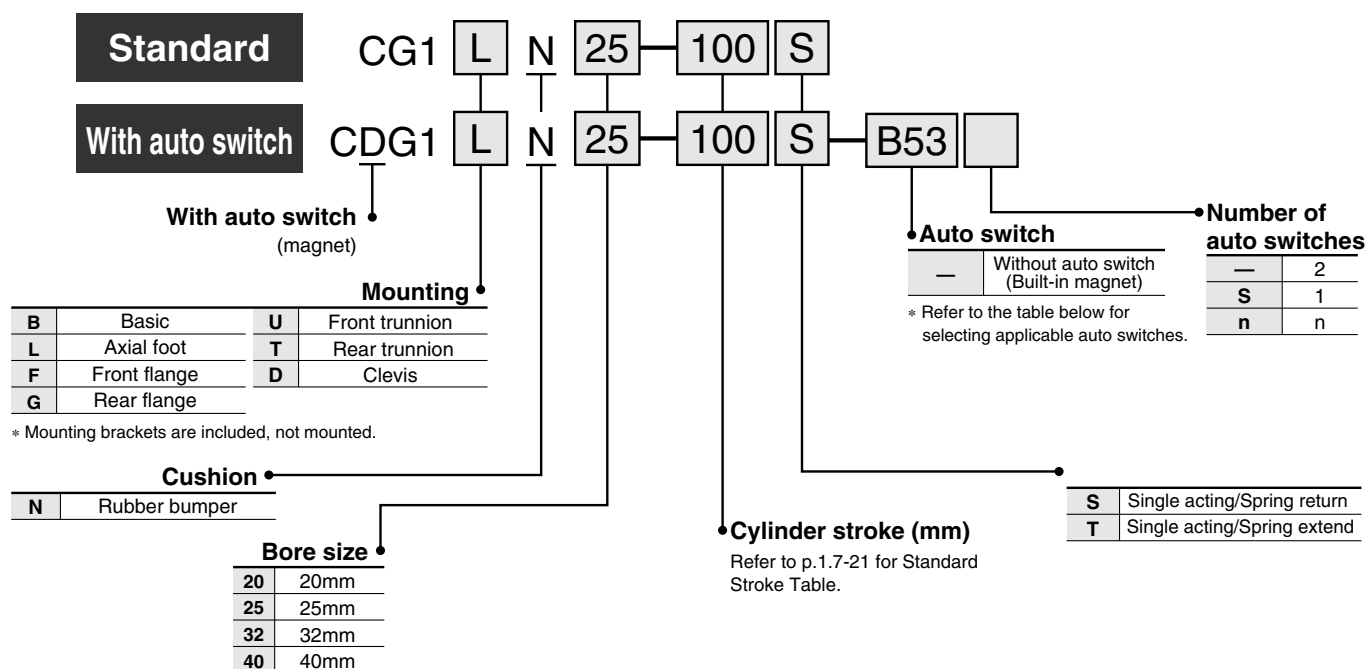


Standard: Single Acting Spring Return/Extend

Series CG1

ø20, ø25, ø32, ø40

How to Order



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 | | | 0.5 (—) | 3 (L) | 5 (Z) | None (N) | | | | | | | |
| Reed switch | — | Grommet | Yes | 3 wire (NPN) | — | 5V | — | C76 | — | ● | ● | — | — | IC | — | | | | | |
| | | | | 2 wire | — | — | — | — | B53 | ● | ● | ● | — | — | PLC | | | | | |
| | | | | | 24V | — | 200V or less | — | B54 | ● | ● | ● | — | — | Relay PLC | | | | | |
| | | | | | | 12V | 100V | C73 | — | ● | ● | ● | — | | | | | | | |
| | | 5V, 12V | 100V or less | | | C80 | — | ● | ● | — | — | IC | | | | | | | | |
| | | 12V | — | | | C73C | — | ● | ● | ● | ● | — | | | | | | | | |
| | | 5V, 12V | 24V or less | | C80C | — | ● | ● | ● | ● | IC | | | | | | | | | |
| | | Diagnostic indication (2 colour) | Grommet | Yes | — | — | — | B59W | ● | ● | — | — | — | | | | | | | |
| Solid state switch | — | Grommet | Yes | 2 wire | 24V | 12V | — | — | K59 | ● | ● | ○ | — | Relay PLC | | | | | | |
| | | | | 3 wire (NPN) | | 5V, 12V | | H7A1 | G59 | ● | ● | ○ | — | | IC | | | | | |
| | | | | 3 wire (PNP) | | | | H7A2 | G5P | ● | ● | ○ | — | | | | | | | |
| | | Connector | 2 wire | 12V | | H7B | | — | ● | ● | ○ | — | — | | | | | | | |
| | | | H7C | — | | ● | | ● | ● | ● | — | | | | | | | | | |
| | | Diagnostic indication (2 colour) | Grommet | Yes | | 3 wire (NPN) | | 5V, 12V | H7NW | G59W | ● | ● | ○ | | — | IC | | | | |
| | 3 wire (PNP) | | | | | H7PW | | G5PW | ● | ● | ○ | — | | | | | | | | |
| | 2 wire | | | | | 12V | | H7BW | K59W | ● | ● | ○ | — | | — | | | | | |
| | H7BA | | | | | G5BA | | — | ● | ○ | — | | | | | | | | | |
| | Water resistant (2 colour) | | | | | Grommet | | Yes | 3 wire (NPN) | 5V, 12V | — | G5NT | — | | ● | ○ | — | IC | | |
| | 3 wire (NPN) | | | | | | | | — | H7NF | G59F | ● | ● | | ○ | — | | | | |
| | With timer | | | | | | | | Grommet | Yes | 4 wire (NPN) | — | H7LF | | — | ● | ● | ○ | — | — |
| | Diagnostic output (2 colour) | | | | | | | | | | Grommet | Yes | 4 wire (NPN) | | — | — | — | — | — | — |
| | Latch with diagnostic output (2 colour) | 4 wire (NPN) | — | — | | — | | — | — | — | | | — | | — | | | | | |

* Lead wire length 0.5m..... 3m.....L e.g.) C73C C73CL 5m.....Z None.....N e.g.) C73CZ C73CN

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

Standard: Single Acting Spring Return/Extend *Series CG1*

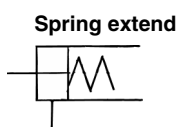
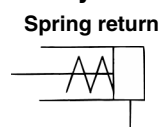


Spring return



Spring extend

JIS symbol



Made to Order

Refer to p.5.4-1 for made to order products of series CG1.

Specifications

| Action | Single acting/Spring return | Single acting/Spring extend |
|-------------------------------|--|-----------------------------|
| Bore size (mm) | 20, 25, 32, 40 | |
| Lubrication | Non-lube | |
| Fluid | Air | |
| Proof pressure | 1.5MPa | |
| Max. operating pressure | 1.0MPa | |
| Min. operating pressure | 0.18MPa | 0.23MPa |
| Ambient and fluid temperature | Without auto switch: -10°C to +70°C (No freezing) | |
| | With auto switch: -10°C to +60°C (No freezing) | |
| Piston speed | 50 to 1000mm/s | |
| Stroke tolerance | Up to 200 ^{+1.4} ₀ mm | |
| Thread tolerance | JIS class 2 | |
| Cushion | Rubber bumper | |
| Mounting | Basic, Axial foot, Front flange, Rear flange, Front trunnion, Rear trunnion, Clevis (Used for changing the port location by 90° degrees.) | |

Accessories

| Mounting | | Basic | Axial foot | Front flange | Rear flange | Front trunnion | Rear trunnion | Clevis |
|----------|-----------------------------------|-------|------------|--------------|-------------|----------------|---------------|--------|
| Standard | Rod end nut | ● | ● | ● | ● | ● | ● | ● |
| | Clevis pin | — | — | — | — | — | — | ● |
| Option | Single knuckle joint | ● | ● | ● | ● | ● | ● | ● |
| | Double knuckle joint* (with pins) | ● | ● | ● | ● | ● | ● | ● |
| | Pivot bracket | — | — | — | — | ● | ● | ● |

* Pins and snap rings for double knuckle joint are included, not mounted.

Stroke

| Bore size (mm) | Standard stroke (mm) ⁽¹⁾ |
|----------------|-------------------------------------|
| 20 | 25, 50, 75, 100, 125 |
| 25, 32, 40 | 25, 50, 75, 100, 125, 150, 200 |

Note 1) Other intermediate strokes can be manufactured upon receipt of order. Spacers are not used for the intermediate strokes.

Mounting Bracket Part No.

| Mounting bracket | Bore size (mm) | | | |
|------------------|----------------|------------|------------|------------|
| | 20 | 25 | 32 | 40 |
| Axial foot* | CG-L020 | CG-L025 | CG-L032 | CG-L040 |
| Flange | CG-F020 | CG-F025 | CG-F032 | CG-F040 |
| Trunnion pin | CG-T020 | CG-T025 | CG-T032 | CG-T040 |
| Clevis** | CG-D020 | CG-D025 | CG-D032 | CG-D040 |
| Pivot bracket | CG-020-24A | CG-025-24A | CG-032-24A | CG-040-24A |

* Order two foot brackets per a cylinder.

** Mounting bolts are attached for foot and flange styles, and clevis pins, snap rings and mounting bolts for the clevis style.

Auto Switch Mounting Bracket Part No.

| Auto switch model | Bore size (mm) | | | |
|-------------------|----------------|----------|----------|----------|
| | 20 | 25 | 32 | 40 |
| D-C7-C8 | BMA2-020 | BMA2-025 | BMA2-032 | BMA2-040 |
| D-H7 | | | | |
| D-B5-B6 | BA-01 | BA-02 | BA-32 | BA-04 |
| D-G5-K5 | | | | |



Note) A set of following stainless steel mounting screws is attached.
(A switch mounting band is not attached. Please order the band separately.)

BBA3: D-B5/B6/G5 types

BBA4: D-C7/C8/H7 types

"D-G5BAL" and "D-H7BAL" switches are set on the cylinder with the screws above when shipped.

When a switch only is shipped, "BBA3" or "BBA4" screws are attached.

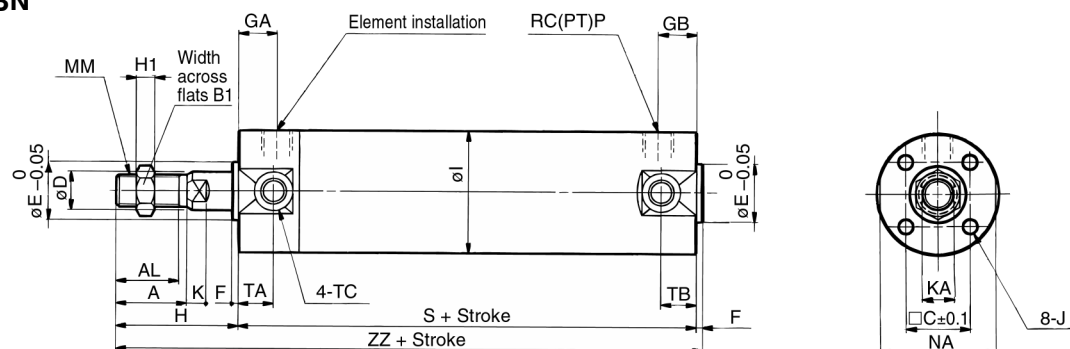
⚠ Precautions

Be sure to read before handling.
Refer to p.0-39 to 0-43 for Safety Instructions and common precautions.
Refer to p.1.7-6 for precautions for series CG1.

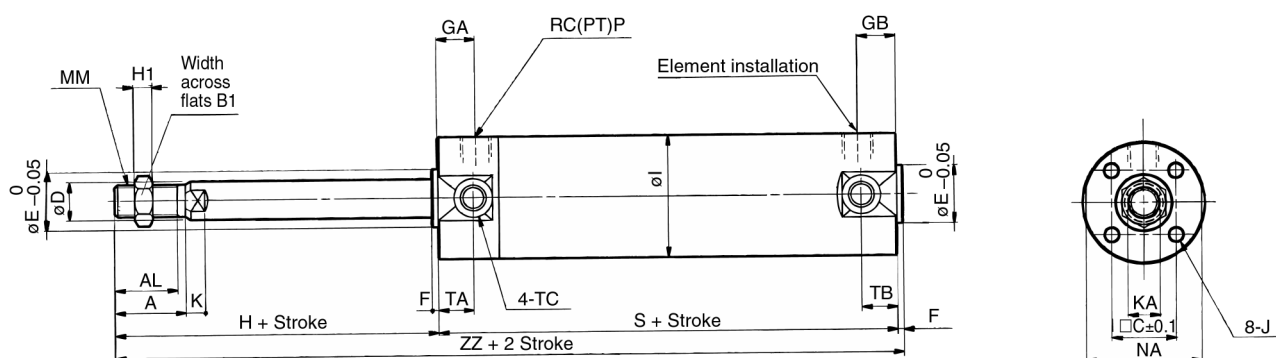
Series CG1

Basic

Spring return/CG1BN



Spring extend/CG1BN



| (mm) | | | | | | | | | | | | | | | | | | | |
|-----------|-------------------|----|------|----|------|----|----|---|----|----|----|----|----|--------------|-----|----|------------|------|-----|
| Bore (mm) | Stroke range (mm) | A | AL | B1 | C | D | E | F | GA | GB | H | H1 | I | J | K | KA | MM | NA | P |
| 20 | Up to 125 | 18 | 15.5 | 13 | 14 | 8 | 12 | 2 | 12 | 10 | 35 | 5 | 26 | M4 Depth 7 | 5 | 6 | M8 | 24 | 1/8 |
| 25 | Up to 200 | 22 | 19.5 | 17 | 16.5 | 10 | 14 | 2 | 12 | 10 | 40 | 6 | 31 | M5 Depth 7.5 | 5.5 | 8 | M10 X 1.25 | 29 | 1/8 |
| 32 | Up to 200 | 22 | 19.5 | 17 | 20 | 12 | 18 | 2 | 12 | 10 | 40 | 6 | 38 | M5 Depth 8 | 5.5 | 10 | M10 X 1.25 | 35.5 | 1/8 |
| 40 | Up to 200 | 30 | 27 | 19 | 26 | 16 | 25 | 2 | 13 | 10 | 50 | 8 | 47 | M6 Depth 12 | 6 | 14 | M14 X 1.5 | 44 | 1/8 |

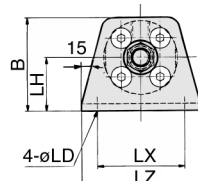
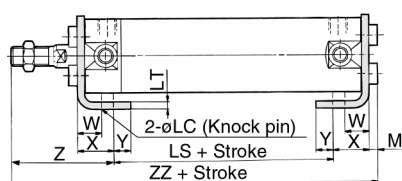
| Bore (mm) | TA | TB | TC | 1 to 50st | | 51 to 100st | | 101 to 125st | | 126 to 200st | |
|-----------|----|----|------------|-----------|-----|-------------|-----|--------------|-----|--------------|-----|
| | | | | S | ZZ | S | ZZ | S | ZZ | S | ZZ |
| 20 | 11 | 11 | M5 | 94 | 131 | 119 | 156 | 144 | 181 | — | — |
| 25 | 11 | 11 | M6 X 0.75 | 94 | 136 | 119 | 161 | 144 | 186 | 169 | 211 |
| 32 | 11 | 10 | M8 X 1.0 | 96 | 138 | 121 | 163 | 146 | 188 | 171 | 213 |
| 40 | 12 | 10 | M10 X 1.25 | 103 | 155 | 128 | 180 | 153 | 205 | 178 | 230 |

With Mounting Bracket



Note) The drawing below shows the single acting/spring return style.
The rod is retracted in case of the spring extend style

Axial foot/CG1LN



Axial foot

(mm)

| Bore (mm) | Stroke range (mm) | B | M | LC | LD | LH | LT | LX | LZ | W | X | Y | Z |
|-----------|-------------------|------|-----|----|-----|----|----|----|----|----|------|-----|------|
| 20 | Up to 125 | 34 | 3 | 4 | 6 | 20 | 3 | 32 | 44 | 10 | 15 | 7 | 47 |
| 25 | Up to 200 | 38.5 | 3.5 | 4 | 6 | 22 | 3 | 36 | 49 | 10 | 15 | 7 | 52 |
| 32 | Up to 200 | 45 | 3.5 | 4 | 6.6 | 25 | 3 | 44 | 58 | 10 | 16 | 8 | 53 |
| 40 | Up to 200 | 54.5 | 4 | 4 | 6.6 | 30 | 3 | 54 | 71 | 10 | 16.5 | 8.5 | 63.5 |

| Bore (mm) | 1 to 50st | | 51 to 100st | | 101 to 125st | | 126 to 200st | |
|-----------|-----------|-------|-------------|-------|--------------|-------|--------------|-------|
| | LS | ZZ | LS | ZZ | LS | ZZ | LS | ZZ |
| 20 | 70 | 135 | 95 | 160 | 120 | 185 | — | — |
| 25 | 70 | 140.5 | 95 | 165.5 | 120 | 190.5 | 145 | 215.5 |
| 32 | 70 | 142.5 | 95 | 167.5 | 120 | 192.5 | 145 | 217.5 |
| 40 | 76 | 160 | 101 | 185 | 126 | 210 | 151 | 235 |