



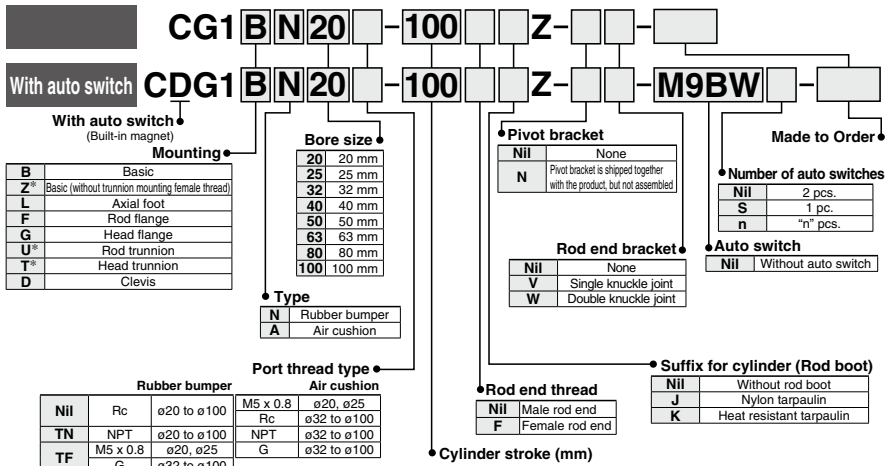
Air Cylinder: Standard Type Double Acting, Single Rod

CG1 Series

RoHS

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

How to Order



Applicable 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	AC	Applicable bore size			0.5 (Nil)	1 (M)	3 (L)	5 (Z)			None (N)			
							ø20 to ø63	ø80, ø100	Perpendicular								In-line	In-line	
Solid state auto switch	—	Grommet	—	3-wire (NPN)	5 V, 12 V	—	M9NV	M9N	—	●	●	○	—	○	IC circuit				
				3-wire (PNP)			M9PV	M9P	G59	●	—	○	○	○					
				2-wire			M9BV	M9B	G5P	●	●	○	○	○					
		Connector		—	—	3-wire (NPN)	24 V	5 V, 12 V	—	—	G59W	●	●	○		○	○	IC circuit	
						3-wire (PNP)			M9VW	M9V	—	●	●	○		○	○		
						2-wire			—	—	G59W	●	●	○		○	○		
	Diagnostic indication (2-color indicator)	Grommet	Yes	—	3-wire (NPN)	5 V, 12 V	—	M9NVV	M9NV	—	●	●	○	○		○	Relay, PLC		
					3-wire (PNP)			M9PVV	M9PV	—	●	●	○	○		○			
					2-wire			M9BVV	M9BV	—	●	●	○	○		○			
		Water resistant (2-color indicator)			Grommet	—	3-wire (NPN)	5 V, 12 V	—	M9NAV	M9NA	—	●	●		○		○	○
							3-wire (PNP)			M9PAV	M9PA	—	○	○		●		●	○
							2-wire			M9BAV	M9BA	—	○	○		●		●	○
With diagnostic output (2-color indicator)	Grommet	Yes	—	4-wire (NPN)	5 V, 12 V	—	—	—	G59W	●	●	○	○	○	IC circuit				
				3-wire (PNP)			—	—	G59W	●	●	○	○	○					
				2-wire			—	—	G59W	●	●	○	○	○					
	—			Grommet	—	—	24 V	12 V	—	A96V	A96	—	●	●		○	○	○	IC circuit
										A93V	A93	—	●	●		○	○	○	
										A90V	A90	—	●	●		○	○	○	
Diagnostic indication (2-color indicator)	Grommet	Yes	—	2-wire	24 V	12 V	—	—	B54	●	●	○	○	○	Relay, PLC				
							—	—	B64	●	●	○	○	○					
							—	—	C73C	●	●	○	○	○					
—	Grommet	Yes	—	—	—	—	—	—	C80C	●	●	○	○	○	IC circuit				
							—	—	B59W	●	●	○	○	○					

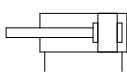
Air Cylinder: Standard Type **CG1 Series** Double Acting, Single Rod

Specifications

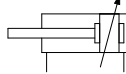


Symbol

Rubber bumper



Air cushion



Bore size (mm)		20	25	32	40	50	63	80	100	
Action		Double acting, Single rod								
Lubricant		Not required (Non-lube)								
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°C to 70°C With auto switch : -10°C to 60°C (No freezing)								
Piston speed		50 to 1000 mm/s						50 to 700 mm/s		
Stroke length tolerance		Up to 1000 st. ^{+1.0} / ₀ mm, Up to 1500 st. ^{+1.8} / ₀ mm								
Cushion		Rubber bumper, Air cushion								
Mounting**		Basic, Basic (without trunnion mounting female thread), Axial foot, Rod flange, Head flange, Rod trunnion, Head trunnion, Clevis								
Allowable kinetic energy (J)	Rubber bumper	Male rod end	0.28	0.41	0.66	1.20	2.00	3.40	5.90	9.90
		Female rod end	0.11	0.18	0.29	0.52	0.91	1.54	2.71	4.54
	Air cushion	Male rod end	R: 0.35 H: 0.42	R: 0.56 H: 0.65	0.91	1.80	3.40	4.90	11.80	16.70
		Female rod end	0.11	0.18	0.29	0.52	0.91	1.54	2.71	4.54

Accessories

Mounting		Basic	Axial foot	Rod flange	Head flange	Rod trunnion	Head trunnion	Clevis
Standard	Rod end nut	●	●	●	●	●	●	●
	Clevis pin	—	—	—	—	—	—	●
Option	Single knuckle joint	●	●	●	●	●	●	●
	Double knuckle joint (with pin)	●	●	●	●	●	●	●
	Pivot bracket	—	—	—	—	●	●	●
	Rod boot	●	●	●	●	●	●	●

Standard Strokes

Bore size	Standard stroke	Manufacturable stroke
20	25, 50, 75, 100, 125, 150, 200	1 to 1500
25	25, 50, 75, 100, 125, 150, 200, 250, 300	1 to 1500
32		
40		
50, 63		
80		
100		

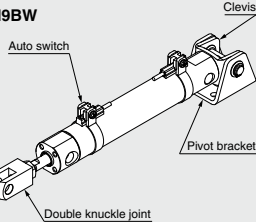


CG1 Series

Ordering Example of Cylinder Assembly

Cylinder model: CDG1DN20-100Z-NW-M9BW

Mounting D: Clevis
 Pivot bracket N: Yes
 Rod end bracket W: Double knuckle joint
 Auto switch D-M9BW: 2 pcs.



*Pivot bracket, double knuckle joint and auto switch are shipped together with the product, but not assembled.

Rod Boot Material

Symbol	Rod boot material	Maximum operating temperature
J	Nylon tarpaulin	70°C
K	Heat resistant tarpaulin	110°C

Mounting Brackets/Part No.

Mounting bracket	Order q'ty	Bore size (mm)								Contents
		20	25	32	40	50	63	80	100	
Axial foot	2 (Note)	CG-L020	CG-L025	CG-L032	CG-L040	CG-L050	CG-L063	CG-L080	CG-L100	2 feet, 8 mounting bolts
Flange	1	CG-F020	CG-F025	CG-F032	CG-F040	CG-F050	CG-F063	CG-F080	CG-F100	1 flange, 4 mounting bolts
Trunnion pin	1	CG-T020	CG-T025	CG-T032	CG-T040	CG-T050	CG-T063	—	—	2 trunnion pins, 2 trunnion bolts, 2 flat washers
Clevis	1	CG-D020	CG-D025	CG-D032	CG-D040	CG-D050	CG-D063	CG-D080	CG-D100	1 clevis, 4 mounting bolts, 1 clevis pin, 2 retaining rings
Pivot bracket	1	CG-020-24A	CG-025-24A	CG-032-24A	CG-040-24A	CG-050-24A	CG-063-24A	CG-080-24A	CG-100-24A	1 pivot bracket

Note) Order two feet per cylinder.

Mounting Brackets, Accessories/Material, Surface Treatment

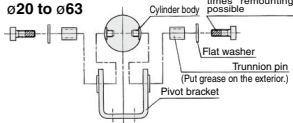
Segment	Description	Material	Surface treatment
Mounting brackets	Foot	Carbon steel	Nickel plating
	Flange	Carbon steel (ø20 to ø63)	Nickel plating
		Cast iron (ø80, ø100)	Nickel plating
	Clevis	Carbon steel (ø20 to ø63)	Nickel plating
		Cast iron (ø80, ø100)	Nickel plating
	Trunnion pin	Trunnion pin	Carbon steel
Trunnion bolt		Carbon steel	Nickel plating
Flat washer		Carbon steel	Nickel plating
Accessories	Rod end nut	Carbon steel	Zinc chromated
	Single knuckle joint	Carbon steel (ø20 to ø32)	Nickel plating
		Cast iron (ø40 to ø100)	Zinc chromated
	Double knuckle joint	Carbon steel (ø20 to ø32)	Nickel plating
		Cast iron (ø40 to ø100)	Zinc chromated
	Knuckle pin	Carbon steel	—
	Clevis pin	Carbon steel	—
	Pivot bracket	Carbon steel (ø20 to ø63)	Nickel plating
		Cast iron (ø80, ø100)	Nickel plating
	Mounting bolt	Carbon steel	Nickel plating
Retaining ring	Carbon tool steel	Phosphate coating	

Mounting Procedure

Mounting procedure for trunnion

Follow the procedures below when mounting a pivot bracket on the trunnion.

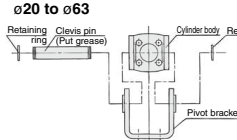
ø20 to ø63



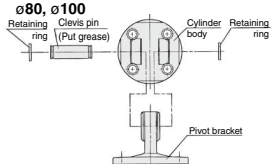
Mounting procedure for clevis

Follow the procedures below when mounting a pivot bracket on the clevis.

ø20 to ø63



ø80, ø100





Air Cylinder: Standard Type **CG1 Series** Double Acting, Single Rod

Weights

		(kg)							
Bore size (mm)		20	25	32	40	50	63	80	100
Basic weight	Basic (B)	0.11	0.17	0.24	0.44	0.79	1.06	2.07	3.16
	Basic (Z)	0.11	0.17	0.25	0.45	0.80	1.09	—	—
	Axial foot	0.21	0.29	0.40	0.67	1.26	1.77	3.04	4.91
	Flange	0.18	0.26	0.38	0.65	1.16	1.64	2.78	4.44
	Trunnion	0.12	0.19	0.28	0.49	0.88	1.20	—	—
	Clevis	0.17	0.25	0.39	0.68	1.19	1.78	2.77	4.44
Pivot bracket		0.08	0.09	0.17	0.25	0.44	0.80	0.98	1.75
Single knuckle joint		0.05	0.09	0.09	0.10	0.22	0.22	0.39	0.57
Double knuckle joint (with pin)		0.05	0.09	0.09	0.13	0.26	0.26	0.64	1.31
Additional weight per 50 mm of stroke		0.05	0.07	0.09	0.14	0.21	0.25	0.35	0.50
Additional weight for switch magnet		0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.04
Additional weight with air cushion		0	0.01	0.04	0	0.01	0.04	0	0.04
Weight reduction for female rod end		-0.01	-0.02	-0.02	-0.05	-0.10	-0.10	-0.19	-0.27
Additional weight for long stroke		0.01	0.01	0.02	0.03	0.06	0.12	0.21	0.31

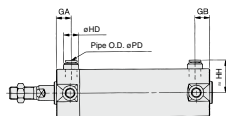
Built-in One-touch Fittings (The shape is the same as the current product.)

CG1 **Mounting type** N **Bore size** F — **Stroke**

↓ Built-in One-touch fittings

This type has the One-touch fittings integrated in a cylinder, which enables to reduce the piping labor and installing space dramatically.

Dimensions (Dimensions other than those shown below are the same as the standard type.)



Bore size (mm)	GA	GB	HD	HH	PD
20	12	12	13	24.2	6
25	12	10(12)	13	26.7	6
32	12	10(12)	13	30.2	6
40	12	10(12)	16	34.6	8
50	13	13	20	40.6	10
63	13	13	20	47.1	10

(Note) (): Long stroke

Specifications

Bore size (mm)	20, 25, 32, 40, 50, 63
Action	Double acting
Fluid	Air
Maximum operating pressure	1.0 MPa
Minimum operating pressure	0.05 MPa
Piston speed	50 to 750 mm/s
Cushion	Rubber bumper
Mounting	Basic, Axial foot, Rod flange, Head flange, Rod trunnion, Head trunnion, Clevis (used for changing the port location by 90°)

- * Auto switch can be mounted.
- * Female rod end is not available.
- * Use the current seal kit.

Applicable Tubing O.D./I.D.

Bore size (mm)	20	25	32	40	50	63
Applicable tubing O.D. (mm)	6/4	6/4	6/4	8/6	10/7.5	10/7.5
Applicable tubing material	Can be used for either nylon, soft nylon or polyurethane tubing.					

Clean Series

10-CG1 **Mounting type** **Type (Cushion)** **Bore size** — **Stroke** **Rod end thread** Z

↓ Clean Series (With relief port)

The type which is applicable for using inside the clean room graded ISO Class 4 by making an actuator's rod section a double seal construction and discharging by relief port directly to the outside of clean room.

Specifications

Bore size (mm)	20, 25, 32, 40, 50, 63, 80, 100
Action	Double acting
Fluid	Air
Maximum operating pressure	1.0 MPa
Minimum operating pressure	0.05 MPa
Cushion	Rubber bumper, Air cushion
Piston speed	30 to 400 mm/s
Relief port size	M5 x 0.8
Mounting	Basic, Axial foot, Rod flange, Head flange**

- * Auto switch can be mounted.
- ** The basic type is B type only. However, no trunnion mounting female thread is provided.



CG1 Series

Air-hydro

CDG1 Mounting type **H** Bore size - Stroke Rod end thread **Z** - Pivot bracket Rod end bracket - Auto switch -

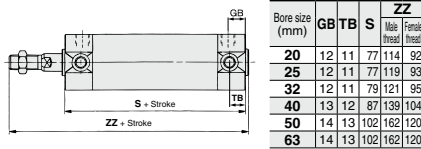
Nil Without magnet
 D Built-in magnet

Air-hydro

Made to Order
 -XA

Low pressure hydraulic cylinder of 1.0 MPa or less
 When using together with the CC series air-hydro unit, constant and low speed actuation and intermediate stopping similar to hydraulic units are possible with the use of valves and other pneumatic equipment.

Dimensions (Dimensions other than those shown below are the same as the standard type.)



Specifications

Bore size (mm)	20, 25, 32, 40, 50, 63
Action	Double acting
Fluid	Turbine oil
Proof pressure	1.5 MPa
Maximum operating pressure	1.0 MPa
Minimum operating pressure	0.18 MPa
Piston speed	15 to 300 mm/s
Cushion	Rubber bumper (Standard equipment)
Ambient and fluid temperature	5 to 60°C
Mounting	Basic, Axial foot, Rod flange, Head flange, Rod trunnion, Head trunnion, Clevis
Made to Order	Change of rod end shape

* Auto switch can be mounted.

Water Resistant

CDG1 Mounting type Type Bore size Port thread type **R** - Stroke Rod end thread **Z** - Pivot bracket Rod end bracket - Auto switch -

Nil Without magnet
 D Built-in magnet

Water resistant cylinder

R NBR seals (Nitrile rubber)
 V FKM seals (Fluororubber)

Water resistant 2-color indicator, solid state auto switch

M9(A)(V) e32 to e63
 G5BAL e80, e100

Made to Order
 XC6

Caution

Since the scraper is press-fit into the rod cover, it cannot be replaced.

Applicable for use in an environment with water splashing such as food processing and car wash equipment, etc.

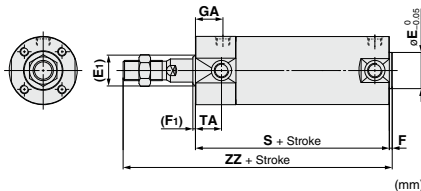
Specifications

Bore size (mm)	32, 40, 50, 63, 80, 100
Action	Double acting, Single rod
Cushion	Rubber bumper/Air cushion
Auto switch mounting	Band mounting type
Made to Order	XC6: Made of stainless steel

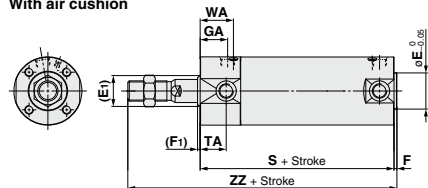
* Specifications other than above are the same as standard type.

Dimensions (Dimensions other than those shown below are the same as the standard type.)

With rubber bumper



With air cushion



Bore size	(E)	E ^φ	(F)	F ^φ	GA		S	TA	WA	ZZ	
					Rc	NPT				G	Male thread
32	17	18	2	2	18	16.5	77 (85)	17	22	119 (127)	93 (101)
40	21	25	2	2	19	19	84 (93)	18	23	136 (145)	101 (110)
50	26	30	2	2	21	21	97 (109)	20	25	157 (169)	115 (127)
63	26	32	2	2	21	21	97 (109)	20	25	157 (169)	115 (127)
80	32	40	3	3	28	25.5	116 (130)	—	32	190 (204)	138 (152)
100	37	50	3	3	29	26.5	117 (131)	—	33	191 (205)	142 (156)

* Dimensions marked with "*" are the same as the standard type.

* (): Denotes the dimensions for long stroke.



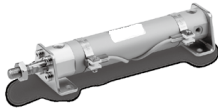
Air Cylinder: Standard Type **CG1 Series** Double Acting, Single Rod

Cylinder with Stable Lubrication Function (Lube-retainer)

CDG1 Mounting N Bore size M - Stroke Rod end thread Z - Pivot bracket Rod end bracket - Auto switch

• With auto switch
(Built-in magnet)

• Cylinder with Stable Lubrication Function
(Lube-retainer)



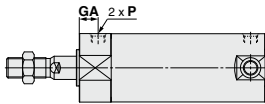
Specifications

Bore size (mm)	20, 25, 32, 40, 50, 63, 80, 100
Action	Double acting, Single rod
Minimum operating pressure	0.1 MPa
Cushion	Rubber bumper

* Specifications other than the above are the same as the standard type.

Dimensions (Dimensions other than those shown below are the same as the standard type.)

* No runnion mounting female thread is provided on the rod side. (For B: Basic)



Bore size	(mm)	
	GA	P
20	14	M5 x 0.8
25	13	M5 x 0.8
32	(12)	(Rc 1/8)
40	(13)	(Rc 1/8)
50	(14)	(Rc 1/4)
63	(14)	(Rc 1/4)
80	(20)	(Rc 3/8)
100	(20)	(Rc 1/2)

* When female thread is used, use a washer, etc. to prevent the contact part at the rod end from being deformed depending on the material of the workpiece.

(): Same as the standard model.

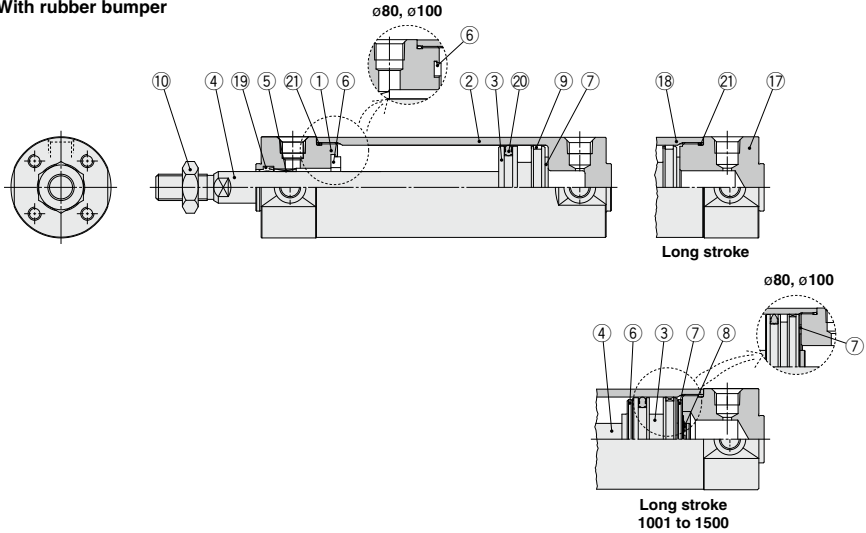
* The mounting dimensions of the mounting bracket are the same as the standard type.



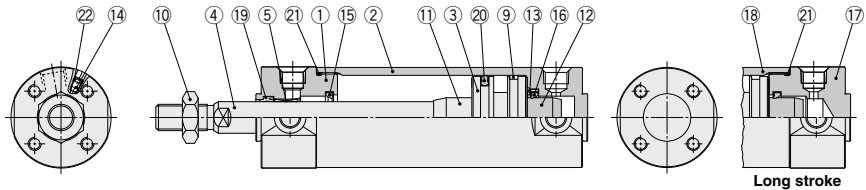
CG1 Series

Construction

With rubber bumper



With air cushion



Component Parts

No.	Description	Material	Note
1	Rod cover	Aluminum alloy	Anodized
2	Tube cover	Aluminum alloy	Hard anodized
3	Piston	Aluminum alloy	
4	Piston rod	Stainless steel Carbon steel*	For ø20 or ø25 with built-in magnet Hard chrome plating*
5	Bushing	Bearing alloy	
6	Bumper	Resin	ø32 or larger is common.
7	Bumper	Resin	
8	Retaining ring	Stainless steel	Except ø80 and ø100
9	Wear ring	Resin	
10	Rod end nut	Carbon steel	Zinc chromated
11	Cushion ring A	Aluminum alloy	
12	Cushion ring B	Aluminum alloy	
13	Seal retainer	Rolled steel	Zinc chromated
14	Cushion valve	ø40 or smaller ø50 or larger	Carbon steel Steel wire
			Electroless nickel plating Zinc chromated

No.	Description	Material	Note
15	Cushion seal A	Urethane	ø32 or larger is common.
16	Cushion seal B	Urethane	common.
17	Head cover	Aluminum alloy	Anodized
18	Cylinder tube	Aluminum alloy	Hard anodized
19	Rod seal	NBR	
20	Piston seal	NBR	
21	Tube gasket	NBR	
22	Valve seal	NBR	

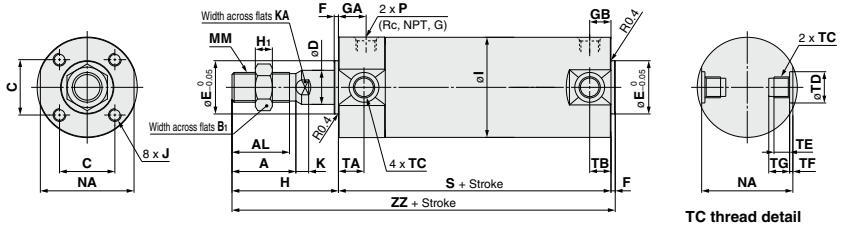
Replacement Parts: Seal Kit

Bore size (mm)	Kit no.	Contents
20	CG1N20Z-PS	Set of the nos. (19, 20, 21)
25	CG1N25Z-PS	
32	CG1N32Z-PS	
40	CG1N40Z-PS	

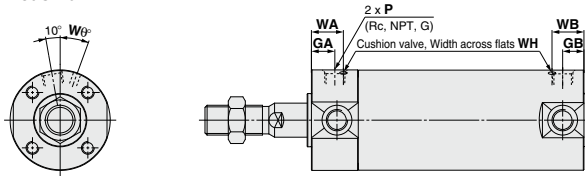


Air Cylinder: Standard Type **CG1 Series**

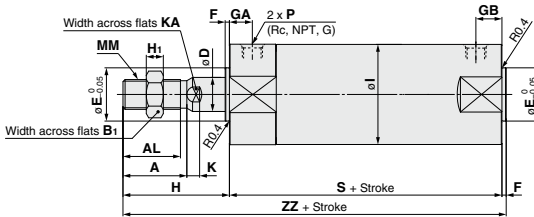
Basic: CG1BN



With air cushion



Basic (Without trunnion mounting female thread): CG1ZN



Bore size	Stroke range		Rc, NPT port			G port																
	Standard	Long stroke	GA	GB	P	GA	GB	P	A	AL	B ₁	C	D	E	F	H	H ₁	I	J	K	KA	MM
20	Up to 200	201 to 1500	12	10 (12)	1/8	12	10 (12)	M5 x 0.8	18	15.5	13	14	8	12	2	35	5	26	M4 x 0.7 depth 7	5	6	M8 x 1.25
25	Up to 300	301 to 1500	12	10 (12)	1/8	12.5	10 (12.5)	M5 x 0.8	22	19.5	17	16.5	10	14	2	40	6	31	M5 x 0.8 depth 7.5	5.5	8	M10 x 1.25
32	Up to 300	301 to 1500	12	10 (12)	1/8	10.5	10 (10.5)	1/8	22	19.5	17	20	12	18	2	40	6	38	M5 x 0.8 depth 8	5.5	10	M10 x 1.25
40	Up to 300	301 to 1500	13	10 (13)	1/8	13	10 (10)	1/8	30	27	19	26	16	25	2	50	8	47	M6 x 1 depth 12	6	14	M14 x 1.5
50	Up to 300	301 to 1500	14	12 (14)	1/4	14	12 (14)	1/4	35	32	27	32	20	30	2	58	11	58	M8 x 1.25 depth 16	7	18	M18 x 1.5
63	Up to 300	301 to 1500	14	12 (14)	1/4	14	12 (14)	1/4	35	32	27	38	20	32	2	58	11	72	M10 x 1.5 depth 16	7	18	M18 x 1.5
80	Up to 300	301 to 1500	20	16 (20)	3/8	17.5	16 (17.5)	3/8	40	37	32	50	25	40	3	71	13	89	M10 x 1.5 depth 22	10	22	M22 x 1.5
100	Up to 300	301 to 1500	20	16 (20)	1/2	17.5	16 (17.5)	1/2	40	37	41	60	30	50	3	71	16	110	M12 x 1.75 depth 22	10	26	M26 x 1.5

Bore size	(mm) With Air Cushion					Bore size	(mm) TC Thread				Bore size	(mm)							
	NA	S	TA	TB	ZZ		Rc, NPT port	WA	WB	Wθ		WH	TC	TD	TE	TF	TG		
20	24	69 (77)	11	11	106 (114)	20	12	10 (12)	M5 x 0.8	16	15 (16)	25°	1.5	20	M5 x 0.8	8 ^{0.03}	4	0.5	5.5
25	29	69 (77)	11	11	111 (119)	25	12.5	10 (12.5)	M5 x 0.8	16	14.5 (16)	25°	1.5	25	M6 x 0.75	10 ^{0.03}	5	1	6.5
32	35.5	71 (79)	11	10 (11)	113 (121)	32	12	10 (12)	1/8	16	14 (16)	25°	1.5	32	M8 x 1.0	12 ^{0.03}	5.5	1	7.5
40	44	78 (87)	12	10 (12)	130 (139)	40	13	10 (13)	1/8	17	15 (17)	20°	1.5	40	M10 x 1.25	14 ^{0.03}	6	1.25	8.5
50	55	90 (102)	13	12 (13)	150 (162)	50	14	12 (14)	1/4	18	16 (18)	20°	3	50	M12 x 1.25	16 ^{0.03}	7.5	2	10
63	69	90 (102)	13	12 (13)	150 (162)	63	14	12 (14)	1/4	18	17 (18)	20°	3	63	M14 x 1.5	18 ^{0.03}	11.5	3	14.5
80	86	108 (122)	—	—	182 (196)	80	20	16 (20)	3/8	24	20 (24)	20°	4	80	—	—	—	—	—
100	106	108 (122)	—	—	182 (196)	100	20	16 (20)	1/2	24	20 (24)	20°	4	100	—	—	—	—	—

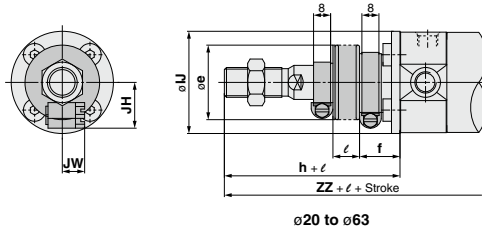
Note) () : Denotes the dimensions for long stroke.



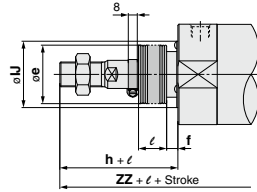
CG1 Series

Basic: CG1BN

With rod boot



ø20 to ø63



ø80, ø100

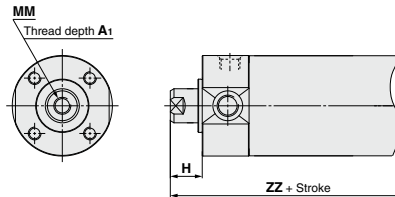
With Rod Boot

(mm)

Bore size	e	f	h	JJ	JH	JW	ℓ	ZZ
20	30	18	55	27	15.5	10.5	1/4 stroke	126 (134)
25	30	19	62	32	16.5	10.5		133 (141)
32	35	19	62	38	18.5	10.5		135 (143)
40	35	19	70	48	21.5	10.5		150 (159)
50	40	19	78	59	24	10.5		170 (182)
63	40	20	78	72	24	10.5		170 (182)
80	52	10	80	59	—	—		191 (205)
100	62	7	80	71	—	—		191 (205)

* The minimum stroke with rod boot is 20 mm.

Female rod end



Female Rod End

(mm)

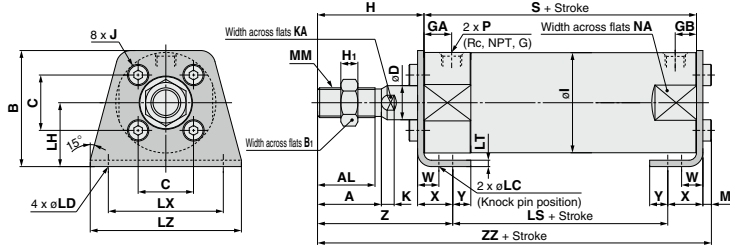
Bore size	A ₁	H	MM	ZZ
20	8	13	M4 x 0.7	84 (92)
25	8	14	M5 x 0.8	85 (93)
32	12	14	M6 x 1	87 (95)
40	13	15	M8 x 1.25	95 (104)
50	18	16	M10 x 1.5	108 (120)
63	18	16	M10 x 1.5	108 (120)
80	21	19	M14 x 1.5	130 (144)
100	25	22	M16 x 1.5	133 (147)

* When female thread is used, use a washer etc. to prevent the contact part at the rod end from being deformed depending on the material of the workpiece.

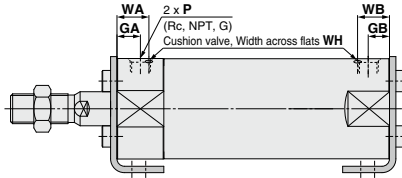
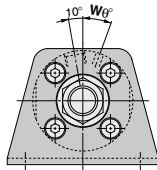


Air Cylinder: Standard Type **CG1 Series** Double Acting, Single Rod

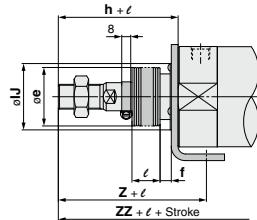
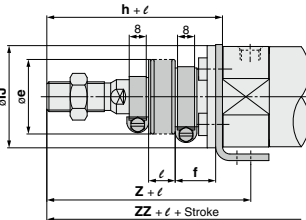
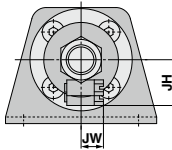
Axial Foot: CG1LN



With air cushion



With rod boot



ø80, ø100

(mm)

Bore size	Stroke range Standard/Long stroke	Rc, NPT port.			G port			A	AL	B	B ₁	C	D	H	H ₁	I	J	K	KA	LC	LD	LH	LS	LT	LX	LZ	M	MM
		GA	GB	P	GA	GB	P																					
20	Up to 200 (201 to 1500)	12 (10 (12))	1/8	12	10 (12)	M5 x 0.8	18	15.5	34	13	14	8	35	5	26	M4 x 0.7	5	6	4	6	20	45 (53)	3	32	44	3	M8 x 1.25	
25	Up to 300 (301 to 1500)	12 (10 (12))	1/8	12.5	10 (12.5)	M5 x 0.8	22	19.5	38.5	17	16.5	10	40	6	31	M5 x 0.8	5.5	8	4	6	22	45 (53)	3	36	49	3.5	M10 x 1.25	
32	Up to 300 (301 to 1500)	12 (10 (12))	1/8	10.5	10 (10.5)	1/8	22	19.5	45	17	20	12	40	6	38	M5 x 0.8	5.5	10	4	7	25	45 (53)	3	44	58	3.5	M10 x 1.25	
40	Up to 300 (301 to 1500)	13 (10 (13))	1/8	13	10 (10)	1/8	30	27	54.5	19	26	16	50	8	47	M6 x 1	6	14	4	7	30	51 (60)	3	54	71	4	M14 x 1.5	
50	Up to 300 (301 to 1500)	14 (12 (14))	1/4	14	12 (14)	1/4	35	32	70.5	27	32	20	58	11	58	M8 x 1.25	7	18	5	10	40	55 (67)	4.5	66	85	6	M18 x 1.5	
63	Up to 300 (301 to 1500)	14 (12 (14))	1/4	14	12 (14)	1/4	35	32	82.5	27	38	20	58	11	72	M10 x 1.5	7	18	5	12	45	55 (67)	4.5	82	106	5	M18 x 1.5	
80	Up to 300 (301 to 1500)	20 (16 (20))	3/8	17.5	16 (17.5)	3/8	40	37	101	32	50	25	71	13	89	M10 x 1.5	10	22	6	11	55	60 (74)	4.5	100	125	5	M22 x 1.5	
100	Up to 300 (301 to 1500)	20 (16 (20))	1/2	17.5	16 (17.5)	1/2	40	37	121	41	60	30	71	16	110	M12 x 1.75	10	26	6	14	65	60 (74)	6	120	150	7	M26 x 1.5	

With Air Cushion

With Rod Boot

Bore size	NA	S	W	X	Y	Z	ZZ	Bore size	Rc, NPT port	G port	WA	WB	W ₀	WH	Bore size	e	f	h	JH	JW	JW _{min}	l	Z	ZZ
20	24	69 (77)	10	15	7	47	110 (118)	20	12 (10 (12))	M5 x 0.8	16	15 (16)	25°	1.5	20	30	18	55	27	15.5	10.5	—	67	130 (138)
25	29	69 (77)	10	15	7	52	115.5 (123.5)	25	12.5 (10 (12.5))	M5 x 0.8	16	14.5 (16)	25°	1.5	25	30	19	62	32	16.5	10.5	—	74	137.5 (145.5)
32	35.5	71 (79)	10	16	8	53	117.5 (125.5)	32	12 (10 (12))	1/8	16	14 (16)	25°	1.5	32	35	19	62	38	18.5	10.5	—	75	139.5 (147.5)
40	44	78 (87)	10	16.5	8.5	63.5	135 (144)	40	13 (10 (13))	1/8	17	15 (17)	20°	1.5	40	35	19	70	48	21.5	10.5	—	83.5	155 (164)
50	55	90 (102)	17.5	22	11	75.5	157.5 (169.5)	50	14 (12 (14))	1/4	18	16 (18)	20°	3	50	40	19	78	59	24	10.5	—	95.5	177.5 (189.5)
63	69	90 (102)	17.5	22	13	75.5	157.5 (169.5)	63	14 (12 (14))	1/4	18	17 (18)	20°	3	63	40	20	78	72	24	10.5	—	95.5	177.5 (189.5)
80	86	108 (122)	20	28.5	14	95	188.5 (202.5)	80	20 (16 (20))	3/8	24	20 (24)	20°	4	80	52	10	80	59	—	—	—	104	197.5 (211.5)
100	106	108 (122)	20	30	16	95	192 (206)	100	20 (16 (20))	1/2	24	20 (24)	20°	4	100	62	7	80	71	—	—	—	104	201 (215)

* For female rod end, since the wrench flap (K and KA portions) will be inside of the bracket when the piston rod is retracted at the stroke end, extend the piston rod to tighten the nut using a tool, and mount a workpiece on the rod end.

* Refer to the basic type for the female rod end.

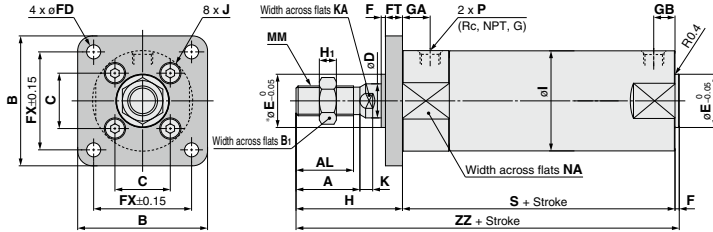
Note () : Denotes the dimensions for long stroke.

* The minimum stroke with rod boot is 20 mm.



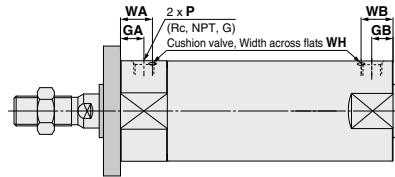
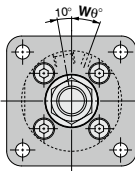
CG1 Series

Rod Flange: CG1FN

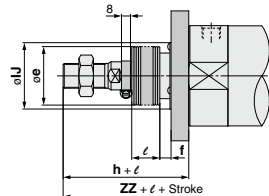
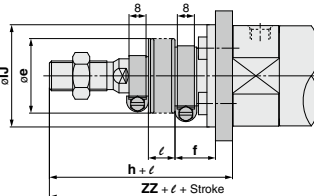
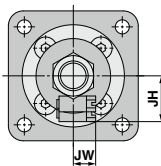


* End boss is machined on the flange for øE.

With air cushion



With rod boot



ø80, ø100

(mm)

Bore size	Stroke range		Rc, NPT port		G port			A	AL	B	B ₁	C	D	E	F	FD	FT	FX	H	H ₁	I	J	K	
	Standard	Long stroke	GA	GB	P	GA	GB																	P
20	Up to 200	201 to 1500	12	10 (12)	1/8	12	10 (12)	M5 x 0.8	18	15.5	40	13	14	8	12	2	5.5	6	28	35	5	26	M4 x 0.7	5
25	Up to 300	301 to 1500	12	10 (12)	1/8	12.5	10 (12.5)	M5 x 0.8	22	19.5	44	17	16.5	10	14	2	5.5	7	32	40	6	31	M5 x 0.8	5.5
32	Up to 300	301 to 1500	12	10 (12)	1/8	10.5	10 (10.5)	1/8	22	19.5	53	17	20	12	18	2	6.6	7	38	40	6	38	M5 x 0.8	5.5
40	Up to 300	301 to 1500	13	10 (13)	1/8	13	10 (13)	1/8	30	27	61	19	26	16	25	2	6.6	8	46	50	8	47	M6 x 1	6
50	Up to 300	301 to 1500	14	12 (14)	1/4	14	12 (14)	1/4	35	32	76	27	32	20	30	2	9	9	58	58	11	58	M8 x 1.25	7
60	Up to 300	301 to 1500	14	12 (14)	1/4	14	12 (14)	1/4	35	32	92	27	38	20	32	2	11	9	70	58	11	72	M10 x 1.5	7
80	Up to 300	301 to 1500	20	16 (20)	3/8	17.5	16 (17.5)	3/8	40	37	104	32	50	25	40	3	11	11	82	71	13	89	M10 x 1.5	10
100	Up to 300	301 to 1500	20	16 (20)	1/2	17.5	16 (17.5)	1/2	40	37	128	41	60	30	50	3	14	14	100	71	16	110	M12 x 1.75	10

(mm)

With Air Cushion

(mm)

With Rod Boot

(mm)

Bore size	KA	MM	NA	S	ZZ	Bore size	Rc, NPT port			WA	WB	W ₀	WH	Bore size	e	f	h	l	JH	JW	ℓ	ZZ	
							GA	GB	P														Reference
20	6	M8 x 1.25	24	69 (77)	106 (114)	20	12	10 (12)	M5 x 0.8	16	15	(16)	25°	1.5	20	30	18	55	27	15.5	10.5	—	126 (134)
25	8	M10 x 1.25	29	69 (77)	111 (119)	25	12.5	10 (12.5)	M5 x 0.8	16	14.5	(16)	25°	1.5	25	30	19	62	32	16.5	10.5	—	133 (141)
32	10	M10 x 1.25	35.5	71 (79)	113 (121)	32	12	10 (12)	1/8	16	14	(16)	25°	1.5	32	35	19	62	38	18.5	10.5	1/4 stroke	135 (143)
40	14	M14 x 1.5	44	78 (87)	130 (139)	40	13	10 (13)	1/8	17	15	(17)	20°	1.5	40	35	19	70	48	21.5	10.5	—	150 (159)
50	18	M18 x 1.5	55	90 (102)	150 (162)	50	14	12 (14)	1/4	18	16	(18)	20°	3	50	40	19	78	59	24	10.5	—	170 (182)
63	18	M18 x 1.5	69	90 (102)	150 (162)	63	14	12 (14)	1/4	18	17	(18)	20°	3	63	40	20	78	72	24	10.5	—	170 (182)
80	22	M22 x 1.5	86	108 (122)	182 (196)	80	20	16 (20)	3/8	24	20	(24)	20°	4	80	52	10	80	59	—	—	—	191 (205)
100	26	M26 x 1.5	106	108 (122)	182 (196)	100	20	16 (20)	1/2	24	20	(24)	20°	4	100	62	7	80	71	—	—	—	191 (205)

* For female rod end, since the wrench flap (K and KA portions) will be inside of the bracket when the piston rod is retracted at the stroke end, extend the piston rod to tighten the nut using a tool, and mount a workpiece on the rod end.

* Refer to the basic type for the female rod end.

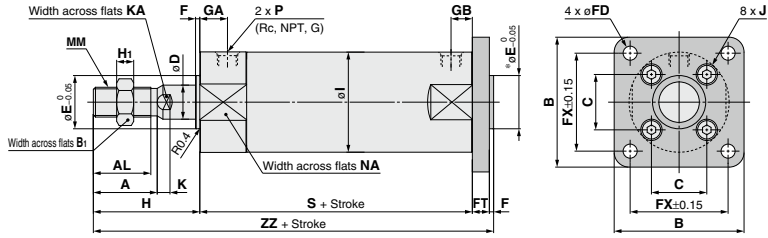
Note () : Denotes the dimensions for long stroke.

* The minimum stroke with rod boot is 20 mm.



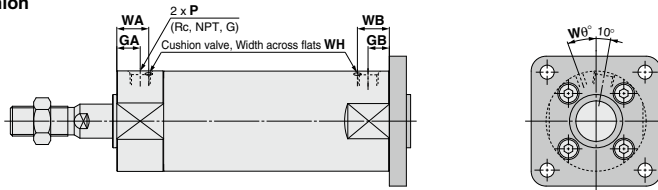
Air Cylinder: Standard Type **CG1 Series** Double Acting, Single Rod

Head Flange: CG1GN

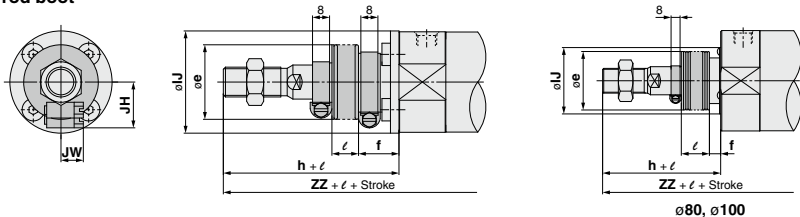


* End boss is machined on the flange for ϕE .

With air cushion



With rod boot



$\phi 80, \phi 100$

Bore size	Stroke range		Rc, NPT port			G port			A	AL	B	B ₁	C	D	E	F	FD	FT	FX	H	H ₁	I	J	K
	Standard	Long stroke	GA	GB	P	GA	GB	P																
20	Up to 200	201 to 1500	12	10 (12)	1/8	12	10 (12)	M5 x 0.8	18	15.5	40	13	14	8	12	2	5.5	6	28	35	5	26	M4 x 0.7	5
25	Up to 300	301 to 1500	12	10 (12)	1/8	12.5	10 (12.5)	M5 x 0.8	22	19.5	44	17	16.5	10	14	2	5.5	7	32	40	6	31	M5 x 0.8	5.5
32	Up to 300	301 to 1500	12	10 (12)	1/8	10	10 (10.5)	1/8	22	19.5	53	17	20	12	18	2	6.6	7	38	40	6	38	M5 x 0.8	5
40	Up to 300	301 to 1500	13	10 (13)	1/8	13	10 (10)	1/8	30	27	61	19	26	16	25	2	6.6	8	46	50	8	47	M6 x 1	6
50	Up to 300	301 to 1500	14	12 (14)	1/4	14	12 (14)	1/4	35	32	76	27	32	20	30	2	9	9	58	58	11	58	M8 x 1.25	7
63	Up to 300	301 to 1500	14	12 (14)	1/4	14	12 (14)	1/4	35	32	92	27	38	20	32	2	11	9	70	58	11	72	M10 x 1.5	7
80	Up to 300	301 to 1500	20	16 (20)	3/8	17.5	16 (17.5)	3/8	40	37	104	32	50	25	40	3	11	11	82	71	13	89	M10 x 1.5	10
100	Up to 300	301 to 1500	20	16 (20)	1/2	17.5	16 (17.5)	1/2	40	37	128	41	60	30	50	3	14	14	100	71	16	110	M12 x 1.75	10

Bore size	(mm)					With Air Cushion (mm)					With Rod Boot (mm)													
	KA	MM	NA	S	ZZ	Bore size	Rc, NPT port	GA	GB	P	WA	WB	W ₀	WH	Bore size	e	f	h	l	JH (Reference)	JW (Reference)	ℓ	ZZ	
20	6	M8 x 1.25	24	69 (77)	112 (120)	20	12	10 (12)	M5 x 0.8	16	15 (16)	25 ^o	1.5	20	30	18	55	27	15.5	10.5	—	—	—	132 (140)
25	8	M10 x 1.25	29	69 (77)	118 (126)	25	12.5	10 (12.5)	M5 x 0.8	16	14.5 (16)	25 ^o	1.5	25	30	19	62	32	16.5	10.5	—	—	—	140 (148)
32	10	M10 x 1.25	35.5	71 (79)	120 (128)	32	12	10 (12)	1/8	16	14 (16)	25 ^o	1.5	32	35	19	62	38	18.5	10.5	—	—	—	142 (150)
40	14	M14 x 1.5	44	78 (87)	138 (147)	40	13	10 (13)	1/8	17	15 (17)	20 ^o	1.5	40	35	19	70	48	21.5	10.5	—	—	—	158 (167)
50	18	M18 x 1.5	55	90 (102)	159 (171)	50	14	12 (14)	1/4	18	16 (18)	20 ^o	3	50	40	19	78	59	24	10.5	—	—	—	179 (191)
63	18	M18 x 1.5	69	90 (102)	159 (171)	63	14	12 (14)	1/4	18	17 (18)	20 ^o	3	63	40	20	78	72	24	10.5	—	—	—	179 (191)
80	22	M22 x 1.5	86	108 (122)	193 (207)	80	20	16 (20)	3/8	24	20 (24)	20 ^o	4	80	52	10	80	59	—	—	—	—	—	202 (216)
100	26	M26 x 1.5	106	108 (122)	196 (210)	100	20	16 (20)	1/2	24	20 (24)	20 ^o	4	100	62	7	80	71	—	—	—	—	—	205 (219)

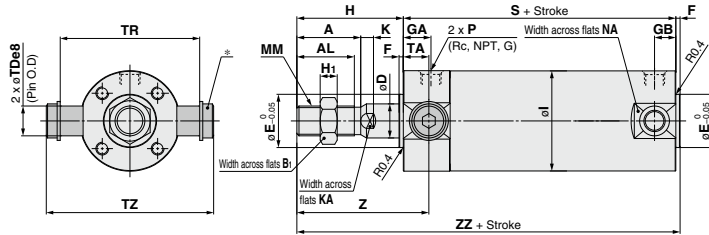
* Refer to the basic type for the female rod end.
Note) () : Denotes the dimensions for long stroke.

* The minimum stroke with rod boot is 20 mm.



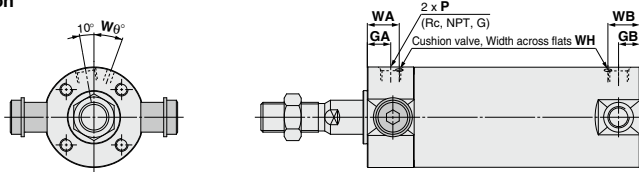
CG1 Series

Rod Trunnion: CG1UN

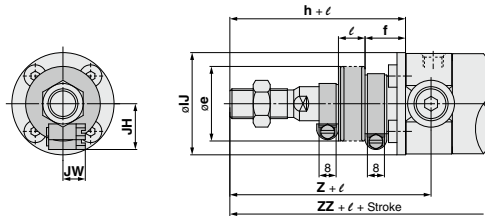


* Constructed of a trunnion pin, flat washer and hexagon socket head cap bolt.

With air cushion



With rod boot



(mm)

Bore size	Stroke range		Rc, NPT port			G port			A	AL	B ₁	D	E	F	H	H ₁	I	K	KA	MM	NA	S
	Standard	Long stroke	GA	GB	P	GA	GB	P														
20	Up to 200	201 to 1500	12	10 (12)	1/8	12	10 (12)	M5 x 0.8	18	15.5	13	8	12	2	35	5	26	5	6	M8 x 1.25	24	69 (77)
25	Up to 300	301 to 1500	12	10 (12)	1/8	12.5	10 (12.5)	M5 x 0.8	22	19.5	17	10	14	2	40	6	31	5.5	8	M10 x 1.25	29	69 (77)
32	Up to 300	301 to 1500	12	10 (12)	1/8	10.5	10 (10.5)	1/8	22	19.5	17	12	18	2	40	6	38	5.5	10	M10 x 1.25	35.5	71 (79)
40	Up to 300	301 to 1500	13	10 (13)	1/8	13	10 (13)	1/8	30	27	19	16	25	2	50	8	47	6	14	M14 x 1.5	44	78 (87)
50	Up to 300	301 to 1500	14	12 (14)	1/4	14	12 (14)	1/4	35	32	27	20	30	2	58	11	58	7	18	M18 x 1.5	55	90 (102)
63	Up to 300	301 to 1500	14	12 (14)	1/4	14	12 (14)	1/4	35	32	27	20	32	2	58	11	72	7	18	M18 x 1.5	69	90 (102)

(mm)

Bore size	TA	TDe8	TR	TZ	ZZ	With Air Cushion				With Rod Boot													
						Bore size	Rc, NPT port	GA	GB	P	WA	WB	Wθ	WH	Bore size	e	f	h	IJ	JH	JW	ℓ	Z
20	11	8 ^{-0.025} _{-0.097}	39	47.6	46	106 (114)	20	12	10 (12)	M5 x 0.8	16	15 (16)	25°	1.5	20	30	18	55	27	15.5	10.5	66	126 (134)
25	11	10 ^{-0.025} _{-0.097}	43	53	51	111 (119)	25	12.5	10 (12.5)	M5 x 0.8	16	14.5 (16)	25°	1.5	25	30	19	62	32	16.5	10.5	73	133 (141)
32	11	12 ^{-0.025} _{-0.097}	54.5	67.7	51	113 (121)	32	12	10 (12)	1/8	16	14 (16)	25°	1.5	32	35	19	62	38	18.5	10.5	73	135 (143)
40	12	14 ^{-0.025} _{-0.097}	65.5	78.7	62	130 (139)	40	13	10 (13)	1/8	17	15 (17)	20°	1.5	40	35	19	70	48	21.5	10.5	82	150 (159)
50	13	16 ^{-0.025} _{-0.097}	80	98.6	71	150 (162)	50	14	12 (14)	1/4	18	16 (18)	20°	3	50	40	19	78	59	24	10.5	91	170 (182)
63	13	18 ^{-0.025} _{-0.097}	98	119.2	71	150 (162)	63	14	12 (14)	1/4	18	17 (18)	20°	3	63	40	20	78	72	24	10.5	91	170 (182)

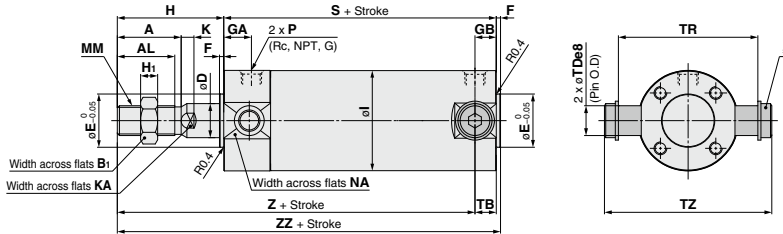
* Refer to the basic type for the female rod end.
 Note) () : Denotes the dimensions for long stroke.

* The minimum stroke with rod boot is 20 mm.



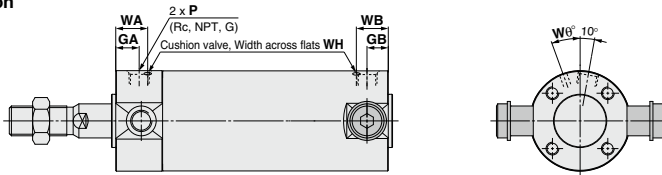
Air Cylinder: Standard Type **CG1 Series** Double Acting, Single Rod

Head Trunnion: CG1TN

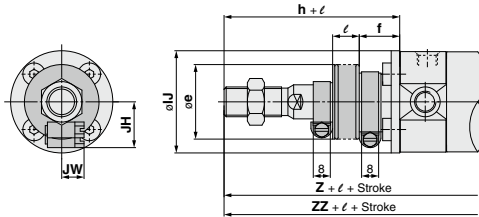


* Constructed of a trunnion pin, flat washer and hexagon socket head cap bolt.

With air cushion



With rod boot



Bore size	Stroke range		Rc, NPT port			G port			A	AL	B ₁	D	E	F	H	H ₁	I	K	KA	MM	NA	S
	Standard	Long stroke	GA	GB	P	GA	GB	P														
20	Up to 200	201 to 1500	12	10 (12)	1/8	12	10 (12)	M5 x 0.8	18	15.5	13	8	12	2	35	5	26	5	6	M8 x 1.25	24	69 (77)
25	Up to 300	301 to 1500	12	10 (12)	1/8	12.5	10 (12.5)	M5 x 0.8	22	19.5	17	10	14	2	40	6	31	5.5	8	M10 x 1.25	29	69 (77)
32	Up to 300	301 to 1500	12	10 (12)	1/8	10.5	10 (10.5)	1/8	22	19.5	17	12	18	2	40	6	38	5.5	10	M10 x 1.25	35.5	71 (79)
40	Up to 300	301 to 1500	13	10 (13)	1/8	13	10 (10)	1/8	30	27	19	16	25	2	50	8	47	6	14	M14 x 1.5	44	78 (87)
50	Up to 300	301 to 1500	14	12 (14)	1/4	14	12 (14)	1/4	35	32	27	20	30	2	58	11	58	7	18	M18 x 1.5	55	90 (102)
63	Up to 300	301 to 1500	14	12 (14)	1/4	14	12 (14)	1/4	35	32	27	20	32	2	58	11	72	7	18	M18 x 1.5	69	90 (102)

(mm)

Bore size	TB	TDe8	TR	TZ	Z	ZZ	With Air Cushion				With Rod Boot												
							Bore size	GA	GB	P	WA	WB	Wø	WH	Bore size	e	f	h	IJ	JH	JW	ℓ	Z
20	11	8 ^{-0.032} _{-0.047}	39	47.6	83 (101)	106 (114)	20	12	10 (12)	M5 x 0.8	16	15 (16)	25°	1.5	20	30	18	55	27	15.5	10.5	113 (121)	126 (134)
25	11	10 ^{-0.032} _{-0.047}	43	53	98 (106)	111 (119)	25	12.5	10 (12.5)	M5 x 0.8	16	14.5 (16)	25°	1.5	25	30	19	62	32	16.5	10.5	120 (126)	133 (141)
32	10 (11)	12 ^{-0.032} _{-0.050}	54.5	67.7	101 (108)	113 (121)	32	12	10 (12)	1/8	16	14 (16)	25°	1.5	32	35	19	62	38	18.5	10.5	123 (130)	135 (143)
40	10 (12)	14 ^{-0.032} _{-0.050}	65.5	78.7	118 (125)	130 (139)	40	13	10 (13)	1/8	17	15 (17)	20°	1.5	40	35	19	70	48	21.5	10.5	138 (145)	150 (159)
50	12 (13)	16 ^{-0.032} _{-0.050}	80	98.6	136 (147)	150 (162)	50	14	12 (14)	1/4	18	16 (18)	20°	3	50	40	19	78	59	24	10.5	156 (167)	170 (182)
63	12 (13)	18 ^{-0.032} _{-0.050}	98	119.2	136 (147)	150 (162)	63	14	12 (14)	1/4	18	17 (18)	20°	3	63	40	20	78	72	24	10.5	156 (167)	170 (182)

* Refer to the basic type for the female rod end.

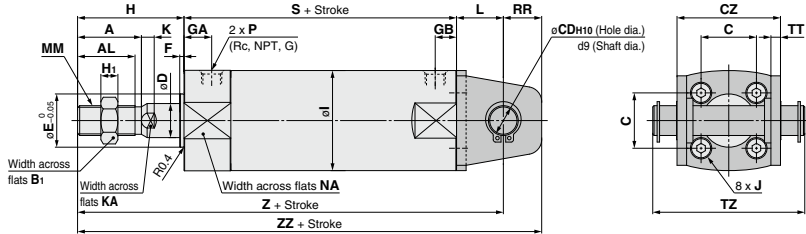
Note) () : Denotes the dimensions for long stroke.

* The minimum stroke with rod boot is 20 mm.

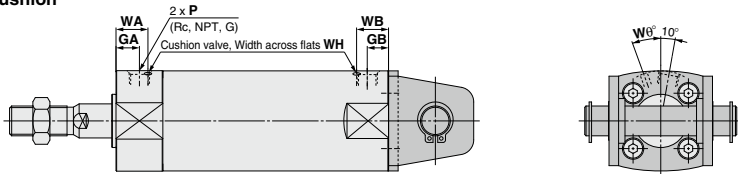


CG1 Series

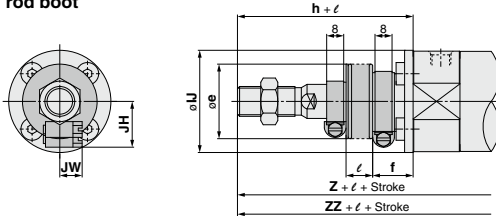
Clevis: CG1DN (ø20 to ø63)



With air cushion



With rod boot



Bore size	Stroke range		Rc, NPT port			G port			A	AL	Bl	C	CD	CZ	D	E	F	H	H ₁	I	J	K	KA	L	MM	NA
	Standard	Long stroke	GA	GB	P	GA	GB	P																		
20	Up to 200	201 to 1500	12	10 (12)	1/8	12	10 (12)	M5 x 0.8	18	15.5	13	14	8	29	8	12	2	35	5	26	M4 x 0.7	5	6	14	M8 x 1.25	24
25	Up to 300	301 to 1500	12	10 (12)	1/8	12.5	10 (12.5)	M5 x 0.8	22	19.5	17	16.5	10	33	10	14	2	40	6	31	M5 x 0.8	5.5	8	16	M10 x 1.25	29
32	Up to 300	301 to 1500	12	10 (12)	1/8	10.5	10 (10.5)	1/8	22	19.5	17	20	12	40	12	18	2	40	6	38	M5 x 0.8	5.5	10	20	M10 x 1.25	35.5
40	Up to 300	301 to 1500	13	10 (13)	1/8	13	10 (10)	1/8	30	27	19	26	14	49	16	25	2	50	8	47	M6 x 1	6	14	22	M14 x 1.5	44
50	Up to 300	301 to 1500	14	12 (14)	1/4	14	12 (14)	1/4	35	32	27	32	16	60	20	30	2	58	11	58	M8 x 1.25	7	18	25	M18 x 1.5	55
63	Up to 300	301 to 1500	14	12 (14)	1/4	14	12 (14)	1/4	35	32	27	38	18	74	20	32	2	58	11	72	M10 x 1.5	7	18	30	M18 x 1.5	69

(mm) With Air Cushion												(mm) With Rod Boot												
Bore size	RR	S	TT	TZ	Z	ZZ	Applicable pin part no.	Bore size	Rc, NPT port	P	WA	WB	W ₀	WH	Bore size	e	f	h	JH	JW	l	Z	ZZ	
20	11	69 (77)	3.2	43.4	118 (126)	129 (137)	CD-G02	20	12	10 (12)	M5 x 0.8	16	15 (16)	25°	1.5	20	30	18	55	27	15.5	10.5		
25	13	69 (77)	3.2	48	125 (133)	138 (146)	CD-G25	25	12.5	10 (12.5)	M5 x 0.8	16	14.5 (16)	25°	1.5	25	30	19	62	32	16.5	10.5		
32	15	71 (79)	4.5	59.4	131 (139)	146 (154)	CD-G03	32	12	10 (12)	1/8	16	14 (16)	25°	1.5	32	35	19	62	38	18.5	10.5		
40	18	78 (87)	4.5	71.4	150 (159)	168 (177)	CD-G04	40	13	10 (13)	1/8	17	15 (17)	20°	1.5	40	35	19	70	48	21.5	10.5		
50	20	90 (102)	6	86	173 (185)	193 (205)	CD-G05	50	14	12 (14)	1/4	18	16 (18)	20°	3	50	40	19	78	59	24	10.5		
63	22	90 (102)	8	105.4	178 (190)	200 (212)	CD-G06	63	14	12 (14)	1/4	18	17 (18)	20°	3	63	40	20	78	72	24	10.5		

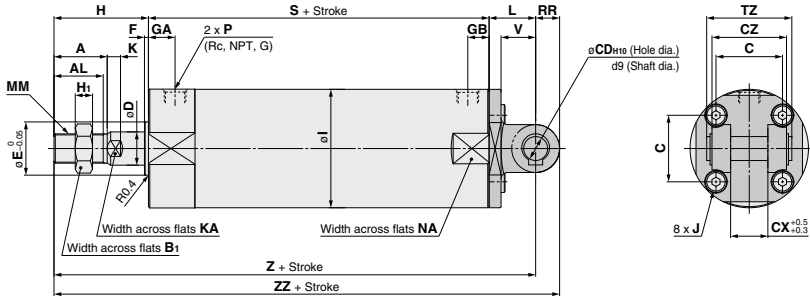
* Refer to the basic type for the female rod end.
Note () : Denotes the dimensions for long stroke.

* The minimum stroke with rod boot is 20 mm.

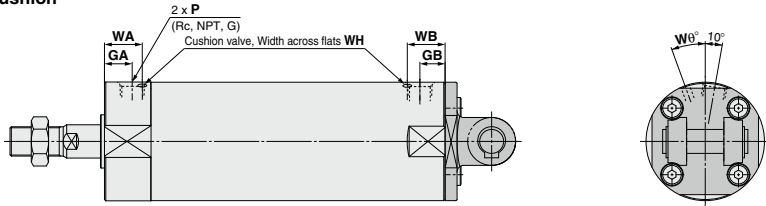


Air Cylinder: Standard Type **CG1 Series** Double Acting, Single Rod

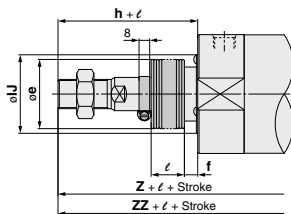
Clevis: CG1DN (ø80, ø100)



With air cushion



With rod boot



Bore size	Stroke range	Rc, NPT port			G port																					
		GA	GB	P	GA	GB	P	A	AL	B ₁	C	CD	CX	CZ	D	E	F	H	H ₁	I	J	K	KA	L	MM	NA
80	Up to 300 301 to 1500	20	16 (20)	3/8	17.5	16 (17.5)	3/8	40	37	32	50	18	28	56	25	40	3	71	13	89	M10 x 1.5	10	22	35	M22 x 1.5	86
100	Up to 300 301 to 1500	20	16 (20)	1/2	17.5	16 (17.5)	1/2	40	37	41	60	22	32	64	30	50	3	71	16	110	M12 x 1.75	10	26	43	M26 x 1.5	106

(mm) With Air Cushion													(mm) With Rod Boot												
Bore size	RR	S	TZ	V	Z	ZZ	Applicable pin part no.	Rc, NPT port			WA	WB	Wθ	WH	Bore size	e	f	h	IJ	l	Z	ZZ			
								GA	GB	P													Bore size	e	f
80	18	108 (122)	64	26	214 (228)	232 (246)	IY-G08	20	16 (20)	3/8	24	20 (24)	20°	4	80	52	10	80	59	1/4	223 (237)	241 (255)			
100	22	108 (122)	72	32	222 (236)	244 (258)	IY-G10	20	16 (20)	1/2	24	20 (24)	20°	4	100	62	7	80	71	stroke	231 (245)	253 (267)			

* Refer to the basic type for the female rod end.
Note () : Denotes the dimensions for long stroke.

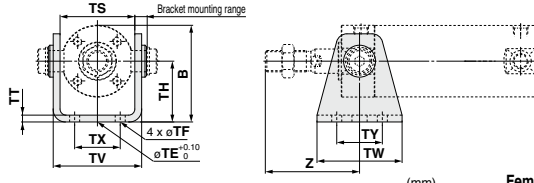
* The minimum stroke with rod boot is 20 mm.



CG1 Series

With Pivot Bracket ((): Denotes the dimensions for long stroke.)

Rod Trunnion (U) with Pivot Bracket



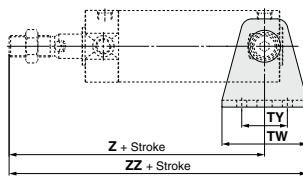
Male Thread

Bore size	B	TE	TF	TH	TS	TT	TV	TW	TX	TY	Z
20	38	10	5.5	25	28	3.2	35.8	42	16	28	46
25	45.5	10	5.5	30	33	3.2	39.8	42	20	28	51
32	54	10	6.6	35	40	4.5	49.4	48	22	28	51
40	63.5	10	6.6	40	49	4.5	58.4	56	30	30	62
50	79	20	9	50	60	6	72.4	64	36	36	71
63	96	20	11	60	74	8	90.4	74	46	46	71

Female Thread

Bore size	Z
20	24
25	25
32	25
40	27
50	29
63	29

Head Trunnion (T) with Pivot Bracket



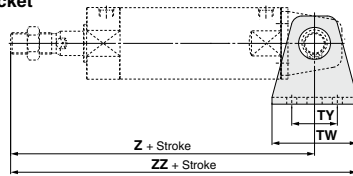
Male Thread

Bore size	B	TE	TF	TH	TS	TT	TV	TW	TX	TY	Z	ZZ
20	38	10	5.5	25	28	3.2	35.8	42	16	28	93 (101)	114 (122)
25	45.5	10	5.5	30	33	3.2	39.8	42	20	28	98 (106)	119 (127)
32	54	10	6.6	35	40	4.5	49.4	48	22	28	101 (108)	125 (132)
40	63.5	10	6.6	40	49	4.5	58.4	56	30	30	118 (125)	146 (153)
50	79	20	9	50	60	6	72.4	64	36	36	136 (147)	168 (179)
63	96	20	11	60	74	8	90.4	74	46	46	136 (147)	173 (184)

Female Thread

Bore size	Z	ZZ
20	71 (79)	92 (100)
25	72 (80)	93 (101)
32	75 (82)	99 (106)
40	83 (90)	111 (118)
50	94 (105)	126 (137)
63	94 (105)	131 (142)

Clevis (D) with Pivot Bracket ø20 to ø63



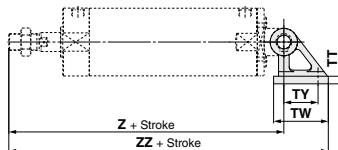
Male Thread

Bore size	B	TE	TF	TH	TT	TV	TW	TX	TY	Z	ZZ
20	38	10	5.5	25	3.2	35.8	42	16	28	118 (126)	139 (147)
25	45.5	10	5.5	30	3.2	39.8	42	20	28	125 (133)	146 (154)
32	54	10	6.6	35	4.5	49.4	48	22	28	131 (139)	155 (163)
40	63.5	10	6.6	40	4.5	58.4	56	30	30	150 (159)	178 (187)
50	79	20	9	50	6	72.4	64	36	36	173 (185)	205 (217)
63	96	20	11	60	8	90.4	74	46	46	178 (190)	215 (227)

Female Thread

Bore size	Z	ZZ
20	96 (104)	117 (125)
25	99 (107)	120 (128)
32	105 (113)	129 (137)
40	115 (124)	143 (152)
50	131 (143)	163 (175)
63	138 (148)	173 (185)

Clevis (D) with Pivot Bracket ø80, ø100



Male Thread

Bore size	B	TF	TH	TT	TV	TW	TX	TY	Z	ZZ
80	99.5	11	55	11	110	72	85	45	214 (228)	272.5 (286.5)
100	120	13.5	65	12	130	93	100	60	222 (236)	288.5 (312.5)

Female Thread

Bore size	Z	ZZ
80	162 (176)	220.5 (234.5)
100	173 (187)	249.5 (263.5)

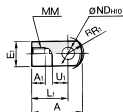


CG1 Series Dimensions of Accessories

Single Knuckle Joint

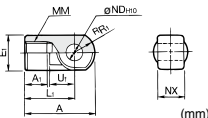
I-G02, G03

Material: Carbon steel



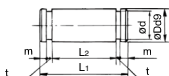
I-G04, G05, G08, G10

Material: Cast iron



Part no.	Applicable bore size (mm)	A	A1	E1	L1	MM	R1	U1	NDH10	NX
I-G02	20	34	8.5	16	25	M8 x 1.25	10.3	11.5	8 ^{+0.050} / ₀	8 ^{+0.2} / ₀
I-G03	25, 32	41	10.5	20	30	M10 x 1.25	12.8	14	10 ^{+0.050} / ₀	10 ^{+0.2} / ₀
I-G04	40	42	14	22	30	M14 x 1.5	12	14	10 ^{+0.050} / ₀	18 ^{+0.2} / ₀
I-G05	50, 63	56	18	28	40	M18 x 1.5	16	20	14 ^{+0.070} / ₀	22 ^{+0.2} / ₀
I-G08	80	71	21	38	50	M22 x 1.5	21	27	18 ^{+0.10} / ₀	28 ^{+0.2} / ₀
I-G10	100	79	21	44	55	M26 x 1.5	24	31	22 ^{+0.10} / ₀	32 ^{+0.2} / ₀

Knuckle Pin

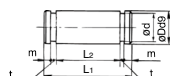


Material: Carbon steel

Part no.	Applicable bore size (mm)	Dd9	L1	d	L2	m	t	Included retaining ring
IY-G02	20	8 ^{+0.040} / _{-0.028}	21	7.6	16.2	1.5	0.9	Type C8 for axis
IY-G03	25, 32	10 ^{+0.040} / _{-0.028}	25.6	9.6	20.2	1.55	1.15	Type C10 for axis
IY-G04	40	10 ^{+0.040} / _{-0.028}	41.6	9.6	36.2	1.55	1.15	Type C10 for axis
IY-G05	50, 63	14 ^{+0.040} / _{-0.028}	50.6	13.4	44.2	2.05	1.15	Type C14 for axis
IY-G08	80	18 ^{+0.050} / _{-0.037}	64	17	56.2	2.55	1.35	Type C18 for axis
IY-G10	100	22 ^{+0.050} / _{-0.037}	72	21	64.2	2.55	1.35	Type C22 for axis

* Retaining rings are included.

Clevis Pin



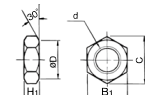
Material: Carbon steel

Part no.	Applicable bore size (mm)	Dd9	L1	d	L2	m	t	Included retaining ring
CD-G02	20	8 ^{+0.040} / _{-0.028}	43.4	7.6	38.6	1.5	0.9	Type C8 for axis
CD-G25	25	10 ^{+0.040} / _{-0.028}	48	9.6	42.6	1.55	1.15	Type C10 for axis
CD-G03	32	12 ^{+0.040} / _{-0.035}	59.4	11.5	54	1.55	1.15	Type C12 for axis
CD-G04	40	14 ^{+0.040} / _{-0.035}	71.4	13.4	65	2.05	1.15	Type C14 for axis
CD-G05	50	16 ^{+0.050} / _{-0.035}	86	15.2	79.6	2.05	1.15	Type C16 for axis
CD-G06	63	18 ^{+0.050} / _{-0.035}	105.4	17	97.8	2.45	1.35	Type C18 for axis

* Retaining rings are included.

* A clevis pin and a knuckle pin are common for the bore size ø80 and ø100.

Rod End Nut



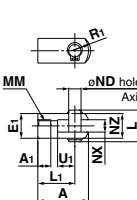
Material: Carbon steel

Part no.	Applicable bore size (mm)	d	H1	B1	C	D
NT-02	20	M8 x 1.25	5	13	(15)	12.5
NT-03	25, 32	M10 x 1.25	6	17	(19.6)	16.5
NT-G04	40	M14 x 1.5	8	19	(21.9)	18
NT-05	50, 63	M18 x 1.5	11	27	(31.2)	26
NT-08	80	M22 x 1.5	13	32	(37.0)	31
NT-10	100	M26 x 1.5	16	41	(47.3)	39

Double Knuckle Joint

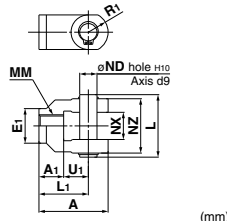
Y-G02, G03

Material: Carbon steel



Y-G04, G05, G08, G10

Material: Cast iron



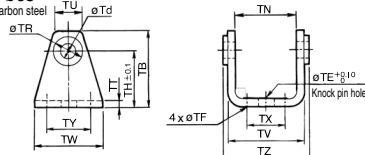
Part no.	Applicable bore size (mm)	A	A1	E1	L1	MM	R1	U1	ND	NX	NZ	L	Included pin part no.
Y-G02	20	34	8.5	16	25	M8 x 1.25	10.3	11.5	8	8 ^{+0.2} / ₀	16	21	IY-G02
Y-G03	25, 32	41	10.5	20	30	M10 x 1.25	12.8	14	10	10 ^{+0.2} / ₀	20	25.6	IY-G03
Y-G04	40	42	16	22	30	M14 x 1.5	12	14	10	18 ^{+0.2} / ₀	36	41.6	IY-G04
Y-G05	50, 63	56	20	28	40	M18 x 1.5	16	20	14	22 ^{+0.2} / ₀	44	50.6	IY-G05
Y-G08	80	71	23	38	50	M22 x 1.5	21	27	18	28 ^{+0.2} / ₀	56	64	IY-G08
Y-G10	100	79	24	44	55	M26 x 1.5	24	31	22	32 ^{+0.2} / ₀	64	72	IY-G10

* A knuckle pin and retaining rings are included.

Pivot Bracket

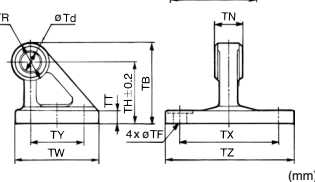
ø20 to ø63

Material: Carbon steel



ø80, ø100

Material: Cast iron



Part no.	Applicable bore size (mm)	TB	Td	TE	TF	TH	TN	TR	TT	
CG-020-24A	20	36	8	10	5.5	25	(29.3)	13	3.2	
CG-025-24A	25	43	10	10	5.5	30	(33.1)	15	3.2	
CG-032-24A	32	50	12	10	6.6	35	(40.4)	17	4.5	
CG-040-24A	40	58	14	10	6.6	40	(49.2)	21	4.5	
CG-050-24A	50	70	16	20	9	50	(60.4)	24	6	
CG-063-24A	63	82	18	20	11	60	(74.6)	26	8	
CG-080-24A	80	73	18	—	11	55	28 ^{+0.2} / ₀	36	11	
CG-100-24A	100	90	20	22	—	13.5	65	32 ^{+0.2} / ₀	50	12

Part no.	Applicable bore size (mm)	TU	TW	TX	TY	TZ	Applicable pin O.D.
CG-020-24A	20	(18.1)	(35.8)	42	16	28	38.3
CG-025-24A	25	(20.7)	(39.8)	42	20	28	42.1
CG-032-24A	32	(23.6)	(49.4)	48	22	28	53.8
CG-040-24A	40	(27.3)	(58.4)	56	30	30	64.6
CG-050-24A	50	(29.7)	(72.4)	64	36	36	79.2
CG-063-24A	63	(34.3)	(90.4)	74	46	46	97.2
CG-080-24A	80	—	—	72	85	45	110
CG-100-24A	100	—	—	93	100	60	130