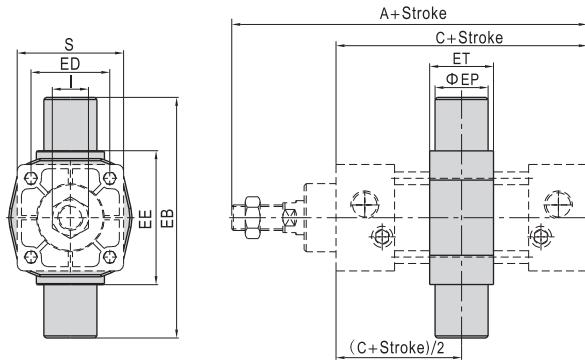
Standard cylinder(Tie-rod)



Accessories

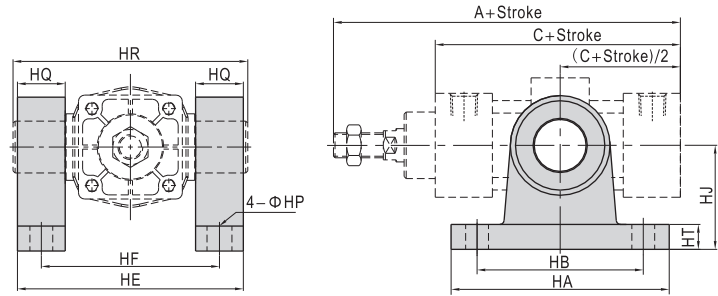
TC

Φ32~Φ100



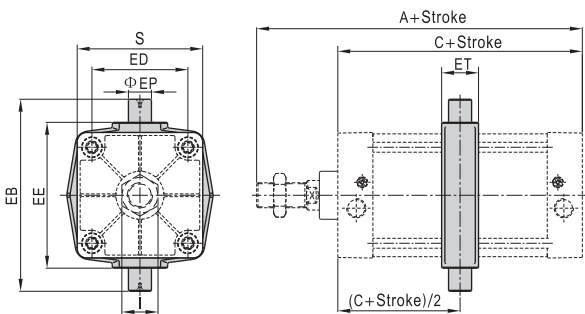
TCM1

Φ32~Φ100

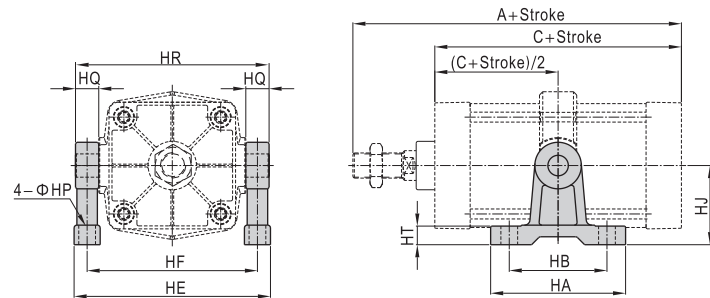


SC

Φ125~Φ250



Φ125~Φ250



Bore size\Item	A	C	EB	ED	EE	EP	ET	I	S
32	140	93	87	33	55	16	22	17	45
40	142	93	113	37	63	25	28	17	50
50	150	93	126	47	76	25	28	23	62
63	153	96	138	56	88	25	30	23	75
80	182	107	164	70	114	25	32	26	94
100	188	113	182	84	132	25	38	26	112
125	203	115	208	104	158	25	40	41	136
160	239	126	272	134	200	36	46	55	174
200	244	126	318	163	246	36	46	55	214
250	294	153	394	202	304	45	56	65	267

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

Bore size\Item	A	C	HA	HB	HE	HF	HP	HQ	HR	HT	HJ
32	140	93	100	75	90	71	12	16	87	11	54
40	142	93	103	80	109	86	11	23	113	12	50
50	150	93	103	80	122	99	11	23	126	12	50
63	153	96	103	80	134	111	11	23	138	12	50
80	182	107	110	85	160	137	13	23	164	12	70
100	188	113	110	85	178	155	13	23	182	12	70
125	203	115	145	105	211	183	18	25	208	20	85
160	239	126	185	140	272	236	22	36	272	25	130
200	244	126	185	140	318	282	22	36	318	25	130
250	294	153	215	165	394	349	26	45	394	28	160

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

Standard cylinder(Tie-rod)

Accessories

List for ordering code of accessories

Bore size	Accessories	Mounting accessory		
	LB	FA	FB	CA
32	F-SC32LB	F-SC32FA		F-SC32CA
40	F-SC40LB	F-SC40FA		F-SC40CA
50	F-SC50LB	F-SC50FA		F-SC50CA
63	F-SC63LB	F-SC63FA		F-SC63CA
80	F-SC80LB	F-SC80FA		F-SC80CA
100	F-SC100LB	F-SC100FA		F-SC100CA
125	F-SC125LB	F-SC125FA		F-SC125CA
160	F-SC160LB	F-SC160FA		F-SC160CA
200	F-SC200LB	F-SC200FA		F-SC200CA
250	F-SC250LB	F-SC250FA		F-SC250CA

Bore size	Accessories	Mounting accessory	
	CB	TC	TCM1
32	F-SC32CB	F-SC32TC	F-SI40TCM1
40	F-SC40CB	F-SC40TC	F-SC40TCM1
50	F-SC50CB	F-SC50TC	F-SC40TCM1
63	F-SC63CB	F-SC63TC	F-SC40TCM1
80	F-SC80CB	F-SC80TC	F-SC80TCM1
100	F-SC100CB	F-SC100TC	F-SC80TCM1
125	F-SC125CB	F-SC125TC	F-SC125TCM1
160	F-SC160CB	F-SC160TC	F-SC160TCM1
200	F-SC200CB	F-SC200TC	F-SC160TCM1
250	F-SC250CB	F-SC250TC	F-SC250TCM1

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	
250	F-M42200II	F-M42200YI	-	-	

Bore size	Accessories	Sensor switch							
	CS1-A	DS1-A	CS1-F	DS1-F	CS1-U	DS1-U	CS1-B	DS1-B	
32-100	CS1-A	DS1-A	CS1-F	DS1-F	CS1-U	DS1-U	-	-	
125-250	-	-	-	-	-	-	CS1-B	DS1-B	

