

Stainless Steel Cylinder

Series CG5-S

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

How to Order

Without Auto Switch CG5 L N 25 TF S R 100

With Auto Switch CDG5 L N 25 TF S R 100 G5BAL

With auto switch
(built-in magnet)

Mounting

B	Basic type
L	Axial foot type
F	Front flange type
G	Rear flange type
E	Integral clevis type

Type

N	Non-lube, rubber bumper
A	Non-lube, air cushion

Bore size

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

Port thread type

-	Rc
TN	NPT
TF	G

Stainless steel cylinder

Seal material

R	NBR
V	FKM

Auto switch type/Band mount type

Nil	Without auto switch (built-in magnet)
G5BAL	D-G5BAL (water resistant)

Auto switches are available in the band mount type only.

Cylinder stroke (mm)
Refer to the standard stroke table on page 8.

Number of auto switches

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

Mounting bracket part numbers

Mounting bracket	Bore size (mm)							
	20	25	32	40	50	63	80	100
Axial foot Note 1)	CG-L020SUS	CG-L025SUS	CG-L032SUS	CG-L040SUS	CG-L050SUS	CG-L063SUS	CG-L080SUS	CG-L100SUS
Flange	CG-F020SUS	CG-F025SUS	CG-F032SUS	CG-F040SUS	CG-F050SUS	CG-F063SUS	CG-F080SUS	CG-F100SUS
Trunnion bracket Note 2)	CG-E020SUS		CG-E032SUS		CG-E050SUS		CG-E080SUS	

Note 1) Order two foot brackets for each cylinder.

Note 2) Includes clevis pin and snap ring.

Auto switch mounting bracket part numbers (band mount type)

Auto switch model	Bore size (mm)							
	20	25	32	40	50	63	80	100
D-G5BAL	NBA-088S	NBA-106S	BGS1-032S	BAF-04S	BAF-05S	BAF-06S	BAF-08S	BAF-10S

* Includes stainless steel mounting screws.

Grease pack for stainless steel cylinders/Part number: GR-R-010 (10g)

Auto switch specifications

Refer to pages 15 through 17 for auto switch related items.

D-G5BAL (With indicator light)/Band mount type	
Auto switch model	D-G5BAL
Wiring type	2 wire
Output type	—
Applicable load	24VDC relay, PLC
Power supply voltage	—
Current consumption	—
Load voltage	24VDC (10 to 28VDC)
Load current	5 to 40mA
Internal voltage drop	4V or less
Leakage current	0.8mA or less at 24VDC
Indicator light	Actuated position Red LED lights up Optimum operating position ... Green LED lights up

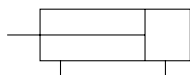
 Use caution during operation as residue may collect on auto switches.

Specifications



JIS symbol

Double acting/Single rod



Minimum stroke for mounting auto switches

Model	Number of auto switches	
	2 pcs.	1 pc.
D-G5BAL	15mm	10mm

Refer to page 15 for details.

Action		Double acting single rod
Fluid		Air
Proof pressure		1.5MPa
Maximum operating pressure		1.0MPa
Minimum operating pressure		0.05MPa
Ambient and fluid temperature		Without auto switch: -10 to 70°C, With auto switch: -10 to 60°C
Cushion		Rubber bumper, Air cushion
Piston speed	ø20 to ø63	50 to 1000mm/s
	ø80, ø100	50 to 700mm/s
Thread tolerance		JIS class 2
Stroke length tolerance	ø20 to ø63	to 1000 ^{+1.4} ₀ mm, to 1200 ^{+1.5} ₀ mm
	ø80, ø100	to 1000 ^{+1.4} ₀ mm, to 1500 ^{+1.5} ₀ mm
Mounting		Basic type, Axial foot type, Front flange type, Rear flange type, Integral clevis type

Standard Strokes

(mm)

Bore size	Standard stroke ^{Note 1)}	Long stroke
20	25, 50, 75, 100, 125, 150, 200	201 to 350
25	25, 50, 75, 100, 125, 150, 200, 250, 300	301 to 400
32		301 to 450
40		301 to 800
50, 63		301 to 1200
80		301 to 1400
100		301 to 1500

Note 1) All non-standard strokes are produced upon receipt of order. (Spacers are not used on intermediate strokes.)

Accessories

Mounting		Basic type	Axial foot type	Front flange type	Rear flange type	Integral clevis type
Standard	Rod end nut	●	●	●	●	●
	Single knuckle joint	●	●	●	●	●
Optional	Double knuckle joint (with pin & snap ring)	●	●	●	●	●
	Trunnion bracket (with pin & snap ring)	—	—	—	—	●

Weights

(kg)

Bore size		20	25	32	40	50	63	80	100
Standard weight	Basic type	0.32	0.42	0.61	0.97	1.78	2.73	5.20	8.13
	Axial foot type	0.40	0.53	0.72	1.13	2.12	3.19	5.91	9.50
	Flange type	0.43	0.53	0.71	1.12	2.04	3.25	5.86	9.29
	Integral clevis type	0.37	0.48	0.72	1.12	2.17	3.26	6.48	9.94
Trunnion 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 50mm 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	0.03	0.02	0.06	0.07	0.14	0.16

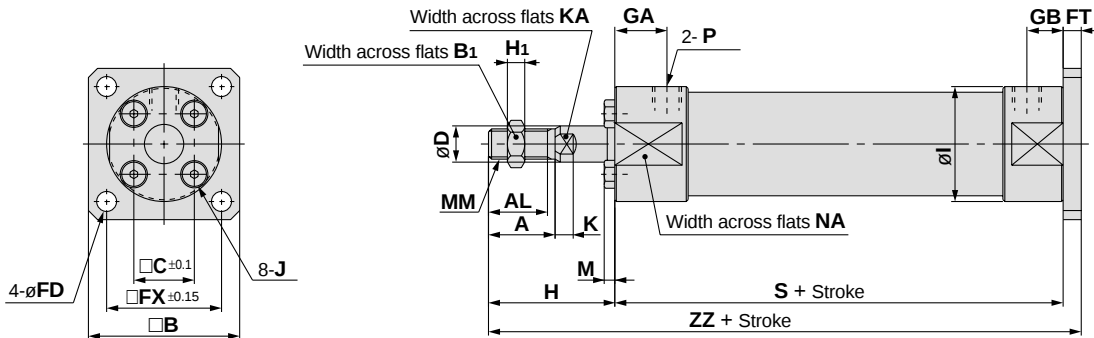
Calculation (Example) CG5LA 20SR-100

(Foot type ø20, 100mm stroke)

- Basic weight 0.40kg (Foot type ø20)
 - Additional stroke weight 0.06kg/50mm stroke
 - Air cylinder stroke 100mm
 - Additional air cushion weight 0.02kg
- 0.40 + 0.06 x 100/50 + 0.02 = 0.54kg

Dimensions

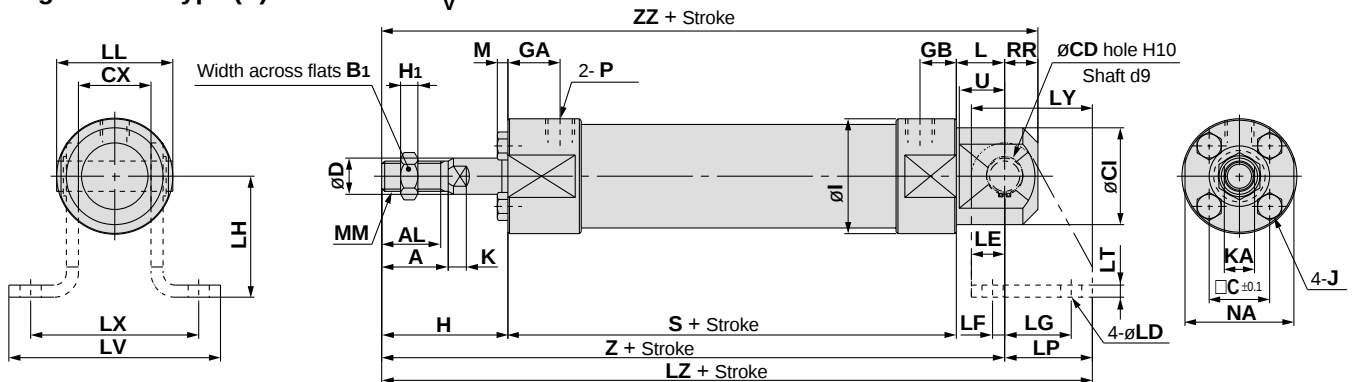
Rear flange type (G)/C□G5GN□S^R_V



Bore size (mm)	Stroke range	A	AL	B ₁	B	C	D	FX	FD	FT	GA	GB	H	H ₁	I	J	K	KA	M	MM	NA	P	S	ZZ
20	to 200	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	83	124
25	to 300	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	83	129
32	to 300	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	85	131
40	to 500	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	93	149
50	to 600	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	109	176
63	to 600	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	109	176
80	to 750	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	130	210
100	to 750	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	131	212

* Flange brackets and plug bolts are installed before shipment from factory.

Integral clevis type (E)/C□G5EN□S^R_V



Bore size (mm)	Stroke range	A	AL	B ₁	C	CD (hole)	CI	CX	D	GA	GB	H	H ₁	I	J	K	KA	L	M	MM	NA	P	RR	S	U
20	to 200	18	15.5	13	16.5	8 ^{+0.058} ₀	25	16 ⁰ _{-0.2}	8	18	12	35	5	31	M4 x 0.7	5	6	14	3	M8 x 1.25	29	1/8	9	83	13
25	to 300	22	19.5	17	18.5	8 ^{+0.058} ₀	27	16 ⁰ _{-0.2}	10	18	12	40	6	33	M5 x 0.8	5.5	8	14	3.5	M10 x 1.25	29	1/8	9	83	13
32	to 300	22	19.5	17	20	10 ^{+0.058} ₀	32	24 ⁰ _{-0.2}	12	18	12	40	6	38	M5 x 0.8	5.5	10	16	3.5	M10 x 1.25	35.5	1/8	11	85	15
40	to 500	30	27	19	26	10 ^{+0.058} ₀	40	24 ⁰ _{-0.2}	16	19	13	50	8	47	M6 x 1.0	6	14	16	4	M14 x 1.5	44	1/8	11	93	15
50	to 600	35	32	27	32	14 ^{+0.070} ₀	50	40 ⁰ _{-0.2}	20	21	14	58	11	58	M8 x 1.25	7	18	22	5.5	M18 x 1.5	55	1/4	15	109	21
63	to 600	35	32	27	38	14 ^{+0.070} ₀	60	40 ⁰ _{-0.2}	20	21	14	58	11	72	M10 x 1.5	7	18	22	7	M18 x 1.5	69	1/4	15	109	21
80	to 750	40	37	32	50	22 ^{+0.084} ₀	75	60 ⁰ _{-0.3}	25	28	20	71	13	89	M10 x 1.5	10	22	33	7	M22 x 1.5	80	3/8	23	130	32
100	to 750	40	37	41	60	22 ^{+0.084} ₀	90	60 ⁰ _{-0.3}	30	29	20	71	16	110	M12 x 1.75	10	26	33	8	M26 x 1.5	100	1/2	23	131	32

Bore size (mm)	Z	ZZ	Trunnion bracket	CD (shaft)	LD	LE	LF	LG	LH	LL	LP	LT	LV	LX	LY	LZ
20	132	141	CG-E020SUS	8 ^{-0.040} _{-0.076}	7	9	2	14	30	27.6	21	3	56.5	42	30	153
25	137	146	CG-E020SUS	8 ^{-0.040} _{-0.076}	7	9	2	14	30	27.6	21	3	56.5	42	30	158
32	141	152	CG-E032SUS	10 ^{-0.040} _{-0.076}	7	11	4	22	40	38.4	29	4	70.5	56	40	170
40	159	170	CG-E032SUS	10 ^{-0.040} _{-0.076}	7	11	4	22	40	38.4	29	4	70.5	56	40	188
50	189	204	CG-E050SUS	14 ^{-0.050} _{-0.093}	12	15	5	25	50	59.6	35	6	106.5	84	50	224
63	189	204	CG-E050SUS	14 ^{-0.050} _{-0.093}	12	15	5	25	50	59.6	35	6	106.5	84	50	224
80	234	257	CG-E080SUS	22 ^{-0.065} _{-0.117}	14	23	6	40	80	87.2	57	9	144.5	120	80	291
100	235	258	CG-E080SUS	22 ^{-0.065} _{-0.117}	14	23	6	40	80	87.2	57	9	144.5	120	80	292

* Plug bolts are installed before shipment from factory.

* Trunnion brackets (with clevis pin and snap ring) are optional. (Not included.)