

ISO Cylinder: Standard Double Acting with End of Stroke Cushioning Series CP96

ø32, ø40, ø50, ø63, ø80, ø100, ø125

How to Order

Without auto switch

CP96S B 32 100 W

With auto switch

CP96SD B 32 100 W M9BW S

Built-in magnet

Mounting

B	Basic/Without bracket
L	Axial foot
F	Head end flange
G	Rod end flange
C	Single rear clevis
D	Double rear clevis

Bore size

32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm
125	125 mm

Stroke (mm)
(Refer to "Standard Stroke" on page 6.)

Rod

Nil	Single rod
W	Double rod

Auto switch

Nil Without auto switch
* For applicable auto switch model, refer to the below table.

Number of auto switches

Nil	2 pcs.
S	1 pc.
3	3 pcs.
n	"n" pcs.

Applicable Auto Switches/Tie-rod Mounting

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Auto switch model	Lead wire length (m)				Pre-wired connector	Applicable load					
					DC	AC		0.5 (Nil)	1 (M)	3 (L)	5 (Z)							
Solid state switch	—	Grommet		3-wire (NPN)	5 V, 12 V		** M9N	●	●	●	○	○	IC	Relay, PLC				
				3-wire (PNP)			** M9P	●	●	●	○	○						
				2-wire			** M9B	●	●	●	○	○						
	Diagnosis indication (2-color)	Grommet	Yes	3-wire (NPN)	5 V, 12 V	—	M9NW	●	●	●	○	○	IC					
				3-wire (PNP)			M9PW	●	●	●	○	○	IC					
				2-wire			M9BW	●	●	●	○	○	—					
	Water resistant (2-color)	Grommet		3-wire (NPN)	5 V, 12 V		M9NA	○	○	●	○	○	IC					
				3-wire (PNP)			M9PA	○	○	●	○	○	IC					
				2-wire			M9BA	○	○	●	○	○	—					
				2-wire			M9BA	○	○	●	○	○	—					
Reed switch	—	Grommet	Yes	3-wire (Equiv. to NPN)	—	5 V	A96	●	—	●	—	—	IC	—				
				None			2-wire	24 V	12 V	100 V	A93	●	—	●	—	—	—	Relay, PLC
											100 V or less	A90	●	—	●	—	—	—

* Lead wire length symbols: 0.5 m Nil (Example) M9NW
1 m M (Example) M9NWM
3 m L (Example) M9NWL
5 m Z (Example) M9NWX

* Solid state switches marked with "○" are produced upon receipt of order.

* Since there are other applicable auto switches than listed, refer to SMC "Best Pneumatics 2004" Vol.7/8/9/10 catalog.

* For details about auto switches with pre-wired connector, refer to SMC "Best Pneumatics 2004" Vol.6 catalog.

* D-A9□, M9□, M9□W, M9□AL are shipped together, (but not assembled).
(Switch mounting bracket is only assembled at the time of shipment.)

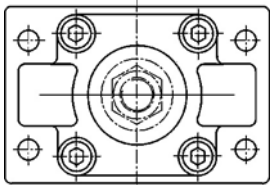
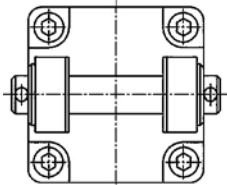
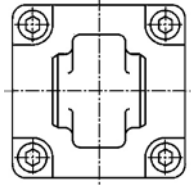
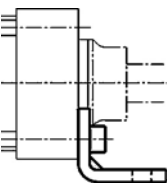
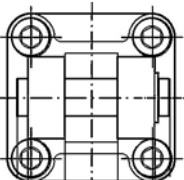
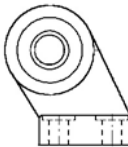
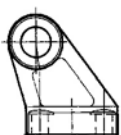
** D-M9BM, M9NM, M9PM type (product of 1 m in length of the lead wire) are applicable from the shipment in May, 2008.

Note) D-Y59A, Y69A, Y7P, Y7□W, Z7□, Z80 type cannot be mounted on the CP96 series.

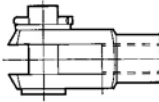
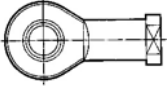
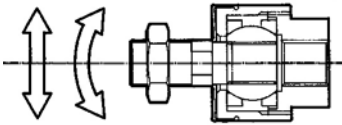
Moreover, D-M9□□ and A9□ type cannot be mounted on square groove of the CP96 series.

Accessories

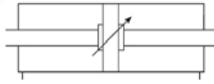
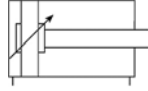
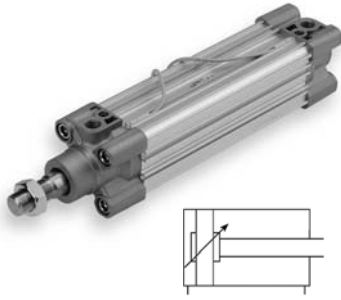
Cylinder Mounting Accessories

Bore size (mm)	F Rod/Head end flange	D Female head end clevis (Corresponds to E accessory)	C Male head end clevis	
				
	Supplied with 4 screws.	Supplied with bolt, safety device and 4 screws.	Supplied with 4 screws.	
			Plain	With ball joint
32	F5032	D5032	C5032	CS5032
40	F5040	D5040	C5040	CS5040
50	F5050	D5050	C5050	CS5050
63	F5063	D5063	C5063	CS6063
80	F5080	D5080	C5080	CS5080
100	F5100	D5100	C5100	CS5100
125	F5125	D5125	C5125	CS5125
	Page 10 for dimensions.	Page 10 and 11 for dimensions.	Page 10 and 11 for dimensions.	
Bore size (mm)	L Foot	DS Female head end clevis (for ES accessory)	ES Angled head end clevis with ball joint	E Angled head end clevis
				
	Supplied with 2 pieces.			
32	L5032	DS5032	ES5032	E5032
40	L5040	DS5040	ES5040	E5040
50	L5050	DS5050	ES5050	E5050
63	L5063	DS5063	ES5063	E5063
80	L5080	DS5080	ES5080	E5080
100	L5100	DS5100	ES5100	E5100
125	L5125	DS5125	ES5125	E5125
	Page 10 for dimensions.	Page 12 for dimensions.	Page 12 for dimensions.	Page 11 for dimensions.

Piston Rod Mounting Accessories

Bore size (mm)	GKM Rod clevis (ISO 8140)	KJ Piston rod ball joint (ISO 8139)	JA Floating joint
			
	Supplied with bolt and safety device.		
32	GKM10-20	KJ10D	JA30-10-125
40	GKM12-24	KJ12D	JA40-12-125
50	GKM16-32	KJ16D	JA50-16-150
63	GKM16-32	KJ16D	JA50-16-150
80	GKM20-40	KJ20D	JAH50-20-150
100	GKM20-40	KJ20D	JAH50-20-150
125	GKM30-54	KJ27D	JA125-27-200
	Page 13 for dimensions.	Page 13 for dimensions.	Page 13 for dimensions.

Series CP96



Minimum Stroke for Auto Switch Mounting

Refer to page 14 for "Minimum Stroke for Auto Switch Mounting".

Specifications

Bore size (mm)	32	40	50	63	80	100	125
Action	Double acting						
Fluid	Air						
Proof pressure	1.5 MPa						
Max. operating pressure	1.0 MPa						
Min. operating pressure	0.05 MPa						
Ambient and fluid temperature	Without auto switch: -20 to 70°C With auto switch: -10 to 60°C						
Lubrication	Not required (Non-lube)						
Operating piston speed	50 to 1000 mm/s					50 to 700 mm/s	
Allowable stroke tolerance	Up to 250 st: $^{+1.0}_0$, 251 to 1000 st: $^{+1.4}_0$, 1001 to 1500 st: $^{+1.8}_0$, 1501 to 2000 st: $^{+2.2}_0$						
Cushion	Both ends (Air cushion)						
Port size	G 1/8	G 1/4	G 1/4	G 3/8	G 3/8	G 1/2	G 1/2
Mounting	Basic, Axial foot, Rod end flange, Head end flange, Single clevis, Double clevis, Center trunnion						

Standard Stroke

Bore size (mm)	Standard stroke (mm)	Max. * stroke
32	25, 50, 80, 100, 125, 160, 200, 250, 320, 400, 500	2000
40	25, 50, 80, 100, 125, 160, 200, 250, 320, 400, 500	2000
50	25, 50, 80, 100, 125, 160, 200, 250, 320, 400, 500, 600	2000
63	25, 50, 80, 100, 125, 160, 200, 250, 320, 400, 500, 600	2000
80	25, 50, 80, 100, 125, 160, 200, 250, 320, 400, 500, 600, 700, 800	2000
100	25, 50, 80, 100, 125, 160, 200, 250, 320, 400, 500, 600, 700, 800	2000
125	—	2000

Intermediate strokes are available.

* Please consult with SMC for longer strokes.

Accessories

Mounting		Basic	Foot	Rod end flange	Head end flange	Single clevis	Double clevis	Center trunnion
Standard	Rod end nut	●	●	●	●	●	●	●
	Clevis pin	—	—	—	—	—	●	—
Option	Piston rod ball joint	●	●	●	●	●	●	●
	Rod clevis	●	●	●	●	●	●	●
	Rod boot	●	●	●	●	●	●	●

* Please do not use a piston rod ball joint (or floating joint) together with a head end clevis with a ball joint (or angled head end clevis with a ball joint).

ISO Cylinder: Standard Double Acting w/ End of Stroke Cushioning **Series CP96**

Theoretical Output



Bore size (mm)	Rod diameter (mm)	Operating direction	Piston area (mm ²)	Operating pressure (MPa)									
				0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	
32	12	OUT	804	161	241	322	402	482	563	643	724	804	
		IN	691	138	207	276	346	415	484	553	622	691	
40	16	OUT	1257	251	377	503	629	754	880	1006	1131	1257	
		IN	1056	211	317	422	528	634	739	845	950	1056	
50	20	OUT	1963	393	589	785	982	1178	1374	1570	1767	1963	
		IN	1649	330	495	660	825	989	1154	1319	1484	1649	
63	20	OUT	3117	623	935	1247	1559	1870	2182	2494	2805	3117	
		IN	2803	561	841	1121	1402	1682	1962	2242	2523	2803	
80	25	OUT	5027	1005	1508	2011	2514	3016	3519	4022	4524	5027	
		IN	4536	907	1361	1814	2268	2722	3175	3629	4082	4536	
100	25	OUT	7854	1571	2356	3142	3927	4712	5498	6283	7068	7854	
		IN	7363	1473	2209	2945	3682	4418	5154	5890	6627	7363	
125	32	OUT	12272	2454	3682	4909	6136	7363	8590	9817	11045	12272	
		IN	11468	2294	3440	4587	5734	6881	8027	9174	10321	11468	

Note) Theoretical out put (N) = Pressure (MPa) x Piston area (mm²)

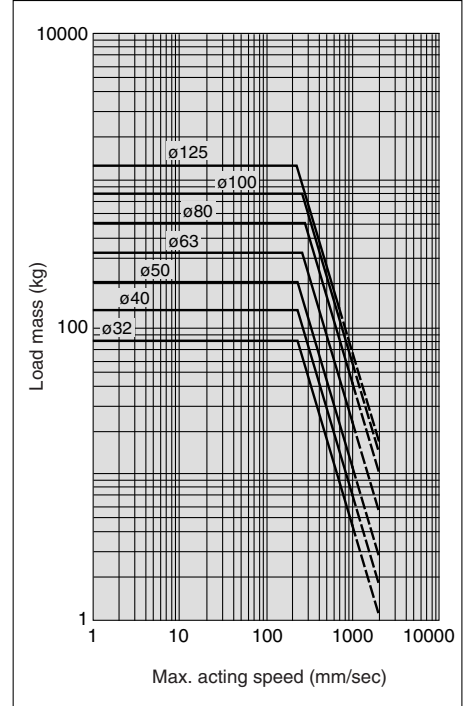
Mass

Bore size (mm)		32	40	50	63	80	100	125
Basic mass	Basic	0.55	0.84	1.36	1.77	2.84	3.77	6.82
	Foot	0.16	0.20	0.38	0.46	0.89	1.09	2.60
	Flange	0.20	0.23	0.47	0.58	1.30	1.81	4.10
	Single clevis	0.16	0.23	0.37	0.60	1.07	1.73	4.15
	Double clevis	0.20	0.32	0.45	0.71	1.28	2.11	4.25
	Trunnion	0.71	1.10	1.73	2.48	4.25	5.95	2.98
Additional mass per each 50 mm stroke	All mounting brackets	0.14	0.18	0.30	0.32	0.49	0.54	0.84
Accessory	Single rod clevis	0.07	0.11	0.22		0.40		1.20
	Double rod clevis	0.09	0.15	0.34		0.69		1.84

Calculation: (Example) CP96SD40-100

- Basic mass 0.84 (kg) (Basic, ø40)
 - Additional mass 0.18 (kg/50 st)
 - Cylinder stroke 100 (st)
 - Mounting 0.32 (kg) (Double clevis)
- 0.84 + 0.18 x 100 ÷ 50 + 0.32 = 1.52 kg

Allowable Kinetic Energy

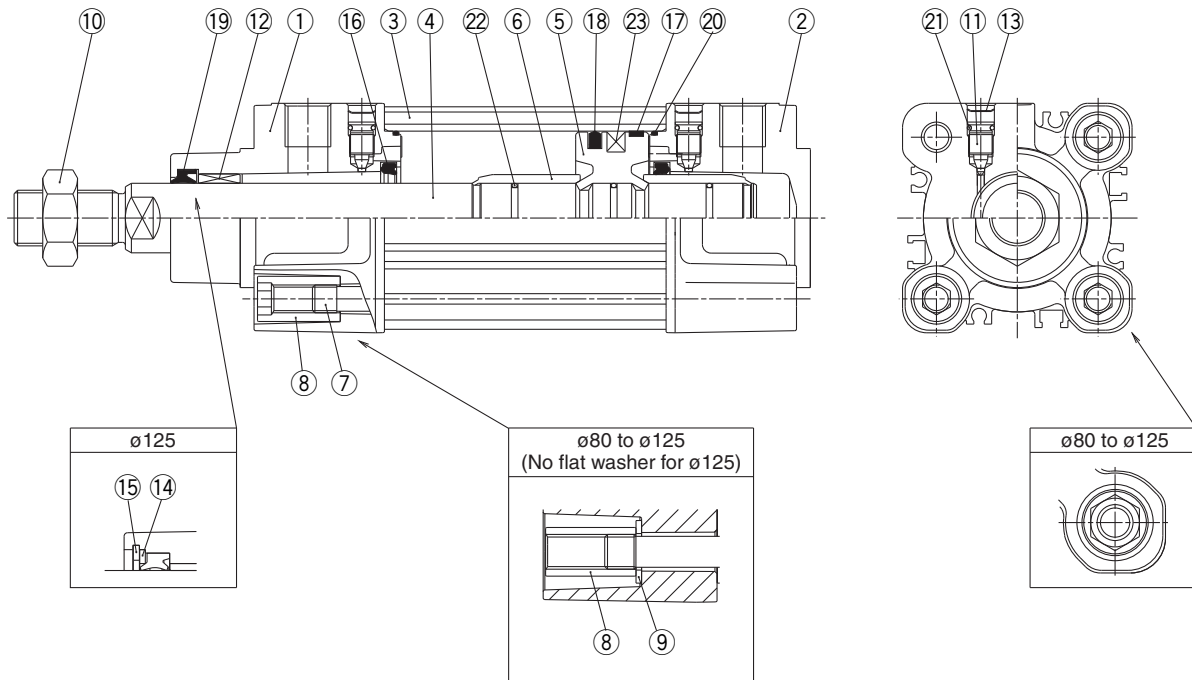


Example: Load limit at rod end when air cylinder ø63 is actuated with max. actuating speed 500 mm/s. See the intersection of lateral axis 500 mm/s and ø63 line, and extend the intersection to left. Thus, the allowable load is 80 kg.

Series CP96

Construction

[First angle projection]



Component Parts

No.	Description	Material	Note
①	Rod cover	Aluminum die-casted	
②	Head cover	Aluminum die-casted	
③	Cylinder tube	Aluminum alloy	
④	Piston rod	Carbon steel	
⑤	Piston	Aluminum alloy	
⑥	Cushion ring	Brass	
⑦	Tie-rod	Carbon steel	
⑧	Tie-rod nut	Steel	
⑨	Flat washer	Steel	ø80 and ø100
⑩	Rod end nut	Steel	
⑪	Cushion valve	Steel wire	
⑫	Bushing	Sintered metal	
⑬	Snap ring	Steel for spring	ø40 to ø125
⑭	Rod seal holder	Stainless steel	ø125
⑮	Snap ring	Steel for spring	ø125
⑯	Cushion seal	Urethane rubber	
⑰	Wearing	Resin	
⑱	Piston seal	NBR	
⑲	Rod seal	NBR	
⑳	Cylinder tube gasket	NBR	
㉑	Cushion valve seal	NBR	
㉒	Piston gasket	NBR	
㉓	Magnet		

Replacement Parts: Seal Kit

Bore size (mm)	Kit no.	Contents
32	CS95-32	Kits include items ⑯ to ㉑.
40	CS95-40	
50	CS95-50	
63	CS95-63	
80	CS95-80	
100	CS96-100	
125	CS96-125	

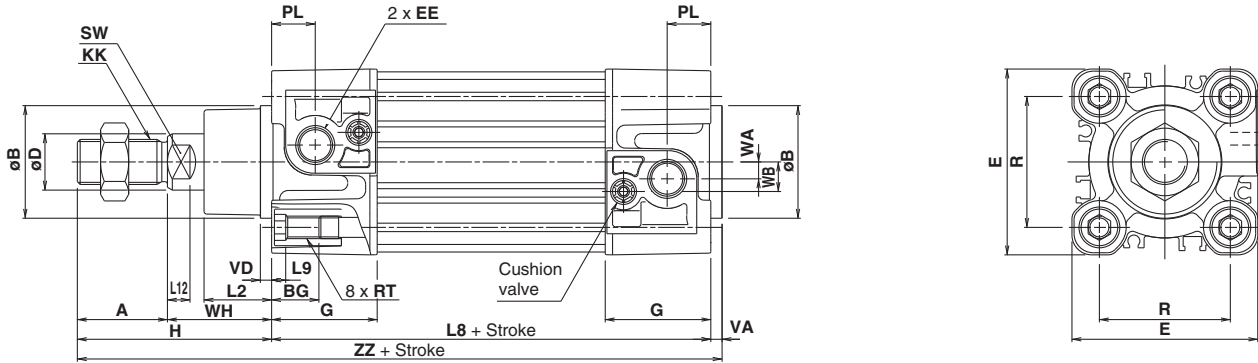
* Seal kits consist of items ⑯ to ㉑ contained in one kit, and can be ordered using the number for each respective tube bore size.

ISO Cylinder: Standard Double Acting w/ End of Stroke Cushioning **Series CP96**

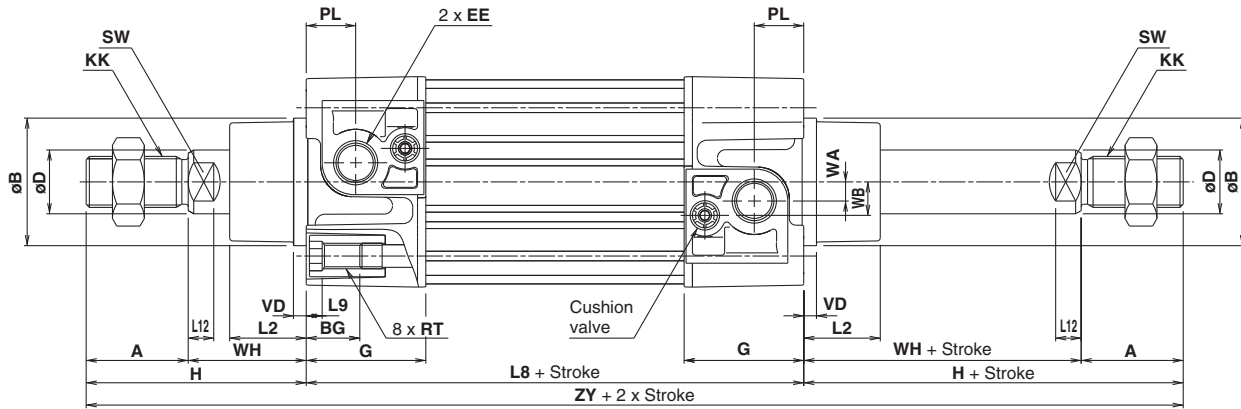
Dimensions: Without Mounting Bracket

[First angle projection]

CP96S(D)B Bore size Stroke



CP96S(D)B Bore size Stroke **W**



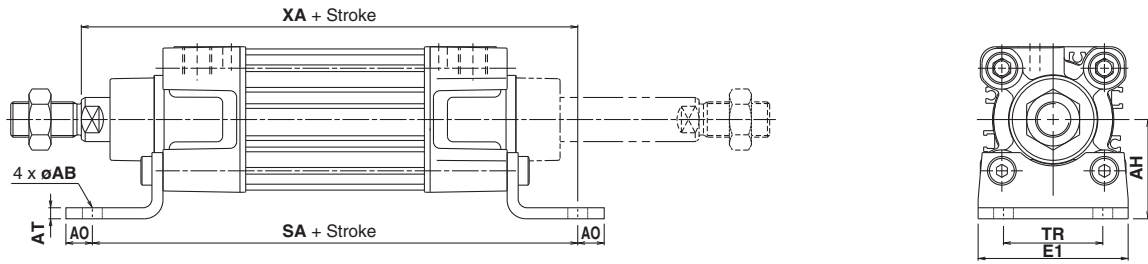
Bore size (mm)	A	øB d11	øD	EE	PL	RT	L12	KK	SW	G	BG	L8	VD	VA	WA	WB	WH	ZZ	ZY	E	R	L2	L9	H
32	22	30	12	G 1/8	13	M6 x 1	6	M10 x 1.25	10	32	16	94	4	4	4	7	26	146	190	47	32.5	15	4	48
40	24	35	16	G 1/4	14	M6 x 1	6.5	M12 x 1.25	13	37.5	16	105	4	4	5	9	30	163	213	54	38	17	4	54
50	32	40	20	G 1/4	15.5	M8 x 1.25	8	M16 x 1.5	17	37.5	16	106	4	4	6	10.5	37	179	244	66	46.5	24	5	69
63	32	45	20	G 3/8	16.5	M8 x 1.25	8	M16 x 1.5	17	45	16	121	4	4	9	12	37	194	259	77	56.5	24	5	69
80	40	45	25	G 3/8	19	M10 x 1.5	10	M20 x 1.5	22	45	17	128	4	4	11.5	14	46	218	300	99	72	30	—	86
100	40	55	25	G 1/2	19	M10 x 1.5	10	M20 x 1.5	22	50	17	138	4	4	17	15	51	233	320	118	89	32	—	91
125	54	60	32	G 1/2	19	M12 x 1.75	13	M27 x 2	27	58	20	160	6	6	17	15	65	285	398	144	110	40	—	119

Series CP96

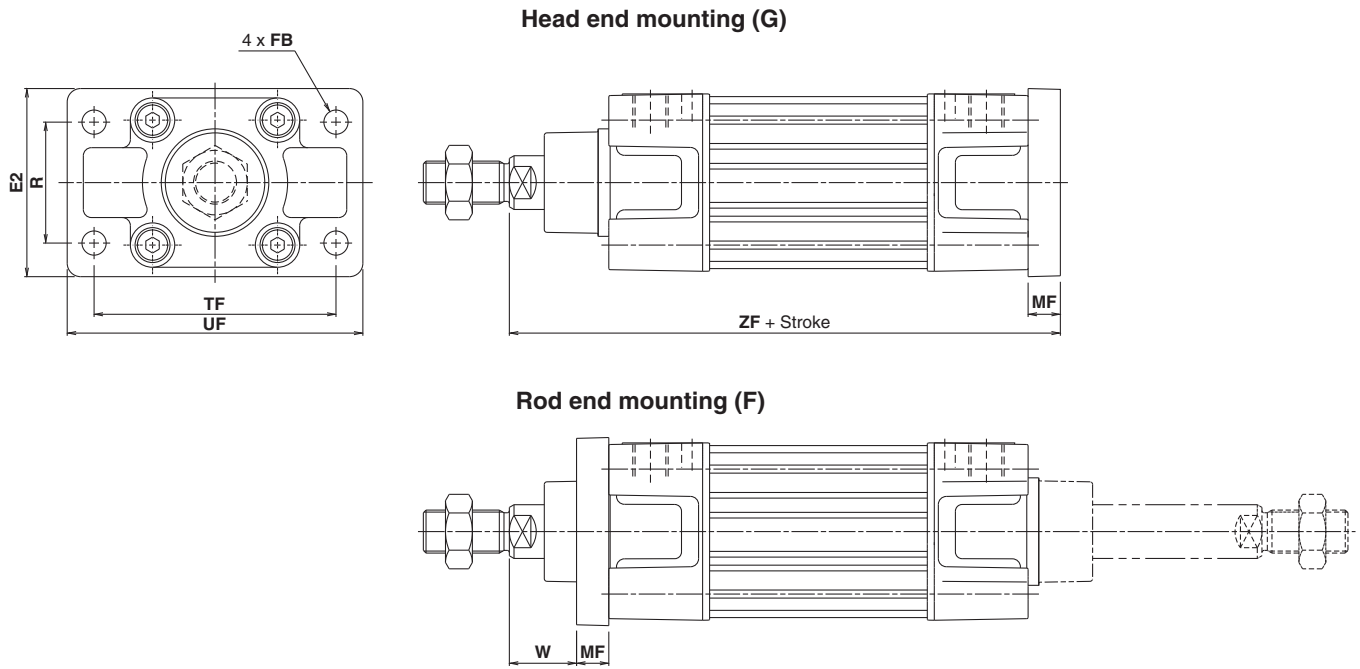
Dimensions: Cylinder Mounting Accessories (L/F/G/C/D)

[First angle projection]

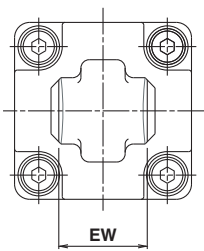
Mounting (L)



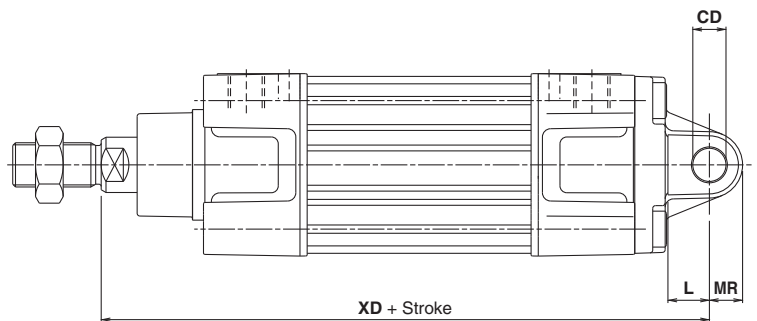
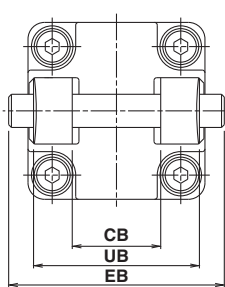
Mounting (F/G)



Mounting (C)



Mounting (D)

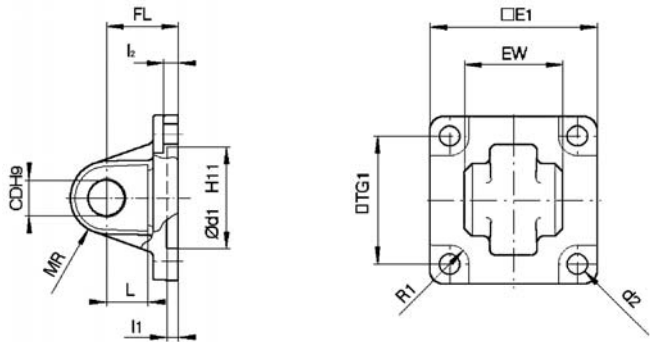


Bore size (mm)	E1	TR	AH	AO	AT	øAB	SA	XA	R	TF	øFB	E2	UF	W	MF	ZF	UB h14	CB H14	EW	øCD H9	L	MR	XD	EB
32	48	32	32	10	4.5	7	142	144	32	64	7	50	79	16	10	130	45	26	26-0.2/-0.6	10	12	9.5	142	65
40	55	36	36	11	4.5	10	161	163	36	72	9	55	90	20	10	145	52	28	28-0.2/-0.6	12	15	12	160	75
50	68	45	45	12	5.5	10	170	175	45	90	9	70	110	25	12	155	60	32	32-0.2/-0.6	12	15	12	170	80
63	80	50	50	12	5.5	10	185	190	50	100	9	80	120	25	12	170	70	40	40-0.2/-0.6	16	20	16	190	90
80	100	63	63	14	6.5	12	210	215	63	126	12	100	153	30	16	190	90	50	50-0.2/-0.6	16	20	16	210	110
100	120	75	71	16	6.5	14.5	220	230	75	150	14	120	178	35	16	205	110	60	60-0.2/-0.6	20	25	20	230	140
125	Max. 157	90	90	Max. 25	8	16	250	270	90	180	16	Max. 157	Max. 224	45	20	245	130	70	70-0.5/-1.2	25	Min. 30	Max. 26	275	Max. 157

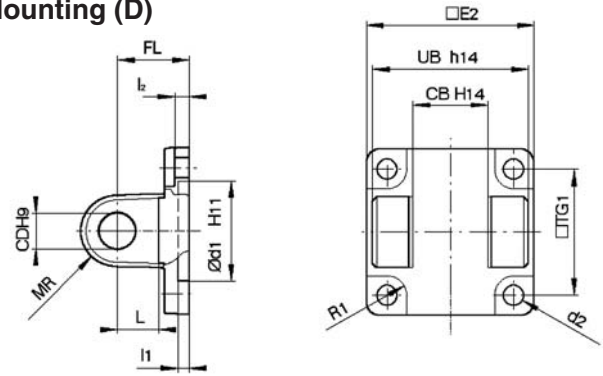
Dimensions: Cylinder Mounting Accessories (C/D/E/CS)

[First angle projection]

Mounting (C)

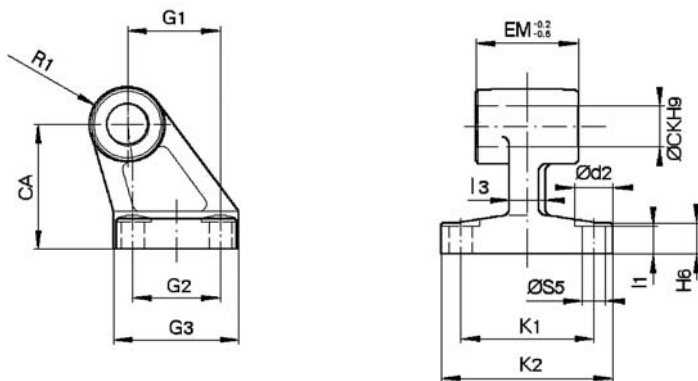


Mounting (D)



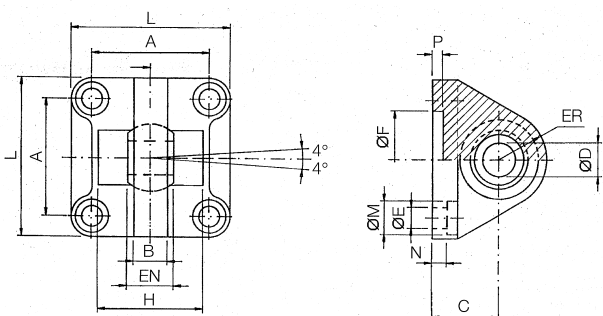
Bore size (mm)	E ₁	EW	TG ₁	FL	l ₁	L	l ₂	Ød ₁	ØCD	MR	Ød ₂	R ₁	E ₂	UB	CB
32	45	26 ^{-0.2} _{-0.6}	32.5	22	5	12	5.5	30	10	9.5	6.6	6.5	48	45	26
40	51	28 ^{-0.2} _{-0.6}	38	25	5	15	5.5	35	12	12	6.6	6.5	56	52	28
50	64	32 ^{-0.2} _{-0.6}	46.5	27	5	15	6.5	40	12	12	9	8.5	64	60	32
63	74	40 ^{-0.2} _{-0.6}	56.5	32	5	20	6.5	45	16	16	9	8.5	75	70	40
80	94	50 ^{-0.2} _{-0.6}	72	36	5	20	10	45	16	16	11	11	95	90	50
100	113	60 ^{-0.2} _{-0.6}	89	41	5	25	10	55	20	20	11	12	115	110	60
125	Max. 157	70 ^{-0.5} _{-1.2}	110	50	7	30	10	60	25	26	13.5	10	Max. 157	130	70

Mounting (E)



Bore size (mm)	Ød ₂	ØCK	ØS ₅	K ₁	K ₂ max.	l ₃ max.	G ₁	l ₁	G ₂	EM	G ₃ max.	CA	H ₆	R ₁
32	11	10	6.6	38	51	10	21	7	18	26 ^{-0.2} _{-0.6}	31	32	8	10
40	11	12	6.6	41	54	10	24	9	22	28 ^{-0.2} _{-0.6}	35	36	10	11
50	15	12	9	50	65	12	33	11	30	32 ^{-0.2} _{-0.6}	45	45	12	12
63	15	16	9	52	67	14	37	11	35	40 ^{-0.2} _{-0.6}	50	50	12	15
80	18	16	11	66	86	18	47	12.5	40	50 ^{-0.2} _{-0.6}	60	63	14	15
100	18	20	11	76	96	20	55	13.5	50	60 ^{-0.2} _{-0.6}	70	71	15	19
125	20	25	14	94	124	30	70	17	60	70 ^{-0.5} _{-1.5}	90	90	20	22.5

Mounting (CS): Head end clevis with ball joint



Bore size (mm)	A	B max.	C	ØD H7	EN 0-0.1	ER max.	ØF H11	ØE	L	ØM	N	P	H ±0.5
32	32.5	10.5	22	10	14	15	30	6.6	45	10.5	5.5	5	—
40	38	12	25	12	16	18	35	6.6	55	11	5.5	5	—
50	46.5	15	27	16	21	20	40	9	65	15	6.5	5	51
63	56.5	15	32	16	21	23	45	9	75	15	6.5	5	—
80	72	18	36	20	25	27	45	11	95	18	10	5	70
100	89	18	41	20	25	30	55	11	115	18	10	5	—
125	110	25	50	30	37	40	60	13.5	140	20	10	7	100

* Black color

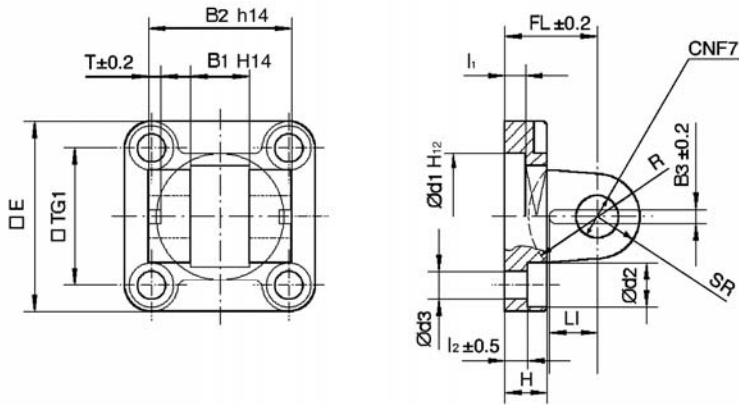


Series CP96

Dimensions: Cylinder Mounting Accessories (DS/ES)

[First angle projection]

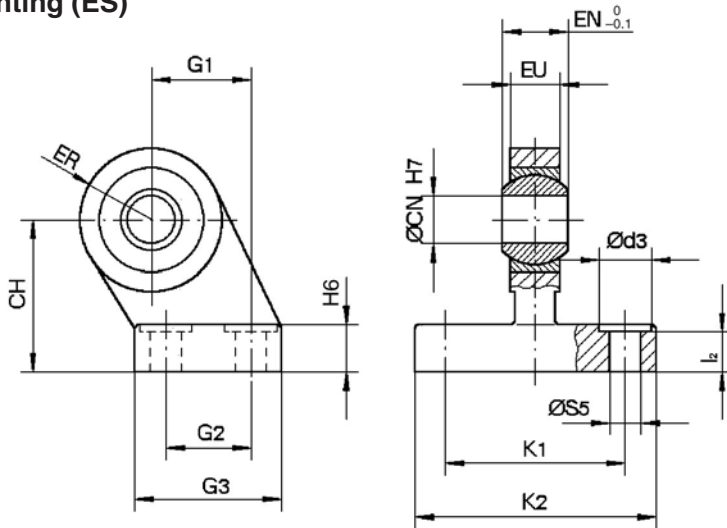
Mounting (DS)



Bore size (mm)	E	B ₁	B ₂	B ₃	LI	TG ₁	T	l ₁ min.	l ₂	FL	H max.	ød ₁	ød ₂	ød ₃	øCN	SR max.	R
32	45	14	34	3.3	11.5	32.5	3	5	5.5	22	10	30	10.5	6.6	10	11	17
40	55	16	40	4.3	12	38	4	5	5.5	25	10	35	11	6.6	12	13	20
50	65	21	45	4.3	14	46.5	4	5	6.5	27	12	40	15	9	16	18	22
63	75	21	51	4.3	14	56.5	4	5	6.5	32	12	45	15	9	16	18	25
80	95	25	65	4.3	16	72	4	5	10	36	16	45	18	11	20	22	30
100	115	25	75	6.3	16	89	4	5	10	41	16	55	18	11	20	22	32
125	140	37	97	6.3	24	110	6	7	10	50	20	60	20	13.5	30	30	42

* Black color

Mounting (ES)



Bore size (mm)	ød ₃	øCN	øS ₅	K ₁	K ₂ max.	l ₂	G ₁	G ₂	G ₃ max.	EN	EU	CH	H ₆	ER max.
32	11	10	6.6	38	51	8.5	21	18	31	14	10.5	32	10	15
40	11	12	6.6	41	54	8.5	24	22	35	16	12	36	10	18
50	15	16	9	50	65	10.5	33	30	45	21	15	45	12	20
63	15	16	9	52	67	10.5	37	35	50	21	15	50	12	23
80	18	20	11	66	86	11.5	47	40	60	25	18	63	14	27
100	18	20	11	76	96	12.5	55	50	70	25	18	71	15	30
125	20	30	13.5	94	124	17	70	60	90	37	25	90	20	40

* Black color

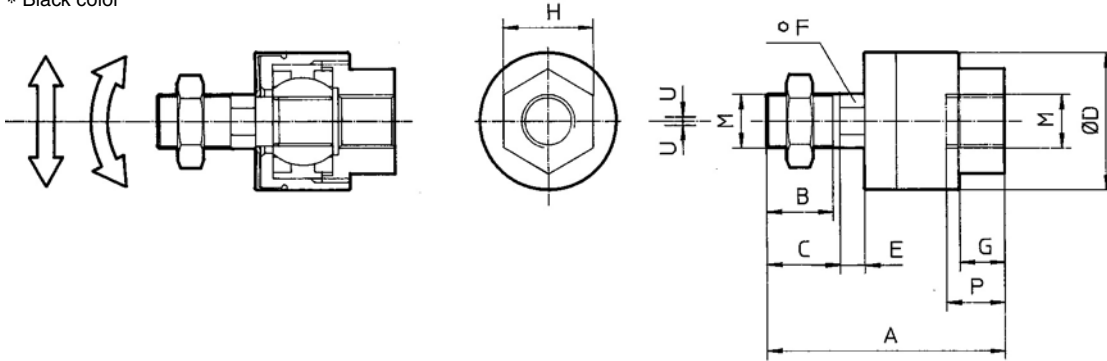
Dimensions: Piston Rod Mounting Accessories

[First angle projection]

Floating Joint JA

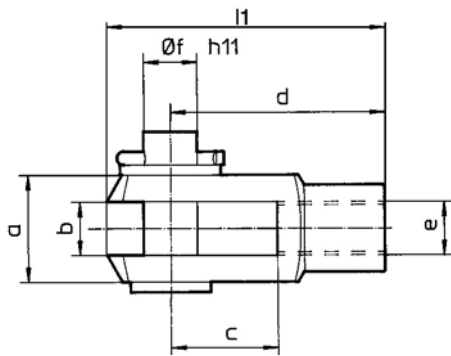
Bore size (mm)	M	Part no.	A	B	C	øD	E	F	G	H	P	U	Load (kN)	Mass (g)	Angle
32	M10 x 1.25	JA30-10-125	49.5	19.5	—	24	5	8	8	17	9	0.5	2.5	70	±0.5°
40	M12 x 1.25	JA40-12-125	60	20	—	31	6	11	11	22	13	0.75	4.4	160	
50, 63	M16 x 1.5	JA50-16-150	71.5	22	—	41	7.5	14	13.5	27	15	1	11	300	
80, 100	M20 x 1.5	JAH50-20-150	101	28	31	59.5	11.5	24	16	32	18	2	18	1080	
125	M27 x 2	JA125-27-200	123	34	38	66	13	27	20	41	24	2	28	1500	

* Black color



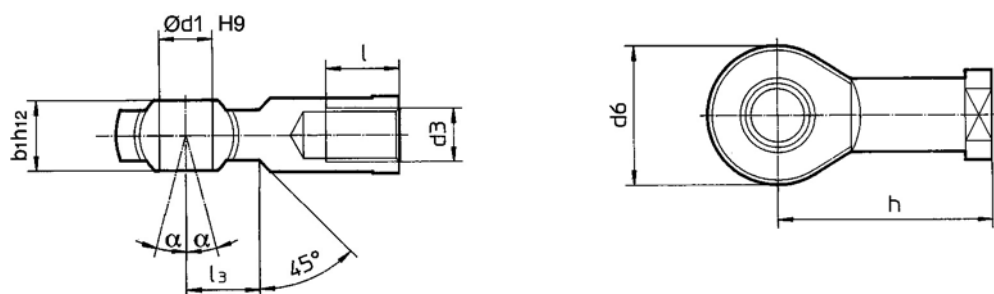
Rod Clevis GKM (ISO 8140), Supplied with Bolt and Safety Device

Bore size (mm)	e	Part no.	b	d	øf h11 (Shaft)	øf H9 (Hole)	h	c min.	a max.
32	M10 x 1.25	GKM10-20	10 ^{+0.5} / _{+0.15}	40	10	10	52	20	20
40	M12 x 1.25	GKM12-24	12 ^{+0.5} / _{+0.15}	48	12	12	62	24	24
50, 63	M16 x 1.5	GKM16-32	16 ^{+0.5} / _{+0.15}	64	16	16	83	32	32
80, 100	M20 x 1.5	GKM20-40	20 ^{+0.5} / _{+0.15}	80	20	20	105	40	40
125	M27 x 2	GKM30-54	30 ^{+0.5} / _{+0.15}	110	30	30	148	54	55



Piston Rod Ball Joint KJ (ISO 8139)

Bore size (mm)	d3	Part no.	ød1 H9	h	d6 max.	b1 h12	l min.	α	l3
32	M10 x 1.25	KJ10D	10	43	28	14	20	4°	15
40	M12 x 1.25	KJ12D	12	50	32	16	22	4°	17
50, 63	M16 x 1.5	KJ16D	16	64	42	21	28	4°	23
80, 100	M20 x 1.5	KJ20D	20	77	50	25	33	4°	27
125	M27 x 2	KJ27D	30	110	70	37	51	4°	36



Series CP96

Minimum Stroke for Auto Switch Mounting

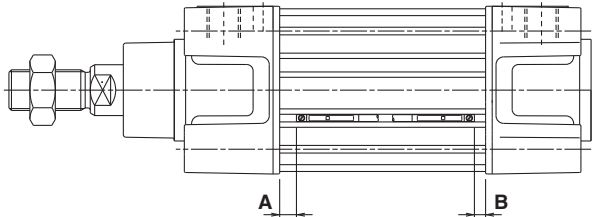
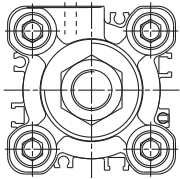


(mm)

Auto switch model	Number of auto switch mounted	32	40	50	63	80	100	125	
D-M9□	2 switches (Different side, Same side)	15				10			
	1 switch	15				10			
	Other qty.	15+5 (n-2)				10+10 (n-2)			
D-M9□W D-M9□AL	2 switches (Different side, Same side)	15				10			
	1 switch	15				10			
	Other qty.	15+10 (n-2)				10+10 (n-2)		10+15 (n-2)	
D-A9□	2 switches (Different side, Same side)	15							
	1 switch	15				10			
	Other qty.	15+10 (n-2)		15+15 (n-2)				15+20 (n-2)	

* n = 3, 4, 5 ...

Recommended Mounting Position for Stroke Ends



Auto Switch Proper Mounting Position

(mm)

Auto switch model	D-M9□ D-M9□W D-M9□AL		D-A9□	
	A	B	A	B
Bore size				
32	10.5	8	6.5	4
40	10.5	8	6.5	4
50	11	8.5	7	4.5
63	11	8.5	7	4.5
80	14	12.5	10	8.5
100	14	12.5	10	8.5
125	16	16	12	12

* Adjust the auto switch after confirming the operation to set actually.

Operating Range

(mm)

Auto switch model	Bore size						
	32	40	50	63	80	100	125
D-M9□ D-M9□W D-M9□AL	4	4.5	5	6	6	6	7.5
D-A9□	7	8	8.5	9.5	9.5	10.5	12.5

Note) Since this is a guideline including hysteresis, not meant to be guaranteed. (Assuming approximately ±30% dispersion)
There may be the case it will vary substantially depending on an ambient environment.

Besides the models listed "How to Order," the following auto switches are applicable.

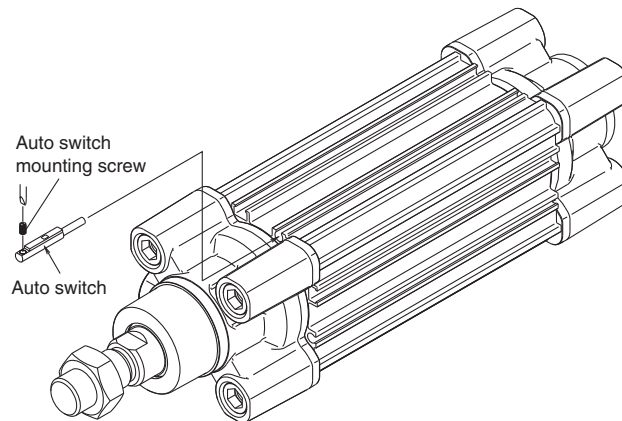
* Normally closed (NC = b contact), solid state switch (D-F9G, F9H type) are also available.
For details, refer to SMC "Best Pneumatics 2004" Vol.7/8/9/10 catalog.

How to Mount and Move the Auto Switch

<Applicable Auto Switch>

Solid state switch D-M9N/M9P/M9B
 D-M9NW/M9PW/M9BW
 D-M9NAL/M9PAL/M9BAL
Reed switch D-A90/A93/A96

How to Mount and Move the Auto Switch



- Please use a watchmaker's screwdriver with a handle diameter of 5 to 6 mm when tightening the auto switch mounting screw.
A torque of 0.05 to 0.15 N·m should be used for D-M9□, M9□W, M9□AL, and 0.10 to 0.20 N·m for D-A9□.
Once the screw starts to feel tight, tighten it further by approximately another 90°.

Note) D-M9□□ and A9□ type cannot be mounted on square groove of the CP96 series.