

Standard: Double Acting Single Rod

Series CG1

ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100

How to Order

Standard

CG1 L N 25 100

With auto switch

CDG1 L N 25 100 B53

With auto switch
(magnet)

Mounting

B	Basic
L	Axial foot
F	Front flange
G	Rear flange
U*	Front trunnion
T*	Rear trunnion
D	Clevis



* Not available for bore sizes ø80 and ø100.
** Mounting brackets are included, not mounted.

Cushion

N	Rubber bumper
A	Air cushion

Rod boot (at one side)

—	Without rod boot
J	Nylon tarpaulin
K	Heat resistant tarpaulin

* Foot brackets and front flanges are fitted when rod boots are mounted.

Number of auto switches

—	2
S	1
n	n

Auto switch

—	Without auto switch (Built-in magnet)
---	---------------------------------------

* Refer to the table below for selecting applicable auto switches.

Bore size

20	20mm	50	50mm
25	25mm	63	63mm
32	32mm	80	80mm
40	40mm	100	100mm

Cylinder stroke (mm)

Refer to p.1.7-3 for Standard Stroke Table.

Applicable Auto Switches/Refer to p.5.3-2 for further information on auto switch.

Style	Special function	Electrical entry	Indicator	Wiring (Output)	Load voltage		Auto switch model		Lead wire (m)*				Applicable load			
					DC	AC	Applicable bore size		0.5 (—)	3 (L)	5 (Z)	None (N)				
							ø20 to ø63	ø20 to ø100								
Reed switch	—	Grommet	Yes	3 wire (NPN)	—	5V	—	C76	—	●	●	—	—	IC	—	
			No	2 wire	24V	12V	200V or less	—	B53	●	●	●	—	—	PLC	
								—	B54	●	●	●	—	—	Relay PLC	
								—	B64	●	●	—	—			
		Yes	12V	100V	C73	—	●	●	●	—	—	Relay PLC				
		No	5V, 12V	100V or less	C80	—	●	●	—	—			IC			
		Yes	12V	—	C73C	—	●	●	●	●			—	—		
	No	5V, 12V	24V or less	C80C	—	●	●	●	●	IC	—					
Diagnostic indication (2 color)	Grommet	Yes	—	—	—	B59W	●	●	—	—	—	—				
Solid state switch	—	Grommet	Yes	3 wire (NPN)	24V	5V, 12V	—	H7A1	G59	●	●	○	—	IC	Relay PLC	
				3 wire (PNP)				H7A2	G5P	●	●	○	—			
		Connector		2 wire				12V	H7B	K59	●	●	○	—		—
				H7C				—	●	●	●	●	—			
	Diagnostic indication (2 color)	Grommet	3 wire (NPN)	24V	5V, 12V	—	H7NW	G59W	●	●	○	—	IC			
			3 wire (PNP)				H7PW	G5PW	●	●	○	—				
			2 wire				12V	H7BW	K59W	●	●	○	—	—		
			H7BA				G5BA	—	●	○	—	IC				
			3 wire (NPN)				5V, 12V	—	G5NT	—	●		○	—		
			4 wire (NPN)				—	H7NF	G59F	●	●		○	—		
			H7LF				—	●	●	○	—		—			

* Lead wire length 0.5m.....— 3m.....L e.g.) C73C 5m.....Z None.....N e.g.) C73CZ C73CN

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

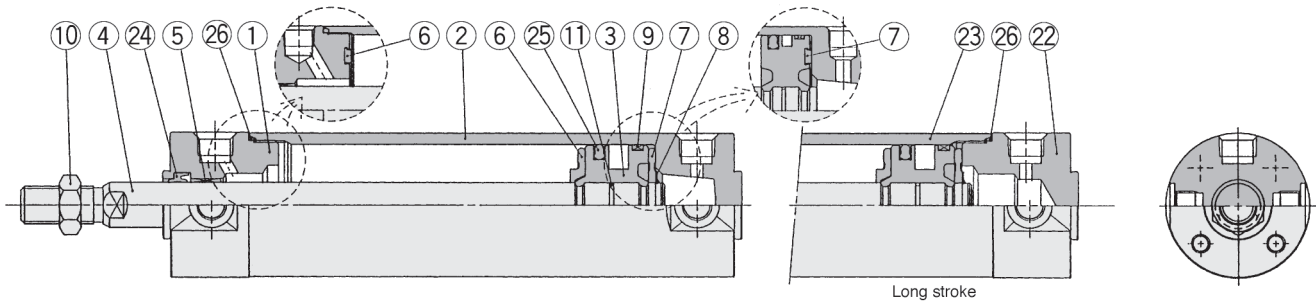
Standard: Double Acting Single Rod *Series CG1*

Construction

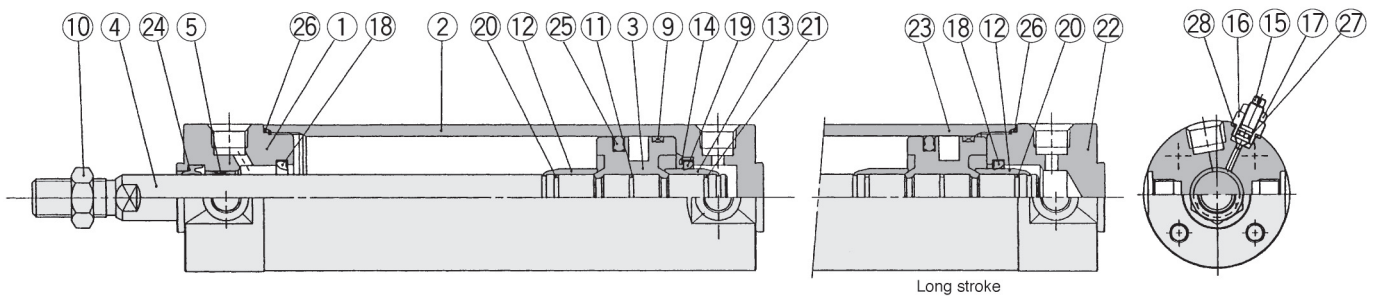
With rubber bumper

ø80, ø100

ø80, ø100



With air cushion



Component Parts

No.	Description	Material	Note
①	Rod cover	Aluminum alloy	White hard anodized
②	Tube cover	Aluminum alloy	White hard anodized
③	Piston	Aluminum alloy	Chromated
④	Piston rod	Carbon steel	Hard chrome plated
⑤	Bushing	Oil impregnated sintered alloy	ø40 or larger: Lead bronze cast
⑥	Bumper A	Urethane	
⑦	Bumper B	Urethane	ø40 or larger: the same as damper A
⑧	Snap ring	Stainless steel	Except for ø80 and ø100
⑨	Wear ring	Resin	
⑩	Rod end nut	Rolled steel	Nickel plated
⑪	Piston gasket	NBR	
⑫	Cushion ring A	Brass	
⑬	Cushion ring B	Brass	ø32 or more: the same as A
⑭	Seal retainer	Rolled steel	Nickel plated/Except for long stroke
⑮	Cushion valve	Rolled steel	Electroless nickel plated
⑯	Valve retainer	Rolled steel	Electroless nickel plated
⑰	Lock nut	Rolled steel	Nickel plated
⑱	Cushion seal A	Urethane	
⑲	Cushion seal B	Urethane	ø32 or larger: the same as A *
⑳	Cushion ring gasket A	NBR	
㉑	Cushion ring gasket B	NBR	ø32 or larger: the same as A
㉒	Head cover	Aluminum alloy	White hard anodized
㉓	Cylinder tube	Aluminum alloy	Hard anodized

Note) A magnet is equipped on the piston of the cylinder with auto switch.

* The material is stainless steel on auto switch equipped styles ø20 and ø25.

Replacement Parts/With rubber bumper

No.	Description	Material	Bore size (mm)/Part No.							
			ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100
㉔	Rod seal	NBR	PDU-8Z	PDU-10Z	PDU-12LZ	PDU-16Z	PDU-20Z	PDU-20Z	PDU-25Z	PDU-30Z
㉕	Piston seal	NBR	PPD-20	PPD-25-19	PPD-32	PPD-40	PPD-50	PPD-63	PPD-80	PPD-100
㉖	Tube gasket	NBR	CM-020-16-123	CM-025-16-124	CM-032-16-126	CM-040-16-127	CM-050-16-128	CM-063-16-129	CM-080-16-152	CM-100-16-153

With air cushion (Parts ㉔ to ㉖ are the same as rubber bumper style.)

㉗	Valve seal	NBR	O ring ø4.5 X ø2.5 X ø1				O ring ø5.5 X ø3.5 X ø1		O ring ø6.5 X ø4.5 X ø1	
㉘	Gasket for valve retainer	NBR	O ring ø6.4 X ø5.2 X ø0.6				O ring ø7.4 X ø5.8 X ø0.8		O ring ø11.4 X ø9.4 X ø1	

CJ1

CJP

CJ2

CM2

C85

C76

CG1

MB

MB1

CP95

C95

C92

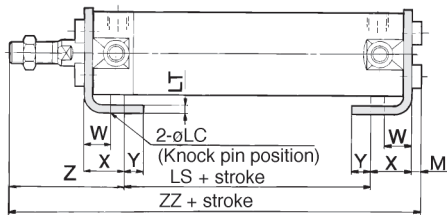
CA1

CS1

Standard: Double Acting Single Rod *Series CG1*

With Mounting Bracket

Axial foot/CGNLN



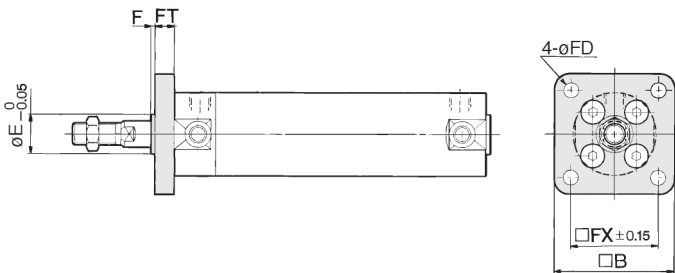
Axial foot

(mm)

Bore (mm)	B	LC	LD	LH	LS	LT	LX	LZ	M	W	X	Y	Z		ZZ	
													Without rod boot	With rod boot	Without rod boot	With rod boot
20	34	4	6	20	45 (53)	3	32	44	3	10	15	7	47	67+ℓ	110 (118)	130 (138) +ℓ
25	38.5	4	6	22	45 (53)	3	36	49	3.5	10	15	7	52	74+ℓ	115.5 (123.5)	137.5 (145.5) +ℓ
32	45	4	6.6	25	45 (53)	3	44	58	3.5	10	16	8	53	75+ℓ	117.5 (125.5)	139.5 (147.5) +ℓ
40	54.5	4	6.6	30	51 (60)	3	54	71	4	10	16.5	8.5	63.5	83.5+ℓ	135 (144)	155 (164) +ℓ
50	70.5	5	9	40	55 (67)	4.5	66	86	5	17.5	22	11	75.5	95.5+ℓ	157.5 (169.5)	177.5 (189.5) +ℓ
63	82.5	5	11	45	55 (67)	4.5	82	106	5	17.5	22	13	75.5	95.5+ℓ	157.5 (169.5)	177.5 (189.5) +ℓ
80	101	6	11	55	60 (74)	4.5	100	125	5	20	28.5	14	95	104+ℓ	188.5 (202.5)	197.5 (211.5) +ℓ
100	121	6	14	65	60 (74)	6	120	150	7	20	30	16	95	104+ℓ	192 (206)	201 (215) +ℓ

Note) (ℓ): Long stroke

Front flange/CG1FN



Flange

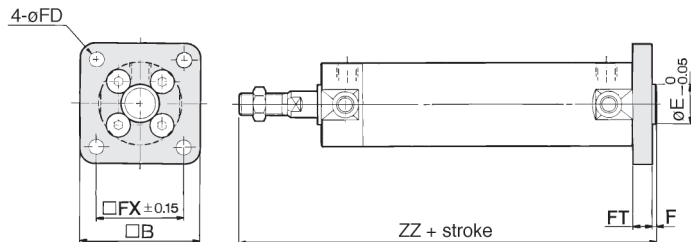
(mm)

Bore (mm)	Stroke range		B	E	F	FX	FD	FT	Rear flange ZZ	
	Front	Rear							Without rod boot	With rod boot
20	Up to 350	Up to 200	40	12	2	28	5.5	6	112	132+ℓ
25	Up to 400	Up to 300	44	14	2	32	5.5	7	118	140+ℓ
32	Up to 450	Up to 300	53	18	2	38	6.6	7	120	142+ℓ
40	Up to 800	Up to 500	61	25	2	46	6.6	8	138 (147)	158 (167) +ℓ
50	Up to 1200	Up to 600	76	30	2	58	9	9	159 (171)	179 (191) +ℓ
63	Up to 1200	Up to 600	92	32	2	70	11	9	159 (171)	179 (191) +ℓ
80	Up to 1400	Up to 750	104	40	3	82	11	11	193 (207)	202 (216) +ℓ
100	Up to 1500	Up to 750	128	50	3	100	14	14	196 (210)	202 (219) +ℓ

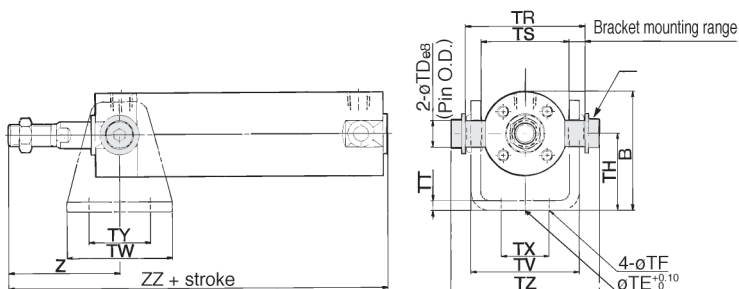
Note 1) (ℓ): Long stroke

Note 2) End boss is machined on the flange for øE.

Rear flange/CG1UN



Front trunnion/CG1UN



Trunnion

(mm)

Bore (mm)	Stroke range		B	TDø8	TE	TF	TH	TR	TS	TT	TV
	Front	Rear									
20	Up to 200	Up to 200	38	8 ^{-0.025} _{-0.047}	10	5.5	25	39	28	3.2	35.8
25	Up to 300	Up to 300	45.5	10 ^{-0.025} _{-0.047}	10	5.5	30	43	33	3.2	39.8
32	Up to 300	Up to 300	54	12 ^{-0.032} _{-0.059}	10	6.6	35	54.5	40	4.5	49.4
40	Up to 500	Up to 500	63.5	14 ^{-0.032} _{-0.059}	10	6.6	40	65.5	49	4.5	58.4
50	Up to 600	Up to 600	79	16 ^{-0.032} _{-0.059}	20	9	50	80	60	6	72.4
63	Up to 600	Up to 600	96	18 ^{-0.032} _{-0.059}	20	11	60	98	74	8	90.4

Bore (mm)	TW	TX	TY	TZ	Front Z		Rear Z		ZZ	
					Without rod boot	With rod boot	Without rod boot	With rod boot	Without rod boot	With rod boot
20	42	16	28	47.6	46	66+ℓ	93	113+ℓ	114	134+ℓ
25	42	20	28	53	51	73+ℓ	98	120+ℓ	119	141+ℓ
32	48	22	28	67.7	51	73+ℓ	101	123+ℓ	125	147+ℓ
40	56	30	30	78.7	62	82+ℓ	118 (125)	138 (145) +ℓ	146 (153)	166 (173) +ℓ
50	64	36	36	98.6	71	91+ℓ	136 (147)	156 (167) +ℓ	168 (179)	188 (199) +ℓ
63	74	46	46	119.2	71	91+ℓ	136 (147)	156 (167) +ℓ	173 (184)	193 (204) +ℓ

* Consists of pins, flat washer and hexagon socket head cap bolt.

Note 1) (ℓ): Long stroke

Note 2) Refer to p.1.7-11 for pivot bracket.

Rear trunnion/CG1TN

