



New Products

ISO Standard Pneumatic Cylinders SCW Series

Universal Pneumatic Cylinders
with compact switch

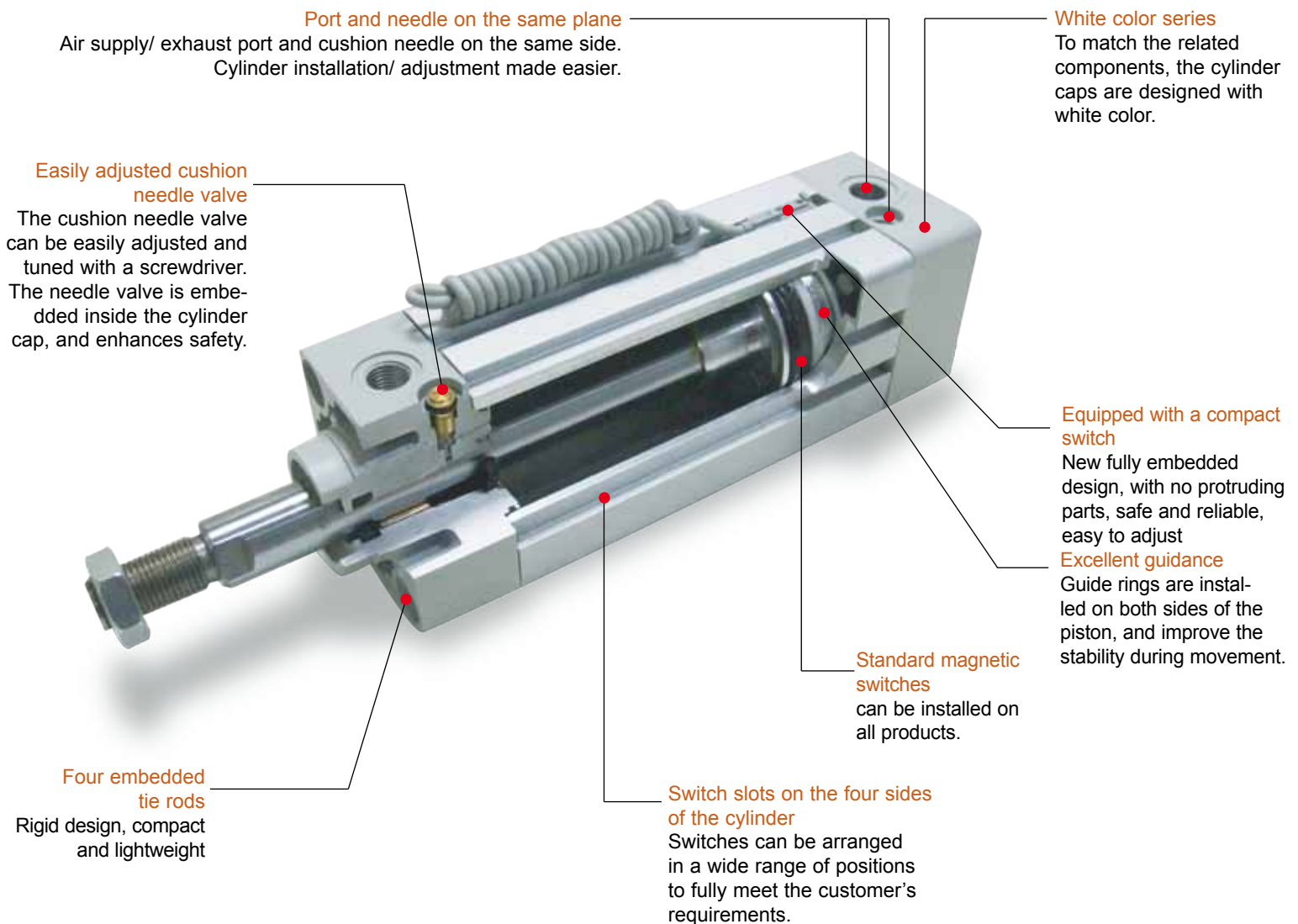


CKD (Shanghai) Corporation

C-CH-001C 1

ISO Compliant Pneumatic Cylinders

Newly developed SCW Series pneumatic cylinders are ergonomically designed, with improved safety, and are more environmental friendly (Ø 32 - Ø 100)




ISO 15552 compliant SCW series



Standard Pneumatic Cylinders SCW series

Bore of pneumatic cylinder: Ø32 • Ø40 • Ø50 • Ø63 • Ø80 • Ø100

Graphic symbol: 

Technical data

Specifications		SCW					
Bore	mm	Ø32	Ø40	Ø50	Ø63	Ø80	Ø100
Working fluid		Compressed air					
Maximum operating pressure	MPa	1.0					
Minimum operating pressure	MPa	0.05					
Withstand pressure	MPa	1.5					
Ambient temperature	°C	-10~60 (to be unfrozen)					
Stroke tolerance	mm	±1.2					
Permissible velocity	mm/s	30~1000					
Cushion type		Air cushion					
Effective air cushion length	mm	8.6	8.6	13.4	13.4	15.4	15.4
Lubrication		Not required (use one turbine oil ISO VG32 when required)					
Allowable energy absorption	J	2.5	3.7	8.0	14.4	25.4	45.6

Stroke Specifications

Bore (mm)	Standard stroke (mm)	Maximum stroke (mm)	Available stroke (mm)	Minimum stroke (mm)
Ø 32	25, 40, 50, 75, 80, 100, 125, 150, 175, 200, 250, 300, 320, 350, 400, 450, 500	600	1700	1
Ø 40		600	1700	
Ø 50		600	1700	
Ø 63		600	1700	
Ø 80		700	1700	
Ø 100		800	1700	

Minimum stroke for switch installation

Switch quantity Bore (mm)	1		2		3		4	
	Solid state	Reed type	Solid state	Reed type	Solid state	Reed type	Solid state	Reed type
Ø 32	10		25		30		35	
Ø 40								
Ø 50								
Ø 63								
Ø 80								
Ø 100								

Switch specifications

- One colour/bi-colour/strong magnetic field resistance

Descriptions	Solid state 2 wire type			Solid state 3 wire type			Reed 2 wire type					Solid state 2 wire type		
	T1H·T1V	T2H·T2V· T2JH·T2JV	T2YH·T2YV	T3H·T3V	T3PH·T3PV (production by order)	T3YH·T3YV	T0H·T0V		T5H·T5V		T8H·T8V		T2YD	
Applications	For programmable controller, relay		Programmable controller	Programmable controller, relay			For programmable controller, relay		For programmable controller, relay IC Circuit (no indicating light)		For programmable controller, relay		Programmable controller	
Output forms	—			NPN output	PNP output	NPN output	—							
Voltage of power supply	—			DC10~28V			—							
Load voltage	AC85~265V	DC10~30V		Below DC30V			DC12/24V	AC110V	DC5/12/24V	AC110V	DC12/24V	AC110V	AC220V	DC24V±10%
Load current	5~100mA	5~20mA (Note 1)		Below 100mA		Below 50mA	5~50mA	7~20mA	Below 50mA	Below 20mA	5~50mA	7~20mA	7~10mA	5~20mA
Indicating light	LED (lights up when ON)	LED (lights up when ON)	Red/Green LED (lights up when ON)	LED (lights up when ON)	Green LED (lights up when ON)	Red/Green LED (lights up when ON)	LED (lights up when ON)		No indicating light		LED (lights up when ON)		Red/Green LED (lights up when ON)	
Leakage current	Below 1mA for AC100V Below 2mA for AC200V	Below 1mA		Below 10µA			0mA					Below 1mA		

- with preventive maintenance output

Descriptions	Solid state 3 wire type	Solid state 4 wire type	Solid state 3 wire type	Solid state 4 wire type
	T2YFH/V	T3YFH/V	T2YMH/V	T3YMH/V
Applications	Programmable controller		Programmable controller, relay	
Output forms	NPN output			
Indicating light	Red/Green LED (Illuminates when it is ON)			
	—		Yellow LED (Illuminates when it is ON)	
Normal output section	Voltage of power supply	—	DC10~28V	—
	Load voltage	DC10~30V	Below DC30V	DC10~30V
	Load current	5~20mA	Below 50mA	5~20mA
	Leakage current	Below 1mA	Below 10µA	Below 1,2mA
Preventive maintenance output section	Below DC30V			
	Load current	Below 20mA	Below 50mA	Below 5-20mA
	Leakage current	Below 10µA		

Note 1: The maximum value 20 mA of above load current is the value at 25°C.
When the switch operational temperature is over 25°C, the load current will be below 20 mA (5-10 mA at 60°C)

List of spare parts

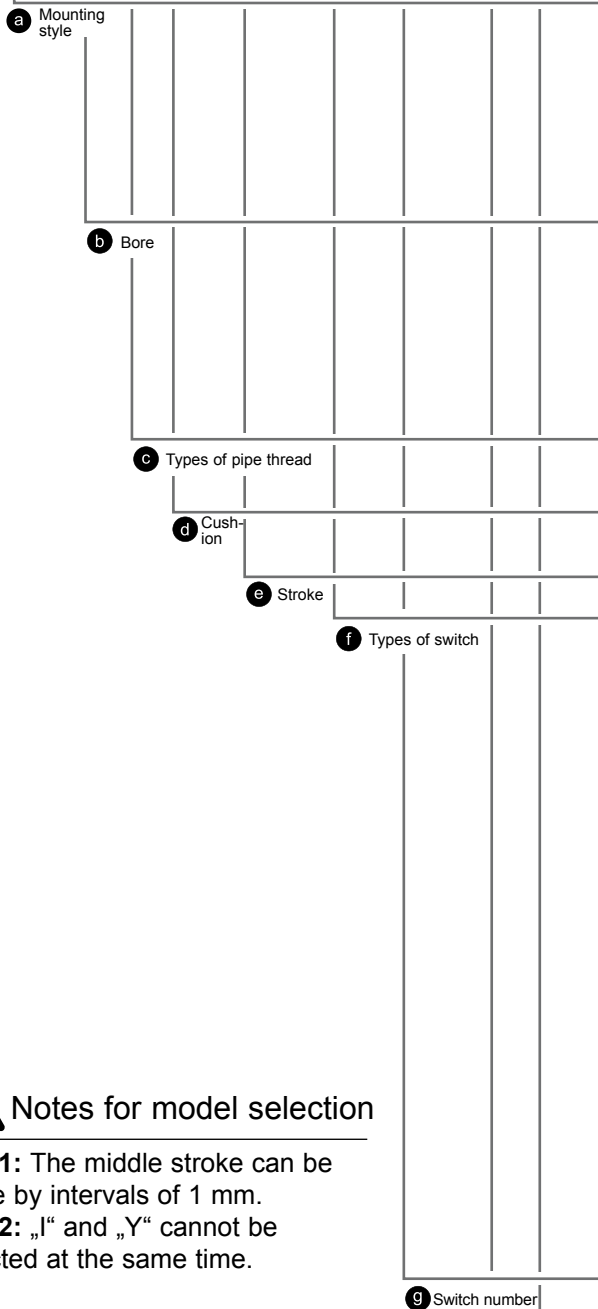
Number	Bore of pneumatic cylinder	Order code of spare parts	Comments
1	32	SCW - 32K	
2	40	SCW - 40K	
3	50	SCW - 50K	
4	63	SCW - 63K	
5	80	SCW - 80K	
6	100	SCW - 100K	

Weight table

Bore of pneumatic cylinders	Weight of pneumatic cylinders when stroke = 0						Switch weight	Accessory weight	
	Standard type (00)	Foot type (LB)	Flange type (FAFB)	Eye bracket type (CA)	Clevis bracket type (CB)	Stroke length: Additional weight per 50 mm		I	Y
32	0.5	0.61	0.72	0.65	0.68	0.12	0.018	0.07	0.1
40	0.66	0.8	0.94	0.85	0.85	0.17	0.018	0.07	0.13
50	1.13	1.29	1.61	1.54	1.54	0.23	0.018	0.2	0.3
63	1.39	1.73	2.15	1.95	1.96	0.25	0.018	0.2	0.3
80	2.66	3.09	4.23	3.93	3.94	0.4	0.018	0.52	0.94
100	3.77	4.63	6.09	5.49	5.52	0.51	0.018	0.48	0.92

How to order

SCW - LB - 40 - B - 100 - T2H - R - J - I



a Mounting style		
00	ISO presentation	Basic type
LB	MS1	Axial foot type
FA	MF1	Rod side flange type
FB	MF2	Head side flange type
CA	MP4	Eye bracket type
CB	MP2	Clevis bracket type

b Bore	
32	Ø 32
40	Ø 40
50	Ø 50
63	Ø 63
80	Ø 80
100	Ø 100

c Port thread type	
No symbol	G thread

d Cushion	
B	Air cushions at both end (standard type)

e Stroke (refer to Stroke Specification section for details)

f Switch model No				
Axial lead wire	Radial lead wire	Contacts	Indicator	Lead wire
T0H※	T0V※	Reed	1 colour indicator	2 Wire
T5H※	T5V※		No indicating light	
T8H※	T8V※		1 colour indicator	
T1H※	T1V※	Proximity	1 colour indicator	2 Wire
T2H※	T2V※			3 Wire
T3H※	T3V※		1 colour indicator (production by order)	3 Wire
T3PH※	T3PV※			2 Wire
T2YH※	T2YV※		2 colour indicator	3 Wire
T3YH※	T3YV※		2 colour indicator (No indicating light for preventative maintenance output)	4 Wire
T2YFH※	T2YFV※			3 Wire
T3YFH※	T3YFV※		2 colour indicator (Indicating light for preventative maintenance output; single color)	4 Wire
T2YMH※	T2YMV※			2 Wire
T3YMH※	T3YMV※		Off delay type	2 Wire
T2JH※	T2JV※			2 Wire
T2YD※	—		Switch for strong magnetic field	2 Wire

Wire length	
No symbol	1m (Standard)
3	3m (Optional)
5	5m (Optional)

g Switch number	
R	1 switch on rod side
H	1 switch on head side
D	2 switches
T	3 switches

h Options	
M	Material for the piston (stainless steel)

i Accessories		
I	ISO8139	Rod eye
Y	ISO8140	Rod clevis (connector pin and split pin attached)
B1		Eye bracket
B2		Clevis bracket (connector pin and split pin attached)
B3	AB7	Eye bracket

Notes for model selection

Note1: The middle stroke can be made by intervals of 1 mm.

Note2: „I“ and „Y“ cannot be selected at the same time.

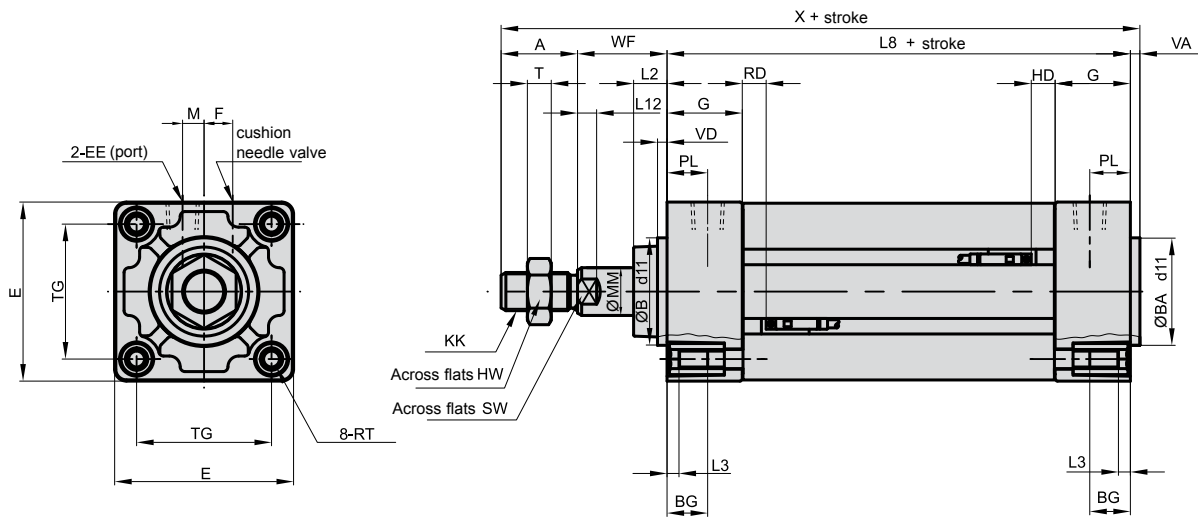
Example of symbol presentation

SCW-LB-50B-100-T0H-D-MI

Installation method: Parallel axis foot rest type
 Bore: Ø 50
 Cushion: Cushions at both ends
 Stroke: 100 mm
 Switch: T0H switch, wire length of 1 m
 Switch number: 2
 Option: Material for the piston (stainless steel)
 Accessories: Rod eye

Dimensions

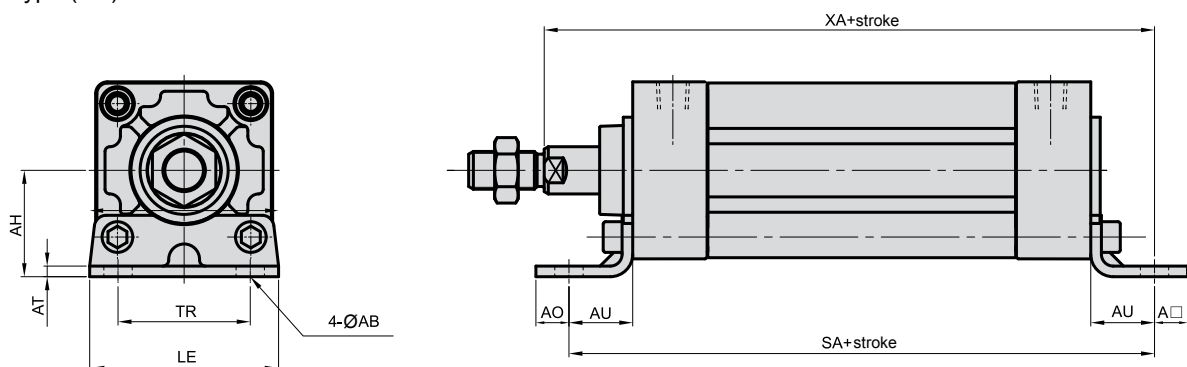
● Standard type



Bore	A	B/BA	BG	E	EE	F	G	HW	KK	L2	L3	L8	L12	M	MM	SW	PL	RT	T
32	22	30	16	46	G1/8	6.5	27	16	M10X1.25	13	4	94	6	4	12	10	13	M6	5
40	24	35	16	52	G1/4	9	27	18	M12X1.25	13	4	105	8	4	16	13	14	M6	6
50	32	40	16	65	G1/4	10.5	31.5	24	M16X1.5	14	5	106	8	5	20	17	15.5	M8	8
63	32	45	16	75	G3/8	12	31.5	24	M16X1.5	14	5	121	8	9	20	17	16.5	M8	8
80	40	45	17	95	G3/8	14	38	30	M20X1.5	20	5	128	11	11.5	25	22	19	M10	10
100	40	55	17	114	G1/2	15	38	30	M20X1.5	20	5	138	11	17	30	22	19	M10	10

Bore	TG	VA/VD	WF	X	RD	HD
Ø 32	32.5	4	26	146	5.5	15.5
Ø 40	38	4	30	163	5.5	26.5
Ø 50	46.5	4	37	179	7	17
Ø 63	56.5	4	37	194	7	32
Ø 80	72	4	46	218	13	20
Ø 100	89	4	51	233	12.5	30.5

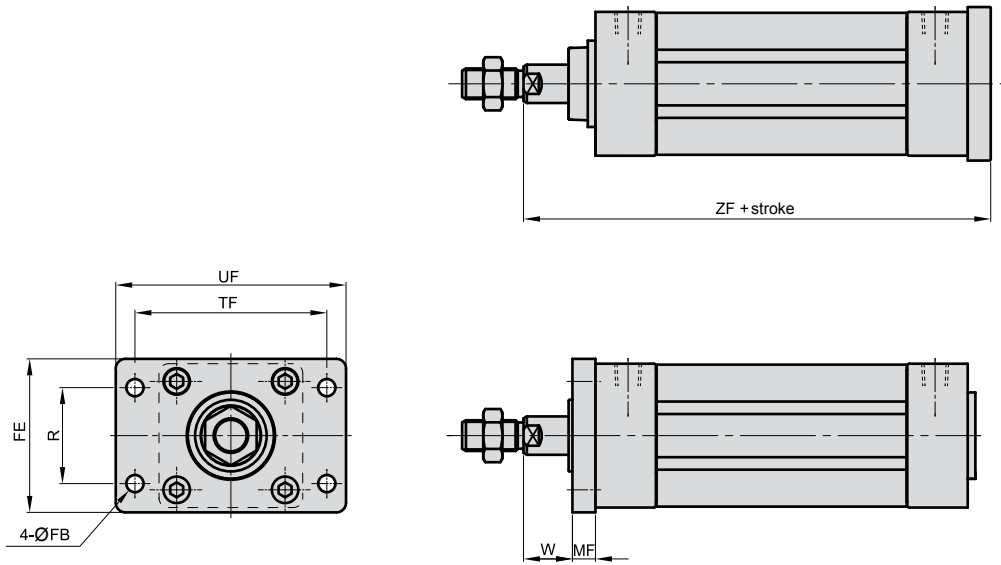
● Axial foot type (CB)



Bore	AB	AH	AO	AT	AU	LE	SA	TR	XA
Ø 32	7	32	8	4	24	46	142	32	144
Ø 40	10	36	10	4	28	52	161	36	163
Ø 50	10	45	10	5	32	65	170	45	175
Ø 63	10	50	10	5	32	75	185	50	190
Ø 80	12	63	13	6	41	94	210	63	215
Ø 100	14.5	71	15	6	41	114	220	75	230

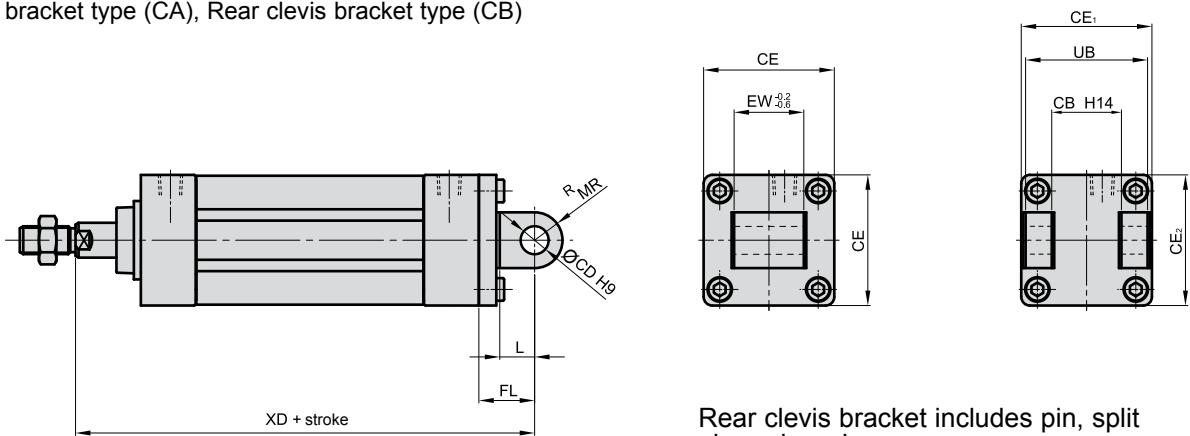
Dimensions

- Rod side flange type, head side flange type (FA, FB)



Bore	FB	FE	MF	R	TF	UF	W	ZF
Ø 32	7	50	10	32	64	79	16	130
Ø 40	9	55	10	36	72	90	20	145
Ø 50	9	70	12	45	90	110	25	155
Ø 63	9	80	12	50	100	120	25	170
Ø 80	12	100	16	63	126	153	30	190
Ø 100	14	120	16	75	150	178	35	205

- Eye bracket type (CA), Rear clevis bracket type (CB)

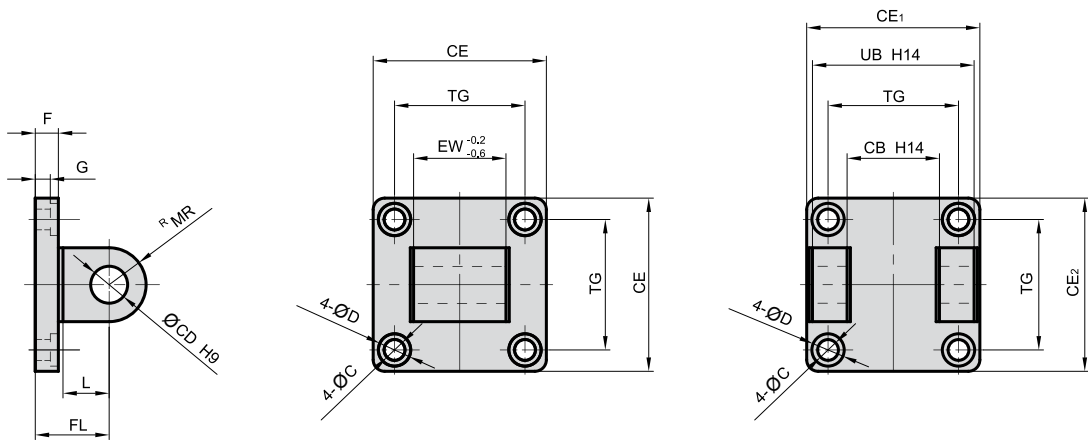


Rear clevis bracket includes pin, split pin and washers.

Bore	CB	CD	CE	CE1	CE2	EW	FL	L	MR	UB	XD
Ø 32	26	10	46	49	46	26	22	12	10	45	142
Ø 40	28	12	52	57	52	28	25	15	12	52	160
Ø 50	32	12	65	65	65	32	27	15	12	60	170
Ø 63	40	16	75	75	75	40	32	20	16	70	190
Ø 80	50	16	95	95	95	50	36	20	16	90	210
Ø 100	60	20	114	116	114	60	41	25	20	110	230

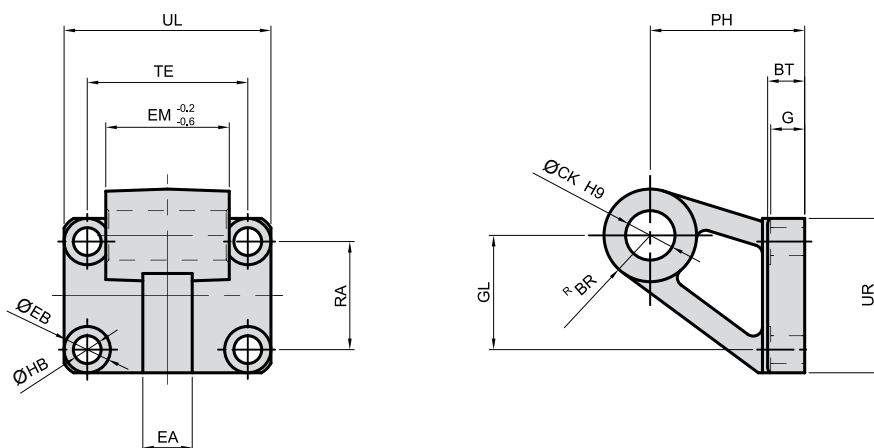
Illustration of layout and dimensions of accessories

● Eye bracket (B1), Clevis bracket (B2)



Bore	C	CB	CD	CE	CE1	CE2	D	EW	F	G	FL	L	MR	TG	UB	XD
∅ 32	6.6	26	10	46	49	46	11	26	8	5.5	22	12	10	32.5	45	142
∅ 40	6.6	28	12	52	57	52	11	28	8	5.5	25	15	12	38	52	160
∅ 50	9	32	12	65	65	65	14	32	10	6.5	27	15	12	46.5	60	170
∅ 63	9	40	16	75	75	75	14	40	10	6.5	32	20	16	56.5	70	190
∅ 80	11	50	16	95	95	95	17.5	50	14	10	36	20	16	72	90	210
∅ 100	11	60	20	114	116	114	17.5	60	14	10	41	25	20	89	110	230

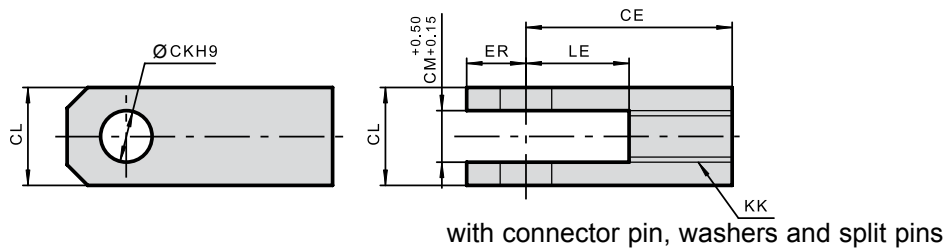
● Eye bracket (B3)



Bore	BR	BT	CK	EA	EB	EM	G	GL	HB	PH	RA	TE	UL	UR	Models
∅ 32	10	8	10	10	11	26	7	21	6.6	32	18	38	51	31	SCW- B3- 32
∅ 40	11	10	12	12	11	28	9	24	6.6	36	22	41	54	35	SCW- B3- 40
∅ 50	12	12	12	16	15	32	11	33	9	45	30	50	65	45	SCW- B3- 50
∅ 63	15	12	16	16	15	40	11	37	9	50	35	52	67	50	SCW- B3- 63
∅ 80	15	14	16	20	18	50	13	47	11	63	40	66	86	60	SCW- B3- 80
∅ 100	19	15	20	20	18	60	14	55	11	71	50	76	96	70	SCW- B3- 100

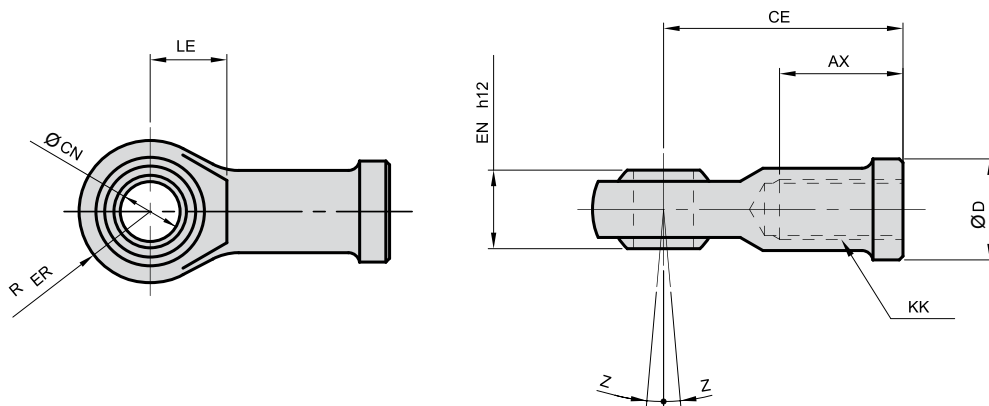
Dimensions of accessories

● Rod clevis (Y)



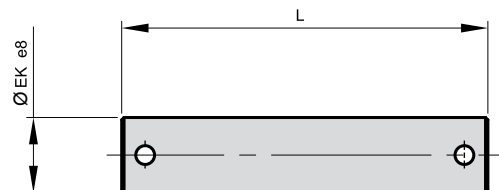
Bore	CE	K	CM	CL	ER	KK	LE	Models
Ø32	40	10	10	19	11,5	M10X1,25	20	SCW-Y-32
Ø40	48	12	12	24	13	M12X1,25	24	SCW-Y-40
Ø50,63	64	6	16	32	18	M16X1,5	32	SCW-Y-50
Ø80,100	80	20	20	40	24	M20X1,5	41	SCW-Y-80

● Rod eye (I)



Bore	AX	CE	CN	D	EN	ER	KK	LE	Z	Models
Ø32	20	43	10	19	14	14	M10X1,25	15	13	SCW-I-32
Ø40	22	50	12	22	16	16	M12X1,25	17	13	SCW-I-40
Ø50,63	28	64	16	27	21	21	M16X1,5	22	15	SCW-I-50
Ø80,100	33	77	20	34	25	25	M20X1,5	26	15	SCW-I-80

● Pin



with washers and split pins

For clevis bracket

Bore	EK	L	Models
Ø32	10	62	SCW-P1-32
Ø40	12	69	SCW-P1-40
Ø50	16	77	SCW-P1-50
Ø63	16	92	SCW-P1-63
Ø80	20	112	SCW-P1-80
Ø100	20	132	SCW-P1-100

For rod clevis

Bore	EK	L	Models
Ø32	10	36	SCW-P2-32
Ø40	12	41	SCW-P2-40
Ø63, Ø50	20	50	SCW-P2-50
Ø80, Ø100	20	62	SCW-P2-80

Related products

NEW Individual valve - Manifold valve

4G4 Series

- large flow volume, long working life
- enhanced safety and operability
- C_v value 6.8-15



NEW Pluggable modular manifold valve

W4G4 Series

- Modular construction, easy to expand
- compact size, space-saving
- protection level equivalent to IP 65
- C_v value 6.4-7.7



Pluggable modular manifold valve

4G1 • 2 • 3 Series

- continuous increase or decrease, easy to use
- reliable
- protection level equivalent to IP 65
- C_v value 2.0-2.5



Individual valve, modular manifold valve

W4G2 Series

- Modular construction, easy to expand
- compact size, space-saving
- protection level equivalent to IP 65
- C_v value 6.4-7.7



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