

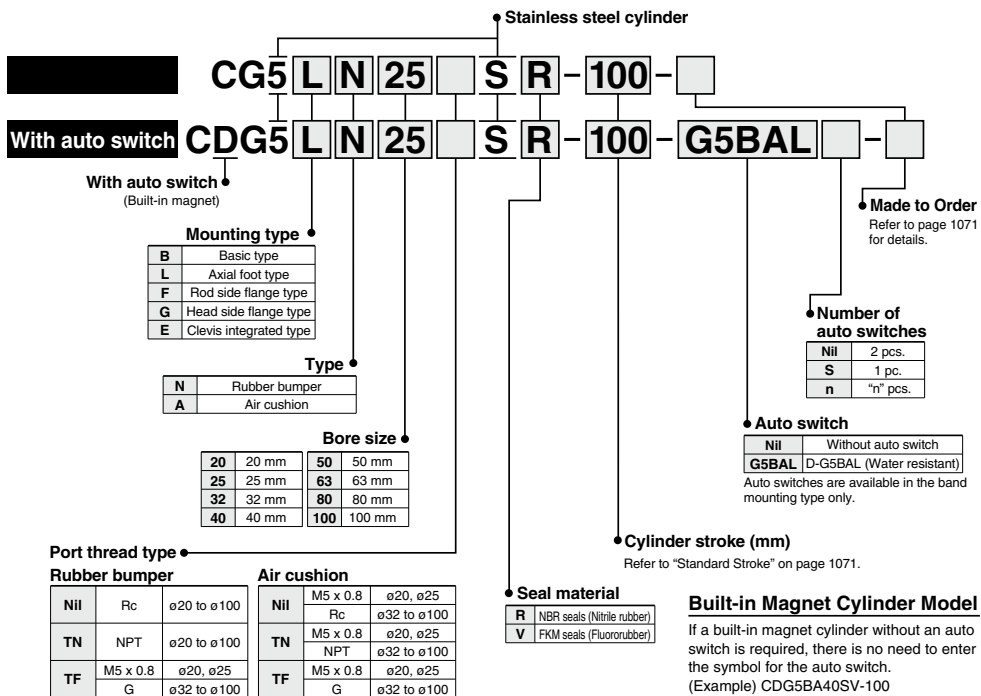
# Stainless Steel Cylinder: Standard Type

## Double Acting, Single Rod

# CG5-S Series

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

### How to Order



**Applicable Auto Switches**/Refer to pages 1575 to 1701 for further information on auto switches.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage		Auto switch model	Lead wire length (m)*		Pre-wired connector	Applicable load
					DC			3 (L)	5 (Z)		
Solid state auto switch	Water resistant (2-color indicator)	Grommet	Yes	2-wire	24 V	12 V	G5BA	●	○	○	Relay, PLC

\* Lead wire length symbols: 3 m.....L (Example) G5BAL  
5 m.....Z (Example) G5BAZ

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

• For details about auto switches with pre-wired connector, refer to pages 1648 and 1649.

### Mounting Bracket Part No.

Mounting bracket	Min. order	Bore size (mm)								Description
		20	25	32	40	50	63	80	100	
Axial foot	2 (Nil)	CG-L020SUS	CG-L025SUS	CG-L032SUS	CG-L040SUS	CG-L050SUS	CG-L063SUS	CG-L080SUS	CG-L100SUS	Foot x 2 Bracket mounting bolt x 4
Flange	1	CG-F020SUS	CG-F025SUS	CG-F032SUS	CG-F040SUS	CG-F050SUS	CG-F063SUS	CG-F080SUS	CG-F100SUS	Flange x 1 Bracket mounting bolt x 4
Pivot bracket	1	CG-E020SUS		CG-E032SUS		CG-E050SUS		CG-E080SUS		Clevis pin x 1 Retaining ring x 2

Note) When ordering the foot bracket, order 2 pcs. per cylinder.

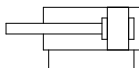
# Stainless Steel Cylinder: Standard Type Double Acting, Single Rod **CG5-S Series**

## Specifications

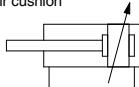


### Symbol

Double acting,  
Single rod, Rubber bumper



Air cushion



Bore size (mm)	20	25	32	40	50	63	80	100
Action	Double acting, Single rod							
Fluid	Air							
Proof pressure	1.5 MPa							
Maximum operating pressure	1.0 MPa							
Minimum operating pressure	0.05 MPa							
Ambient and fluid temperature	Without auto switch: -10 to 70°C With auto switch: -10 to 60°C							
Cushion	Rubber bumper, Air cushion							
Lubrication	Not required (Non-lube)							
Piston speed	50 to 1000 mm/s						50 to 700 mm/s	
Stroke length tolerance	Up to 1000 <sup>st</sup> +1.4 <sub>0</sub> mm, Up to 1500 <sup>st</sup> +1.8 <sub>0</sub> mm							
Mounting type	Basic type, Axial foot type, Rod side flange type, Head side flange type, Clevis integrated type							

## Standard Stroke

(mm)

Bore size	Standard stroke <sup>Note 1)</sup>	Maximum manufacturable stroke <sup>Note 2)</sup>
20	25, 50, 75, 100, 125, 150, 200	201 to 1500
25	25, 50, 75, 100, 125, 150, 200, 250, 300	301 to 1500
32		
40		
50		
63		
80		
100		

Note 1) Other intermediate strokes can be manufactured upon receipt of order. Manufacture of intermediate strokes in 1 mm increments is possible. (Spacers are not used.)

Note 2) The maximum manufacturable stroke shows the long stroke.

Note 3) Applicable strokes should be confirmed according to the usage. For details, refer to "Air Cylinders Model Selection" on front matter pages. In addition, the products that exceed the standard stroke might not be able to fulfill the specifications due to the deflection etc.



**Made to Order Specifications**  
[Click here for details](#)

Symbol	Specifications
-XA <input type="checkbox"/>	Change of rod end shape
-XB6 <input type="checkbox"/>	Heat resistant cylinder (150°C)*

\* Heat resistant grease (non-food grease) is used.

## Accessory

For details, refer to page 1076. ●: Supplied with the product. ○: Please order separately.

Mounting		Basic type	Axial foot type	Rod side flange type	Head side flange type	Clevis integrated type
Standard equipment	Rod end nut	●	●	●	●	●
Option	Single knuckle joint	○	○	○	○	○
	Double knuckle joint (With pin & retaining ring)	○	○	○	○	○
	Pivot bracket (With pin and retaining ring)	—	—	—	—	○

## Weight

(kg)

Bore size (mm)		20	25	32	40	50	63	80	100
Basic weight	Basic type	0.34	0.42	0.59	1.03	1.84	2.81	5.27	8.25
	Axial foot type	0.49	0.59	0.77	1.25	2.24	3.35	6.05	9.70
	Flange type	0.44	0.51	0.69	1.16	2.16	3.28	5.86	9.30
	Clevis integrated type	0.40	0.48	0.72	1.21	2.30	3.40	6.83	10.28
	Pivot bracket	0.08	0.08	0.18	0.18	0.46	0.46	1.65	1.65
	Single knuckle joint	0.04	0.07	0.07	0.11	0.22	0.22	0.53	0.78
	Double knuckle joint (with pin)	0.05	0.09	0.09	0.18	0.33	0.33	0.73	1.07
	Additional weight per each 50 mm of stroke	0.06	0.08	0.14	0.18	0.27	0.33	0.50	0.73
	Additional weight with air cushion	0.02	0.02	0.02	0.02	0.05	0.10	0.22	0.24

Calculation: (Example) **CG5LA 20SR-100**  
(Foot type ø20, 100 stroke)

- Basic weight..... 0.49 kg (Foot type ø20)
- Additional stroke weight ..... 0.06 kg/50 ST
- Air cylinder stroke ..... 100 ST
- Additional air cushion weight ..... 0.02 kg
- 0.49 + 0.06 x 100/50 + 0.02 = 0.63 kg

To calculate the theoretical output, refer to the "Theoretical Output Table" on page 1903 after confirming the bore size of the tubing and the piston rod size.



CJ5  
CG5

HY

Water Resistant

D-

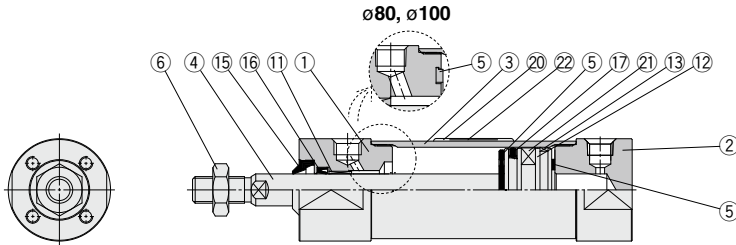
-X

Technical Data

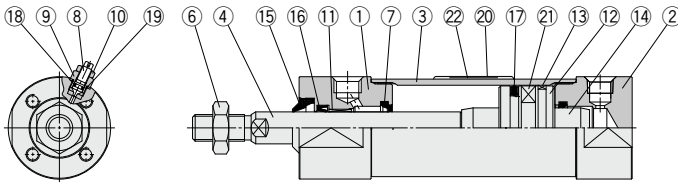
# CG5-S Series

## Construction

### With rubber bumper



### With air cushion



## Component Parts

No.	Description	Material	Note
1	Rod cover	Stainless steel	
2	Head cover	Stainless steel	
3	Cylinder tube	Stainless steel	
4	Piston rod	Stainless steel	Hard chrome plated
5	Bumper	Urethane	
6	Rod end nut	Stainless steel	
7	Cushion seal	Urethane	
8	Cushion valve	Stainless steel	
9	Valve retainer	Stainless steel	
10	Lock nut	Stainless steel	
11	Bushing	Bearing alloy	
12	Piston	Aluminum alloy	
13	Wearing ring	Resin	
14	Cushion ring	Aluminum alloy	

Note 1) Component part material and surface treatment other than listed above are the same as the standard type of the CG1 series.

Note 2) For cylinders with an auto switch, the piston is fixed with a magnet.

No.	Description	Material	
		CG5□□SR	CG5□□SV
15	Water resistant scraper	NBR	FKM
16	Rod seal		
17	Piston seal		
18	Valve seal		
19	Valve retainer gasket		
20	Label protector	PET	
21	Magnet	—	
22	Label	—	

## Replacement Parts/Seal Kit

Bore size (mm)	Rubber bumper		Air cushion	
	CG5□□SR	CG5□□SV	CG5□□SR	CG5□□SV
20	CG5N20SR-PS	CG5N20SV-PS	CG5A20SR-PS	CG5A20SV-PS
25	CG5N25SR-PS	CG5N25SV-PS	CG5A25SR-PS	CG5A25SV-PS
32	CG5N32SR-PS	CG5N32SV-PS	CG5A32SR-PS	CG5A32SV-PS
40	CG5N40SR-PS	CG5N40SV-PS	CG5A40SR-PS	CG5A40SV-PS
Contents	Set of 16 and 17 above		Set of 16, 17, 18 and 19 above	

\* As sizes  $\phi 50$  and larger cannot be disassembled, the seal cannot be replaced. (Refer to page 1080 for details.)

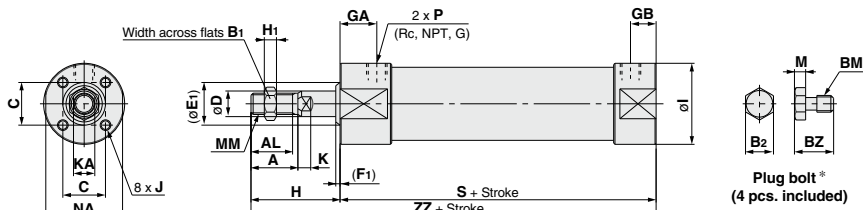
\* Seal kit includes a grease pack (10 g).

Order with the following part number when only the grease pack is needed.

Grease pack for stainless steel cylinders/Part no.: GR-R-010 (10 g)

**Dimensions**

**Basic type (B): C□G5BN□S<sup>R</sup><sub>V</sub>: With rubber bumper**



**CJ5**  
**CG5**  
**HY**  
Water Resistant

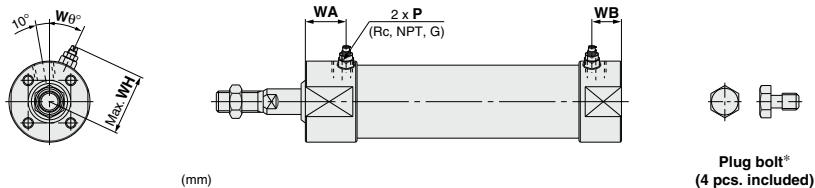
**Plug bolt\* (4 pcs. included)**

(mm)

Bore size (mm)	Stroke range	P																			S	ZZ				
		A	AL	B1	B2	BM	BZ	C	D	E1	F1	GA	GB	H	H1	I	J	K	KA	M			MM	NA	Rc, NPT	G
20	Standard	18	15.5	13	7	M4 x 0.7	9	16.5	8	15	3	18	12	35	5	31	M4 x 0.7 depth 7	5	6	3	M8 x 1.25	29	1/8	M5 x 0.8	83	118
25	Up to 1500	22	19.5	17	8	M5 x 0.8	9.5	18.5	10	17	3	18	12	40	6	33	M5 x 0.8 depth 8	5.5	8	3.5	M10 x 1.25	29	1/8	M5 x 0.8	83	123
32		22	19.5	17	8	M5 x 0.8	9.5	20	12	19	3	18	12	40	6	38	M5 x 0.8 depth 8	5.5	10	3.5	M10 x 1.25	35.5	1/8	1/8	85	125
40		30	27	19	10	M6 x 1.0	12	26	16	23	3	19	13	50	8	47	M6 x 1.0 depth 12	6	14	4	M14 x 1.5	44	1/8	1/8	93	143
50		35	32	27	13	M8 x 1.25	15.5	32	20	28	3	21	14	58	11	58	M8 x 1.25 depth 16	7	18	5.5	M18 x 1.5	55	1/4	1/4	109	167
63		35	32	27	17	M10 x 1.5	19	38	20	28	3	21	14	58	11	72	M10 x 1.5 depth 16	7	18	7	M18 x 1.5	69	1/4	1/4	109	167
80		40	37	32	17	M10 x 1.5	19	50	25	33	3	28	20	71	13	89	M10 x 1.5 depth 22	10	22	7	M22 x 1.5	80	3/8	3/8	130	201
100		40	37	41	19	M12 x 1.75	24	60	30	38	3	29	20	71	16	110	M12 x 1.75 depth 23	10	26	8	M26 x 1.5	100	1/2	1/2	131	202

\* Install plug bolts, which are included, in any unused mounting holes.

**Basic type (B): C□G5BA□S<sup>R</sup><sub>V</sub>: With air cushion**



**Plug bolt\* (4 pcs. included)**

(mm)

Bore size (mm)	Stroke range	P				
		Rc, NPT, G	WA	WB	WH	Wθ
20	Up to 1500	M5 x 0.8	22	16	23	30°
25		M5 x 0.8	22	16	25	30°
32		1/8	22	16	28.5	25°
40		1/8	24	18	33	20°
50		1/4	27	20	40.5	20°
63		1/4	25	18	47.5	20°
80		3/8	30	22	60.5	20°
100		1/2	31	22	71	20°

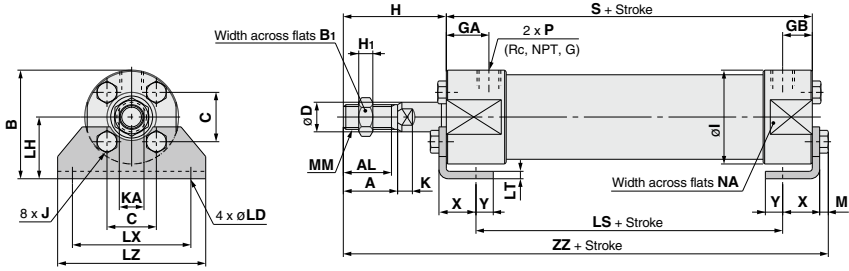
\* Install plug bolts, which are included, in any unused mounting holes.

**D** □  
**X** □  
Technical Data

# CG5-S Series

## Dimensions

Axial foot type (L): C□G5L<sup>N</sup>A□S<sup>R</sup>V

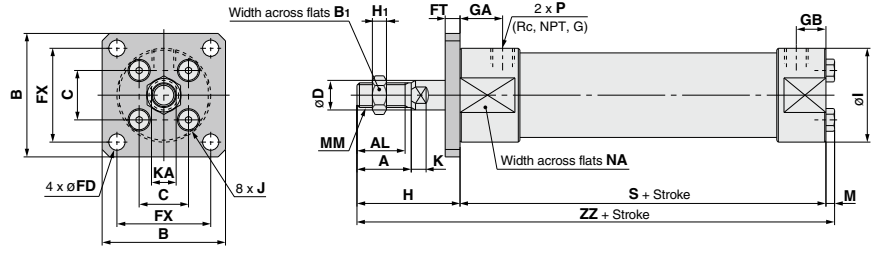


Bore size (mm)	Stroke range	Standard																						
		A	AL	B <sub>1</sub>	B	C	D	GA	GB	H	H <sub>1</sub>	I	J	K	KA	LD	LH	LS	LT	LX	LZ	M	MM	NA
20	Up to 1500	18	15.5	13	37.5	16.5	8	18	12	35	5	31	M4 x 0.7	5	6	6	22	59	3	40	50	3	M8 x 1.25	29
25		22	19.5	17	41.5	18.5	10	18	12	40	6	33	M5 x 0.8	5.5	8	6	25	59	3	44	60	3.5	M10 x 1.25	29
32		22	19.5	17	44	20	12	18	12	40	6	38	M5 x 0.8	5.5	10	7.2	25	59	3	44	60	3.5	M10 x 1.25	35.5
40		30	27	19	53.5	26	16	19	13	50	8	47	M6 x 1.0	6	14	7.2	30	66	3	54	75	4	M14 x 1.5	44
50		35	32	27	69	32	20	21	14	58	11	58	M8 x 1.25	7	18	10	40	74	4	66	90	5.5	M18 x 1.5	55
63		35	32	27	81	38	20	21	14	58	11	72	M10 x 1.5	7	18	12	45	74	4	82	110	7	M18 x 1.5	69
80		40	37	32	99.5	50	25	28	20	71	13	89	M10 x 1.5	10	22	12	55	82	4	100	130	7	M22 x 1.5	80
100		40	37	41	125	60	30	29	20	71	16	110	M12 x 1.75	10	26	14	70	83	6	120	160	8	M26 x 1.5	100

\* Foot brackets and plug bolts are installed when shipped from factory.  
 Note 1) ø20 and ø25 cylinders with an air cushion: M5 x 0.8  
 Note 2) Refer to the basic type (B)/CG5BA□S<sup>R</sup> for the dimensions of air cushion needles.

Bore size (mm)	P		S	X	Y	ZZ
	Rc, NPT	G				
20	1/8 (1)	M5 x 0.8	83	15	7	124
25	1/8 (1)	M5 x 0.8	83	15	7	129.5
32	1/8	1/8	85	16	6	131.5
40	1/8	1/8	93	16.5	6.5	150
50	1/4	1/4	109	21.5	11.5	176.5
63	1/4	1/4	109	21.5	11.5	178
80	3/8	3/8	130	28	17	212
100	1/2	1/2	131	30	15	216

Rod side flange type (F): C□G5F<sup>N</sup>A□S<sup>R</sup>V



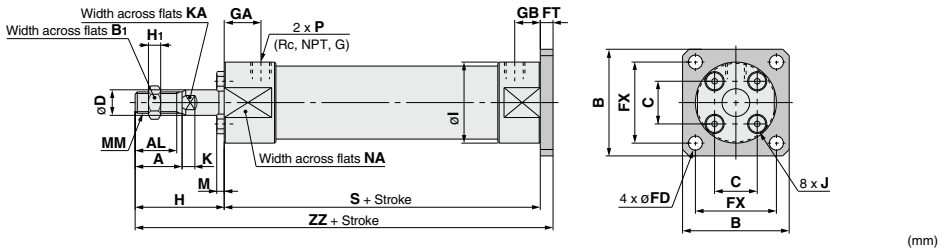
Bore size (mm)	Stroke range	Standard																			P		S	ZZ	
		A	AL	B <sub>1</sub>	B	C	D	FX	FD	FT	GA	GB	H	H <sub>1</sub>	I	J	K	KA	M	MM	NA	Rc, NPT			G
20	Up to 1500	18	15.5	13	50	16.5	8	36	5.5	6	18	12	35	5	31	M4 x 0.7	5	6	3	M8 x 1.25	29	1/8 (1)	M5 x 0.8	83	121
25		22	19.5	17	50	18.5	10	36	5.5	6	18	12	40	6	33	M5 x 0.8	5.5	8	3.5	M10 x 1.25	29	1/8 (1)	M5 x 0.8	83	126.5
32		22	19.5	17	50	20	12	38	6.6	6	18	12	40	6	38	M5 x 0.8	5.5	10	3.5	M10 x 1.25	35.5	1/8	1/8	85	128.5
40		30	27	19	60	26	16	46	6.6	6	19	13	50	8	47	M6 x 1.0	6	14	4	M14 x 1.5	44	1/8	1/8	93	147
50		35	32	27	75	32	20	58	9	9	21	14	58	11	58	M8 x 1.25	7	18	5.5	M18 x 1.5	55	1/4	1/4	109	172.5
63		35	32	27	90	38	20	70	11	9	21	14	58	11	72	M10 x 1.5	7	18	7	M18 x 1.5	69	1/4	1/4	109	174
80		40	37	32	100	50	25	82	11	9	28	20	71	13	89	M10 x 1.5	10	22	7	M22 x 1.5	80	3/8	3/8	130	208
100		40	37	41	125	60	30	100	14	10	29	20	71	16	110	M12 x 1.75	10	26	8	M26 x 1.5	100	1/2	1/2	131	210

\* Flange bracket and plug bolt are installed when shipped from factory.  
 Note 1) ø20 and ø25 cylinders with an air cushion: M5 x 0.8  
 Note 2) Refer to the basic type (B)/CG5BA□S<sup>R</sup> for the dimensions of air cushion needles.

# Stainless Steel Cylinder: Standard Type CG5-S Series

## Dimensions

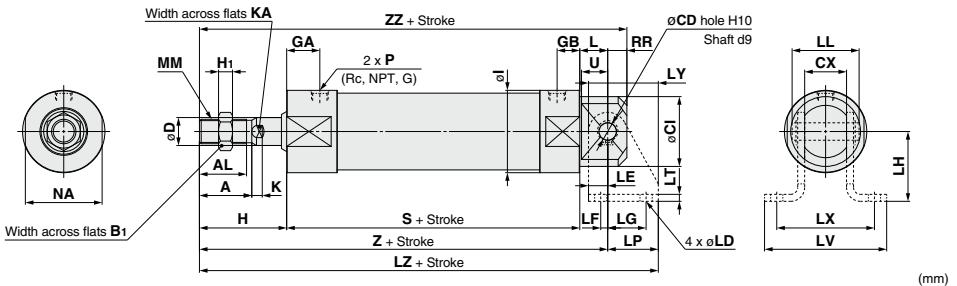
### Head side flange type (G): C□G5G<sup>N</sup>A□S<sup>R</sup>V



Bore size (mm)	Stroke range	A	AL	B1	B	C	D	FX	FD	FT	GA	GB	H	H1	I	J	K	KA	M	MM	NA	P		S	ZZ
																						Rc, NPT	G		
20	Up to 1500	18	15.5	13	50	16.5	8	36	5.5	6	18	12	35	5	31	M4 x 0.7	5	6	3	M8 x 1.25	29	1/8 <sup>(1)</sup>	M5 x 0.8	83	124
25		22	19.5	17	50	18.5	10	36	5.5	6	18	12	40	6	33	M5 x 0.8	5.5	8	3.5	M10 x 1.25	29	1/8 <sup>(1)</sup>	M5 x 0.8	83	129
32		22	19.5	17	50	20	12	38	6.6	6	18	12	40	6	38	M5 x 0.8	5.5	10	3.5	M10 x 1.25	35.5	1/8	1/8	85	131
40		30	27	19	60	26	16	46	6.6	6	19	13	50	8	47	M6 x 1.0	6	14	4	M14 x 1.5	44	1/8	1/8	93	149
50		35	32	27	75	32	20	58	9	9	21	14	58	11	58	M8 x 1.25	7	18	5.5	M18 x 1.5	55	1/4	1/4	109	176
63		35	32	27	90	38	20	70	11	9	21	14	58	11	72	M10 x 1.5	7	18	7	M18 x 1.5	69	1/4	1/4	109	176
80		40	37	32	100	50	25	82	11	9	28	20	71	13	89	M10 x 1.5	10	22	7	M22 x 1.5	80	3/8	3/8	130	210
100		40	37	41	125	60	30	100	14	10	29	20	71	16	110	M12 x 1.75	10	26	8	M26 x 1.5	100	1/2	1/2	131	212

\* Foot brackets and plug bolts are installed when shipped from factory.  
 Note 1) ø20 and ø25 cylinders with an air cushion: M5 x 0.8  
 Note 2) Refer to the basic type (B)/CG5BA□S<sup>R</sup> for the dimensions of air cushion needles.

### Integrated clevis type (E): C□G5E<sup>N</sup>A□S<sup>R</sup>V



Bore size (mm)	Stroke range	A	AL	B1	CD(Hole)	CI	CX	D	GA	GB	H	H1	I	K	KA	L	MM	NA	P		RR	S	U	Z
																			Rc, NPT	G				
20	Up to 1500	18	15.5	13	8 <sup>+0.058</sup> <sub>-0.076</sub>	25	16 <sup>0</sup> <sub>-0.2</sub>	8	18	12	35	5	31	5	6	14	M8 x 1.25	29	1/8 <sup>(1)</sup>	M5 x 0.8	9	83	13	132
25		22	19.5	17	8 <sup>+0.058</sup> <sub>-0.076</sub>	27	16 <sup>0</sup> <sub>-0.2</sub>	10	18	12	40	6	33	5.5	8	14	M10 x 1.25	29	1/8 <sup>(1)</sup>	M5 x 0.8	9	83	13	137
32		22	19.5	17	10 <sup>+0.058</sup> <sub>-0.076</sub>	32	24 <sup>0</sup> <sub>-0.2</sub>	12	18	12	40	6	38	5.5	10	16	M10 x 1.25	35.5	1/8	1/8	11	85	15	141
40		30	27	19	10 <sup>+0.058</sup> <sub>-0.076</sub>	40	24 <sup>0</sup> <sub>-0.2</sub>	16	19	13	50	8	47	6	14	16	M14 x 1.5	44	1/8	1/8	11	93	15	159
50		35	32	27	14 <sup>+0.070</sup> <sub>-0.093</sub>	50	40 <sup>0</sup> <sub>-0.2</sub>	20	21	14	58	11	58	7	18	22	M18 x 1.5	55	1/4	1/4	15	109	21	189
63		35	32	27	14 <sup>+0.070</sup> <sub>-0.093</sub>	60	40 <sup>0</sup> <sub>-0.2</sub>	20	21	14	58	11	72	7	18	22	M18 x 1.5	69	1/4	1/4	15	109	21	189
80		40	37	32	22 <sup>+0.084</sup> <sub>-0.107</sub>	75	66 <sup>0</sup> <sub>-0.3</sub>	25	28	20	71	13	89	10	22	33	M22 x 1.5	80	3/8	3/8	23	130	32	234
100		40	37	41	22 <sup>+0.084</sup> <sub>-0.107</sub>	90	66 <sup>0</sup> <sub>-0.3</sub>	30	29	20	71	16	110	10	26	33	M26 x 1.5	100	1/2	1/2	23	131	32	235

Bore size (mm)	ZZ	Pivot bracket	CD(Shaft)	LD	LE	LF	LG	LH	LL	LP	LT	LV	LX	LY	LZ
20	141	CG-E020SUS	8 <sup>+0.040</sup> <sub>-0.076</sub>	7	9	2	14	30	27.6	21	3	56.5	42	30	153
25	146	CG-E020SUS	8 <sup>+0.040</sup> <sub>-0.076</sub>	7	9	2	14	30	27.6	21	3	56.5	42	30	158
32	152	CG-E032SUS	10 <sup>+0.040</sup> <sub>-0.076</sub>	7	11	4	22	40	38.4	29	4	70.5	56	40	170
40	170	CG-E032SUS	10 <sup>+0.040</sup> <sub>-0.076</sub>	7	11	4	22	40	38.4	29	4	70.5	56	40	188
50	204	CG-E050SUS	14 <sup>+0.060</sup> <sub>-0.093</sub>	12	15	5	25	50	59.6	35	6	106.5	84	50	224
63	204	CG-E050SUS	14 <sup>+0.060</sup> <sub>-0.093</sub>	12	15	5	25	50	59.6	35	6	106.5	84	50	224
80	257	CG-E080SUS	22 <sup>+0.117</sup> <sub>-0.140</sub>	14	23	6	40	80	87.2	57	9	144.5	120	80	291
100	258	CG-E080SUS	22 <sup>+0.117</sup> <sub>-0.140</sub>	14	23	6	40	80	87.2	57	9	144.5	120	80	292

\* There is no plug bolt.  
 \* There is no mounting tap on the rod cover side.  
 \* Pivot bracket (with clevis pin and snap ring) are optional. (Not included.)  
 Note 1) ø20 and ø25 cylinders with an air cushion: M5 x 0.8  
 Note 2) Refer to the basic type (B)/CG5BA□S<sup>R</sup> for the dimensions of air cushion needles.

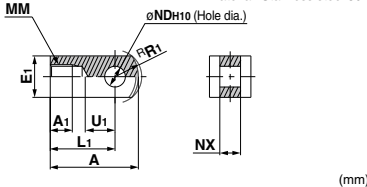
CJ5  
CG5  
HY□  
Water Resistant

D-□  
-X□  
Technical Data

# CG5-S series Accessory Dimensions

## Single Knuckle Joint

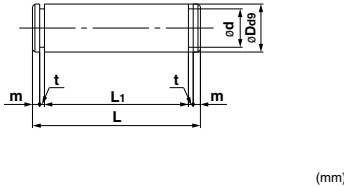
Material: Stainless steel 304



Part no.	Applicable bore size (mm)	A	A1	E1	L1	MM	NDH10	NX	R1	U1
I-G02SUS	20	34	8.5	16	25	M8 x 1.25	8 <sup>+0.058</sup> <sub>0</sub>	8 <sup>-0.2</sup> <sub>-0.4</sub>	10.3	11.5
I-G03SUS	25, 32	41	10.5	20	30	M10 x 1.25	10 <sup>+0.058</sup> <sub>0</sub>	10 <sup>-0.2</sup> <sub>-0.4</sub>	12.8	14
I-G04SUS	40	42	14	22	30	M14 x 1.5	10 <sup>+0.058</sup> <sub>0</sub>	18 <sup>-0.3</sup> <sub>-0.5</sub>	12	14
I-G05SUS	50, 63	56	18	28	40	M18 x 1.5	14 <sup>+0.070</sup> <sub>0</sub>	22 <sup>-0.3</sup> <sub>-0.5</sub>	16	20
I-G08SUS	80	71	21	38	50	M22 x 1.5	18 <sup>+0.070</sup> <sub>0</sub>	28 <sup>-0.3</sup> <sub>-0.5</sub>	21	27
I-G10SUS	100	79	21	45	55	M26 x 1.5	22 <sup>+0.084</sup> <sub>0</sub>	32 <sup>-0.3</sup> <sub>-0.5</sub>	24	31

## Knuckle Joint Pin

Material: Stainless steel 440 (Pin)  
Stainless steel 304 (Retaining ring)

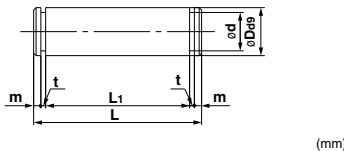


Part no.	Applicable bore size (mm)	Dd9	d	L	L1	m	t	Applicable retaining ring
IY-G02SUS	20	8 <sup>-0.040</sup> <sub>-0.078</sub>	7.6	21	16.2	1.5	0.9	Type C 8 for axis
IY-G03SUS	25, 32	10 <sup>-0.040</sup> <sub>-0.078</sub>	9.6	25.6	20.2	1.55	1.15	Type C 10 for axis
IY-G04SUS	40	10 <sup>-0.040</sup> <sub>-0.078</sub>	9.6	41.6	36.2	1.55	1.15	Type C 10 for axis
IY-G05SUS	50, 63	14 <sup>-0.050</sup> <sub>-0.093</sub>	13.4	50.6	44.2	2.05	1.15	Type C 14 for axis
IY-G08SUS	80	18 <sup>-0.050</sup> <sub>-0.093</sub>	17	64	56.2	2.55	1.35	Type C 18 for axis
IY-G10SUS	100	22 <sup>-0.065</sup> <sub>-0.117</sub>	21	72	64.2	2.55	1.35	Type C 22 for axis

\* Retaining rings are included.

## Clevis Pin

Material: Stainless steel 440 (Pin)  
Stainless steel 304 (Retaining ring)

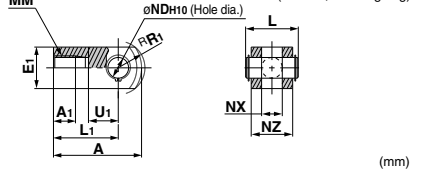


Part no.	Applicable bore size (mm)	Dd9	d	L	L1	m	t	Applicable retaining ring
CD-E02SUS	20, 25	ø8 <sup>-0.040</sup> <sub>-0.078</sub>	7.6	27.6	22.8	1.5	0.9	Type C 8 for axis
CD-E03SUS	32, 40	ø10 <sup>-0.040</sup> <sub>-0.078</sub>	9.6	38.4	33	1.55	1.15	Type C 10 for axis
CD-E05SUS	50, 63	ø14 <sup>-0.050</sup> <sub>-0.093</sub>	13.4	59.6	53.2	2.05	1.15	Type C 14 for axis
CD-E08SUS	80, 100	ø22 <sup>-0.065</sup> <sub>-0.117</sub>	21	87.2	79.4	2.55	1.35	Type C 22 for axis

\* Retaining rings are included.

## Double Knuckle Joint

Material: Stainless steel 440 (Pin)  
Stainless steel 304 (Bracket, retaining ring)

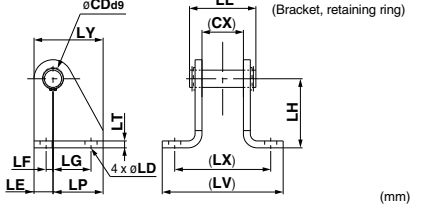


Part no.	Applicable bore size (mm)	A	A1	E1	L	L1	MM	NDH10	NX	NZ	R1	U1	Applicable pin no.
Y-G02SUS	20	34	8.5	16	21	25	M8 x 1.25	8 <sup>+0.058</sup> <sub>0</sub>	8 <sup>+0.4</sup> <sub>+0.2</sub>	16	10.3	11.5	IY-G02SUS
Y-G03SUS	25, 32	41	10.5	20	26.6	30	M10 x 1.25	10 <sup>+0.058</sup> <sub>0</sub>	10 <sup>+0.4</sup> <sub>+0.2</sub>	20	12.8	14	IY-G03SUS
Y-G04SUS	40	42	16	22	41.6	30	M14 x 1.5	10 <sup>+0.058</sup> <sub>0</sub>	18 <sup>+0.3</sup> <sub>+0.5</sub>	36	12	14	IY-G04SUS
Y-G05SUS	50, 63	56	20	25	50.6	40	M18 x 1.5	14 <sup>+0.070</sup> <sub>0</sub>	22 <sup>+0.3</sup> <sub>+0.5</sub>	44	16	20	IY-G05SUS
Y-G08SUS	80	71	21	35	64	50	M22 x 1.5	18 <sup>+0.070</sup> <sub>0</sub>	28 <sup>+0.3</sup> <sub>+0.5</sub>	56	21	27	IY-G08SUS
Y-G10SUS	100	79	24	40	72	55	M26 x 1.5	22 <sup>+0.084</sup> <sub>0</sub>	32 <sup>+0.3</sup> <sub>+0.5</sub>	64	24	31	IY-G10SUS

\* Knuckle joint pins and retaining rings are included.

## Pivot Bracket

Material: Stainless steel 440 (Pin)  
Stainless steel 304 (Bracket, retaining ring)

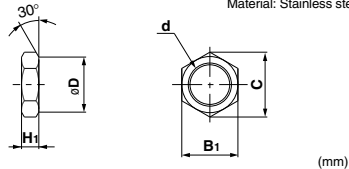


Part no.	Applicable bore size (mm)	CD (Retaining ring)	CX	LD	LE	LF	LG	LH	LL	LP	LV	LX	LY
CG-E020SUS	20, 25	8 <sup>-0.040</sup> <sub>-0.078</sub>	16	7	9	2	14	30	27.6	21	3	56.5	42
CG-E032SUS	32, 40	10 <sup>-0.040</sup> <sub>-0.078</sub>	24	7	11	4	22	40	38.4	29	4	70.5	56
CG-E050SUS	50, 63	14 <sup>-0.050</sup> <sub>-0.093</sub>	40	12	15	5	25	50	59.6	35	6	106.5	84
CG-E080SUS	80, 100	22 <sup>-0.065</sup> <sub>-0.117</sub>	60	14	23	6	40	80	87.2	57	9	144.5	120

\* Clevis pins and retaining rings are included.

## Rod End Nut

Material: Stainless steel 304

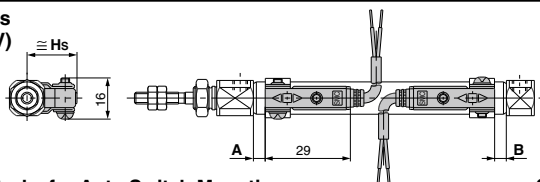


Part no.	Applicable bore size (mm)	B1	C	D	d	H1
NT-02SUS	20	13	(15)	12.5	M8 x 1.25	5
NT-03SUS	25, 32	17	(19.6)	16.5	M10 x 1.25	6
NT-G04SUS	40	19	(21.9)	18	M14 x 1.5	8
NT-05SUS	50, 63	27	(31.2)	26	M18 x 1.5	11
NT-08SUS	80	32	(37.0)	31	M22 x 1.5	13
NT-10SUS	100	41	(47.3)	39	M26 x 1.5	16

# CJ5-S/CG5-S Series Auto Switch Mounting

## Proper Auto Switch Mounting Position (Detection at stroke end) and Mounting Height

### CJ5-S Series D-M9□A(V) D-H7BA



### Minimum Stroke for Auto Switch Mounting

Mounting bracket	Basic type, Foot type, Flange type, Clevis type		
Number of auto switches	1 (Rod cover side)	2 (Different sides)	2 (Same side)
	Switch mounting side	Port side 	Port side 
Switch type			
Minimum stroke (mm)	10	15	60

### Auto Switch Mounting Bracket / Part No.

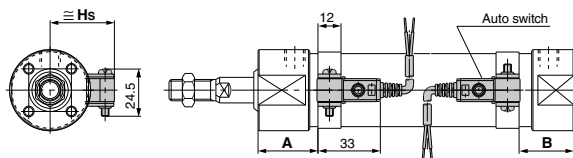
Auto switch model	Bore size (mm)	
	ø10	ø16
D-M9□A D-M9□AV	BJ6-010S (Note 1)	BJ6-016S (Note 1)
D-H7BA	BJ2-010S	BJ2-016S

\* With stainless steel mounting screws.

Note 1) Set part number which includes the auto switch mounting band (BJ2-□□□S) and the holder kit (BJ4-1/Switch bracket; White).

Note 2) For D-M9□A(V), avoid the indicator LED for mounting the switch bracket.

### CG5-S Series D-G5BA



### Minimum Stroke for Auto Switch Mounting

Mounting bracket	Basic type, Foot type, Flange type, Clevis type		
Number of auto switches	1 (Rod cover side)	2 (Different sides)	2 (Same side)
	Switch mounting side	Port side 	Port side 
Switch type			
Minimum stroke (mm)	10	15	75

### Auto Switch Mounting Bracket / Part No.

Auto switch model	Bore size (mm)									
	20	25	32	40	50	63	80	100		
D-G5BA	NBA-088S	NBA-106S	BGS1-032S	BAF-04S	-05S	BAF-06S	BAF-08S	BAF-10S		

\* With stainless steel mounting screws.

### Operating Range

Auto switch model	Bore size (mm)	
	10	16
D-H7BA	5	5

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

### Proper Auto Switch Mounting Position and Its Mounting Height

Applicable bore size (mm)	Auto switch model D-H7BA		
	A	B	Hs
10	0	0	17
16	0.5	0.5	20.5

Note) Adjust the auto switch after confirming the operating condition in the actual setting.

### Operating Range

Auto switch model	Bore size (mm)							
	20	25	32	40	50	63	80	100
D-G5BA	5	5	5.5	6	7	7.5	7.5	8

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

### Proper Auto Switch Mounting Position and Its Mounting Height

Applicable bore size (mm)	Auto switch model D-G5BA		
	A	B	Hs
20	31.5	26	26
25	31.5	28.5	28.5
32	32.5	33	33
40	37	36.5	36.5
50	45.5	42	42
63	45.5	48.5	48.5
80	56	57.5	57.5
100	57	68	68

Note) Adjust the auto switch after confirming the operating condition in the actual setting.

CJ5  
CG5

HY□

Water  
Resistant

D-□

-X□

Technical  
Data



# Technical Data: Chemical Resistance Table

⊙ : No influence or almost no influence  
 ○ : Some influence, but operational depending on conditions  
 △ : Avoid use if possible  
 × : Substantial influence, not suitable for use  
 — : Not tested

## Chemical Resistance Table

Parts		Body		Seal		Water resistant auto switch	
Material		Stainless steel	Aluminum*	Nitrile rubber	Fluororubber	Resin casing	Lead wire
Chemical (Concentration weight %, Temperature °C)	Symbol	Stainless steel 304	Al	NBR (-10 to 60°C)	FKM (-40 to 150°C)	PBT (-10 to 60°C)	PVC (-10 to 60°C)
		Inorganic salt	1 Hydrochloric acid (20%, Room temperature)	×	×	○	⊙
	2 Chromic acid (25%, 70°C)	○	×	×	⊙	⊙	○
	3 Boric acid	○	×	⊙	⊙	⊙	○
	4 Sulfuric acid (30%, Room temperature)	×	×	⊙	⊙	⊙	○
	5 Phosphoric acid (50%, Room temperature)	○	×	⊙	⊙	⊙	○
	6 Ammonium hydroxide (28%)	○	○	○	×	⊙	○
Inorganic alkali	7 Sodium hydroxide (30%, Room temperature)	⊙	×	⊙	△	⊙	×
	8 Calcium hydroxide	△	×	⊙	⊙	⊙	⊙
	9 Magnesium hydroxide	○	○	⊙	⊙	⊙	⊙
Organic solvent	10 Acetylene	⊙	△	⊙	⊙	⊙	⊙
	11 Formic acid (25%, Room temperature)	○	△	×	△	△	△
	12 Citric acid	△	×	⊙	⊙	△	○
	13 Acetic acid (10%, Room temperature)	⊙	△	△	○	⊙	○
	14 Lactic acid (5%, 20°C)	○	×	⊙	⊙	⊙	○
Others (oil, gas, etc.)	15 Linseed oil	⊙	○	⊙	⊙	△	△
	16 Potassium chloride	○	△	⊙	⊙	⊙	⊙
	17 Calcium chloride	○	⊙	⊙	⊙	⊙	⊙
	18 Mineral oil	⊙	⊙	⊙	⊙	⊙	△
	19 Sodium hypochlorite (2%, Room temperature)	○	×	×	⊙	⊙	△
	20 Sodium chloride	○	—	⊙	⊙	⊙	⊙
	21 Carbon dioxide	⊙	⊙	⊙	⊙	⊙	⊙
	22 Natural gas	⊙	⊙	⊙	⊙	⊙	⊙
	23 Boric acid	○	×	⊙	⊙	⊙	○

\* Unless noted otherwise, the solution concentration is in a saturated state.

\* Chemical resistance is a guide that applies only to the stainless steel cylinder parts, and does not guarantee the performance of air cylinders (auto switches).  
 Be sure to perform a verification test before operating.

\* ) Reference data