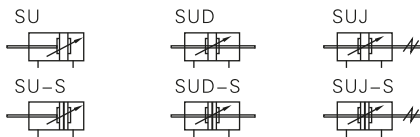




Symbol



Product feature

1. Standard cylinder manufactured by our enterprise.
2. The seal of piston adopts heterogeneous two way seal structure. It's dimension is tight and it has the function of oil reservation.
3. It is no tie rod cylinder. The cylinder barrel is "Mickey Mouse" shape, and have good corrosion resistance.
4. Compared with ISO15552 standard cylinder, SU series same bore size is shorter.
5. The buffer adjustment of cylinder is smooth and steady.
6. Mounting accessories are the same as SC series.
7. The seal material with high temperature resistance is adopted to guarantee the normal operation of cylinder at 150°C.

Ordering code

SU		50	×	50		
SUD		50	×	50		
SUJ		50	×	50	-	20
Model	Bore size	Stroke	Adjustable stroke			
SU	Double acting type	32	10	10mm		
		40	20	20mm		
SUD	Double rod type	50	30	30mm		
		63	40	40mm		
SUJ	Adjustable stroke type	80	50	50mm		
		100	75	75mm		
		125	100	100mm		
		160				
		200				
		250				
		320				

Specifications

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)										
Mounting type	SU	Basic FA FB CA CB LB TC TCM1										
	SUD, SUJ	Basic FA 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 ^{+1.5} ₀			1001~1500 ^{+2.0} ₀				
Cushion type		Variable cushion										
Adjustable cushion stroke		21			28		29					
Port size Note)		1/8"	1/4"		3/8"		1/2"		3/4"		1"	

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

Stroke

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

Note: Consult us if need non-standard stroke.

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

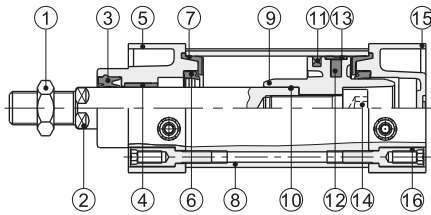
Note: TC is used with TCM1.

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

Inner structure and material of major parts

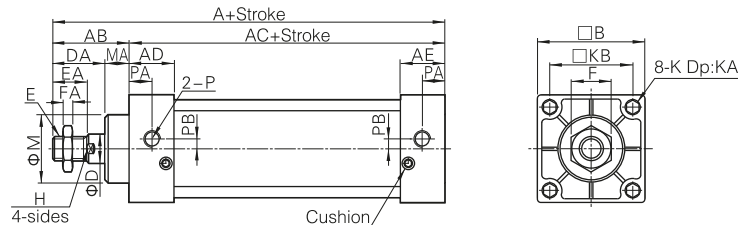
SU



No.	Item	Material	No.	Item	Material
1	Rod nut	Carbon steel	9	Piston	Aluminum alloy
2	Piston rod	Carbon steel with 20μm chrome plated	10	Piston rod O-ring	NBR
3	Front cover packing	TPU	11	Piston seal	NBR
4	Bushing	Wear resistant material	12	Magnet	Plastic
5	Front cover	Aluminum alloy	13	Wear ring	Wear resistant material
6	Cushing O-ring	NBR	14	Bolt	Carbon steel
7	Cushion gasket	TPU	15	Back cover	Aluminum alloy
8	Barrel	Aluminum alloy	16	Tie-rod nut	Carbon steel

Dimensions

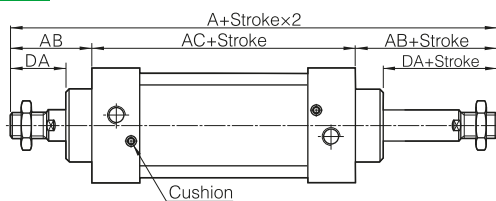
SU



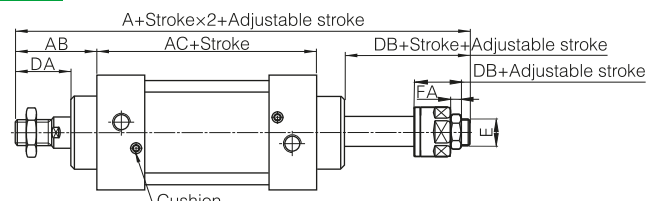
Bore size\Item	A	AB	AC	AD	AE	B	D	DA	E	EA	F	FA	M	MA	H	K(Without TC)	K(With TC)	KA(Without TC)	KA(With TC)	KB	P	PA	PB
32	140	47	93	27.5	27.5	45	12	32	M10×1.25	22	17	6	28	15	10	M6×1.0	M5×0.8	9.5	10	33	1/8"	14	5.5
40	142	49	93	27.5	27.5	50	16	34	M12×1.25	24	17	7	32	15	14	M6×1.0	M5×0.8	9.5	9	37	1/4"	15	6
50	150	57	93	27.5	27.5	62	20	42	M16×1.5	32	23	8	38	15	17	M6×1.0	M5×0.8	9.5	9.5	47	1/4"	17	8.5
63	153	57	96	27.5	27.5	75	20	42	M16×1.5	32	23	8	38	15	17	M8×1.25	M6×1.0	9.5	7.5	56	3/8"	15	9.5
80	182	75	107	33	33	94	25	54	M20×1.5	40	26	10	47	21	22	M10×1.5	M8×1.25	11.5	11	70	3/8"	19.5	10
100	188	75	113	33	33	112	25	54	M20×1.5	40	26	10	47	21	22	M10×1.5	M8×1.25	11.5	11	84	1/2"	16.5	11
125	239	104	136	40	40	140	32	71	M27×2	54	40	12	56	32	28	M12×1.75	-	21	-	110	1/2"	16.5	-
160	291	121	166	50	50	180	40	92	M36×2	72	50	14	62	60	36	M16×2	-	25	-	140	3/4"	26	-
200	272	132	130	41	41	220	40	117	M36×2	72	50	16	75	30	36	M16×2	-	25	-	175	3/4"	22.5	-
250	389	189	200	54	54	270	50	122	M42×2	84	65	21	90	67	46	M20×2	-	-	-	220	1"	31	18.5
320	436	216	220	65	65	350	63	126	M48×2	96	75	24	110	90	55	M24×2	-	-	-	270	1"	31	35

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

SUD



SUJ

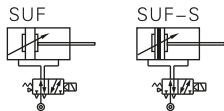


Bore size\Item	A(SUD)	A(SUJ)	AB	AC	DA	DB	E	FA
32	187	182	47	93	32	27	M10×1.25	6
40	191	185	49	93	34	28	M12×1.25	7
50	207	194	57	93	42	29	M16×1.5	8
63	210	197	57	96	42	29	M16×1.5	8
80	257	238.5	75	107	54	35.5	M20×1.5	10
100	263	244.5	75	113	54	35.5	M20×1.5	10
125	330	363	104	136	71	-	M27×2	12
160	412	450	121	166	92	-	M36×2	14
200	409	451	132	130	117	-	M36×2	16
250	-	-	189	200	122	-	M42×2	21
320	-	-	216	220	126	-	M48×2	24

Note: 1. The dimensions of magnet type cylinder are the same as non-magnet type cylinder;
2. The unmarked dimension is the same as SU standard 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 decentralize installation in large system.
4. Options of mounting accessories & easy installation.

Stroke

Bore size (mm)	Standard stroke (mm)	Mini. stroke	Max. std.	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	100		
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	100		
63	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	125		

Note: Consult us for non-standard stroke.

Ordering code

SUF		50	×	1000	S		06	A		
Model	Bore size	Stroke	Magnet	Mounting type (Note)	Port size	Voltage	Electrical entry	Thread type		
SUF	Double acting with valve type	32	Refer to stroke table for details	Blank	06 1/8"	A AC220V	Blank	Blank	Blank	PT
		40		LB	08 1/4"	B DC24V	I	G	G	G
		50		FA	10 3/8"	C AC110V		T	NPT	NPT
		63		FB		E AC24V				
		80		CA		F DC12V				
		100		CB						
				TC						

Note: TC is used with TCM1.

Specifications

Cylinder specification						
Bore size(mm)	32	40	50	63	80	100
Acting type	Double acting					
Fluid	Air (to be filtered by 40μm 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 ^{+1.5} ₀ 1001~1500 ^{+2.0} ₀					
Cushion type	Variable cushion					
Adjustable cushion stroke	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 40μm filter element)					
Acting type	Internal piloted					
Port size Note 1)	In=Exhaust=1/8" & In=1/4" Exhaust=1/8"			In=Exhaust=1/4" & In=3/8" Exhaust=1/4"		
Orifice size	4M210-06: 14.0mm ² (Cv=0.78) 4M210-08: 16.0mm ² (Cv=0.89)			4M310-08: 25.0mm ² (Cv=1.40) 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 Note 2)	Not required					
Max. frequency Note 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					

Note: 1. PT thread, G thread and NPT 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.

Cylinder

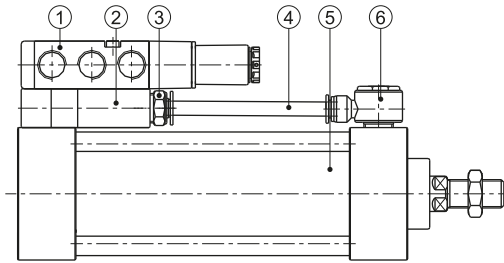
SC
SC(Big)
SCT
SCF
SU
SUF
SI
SIF
DNC
QGB
QGBZ
NCQ2
NCQ2(Big)
NCQ2(Long)
NCQS
NCQM
NRQ
SDA
ADVU
ACE(AND)
MAL
MA
MI
NCM2
NCJ2
NCG1
NCJP
TD
TN(TDA)
NCXS
NCXSW
NMGP
NMGG
NCU
NCUJ
NCY3B
NCY3R
NCY1S
NCY1L
STM
NMXH
NMXS
NMXQ
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRQ2
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
NMHZ2
NMHC2
NMHL2
NMHY2
NMHT2
NMHW2
NMHF2
NMHS2
NMHS3
NMHS4
NMRHQ
NMSQ
NCRA1
NCRO2
NCRB2
ACK
SRC
QCK
NCK1

Inner structure

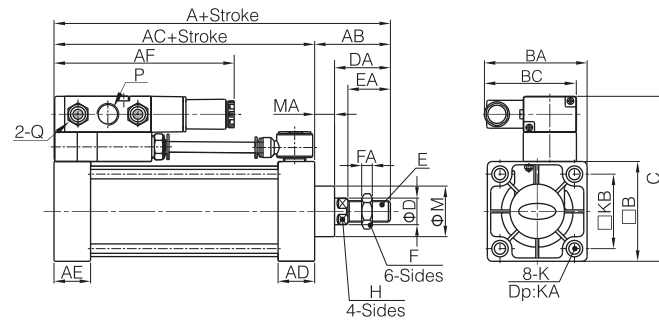
SUF



No.	Item
1	4M series solenoid valve
2	Unite block
3	PC series tube connector
4	PU tube
5	SU series cylinder
6	PH series tube connector

Dimensions

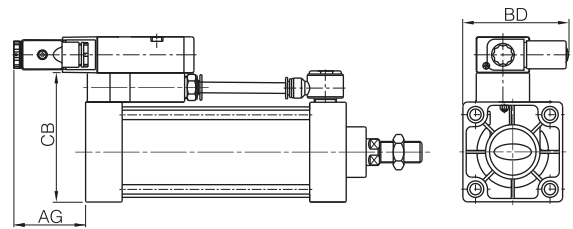
Pull when energized



Bore size\Item	A	AB	AC	AD	AE	AF	AG	B	BA	BC	BD
32	140	47	93	27.5	27.5	118	53	45	67	67	77
40	142	49	93	27.5	27.5	118	53	50	68.5	67	80.5
50	150	57	93	27.5	27.5	120	51	62	72	67	89
63	153	57	96	27.5	27.5	135.5	54.5	75	77.5	69.5	96.5
80	182	75	107	33	33	137	53	94	86.5	69.5	106.5
100	188	75	113	33	33	135.5	54.5	112	96	69.5	115

Bore size\Item	C	CB	D	DA	E	EA	F	FA	M	MA
32	89	67	12	32	M10×1.25	22	17	6	28	15
40	94	72	16	34	M12×1.25	24	17	7	32	15
50	106	84	20	42	M16×1.5	32	23	8	38	15
63	124	97	20	42	M16×1.5	32	23	8	38	15
80	143	116	25	54	M20×1.5	40	26	10	47	21
100	161	134	25	54	M20×1.5	40	26	10	47	21

Push when energized



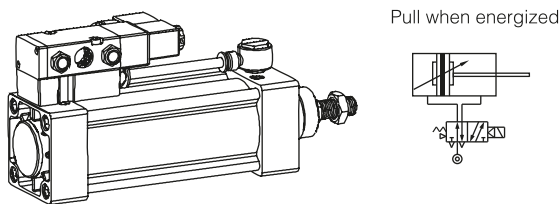
Bore size\Item	Compatible valve's type	P	Q	K	KA	KB	H
32	4M210-06	1/8"	1/8"	M6×1(No TC)	9.5(No TC)	33	10
	4M210-08	1/4"		M5×0.8(With TC)	10(With TC)		
40	4M210-06	1/8"	1/8"	M6×1(No TC)	9.5(No TC)	37	14
	4M210-08	1/4"		M5×0.8(With TC)	9(With TC)		
50	4M210-06	1/8"	1/8"	M6×1(No TC)	9.5(No TC)	47	17
	4M210-08	1/4"		M5×0.8(With TC)	9.5(With TC)		
63	4M310-08	1/4"	1/4"	M8×1.25(No TC)	9.5(No TC)	56	17
	4M310-10	3/8"		M6×1(With TC)	7.5(With TC)		
80	4M310-08	1/4"	1/4"	M10×1.5(No TC)	11.5(No TC)	70	22
	4M310-10	3/8"		M8×1.25(With TC)	11(With TC)		
100	4M310-08	1/4"	1/4"	M10×1.5(No TC)	11.5(No TC)	84	22
	4M310-10	3/8"		M8×1.25(With TC)	11(With TC)		

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

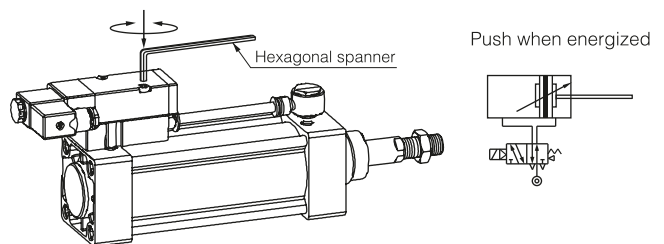
How to use

- Options for piston rod to retract or extend when solenoid coil is energized.
- Default factory setting will be retracting action when energized (see drawing one). If 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.

List for ordering code of accessories

Accessories Bore size	Mounting accessories					
	LB	FA\FB	CA	CB	TC	TCM1
32	F-SC32LB	F-SC32FA	F-SC32CA	F-SC32CB	F-SU32TC	F-SI32TCM1
40	F-SC40LB	F-SC40FA	F-SC40CA	F-SC40CB	F-SU40TC	F-SC40TCM1
50	F-SC50LB	F-SC50FA	F-SC50CA	F-SC50CB	F-SU50TC	F-SC40TCM1
63	F-SC63LB	F-SC63FA	F-SC63CA	F-SC63CB	F-SU63TC	F-SC40TCM1
80	F-SC80LB	F-SC80FA	F-SC80CA	F-SC80CB	F-SU80TC	F-SC80TCM1
100	F-SC100LB	F-SC100FA	F-SC100CA	F-SC100CB	F-SU100TC	F-SC80TCM1

Accessories Bore size	Knuckle				Sensor switch			
	I: I Knuckle	Y: Y Knuckle	F: F Knuckle	U: U Knuckle	CS1-B□	DS1-B□	CS1-F	DS1-F
32	F-M10×125I	F-M10×125Y	F-M10×125F	F-M10×125U	CS1-B1	CS1-B1	CS1-F	DS1-F
40	F-M12×125I	F-M12×125Y	F-M12×125F	F-M12×125U	CS1-B1	CS1-B1		
50	F-M16×150I	F-M16×150Y	F-M16×150F	F-M16×150U	CS1-B1	CS1-B1		
63	F-M16×150I	F-M16×150Y	F-M16×150F	F-M16×150U	CS1-B2	CS1-B2		
80	F-M20×150I	F-M20×150Y	F-M20×150F	F-M20×150U	CS1-B3	CS1-B3		
100	F-M20×150I	F-M20×150Y	F-M20×150F	F-M20×150U	CS1-B4	CS1-B4		

Accessory selection

Accessories		Mounting accessory							Knuckle				Sensor switch					
Cylinder model		LB	FA	FB	CA	CB	TC	TCM1	I	Y	U	F	CS1-B	DS1-B	CS1-F	DS1-F	CS1-U	DS1-U
SUSUF	Standard	●	●	●	●	●	●	●	●	●	●	●	×	×	×	×	×	×
	With magnet	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SUD	Standard	●	●	×	×	×	●	●	●	●	●	●	×	×	×	×	×	×
	With magnet	●	●	×	×	×	●	●	●	●	●	●	●	●	●	●	●	●
SUJ	Standard	●	●	×	×	×	●	●	●	●	●	●	×	×	×	×	×	×
	With magnet	●	●	×	×	×	●	●	●	●	●	●	●	●	●	●	●	●

Material of accessories

Accessories		Mounting accessories							Knuckle			
Bore size		LB	FA	FB	CA	CB	TC	TCM1	I	Y	U	F
32~40		□	●	●	◇	◇	◇	◇	□	□	□	□

●—Aluminum alloy, ◇—Cast steel, □—Carbon steel.

Dimensions

TC

Bore size\Item	A	C	EA	EB	EC	ED	EE	EP	ET	I	S
32	140	93	20	74	52	33	50	12	22	17	45
40	142	93	27	113	65	37	63	25	28	17	50
50	150	93	31	126	75	47	76	25	28	23	62
63	153	96	42	138	90	56	88	25	30	23	75
80	182	107	54	164	112	70	114	25	32	26	94
100	188	113	68	182	135	84	132	25	38	26	112

TCM1

Bore size\Item	A	C	HA	HB	HE	HF	HP	HQ	HR	HT	HJ
32	140	93	80	60	72	62	9	12	74	11	40
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

Note: The TC accessory has been installed on the barrel of cylinder before it worked off, and the position of the accessories can not be adjusted arbitrarily.
If consumer orders the TC solely, it will not be installed on the barrel of standard cylinder directly.
The others accessories are the same as SC series's accessories.

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