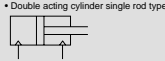


Medium bore size cylinder  
Double acting/single rod type

# CMK2 Series

- Bore size: 20, 25, 32, 40 mm

JIS symbol



CAD DATA AVAILABLE.

## Specifications

| Descriptions                |      | CMK2  |         |         |         |
|-----------------------------|------|---|---------|---------|---------|
| Bore size                   | mm   | 20 dia.   | 25 dia. | 32 dia. | 40 dia. |
| Actuation                   |      | Double acting   |         |         |         |
| Working fluid               |      | Compressed air  |         |         |         |
| Max. working pressure       | MPa  | 1.0   |         |         |         |
| Min. working pressure       | MPa  | 0.1   |         |         |         |
| Withstanding pressure       | MPa  | 1.6   |         |         |         |
| Ambient temperature         | °C   | -10 to 60 (to be unfrozen)  |         |         |         |
| Port size                   |      | Rc1/8   |         |         |         |
| Stroke tolerance            | mm   | $+2.0_0$ (to 200), $+2.4_0$ (200 to)                              |         |         |         |
| Working piston speed        | mm/s | 50 to 500   |         |         |         |
| Cushion                     |      | Rubber cushion  |         |         |         |
| Lubrication                 |      | Not required (when lubrication, use turbine oil Class 1 ISO VG32) |         |         |         |
| Allowable energy absorption | J    | 0.089   | 0.137   | 0.179   | 0.278   |

## Stroke length

| Bore size (mm) | Standard stroke length (mm)               | Max. stroke length (mm) | Min. stroke length (mm)<br>(for types with switch) *                      |
|----------------|---|-------------------------|---|
| 20 dia.        | 25, 50, 75, 100,<br>150, 200, 250,<br>300 | 750                     | 15 (10)<br>When one switch is<br>installed, refer to the<br>value in ( ). |
| 25 dia.        |   |                         |   |
| 32 dia.        |   |                         |   |
| 40 dia.        |   |                         |   |

- For types with switch, minimum stroke length varies depending on installation method. Refer to the table below.
- For single foot type (LS type), maximum stroke length is 50mm.
- For bellows "J" type, stroke length should be more than 25 mm. Consult with CKD when stroke length is less than 25mm.

## Min. stroke length of types with switch

| Rough sketch | When different surface installation |              | When same surface installation |                                  |
|--------------|-------------------------------------|--------------|--------------------------------|----------------------------------|
|              |                                     |              |                                |                                  |
| Descriptions | Grommet                             | Terminal box | Grommet                        | Terminal box                     |
| 20 dia.      | 15(10)mm                            | 15(10)mm     | 30mm                           | 32mm mounted A<br>80mm mounted B |
| 25 dia.      |                                     |              |                                |                                  |
| 32 dia.      |                                     |              |                                |                                  |
| 40 dia.      |                                     |              |                                |                                  |

- Note 1: When one switch is installed, refer to the value in ( ).

SCP \* 2  
**CMK2**  
 CMA2  
 SCM  
 SCA2  
 SCS  
 CKV2  
 CAV2/  
 COV \* 2  
 CAT  
 MDC2  
 MVC  
 SMD2  
 MSD/  
 MSDG  
 SSD  
 SSD  
 (large)  
 FC \*  
 ULKP/  
 ULK  
 JSK2/  
 JSM2  
 JSC3  
 (medium)  
 JSC3  
 (large)  
 JSB3  
 UCAC  
 STS/  
 STL  
 LCS  
 LCY  
 STR2  
 UCA2  
 STK  
 USSD  
 USC  
 MFC  
 GLC  
 SHC  
 CAC3  
 HCA  
 HCA  
 MRL2  
 SRL2  
 SRG  
 SRM  
 SRT  
 SRB2

### Switch specifications

| Descriptions             | Proximity 2 wire  |  |   | Proximity 3 wire   |                            |
|--------------------------|---|--|---|--|----------------------------|
|                          | R1  | R2   | R2Y<br>(2 color indicator)  | R3   | R3Y<br>(2 color indicator) |
| Applications             | Programmable controller, relay, small solenoid valve          |  | Programmable controller   | Programmable controller, relay, IC circuit, solenoid valve |                            |
| Power voltage            | —————   |  | —————   | DC4.5V to 28V  |                            |
| Load voltage/<br>current | AC85V to 265V<br>5 to 100mA                                   |  | DC10 to 30V<br>5 to 30mA  | DC30V or less  |                            |
| Light                    | LED (ON lighting)   |  | Red/green LED<br>(ON lighting)  | LED (ON lighting)  | LED (ON lighting)          |
| Descriptions             | Reed 2 wire   |  |   |  |                            |
|                          | R0  | R4   | R5  | R6   |                            |
| Applications             | Relay, programmable controller                                | High capacity relay, solenoid valve        | Programmable controller, relay, IC circuit (without indicator light), serial connection | Programmable controller (DC self hold type)                |                            |
| Load voltage/<br>current | DC12/24V, 5 to 50mA<br>AC110V, 7 to 20mA<br>AC220V, 7 to 10mA | AC110V, 20 to 200mA<br>AC220V, 10 to 200mA | DC5/12/24V, 50mA or less<br>AC110V, 20mA or less<br>AC220V, 10mA or less                | DC24V, 5 to 50mA   |                            |
| Light                    | LED ON lighting   | Neon light OFF lighting                    | None  | LED ON lighting  |                            |

Note 1: Please refer to Ending 1 about other switches specifications.

### Bellows max. working temperature

| Symbol | Bellows material            | Max. ambient temperature | Instantaneous max. temperature |
|--------|-----------------------------|--------------------------|--------------------------------|
| J      | Polyolefin elastomer        | 100 °C                   | 200 °C                         |
| L      | Silicone rubber glass cloth | 250 °C                   | 400 °C                         |

Instantaneous maximum temperature is the temperature when spark and spatter etc. instantaneously contacts to bellows.

### Cylinder mass

(Unit: Kg)

| Descriptions/<br>mounting style | Product mass when stroke length (S) = 0 mm |                         |                         |                        |                     |                     |                        |                          | Switch mass |              | Additional mass<br>per S = 10 mm |
|---------------------------------|--|-------------------------|-------------------------|------------------------|---------------------|---------------------|------------------------|--------------------------|-------------|--------------|----------------------------------|
|                                 | Basic type<br>(00)                         | Axial foot type<br>(LB) | Axial foot type<br>(LS) | Flange type<br>(FA/FB) | Eye bracket<br>(CA) | Clevis type<br>(CC) | Clevis bracket<br>(CB) | Trunnion type<br>(TA/TB) | Grommet     | Terminal box |                                  |
| 20 dia.                         | 0.17                                       | 0.32                    | 0.25                    | 0.23                   | 0.32                | 0.18                | 0.32                   | 0.22                     | 0.04        | 0.03         | 0.01                             |
| 25 dia.                         | 0.26                                       | 0.52                    | 0.39                    | 0.41                   | 0.50                | 0.26                | 0.50                   | 0.36                     | 0.04        | 0.03         | 0.01                             |
| 32 dia.                         | 0.30                                       | 0.56                    | 0.43                    | 0.45                   | 0.54                | 0.30                | 0.54                   | 0.40                     | 0.04        | 0.03         | 0.02                             |
| 40 dia.                         | 0.48                                       | 0.74                    | 0.61                    | 0.63                   | 0.72                | 0.50                | 0.72                   | 0.64                     | 0.04        | 0.03         | 0.02                             |

(E. g.) product mass of CMK2-FA-32-50-R0-D

When S=0mm, product mass is 0.45kg  
 Additional mass at S= 50mm is additional mass at S=10mm 0.02 X  $\frac{\text{Product stroke length (50)}}{10}$  =0.10kg  
 Mass of two switches is 0.08kg  
 Product mass is 0.45kg + 0.1kg + 0.08kg = 0.63kg

Standard type  
 Medium bore size cylinder

## How to order

Without switch

CMK2 - 00 - 20 - 100 - Y

With switch

CMK2 - 00 - 20 - 100 - R0 - R - V - Y

**A** Mounting style  
Note 1

**B** Bore size

**C** Stroke length

**D** Switch model No.

**E** Switch quantity

**F** Option  
Note 1, Note 2, Note 3

**G** Accessory

### ⚠ Caution for model No. selection

Note 1: Applicable tube outer diameter of F: push in joint (straight), FE: push in joint (elbow) is 6 mm.

Note 2: For bellows "J" type, stroke length should be more than 25 mm. When stroke length is shorter than 25mm, consult with CKD.

Note 3: Instantaneous maximum temperature is the temperature when spark and spatter etc. instantaneously contact to bellows.

**Note 4: Please refer to Ending 81 about custom specifications of rod end form.**

Note 5: Please refer to Page 78 about variation/optional combination.

<Example of model number>

**CMK2-00-20-100-R0-R-VY**

Model: Medium bore size cylinder, double acting/standard type

- A** Mounting style : Basic type
- B** Bore size : 20mm
- C** Stroke length : 100mm
- D** Switch model No: Reed R0 switch, lead wire 1m
- E** Switch quantity : One on rod side
- F** Option : Boss cut off
- G** Accessory : Rod clevis

| Symbol                  | Descriptions                 |
|-------------------------|------------------------------|
| <b>A Mounting style</b> |                              |
| 00                      | Basic type                   |
| LB                      | Axial foot type (both sides) |
| LS                      | Axial foot type (single)     |
| FA                      | Rod side flange type         |
| FB                      | Head side flange type        |
| CA                      | Eye bracket                  |
| CC                      | Fixed eye                    |
| CC1                     | Eye, bush press fitting type |
| CB                      | Clevis bracket               |
| TA                      | Rod side trunnion type       |
| TB                      | Head side trunnion type      |

| <b>B Bore size (mm)</b> |         |
|-------------------------|---------|
| 20                      | 20 dia. |
| 25                      | 25 dia. |
| 32                      | 32 dia. |
| 40                      | 40 dia. |

| <b>C Stroke length (mm)</b> |     |
|-----------------------------|-----|
| 25                          | 25  |
| 50                          | 50  |
| 75                          | 75  |
| 100                         | 100 |
| 150                         | 150 |
| 200                         | 200 |
| 250                         | 250 |
| 300                         | 300 |

| <b>D Switch model No.</b> |                   |              |           |                   |           |  |
|---------------------------|-------------------|--------------|-----------|-------------------|-----------|--|
| Grommet type              | Terminal box type |              | Contact   | Display           | Lead wire |  |
|                           | Standard type     | Splash-proof |           |                   |           |  |
| R1 *                      | R1B               | R1A          | Proximity | 1 color indicator | 2 wire    |  |
| R2 *                      | R2B               | R2A          |           |                   |           |  |
| R2Y *                     | R2YB              | -            | Proximity | 2 color indicator | 3 wire    |  |
| R3 *                      | R3B               | R3A          |           |                   |           |  |
| R3Y *                     | R3YB              | -            | Reed      | 1 color indicator | 2 wire    |  |
| R0 *                      | R0B               | R0A          |           |                   |           |  |
| R4 *                      | R4B               | R4A          | Reed      | 2 color indicator | 3 wire    |  |
| R5 *                      | R5B               | R5A          |           |                   |           |  |
| R6 *                      | R6B               | R6A          |           |                   |           |  |

| <b>*Lead wire length</b> |               |
|--------------------------|---------------|
| Blank                    | 1m (standard) |
| 3                        | 3m (Option)   |
| 5                        | 5m (Option)   |

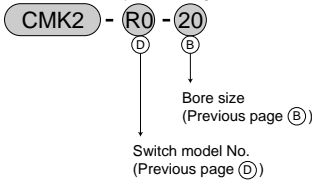
| <b>E Switch quantity</b> |                  |
|--------------------------|------------------|
| R                        | One on rod side  |
| H                        | One on head side |
| D                        | Two              |
| T                        | Three            |

| <b>F Option</b> |                            |              |              |
|-----------------|----------------------------|--------------|--------------|
|                 |                            | Max. ambient | Instant max. |
| J               | Bellows                    | 100 °C       | 200 °C       |
| L               | Bellows                    | 250 °C       | 400 °C       |
| F               | Push in joint (straight)   |              |              |
| FE              | Push in joint (elbow)      |              |              |
| M               | Piston rod material change |              |              |
| V               | Boss cut off               |              |              |
| P6              | Copper and PTFE free       |              |              |

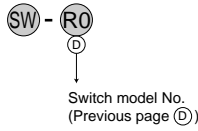
| <b>G Accessory</b> |                |
|--------------------|----------------|
| I                  | Rod eye        |
| Y                  | Rod clevis     |
| B2                 | Clevis bracket |

### How to order switch

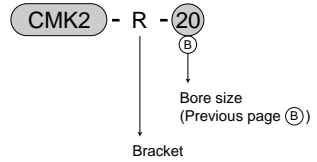
- Switch main body + mounting bracket



- Switch only



- Mounting bracket



- Terminal box only

- For R \* B



- For R \* A



### How to order mounting bracket

| Bore size (mm)          | 20 dia.  | 25 dia.  | 32 dia.  | 40 dia.  |
|-------------------------|----------|----------|----------|----------|
| Mounting bracket        |          |          |          |          |
| Axial foot type (LB/LS) | M1-LB-20 | M1-LB-30 | M1-LB-30 | M1-LB-30 |
| Flange (FA/FB)          | M1-FA-20 | M1-FA-30 | M1-FA-30 | M1-FA-30 |
| Trunnion (TA/TB)        | M1-TA-20 | M1-TA-30 | M1-TA-30 | M1-TA-40 |
| Eye bracket (CA)        | M1-CA-20 | M1-CA-30 | M1-CA-30 | M1-CA-30 |
| Clevis bracket (CB)     | M1-CB-20 | M1-CB-30 | M1-CB-30 | M1-CB-30 |

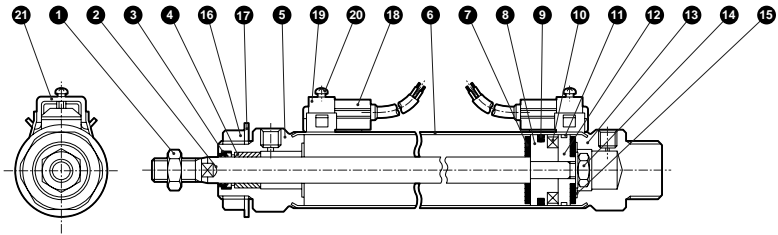
- Note: Mounting nut/toothed washer are attached to each mounting bracket.

- SCP \* 2
- CMK2**
- CMA2
- SCM
- SCA2
- SCS
- CKV2
- CAV2/  
COV \* 2
- CAT
- MDC2
- MVC
- SMD2
- MSD/  
MSDG
- SSD
- SSD  
(large)
- FC \*
- ULKP/  
ULK
- JSK2/  
JSM2
- JSC3  
(medium)
- JSC3  
(large)
- JSB3
- UCAC
- STS/  
STL
- LCS
- LCY
- STR2
- UCA2
- STK
- USSD
- USC
- MFC
- GLC
- SHC
- CAC3
- HCM
- HCA
- MRL2
- SRL2
- SRG
- SRM
- SRT
- SRB2

Standard type  
Medium bore size cylinder

## Internal structure and parts list

• CMK2



• Note: This caulking type cannot be disassembled.

| No. | Parts name     | Material  | Remarks               | No. | Parts name             | Material        | Remarks |
|-----|----------------|---|-----------------------|-----|------------------------|-----------------|---------|
| 1   | Rod nut        | Steel   | JIS B1181 hexagon nut | 12  | Piston B               | Aluminum alloy  |         |
| 2   | Piston rod     | 20, 25 dia.: Stainless steel<br>32, 40 dia.: Carbon steel |                       | 13  | Head cover             | Aluminum alloy  |         |
| 3   | Rod packing    | Nitrile rubber  |                       | 14  | Hexagon nut            | Steel           |         |
| 4   | Bush           | 20 dia.: Dry bearing<br>25, 32, 40 dia.: Copper           | Note 1                | 15  | Spacer                 | Steel           |         |
| 5   | Rod cover      | Aluminum alloy  |                       | 16  | Nut                    | Steel           |         |
| 6   | Cylinder tube  | Stainless steel   |                       | 17  | Toothed washer         | Steel           |         |
| 7   | Cushion rubber | Urethane rubber   |                       |     | With switch            |                 |         |
| 8   | Piston A       | Aluminum alloy  |                       | 18  | Switch main body       |                 |         |
| 9   | Piston seal    | Nitrile rubber  |                       | 19  | Band                   | Stainless steel |         |
| 10  | Piston magnet  | Plastic magnet  |                       | 20  | Pan head machine screw | Steel           |         |
| 11  | Wear ring      | Polyacetal  |                       | 21  | Bracket                | Stainless steel |         |

Note 1: For copper and PTFE free specifications, oil impregnated resin bearing is used.

### Mounting bracket material

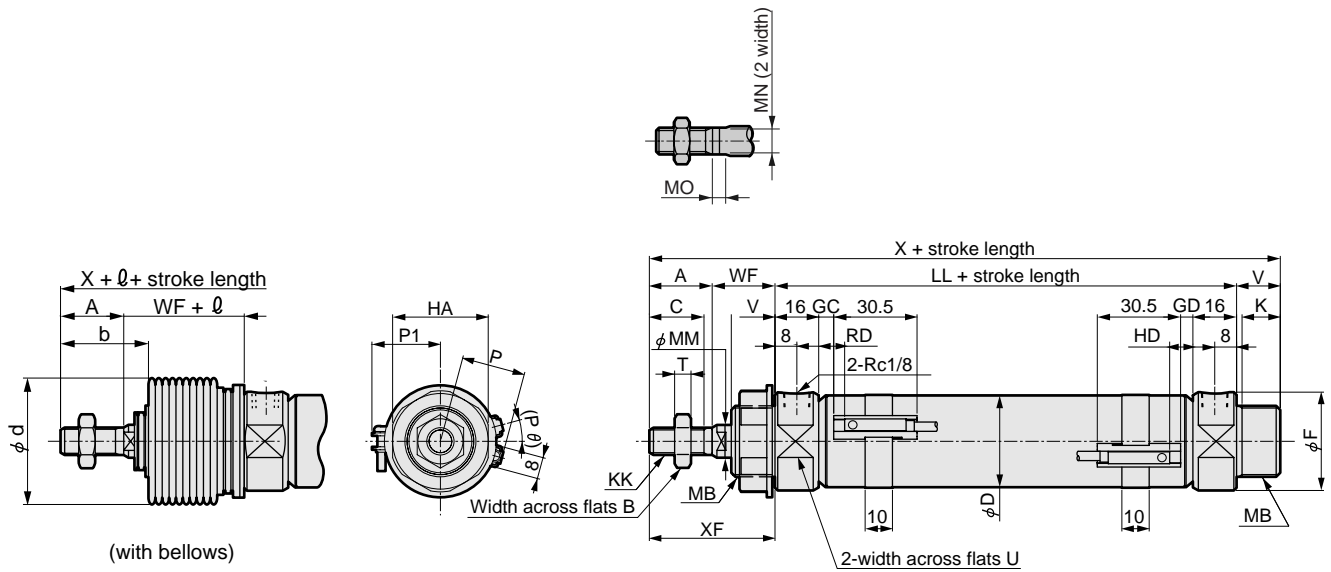
• Note: Mounting bracket is attached to the product when shipping.

| Mounting style | Material |
|----------------|----------|
| LB/LS          | Steel    |
| FA/FB          | Steel    |
| TA/TB          | Steel    |
| CA             | Steel    |
| CB             | Steel    |

### Dimensions



● Basic type (00)



RD: Rod side max. sensitive position  
 HD: Head side max. sensitive position

| Symbol         | Basic dimensions of basic type (00) |     |      |      |      |      |       |              |    |                          |    |    |    |   |    |    |    |     |    |  |
|----------------|-------------------------------------|-----|------|------|------|------|-------|--------------|----|--------------------------|----|----|----|---|----|----|----|-----|----|--|
| Bore size (mm) | A                                   | B   | C    | D    | F    | HA   | K     | KK           | LL | MB                       | MM | MN | MO | T | U  | V  | WF | X   | XF |  |
| φ 20           | 20                                  | 13  | 18   | 21.4 | 28   | 26   | 12    | M8 x 1.0     | 66 | M18 x 1.5                | 10 | 8  | 5  | 5 | 24 | 14 | 24 | 124 | 44 |  |
| φ 25           | 23                                  | 17  | 20   | 26.4 | 32   | 35   | 14    | M10 x 1.25   | 69 | M26 x 1.5                | 12 | 10 | 5  | 6 | 30 | 16 | 23 | 131 | 46 |  |
| φ 32           | 23                                  | 17  | 20   | 33.6 | 36   | 35   | 14    | M10 x 1.25   | 69 | M26 x 1.5                | 12 | 10 | 5  | 6 | 34 | 16 | 23 | 131 | 46 |  |
| φ 40           | 25                                  | 19  | 22   | 41.6 | 45   | 35   | 14    | M12 x 1.5    | 73 | M26 x 1.5                | 14 | 12 | 6  | 7 | 43 | 16 | 23 | 137 | 48 |  |
| Symbol         | With switch                         |     |      |      |      |      |       | With bellows |    |                          |    |    |    |   |    |    |    |     |    |  |
| Bore size (mm) | GC                                  | GD  | RD   | HD   | P    | P1   | (Pθ)° | b            | d  | ℓ                        |    |    |    |   |    |    |    |     |    |  |
| φ 20           | 4.0                                 | 3.0 | 8.0  | 7.0  | 17.3 | 19.5 | 22    | 30           | 30 | (stroke length/3) + 6    |    |    |    |   |    |    |    |     |    |  |
| φ 25           | 5.5                                 | 4.5 | 9.5  | 8.5  | 19.8 | 22.0 | 18    | 32           | 46 | (stroke length/3.25) + 7 |    |    |    |   |    |    |    |     |    |  |
| φ 32           | 5.5                                 | 4.5 | 9.5  | 8.5  | 24.3 | 25.5 | 15    | 32           | 46 | (stroke length/3.25) + 7 |    |    |    |   |    |    |    |     |    |  |
| φ 40           | 7.0                                 | 6.5 | 11.5 | 10.5 | 28.3 | 29.5 | 12    | 34           | 46 | (stroke length/3.25) + 7 |    |    |    |   |    |    |    |     |    |  |

Note 1: For ℓ dimensions, round up decimal point or less.

Note 2: Refer to page 188 for the HD, RD, and projecting dimensions of the T1\* and T8\* switches and 2-color indicator switch with preventive maintenance output.

Note 3: Refer to page 190 for dimensions of accessories.

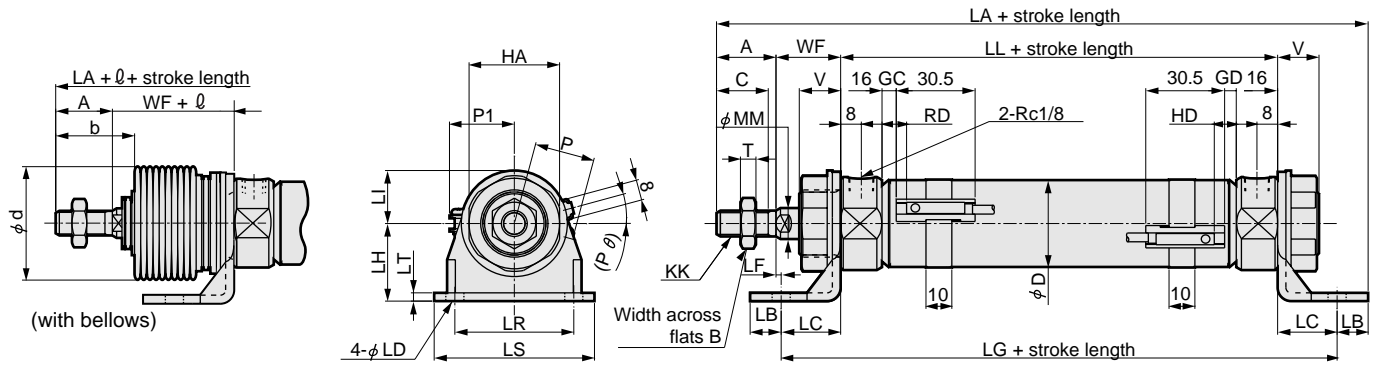
SCP\*2  
**CMK2**  
 CMA2  
 SCM  
 SCG  
 SCA2  
 SCS  
 CKV2  
 CA/OV2  
 SSD  
 CAT  
 MDC2  
 MVC  
 SMD2  
 MSD\*  
 FC\*  
 STK  
 ULK\*  
 JSK/M2  
 JSG  
 JSC3  
 USSD  
 USC  
 JSB3  
 LMB  
 STG  
 STS/L  
 LCS  
 LCG  
 LCM  
 LCT  
 LCY  
 STR2  
 UCA2  
 HCM  
 HCA  
 SRL2  
 SRG  
 SRM  
 SRT  
 MRL2  
 MRG2  
 SM-25  
 CAC3  
 UCAC  
 RCC2  
 MFC  
 SHC  
 GLC  
 Ending

Medium bore size cylinder  
 Standard type

## Dimensions



### ● Axial foot type (LB)



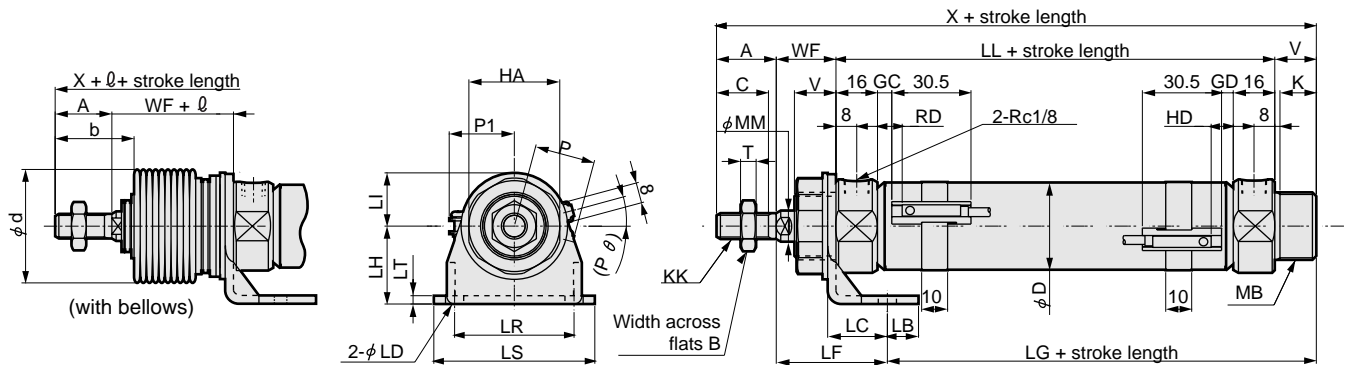
Note 1: For  $\ell$  dimensions, round up decimal point or less.

Note 2: Refer to page 188 for the HD, RD, and projecting dimensions of the T1\* and T8\* switches and 2-color indicator switch with preventive maintenance output.

Note 3: Refer to page 190 for dimensions of accessories.

| Symbol | Axial foot type (LB) basic dimensions |    |    |      |     |            |     |      |      |      |      | Installation dimensions |    |    |                          |    |     |
|--------|---------------------------------------|----|----|------|-----|------------|-----|------|------|------|------|-------------------------|----|----|--------------------------|----|-----|
|        | A                                     | B  | C  | D    | HA  | KK         | LL  | MM   | T    | V    | WF   | LA                      | LB | LC | LD                       | LF | LG  |
| φ20    | 20                                    | 13 | 18 | 21.4 | 26  | M8 x 1.0   | 66  | 10   | 5    | 14   | 24   | 138                     | 10 | 18 | 6                        | 6  | 102 |
| φ25    | 23                                    | 17 | 20 | 26.4 | 35  | M10 x 1.25 | 69  | 12   | 6    | 16   | 23   | 150                     | 12 | 23 | 7                        | 0  | 115 |
| φ32    | 23                                    | 17 | 20 | 33.6 | 35  | M10 x 1.25 | 69  | 12   | 6    | 16   | 23   | 150                     | 12 | 23 | 7                        | 0  | 115 |
| φ40    | 25                                    | 19 | 22 | 41.6 | 35  | M12 x 1.5  | 73  | 14   | 7    | 16   | 23   | 156                     | 12 | 23 | 7                        | 0  | 119 |
| Symbol | With switch                           |    |    |      |     |            |     |      |      |      |      | With bellows            |    |    |                          |    |     |
|        | LH                                    | LI | LR | LS   | LT  | GC         | GD  | RD   | HD   | P    | P1   | (P θ)°                  | b  | d  | ℓ                        |    |     |
| φ20    | 25                                    | 15 | 30 | 44   | 3.2 | 4.0        | 3.0 | 8.0  | 7.0  | 17.3 | 19.5 | 22                      | 30 | 30 | (stroke length/3) + 6    |    |     |
| φ25    | 30                                    | 20 | 46 | 62   | 3.2 | 5.5        | 4.5 | 9.5  | 8.5  | 19.8 | 22.0 | 18                      | 32 | 46 | (stroke length/3.25) + 7 |    |     |
| φ32    | 30                                    | 20 | 46 | 62   | 3.2 | 5.5        | 4.5 | 9.5  | 8.5  | 24.3 | 25.5 | 15                      | 32 | 46 | (stroke length/3.25) + 7 |    |     |
| φ40    | 30                                    | 20 | 46 | 62   | 3.2 | 7.0        | 6.5 | 11.5 | 10.5 | 28.3 | 29.5 | 12                      | 34 | 46 | (stroke length/3.25) + 7 |    |     |

### ● Single axial foot type (LS)



Note 1: For  $\ell$  dimensions, round up decimal point or less.

Note 2: Refer to page 188 for the HD, RD, and projecting dimensions of the T1\* and T8\* switches and 2-color indicator switch with preventive maintenance output.

Note 3: Up to 50mm stroke.

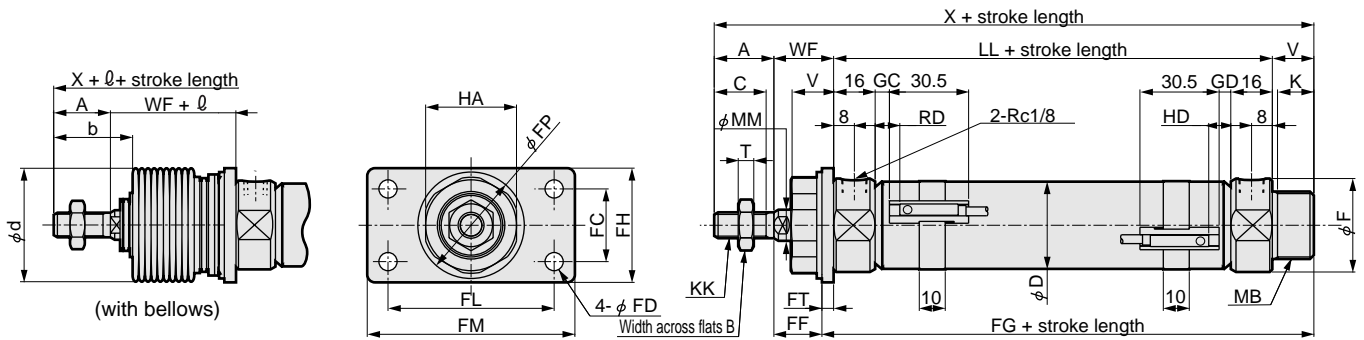
Note 4: Refer to page 190 for dimensions of accessories.

| Symbol | Single axial foot type (LS) basic dimensions |      |    |      |    |    |            |     |           |      |      |      |      |        | Installation dimensions |    |                          |  |
|--------|--|------|----|------|----|----|------------|-----|-----------|------|------|------|------|--------|-------------------------|----|--------------------------|--|
|        | A  | B    | C  | D    | HA | K  | KK         | LL  | MB        | MM   | T    | V    | WF   | X      | LB                      | LC | LD                       |  |
| φ20    | 20   | 13   | 18 | 21.4 | 26 | 12 | M8 x 1.0   | 66  | M18 x 1.5 | 10   | 5    | 14   | 24   | 124    | 10                      | 18 | 6                        |  |
| φ25    | 23   | 17   | 20 | 26.4 | 35 | 14 | M10 x 1.25 | 69  | M26 x 1.5 | 12   | 6    | 16   | 23   | 131    | 12                      | 23 | 7                        |  |
| φ32    | 23   | 17   | 20 | 33.6 | 35 | 14 | M10 x 1.25 | 69  | M26 x 1.5 | 12   | 6    | 16   | 23   | 131    | 12                      | 23 | 7                        |  |
| φ40    | 25   | 19   | 22 | 41.6 | 35 | 14 | M12 x 1.5  | 73  | M26 x 1.5 | 14   | 7    | 16   | 23   | 137    | 12                      | 23 | 7                        |  |
| Symbol | With switch                                  |      |    |      |    |    |            |     |           |      |      |      |      |        | With bellows            |    |                          |  |
|        | LF   | LG   | LH | LI   | LR | LS | LT         | GC  | GD        | RD   | HD   | P    | P1   | (P θ)° | b                       | d  | ℓ                        |  |
| φ20    | 38.8   | 65.2 | 25 | 15   | 30 | 44 | 3.2        | 4.0 | 3.0       | 8.0  | 7.0  | 17.3 | 19.5 | 22     | 30                      | 30 | (stroke length/3) + 6    |  |
| φ25    | 42.8   | 65.2 | 30 | 20   | 46 | 62 | 3.2        | 5.5 | 4.5       | 9.5  | 8.5  | 19.8 | 22.0 | 18     | 32                      | 46 | (stroke length/3.25) + 7 |  |
| φ32    | 42.8   | 65.2 | 30 | 20   | 46 | 62 | 3.2        | 5.5 | 4.5       | 9.5  | 8.5  | 24.3 | 25.5 | 15     | 32                      | 46 | (stroke length/3.25) + 7 |  |
| φ40    | 42.8   | 69.2 | 30 | 20   | 46 | 62 | 3.2        | 7.0 | 6.5       | 11.5 | 10.5 | 28.3 | 29.5 | 12     | 34                      | 46 | (stroke length/3.25) + 7 |  |

### Dimensions



#### ● Rod side flange type (FA)



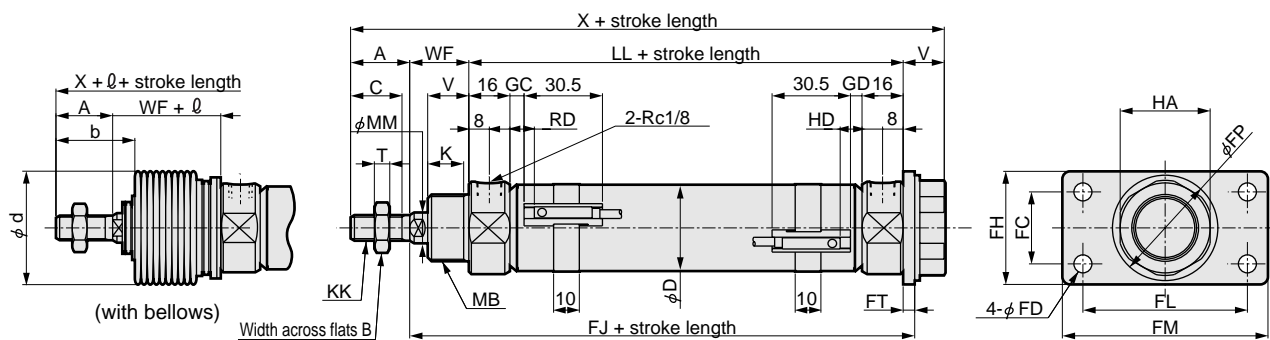
Note 1: For  $\ell$  dimensions, round up decimal point or less.

Note 2: Refer to page 188 for the HD, RD, and projecting dimensions of the T1\* and T8\* switches and 2-color indicator switch with preventive maintenance output.

Note 3: Refer to page 190 for dimensions of accessories.

| Symbol         | Rod side flange type (FA) basic dimensions |      |    |      |    |    |     |            |     |           |              |    |    |                          |     | Installation dimensions |    |
|----------------|--|------|----|------|----|----|-----|------------|-----|-----------|--------------|----|----|--------------------------|-----|-------------------------|----|
| Bore size (mm) | A  | B    | C  | D    | F  | HA | K   | KK         | LL  | MB        | MM           | T  | V  | WF                       | X   | FC                      | FD |
| φ20            | 20   | 13   | 18 | 21.4 | 28 | 26 | 12  | M8 x 1.0   | 66  | M18 x 1.5 | 10           | 5  | 14 | 24                       | 124 | 20                      | 6  |
| φ25            | 23   | 17   | 20 | 26.4 | 32 | 35 | 14  | M10 x 1.25 | 69  | M26 x 1.5 | 12           | 6  | 16 | 23                       | 131 | 28                      | 7  |
| φ32            | 23   | 17   | 20 | 33.6 | 36 | 35 | 14  | M10 x 1.25 | 69  | M26 x 1.5 | 12           | 6  | 16 | 23                       | 131 | 28                      | 7  |
| φ40            | 25   | 19   | 22 | 41.6 | 45 | 35 | 14  | M12 x 1.5  | 73  | M26 x 1.5 | 14           | 7  | 16 | 23                       | 137 | 28                      | 7  |
| Symbol         | With switch                                |      |    |      |    |    |     |            |     |           | With bellows |    |    |                          |     |                         |    |
| Bore size (mm) | FF   | FG   | FH | FL   | FM | FP | FT  | GC         | GD  | RD        | HD           | b  | d  | ℓ                        |     |                         |    |
| φ20            | 20.8                                       | 83.2 | 34 | 40   | 54 | 29 | 3.2 | 4.0        | 3.0 | 8.0       | 7.0          | 30 | 30 | (stroke length/3) + 6    |     |                         |    |
| φ25            | 18.5                                       | 89.5 | 44 | 64   | 80 | 41 | 4.5 | 5.5        | 4.5 | 9.5       | 8.5          | 32 | 46 | (stroke length/3.25) + 7 |     |                         |    |
| φ32            | 18.5                                       | 89.5 | 44 | 64   | 80 | 41 | 4.5 | 5.5        | 4.5 | 9.5       | 8.5          | 32 | 46 | (stroke length/3.25) + 7 |     |                         |    |
| φ40            | 18.5                                       | 93.5 | 44 | 64   | 80 | 41 | 4.5 | 7.0        | 6.5 | 11.5      | 10.5         | 34 | 46 | (stroke length/3.25) + 7 |     |                         |    |

#### ● Head side flange type (FB)



Note 1: For  $\ell$  dimensions, round up decimal point or less.

Note 2: Refer to page 188 for the HD, RD, and projecting dimensions of the T1\* and T8\* switches and 2-color indicator switch with preventive maintenance output.

Note 3: Refer to page 190 for dimensions of accessories.

| Symbol         | Head side flange type (FB) basic dimensions |    |    |      |     |     |            |      |           |    |              |                          |    |     |    | Installation dimensions |    |  |
|----------------|---|----|----|------|-----|-----|------------|------|-----------|----|--------------|--------------------------|----|-----|----|-------------------------|----|--|
| Bore size (mm) | A   | B  | C  | D    | HA  | K   | KK         | LL   | MB        | MM | T            | V                        | WF | X   | FC | FD                      | FH |  |
| φ20            | 20  | 13 | 18 | 21.4 | 26  | 12  | M8 x 1.0   | 66   | M18 x 1.5 | 10 | 5            | 14                       | 24 | 124 | 20 | 6                       | 34 |  |
| φ25            | 23  | 17 | 20 | 26.4 | 35  | 14  | M10 x 1.25 | 69   | M26 x 1.5 | 12 | 6            | 16                       | 23 | 131 | 28 | 7                       | 44 |  |
| φ32            | 23  | 17 | 20 | 33.6 | 35  | 14  | M10 x 1.25 | 69   | M26 x 1.5 | 12 | 6            | 16                       | 23 | 131 | 28 | 7                       | 44 |  |
| φ40            | 25  | 19 | 22 | 41.6 | 35  | 14  | M12 x 1.5  | 73   | M26 x 1.5 | 14 | 7            | 16                       | 23 | 137 | 28 | 7                       | 44 |  |
| Symbol         | With switch                                 |    |    |      |     |     |            |      |           |    | With bellows |                          |    |     |    |                         |    |  |
| Bore size (mm) | FJ  | FL | FM | FP   | FT  | GC  | GD         | RD   | HD        | b  | d            | ℓ                        |    |     |    |                         |    |  |
| φ20            | 93.2  | 40 | 54 | 29   | 3.2 | 4.0 | 3.0        | 8.0  | 7.0       | 30 | 30           | (stroke length/3) + 6    |    |     |    |                         |    |  |
| φ25            | 96.5  | 64 | 80 | 41   | 4.5 | 5.5 | 4.5        | 9.5  | 8.5       | 32 | 46           | (stroke length/3.25) + 7 |    |     |    |                         |    |  |
| φ32            | 96.5  | 64 | 80 | 41   | 4.5 | 5.5 | 4.5        | 9.5  | 8.5       | 32 | 46           | (stroke length/3.25) + 7 |    |     |    |                         |    |  |
| φ40            | 100.5                                       | 64 | 80 | 41   | 4.5 | 7.0 | 6.5        | 11.5 | 10.5      | 34 | 46           | (stroke length/3.25) + 7 |    |     |    |                         |    |  |

SCP\*2  
**CMK2**  
 CMA2  
 SCM  
 SCG  
 SCA2  
 SCS  
 CKV2  
 CA/OV2  
 SSD  
 CAT  
 MDC2  
 MVC  
 SMD2  
 MSD\*  
 FC\*  
 STK  
 ULK\*  
 JSK/M2  
 JSG  
 JSC3  
 USSD  
 USC  
 JSB3  
 LMB  
 STG  
 STS/L  
 LCS  
 LCG  
 LCM  
 LCT  
 LCY  
 STR2  
 UCA2  
 HCM  
 HCA  
 SRL2  
 SRG  
 SRM  
 SRT  
 MRL2  
 MRG2  
 SM-25  
 CAC3  
 UCAC  
 RCC2  
 MFC  
 SHC  
 GLC

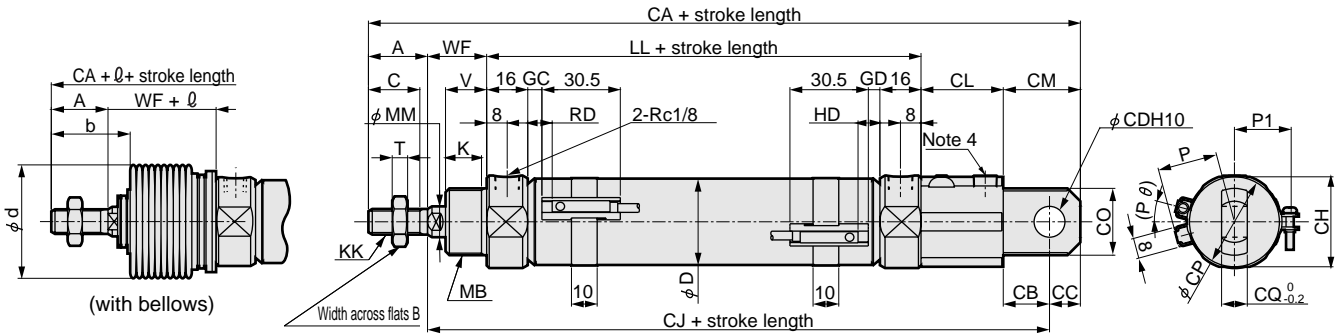
Ending  
 Medium bore size cylinder  
 Standard type



## Dimensions



### ● Eye bracket type (CA)



Note 1: For  $\ell$  dimensions, round up decimal point or less.

Note 2: Refer to page 188 for the HD, RD, and projecting dimensions of the T1\* and T8\* switches and 2-color indicator switch with preventive maintenance output.

Note 3: This is not a piping port.

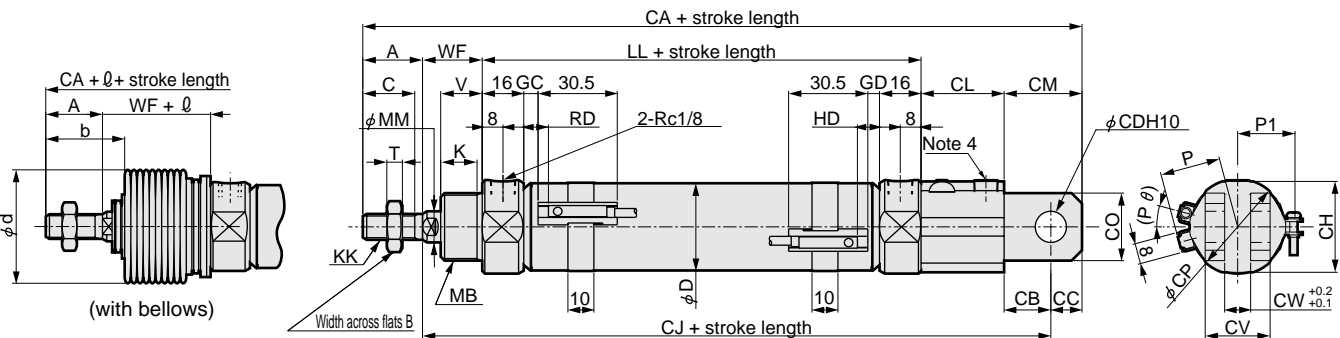
Note 4: Refer to page 190 for dimensions accessories.

| Symbol         | Eye bracket type (CA) basic dimensions |    |    |      |    |            |    |           |    |   |    |    | Installation dimensions |    |    |                 |    |
|----------------|--|----|----|------|----|------------|----|-----------|----|---|----|----|-------------------------|----|----|-----------------|----|
| Bore size (mm) | A                                      | B  | C  | D    | K  | KK         | LL | MB        | MM | T | V  | WF | CA                      | CB | CC | CD              | CH |
| $\phi 20$      | 20                                     | 13 | 18 | 21.4 | 12 | M8 x 1.0   | 66 | M18 x 1.5 | 10 | 5 | 14 | 24 | 165                     | 14 | 10 | $10^{+0.058}_0$ | 26 |
| $\phi 25$      | 23                                     | 17 | 20 | 26.4 | 14 | M10 x 1.25 | 69 | M26 x 1.5 | 12 | 6 | 16 | 23 | 177                     | 18 | 12 | $12^{+0.070}_0$ | 35 |
| $\phi 32$      | 23                                     | 17 | 20 | 33.6 | 14 | M10 x 1.25 | 69 | M26 x 1.5 | 12 | 6 | 16 | 23 | 177                     | 18 | 12 | $12^{+0.070}_0$ | 35 |
| $\phi 40$      | 25                                     | 19 | 22 | 41.6 | 14 | M12 x 1.5  | 73 | M26 x 1.5 | 14 | 7 | 16 | 23 | 183                     | 18 | 12 | $12^{+0.070}_0$ | 35 |

| Symbol         | With switch |    |    |    |    |    |     |     |      |      |      |      | With bellows               |    |    |                          |
|----------------|-------------|----|----|----|----|----|-----|-----|------|------|------|------|----------------------------|----|----|--------------------------|
| Bore size (mm) | CJ          | CL | CM | CO | CP | CQ | GC  | GD  | RD   | HD   | P    | P1   | (P $\theta$ ) <sup>o</sup> | b  | d  | $\ell$                   |
| $\phi 20$      | 135         | 31 | 24 | 22 | 28 | 8  | 4.0 | 3.0 | 8.0  | 7.0  | 17.3 | 19.5 | 22                         | 30 | 30 | (stroke length/3) + 6    |
| $\phi 25$      | 142         | 32 | 30 | 26 | 37 | 10 | 5.5 | 4.5 | 9.5  | 8.5  | 19.8 | 22.0 | 18                         | 32 | 46 | (stroke length/3.25) + 7 |
| $\phi 32$      | 142         | 32 | 30 | 26 | 37 | 10 | 5.5 | 4.5 | 9.5  | 8.5  | 24.3 | 25.5 | 15                         | 32 | 46 | (stroke length/3.25) + 7 |
| $\phi 40$      | 146         | 32 | 30 | 26 | 37 | 10 | 7.0 | 6.5 | 11.5 | 10.5 | 28.3 | 29.5 | 12                         | 34 | 46 | (stroke length/3.25) + 7 |

### ● Clevis bracket type (CB)



Note 1: For  $\ell$  dimensions, round up decimal point or less.

Note 2: Refer to page 188 for the HD, RD, and projecting dimensions of the T1\* and T8\* switches and 2-color indicator switch with preventive maintenance output.

Note 3: This is not a piping port.

Note 4: Refer to page 190 for dimensions accessories.

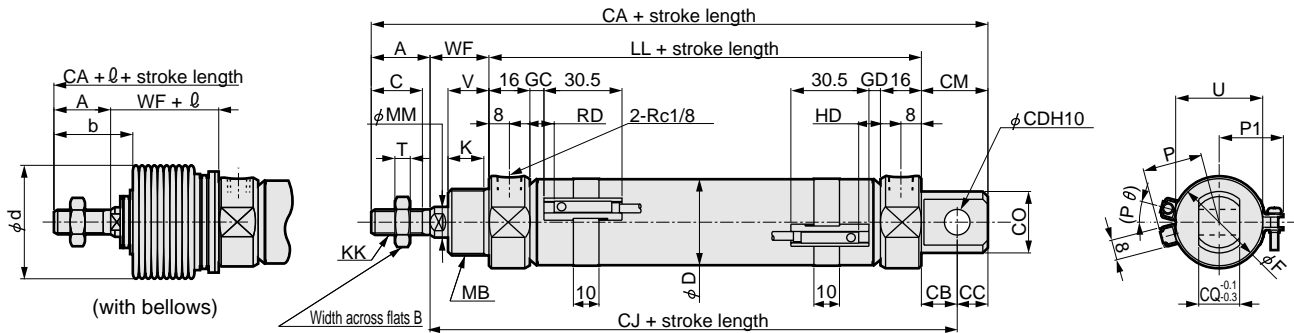
| Symbol         | Clevis bracket type (CB) basic dimensions. |    |    |      |    |            |    |           |    |   |    |    | Installation dimensions |    |    |                 |    |
|----------------|--|----|----|------|----|------------|----|-----------|----|---|----|----|-------------------------|----|----|-----------------|----|
| Bore size (mm) | A  | B  | C  | D    | K  | KK         | LL | MB        | MM | T | V  | WF | CA                      | CB | CC | CD              | CH |
| $\phi 20$      | 20   | 13 | 18 | 21.4 | 12 | M8 x 1.0   | 66 | M18 x 1.5 | 10 | 5 | 14 | 24 | 165                     | 14 | 10 | $10^{+0.058}_0$ | 26 |
| $\phi 25$      | 23   | 17 | 20 | 26.4 | 14 | M10 x 1.25 | 69 | M26 x 1.5 | 12 | 6 | 16 | 23 | 177                     | 18 | 12 | $12^{+0.070}_0$ | 35 |
| $\phi 32$      | 23   | 17 | 20 | 33.6 | 14 | M10 x 1.25 | 69 | M26 x 1.5 | 12 | 6 | 16 | 23 | 177                     | 18 | 12 | $12^{+0.070}_0$ | 35 |
| $\phi 40$      | 25   | 19 | 22 | 41.6 | 14 | M12 x 1.5  | 73 | M26 x 1.5 | 14 | 7 | 16 | 23 | 183                     | 18 | 12 | $12^{+0.070}_0$ | 35 |

| Symbol         | With switch |    |    |    |    |    |    |     |     |      |      |      | With bellows |                            |    |    |                          |
|----------------|-------------|----|----|----|----|----|----|-----|-----|------|------|------|--------------|----------------------------|----|----|--------------------------|
| Bore size (mm) | CJ          | CL | CM | CO | CP | CV | CW | GC  | GD  | RD   | HD   | P    | P1           | (P $\theta$ ) <sup>o</sup> | b  | d  | $\ell$                   |
| $\phi 20$      | 135         | 31 | 24 | 22 | 28 | 19 | 8  | 4.0 | 3.0 | 8.0  | 7.0  | 17.3 | 19.5         | 22                         | 30 | 30 | (stroke length/3) + 6    |
| $\phi 25$      | 142         | 32 | 30 | 26 | 37 | 25 | 10 | 5.5 | 4.5 | 9.5  | 8.5  | 19.8 | 22.0         | 18                         | 32 | 46 | (stroke length/3.25) + 7 |
| $\phi 32$      | 142         | 32 | 30 | 26 | 37 | 25 | 10 | 5.5 | 4.5 | 9.5  | 8.5  | 24.3 | 25.5         | 15                         | 32 | 46 | (stroke length/3.25) + 7 |
| $\phi 40$      | 146         | 32 | 30 | 26 | 37 | 25 | 10 | 7.0 | 6.5 | 11.5 | 10.5 | 28.3 | 29.5         | 12                         | 34 | 46 | (stroke length/3.25) + 7 |

### Dimensions

- Fixed eye (CC)
- Eye bush press fitted type (CC1)



Note 1: For  $l$  dimensions, round up decimal point or less.

Note 2: Refer to page 188 for the HD, RD, and projecting dimensions of the T1\* and T8\* switches and 2-color indicator switch with preventive maintenance output.

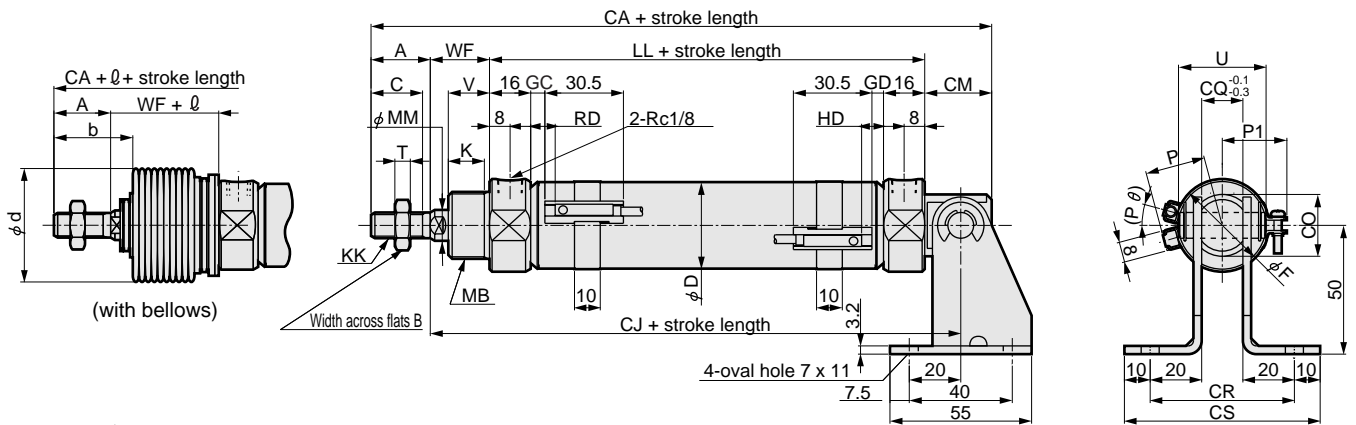
Note 3: Refer to page 190 for dimensions of accessories.

| Symbol | Fixed eye (CC) basic dimensions |    |    |      |    |    |            |    |           |    |   |    |    |    | Installation dimensions |    |    |
|--------|---------------------------------|----|----|------|----|----|------------|----|-----------|----|---|----|----|----|-------------------------|----|----|
|        | A                               | B  | C  | D    | F  | K  | KK         | LL | MB        | MM | T | U  | V  | WF | CA                      | CB | CC |
| φ 20   | 20                              | 13 | 18 | 21.4 | 28 | 12 | M8 x 1.0   | 66 | M18 x 1.5 | 10 | 5 | 24 | 14 | 24 | 131                     | 12 | 9  |
| φ 25   | 23                              | 17 | 20 | 26.4 | 32 | 14 | M10 x 1.25 | 69 | M26 x 1.5 | 12 | 6 | 30 | 16 | 23 | 136                     | 12 | 9  |
| φ 32   | 23                              | 17 | 20 | 33.6 | 36 | 14 | M10 x 1.25 | 69 | M26 x 1.5 | 12 | 6 | 34 | 16 | 23 | 141                     | 14 | 12 |
| φ 40   | 25                              | 19 | 22 | 41.6 | 45 | 14 | M12 x 1.5  | 73 | M26 x 1.5 | 14 | 7 | 43 | 16 | 23 | 151                     | 16 | 14 |

| Symbol | With switch                       |     |    |    |    |     |     |      |      |      |      | With bellows      |    |    |                          |
|--------|-----------------------------------|-----|----|----|----|-----|-----|------|------|------|------|-------------------|----|----|--------------------------|
|        | CD                                | CJ  | CM | CO | CQ | GC  | GD  | RD   | HD   | P    | P1   | (Pθ) <sup>o</sup> | b  | d  | l                        |
| φ 20   | 8 <sup>+0.058</sup> <sub>0</sub>  | 102 | 21 | 22 | 16 | 4.0 | 3.0 | 8.0  | 7.0  | 17.3 | 19.5 | 22                | 30 | 30 | (stroke length/3) + 6    |
| φ 25   | 8 <sup>+0.058</sup> <sub>0</sub>  | 104 | 21 | 24 | 16 | 5.5 | 4.5 | 9.5  | 8.5  | 19.8 | 22.0 | 18                | 32 | 46 | (stroke length/3.25) + 7 |
| φ 32   | 10 <sup>+0.058</sup> <sub>0</sub> | 106 | 26 | 24 | 16 | 5.5 | 4.5 | 9.5  | 8.5  | 24.3 | 25.5 | 15                | 32 | 46 | (stroke length/3.25) + 7 |
| φ 40   | 12 <sup>+0.070</sup> <sub>0</sub> | 112 | 30 | 30 | 20 | 7.0 | 6.5 | 11.5 | 10.5 | 28.3 | 29.5 | 12                | 34 | 46 | (stroke length/3.25) + 7 |

- Fixed eye (CC) with bracket (option symbol B2)
- Eye bush press fitted type (CC1) with bracket (option symbol B2)



Note 1: For  $l$  dimensions, round up decimal point or less.

Note 2: Refer to page 188 for the HD, RD, and projecting dimensions of the T1\* and T8\* switches and 2-color indicator switch with preventive maintenance output.

Note 3: Refer to page 190 for dimensions of accessories.

| Symbol | Fixed eye (CC) with bracket (option symbol B2) basic dimensions |    |    |      |    |    |            |    |           |    |   |    |    |    | Installation dimensions |     |    |
|--------|---|----|----|------|----|----|------------|----|-----------|----|---|----|----|----|-------------------------|-----|----|
|        | A   | B  | C  | D    | F  | K  | KK         | LL | MB        | MM | T | U  | V  | WF | CA                      | CJ  | CM |
| φ 20   | 20  | 13 | 18 | 21.4 | 28 | 12 | M8 x 1.0   | 66 | M18 x 1.5 | 10 | 5 | 24 | 14 | 24 | 131                     | 102 | 21 |
| φ 25   | 23  | 17 | 20 | 26.4 | 32 | 14 | M10 x 1.25 | 69 | M26 x 1.5 | 12 | 6 | 30 | 16 | 23 | 136                     | 104 | 21 |
| φ 32   | 23  | 17 | 20 | 33.6 | 36 | 14 | M10 x 1.25 | 69 | M26 x 1.5 | 12 | 6 | 34 | 16 | 23 | 141                     | 106 | 26 |
| φ 40   | 25  | 19 | 22 | 41.6 | 45 | 14 | M12 x 1.5  | 73 | M26 x 1.5 | 14 | 7 | 43 | 16 | 23 | 151                     | 112 | 30 |

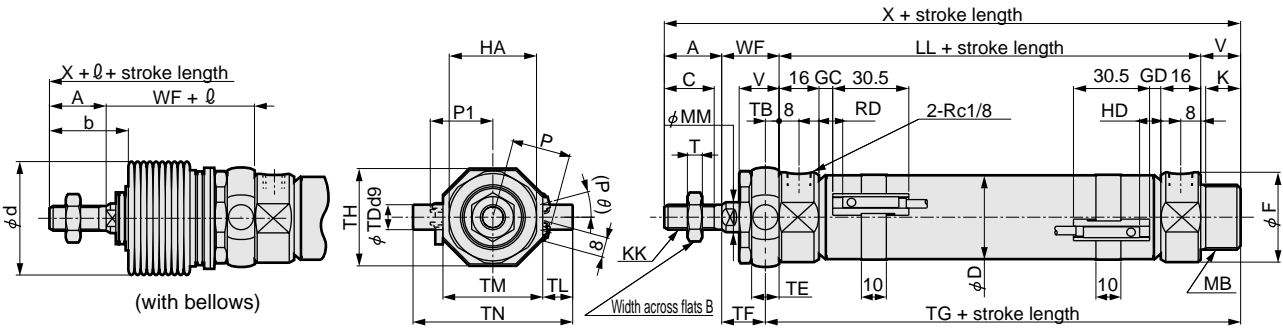
| Symbol | With switch |    |    |    |     |     |      |      |      |      |                   | With bellows |    |                          |  |
|--------|-------------|----|----|----|-----|-----|------|------|------|------|-------------------|--------------|----|--------------------------|--|
|        | CO          | CQ | CR | CS | GC  | GD  | RD   | HD   | P    | P1   | (Pθ) <sup>o</sup> | b            | d  | l                        |  |
| φ 20   | 22          | 16 | 56 | 76 | 4.0 | 3.0 | 8.0  | 7.0  | 17.3 | 19.5 | 22                | 30           | 30 | (stroke length/3) + 6    |  |
| φ 25   | 24          | 16 | 56 | 76 | 5.5 | 4.5 | 9.5  | 8.5  | 19.8 | 22.0 | 18                | 32           | 46 | (stroke length/3.25) + 7 |  |
| φ 32   | 24          | 16 | 56 | 76 | 5.5 | 4.5 | 9.5  | 8.5  | 24.3 | 25.5 | 15                | 32           | 46 | (stroke length/3.25) + 7 |  |
| φ 40   | 30          | 20 | 60 | 80 | 7.0 | 6.5 | 11.5 | 10.5 | 28.3 | 29.5 | 12                | 34           | 46 | (stroke length/3.25) + 7 |  |

- SCP\*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD\*
- FC\*
- STK
- ULK\*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL2
- SRG
- SRM
- SRT
- MRL2
- MRG2
- SM-25
- CAC3
- UCAC
- RCC2
- MFC
- SHC
- GLC
- Ending

Medium bore size cylinder  
Standard type

## Dimensions

● Rod side trunnion type (TA)



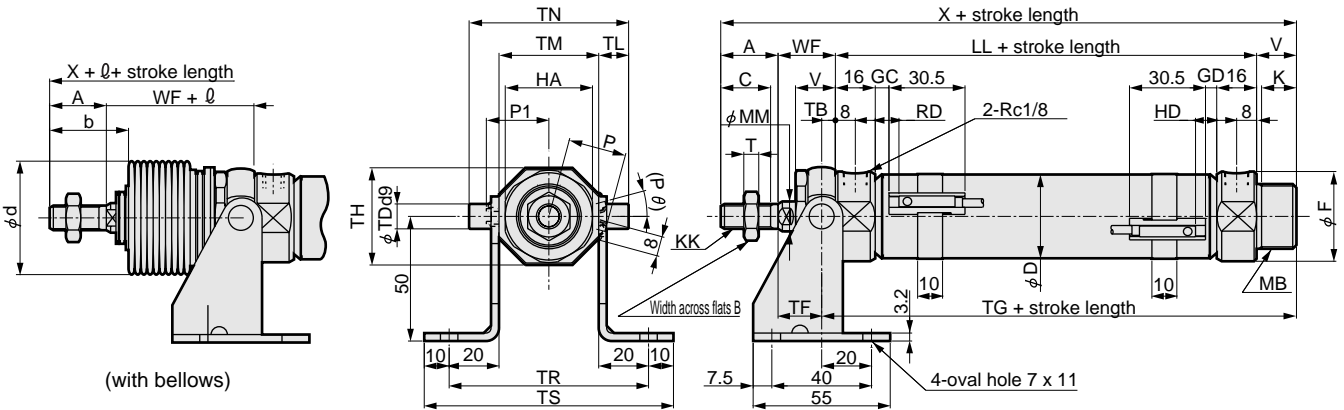
Note 1: For  $\ell$  dimensions, round up decimal point or less.

Note 2: Refer to page 188 for the HD, RD, and projecting dimensions of the T1\* and T8\* switches and 2-color indicator switch with preventive maintenance output.

Note 3: Refer to page 190 for dimensions of accessories.

| Symbol         | Rod side trunnion type (TA) basic dimensions |      |      |      |     |    |    |            |     |           |      |      |              |                |     | Installation dimensions |                          |
|----------------|--|------|------|------|-----|----|----|------------|-----|-----------|------|------|--------------|----------------|-----|-------------------------|--------------------------|
| Bore size (mm) | A  | B    | C    | D    | F   | HA | K  | KK         | LL  | MB        | MM   | T    | V            | WF             | X   | TB                      | TD                       |
| $\phi 20$      | 20   | 13   | 18   | 21.4 | 28  | 26 | 12 | M8 x 1.0   | 66  | M18 x 1.5 | 10   | 5    | 14           | 24             | 124 | 4.5                     | $8^{+0.040}_{-0.076}$    |
| $\phi 25$      | 23   | 17   | 20   | 26.4 | 32  | 35 | 14 | M10 x 1.25 | 69  | M26 x 1.5 | 12   | 6    | 16           | 23             | 131 | 5.5                     | $10^{+0.040}_{-0.076}$   |
| $\phi 32$      | 23   | 17   | 20   | 33.6 | 36  | 35 | 14 | M10 x 1.25 | 69  | M26 x 1.5 | 12   | 6    | 16           | 23             | 131 | 5.5                     | $10^{+0.040}_{-0.076}$   |
| $\phi 40$      | 25   | 19   | 22   | 41.6 | 45  | 35 | 14 | M12 x 1.5  | 73  | M26 x 1.5 | 14   | 7    | 16           | 23             | 137 | 5.5                     | $10^{+0.040}_{-0.076}$   |
| Symbol         | With switch                                  |      |      |      |     |    |    |            |     |           |      |      | With bellows |                |     |                         |                          |
| Bore size (mm) | TE   | TF   | TG   | TH   | TL  | TM | TN | GC         | GD  | RD        | HD   | P    | P1           | (P $\theta$ )° | b   | d                       | $\ell$                   |
| $\phi 20$      | 9  | 19.5 | 84.5 | 29.5 | 8   | 30 | 46 | 4.0        | 3.0 | 8.0       | 7.0  | 17.3 | 19.5         | 22             | 30  | 30                      | (stroke length/3) + 6    |
| $\phi 25$      | 11   | 17.5 | 90.5 | 39   | 12  | 40 | 64 | 5.5        | 4.5 | 9.5       | 8.5  | 19.8 | 22.0         | 18             | 32  | 46                      | (stroke length/3.25) + 7 |
| $\phi 32$      | 11   | 17.5 | 90.5 | 39   | 12  | 40 | 64 | 5.5        | 4.5 | 9.5       | 8.5  | 24.3 | 25.5         | 15             | 32  | 46                      | (stroke length/3.25) + 7 |
| $\phi 40$      | 11   | 17.5 | 94.5 | 44   | 9.5 | 53 | 72 | 7.0        | 6.5 | 11.5      | 10.5 | 28.3 | 29.5         | 12             | 34  | 46                      | (stroke length/3.25) + 7 |

● Rod side trunnion type (TA) with bracket (option symbol B2)



Note 1: For  $\ell$  dimensions, round up decimal point or less.

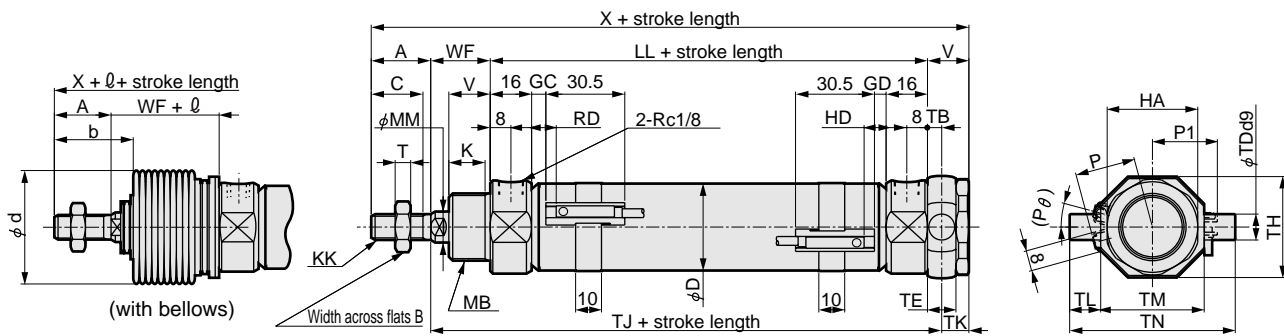
Note 2: Refer to page 188 for the HD, RD, and projecting dimensions of the T1\* and T8\* switches and 2-color indicator switch with preventive maintenance output.

Note 3: Refer to page 190 for dimensions of accessories.

| Symbol         | Rod side trunnion type (TA) with bracket (option symbol B2) basic dimensions |      |     |      |    |    |     |            |     |           |      |      |              |                |     | Installation dimensions |                          |      |
|----------------|--|------|-----|------|----|----|-----|------------|-----|-----------|------|------|--------------|----------------|-----|-------------------------|--------------------------|------|
| Bore size (mm) | A  | B    | C   | D    | F  | HA | K   | KK         | LL  | MB        | MM   | T    | V            | WF             | X   | TB                      | TD                       | TF   |
| $\phi 20$      | 20   | 13   | 18  | 21.4 | 28 | 26 | 12  | M8 x 1.0   | 66  | M18 x 1.5 | 10   | 5    | 14           | 24             | 124 | 4.5                     | $8^{+0.040}_{-0.076}$    | 19.5 |
| $\phi 25$      | 23   | 17   | 20  | 26.4 | 32 | 35 | 14  | M10 x 1.25 | 69  | M26 x 1.5 | 12   | 6    | 16           | 23             | 131 | 5.5                     | $10^{+0.040}_{-0.076}$   | 17.5 |
| $\phi 32$      | 23   | 17   | 20  | 33.6 | 36 | 35 | 14  | M10 x 1.25 | 69  | M26 x 1.5 | 12   | 6    | 16           | 23             | 131 | 5.5                     | $10^{+0.040}_{-0.076}$   | 17.5 |
| $\phi 40$      | 25   | 19   | 22  | 41.6 | 45 | 35 | 14  | M12 x 1.5  | 73  | M26 x 1.5 | 14   | 7    | 16           | 23             | 137 | 5.5                     | $10^{+0.040}_{-0.076}$   | 17.5 |
| Symbol         | With switch  |      |     |      |    |    |     |            |     |           |      |      | With bellows |                |     |                         |                          |      |
| Bore size (mm) | TG   | TH   | TL  | TM   | TN | TR | TS  | GC         | GD  | RD        | HD   | P    | P1           | (P $\theta$ )° | b   | d                       | $\ell$                   |      |
| $\phi 20$      | 84.5   | 29.5 | 8   | 30   | 46 | 70 | 90  | 4.0        | 3.0 | 8.0       | 7.0  | 17.3 | 19.5         | 22             | 30  | 30                      | (stroke length/3) + 6    |      |
| $\phi 25$      | 90.5   | 39   | 12  | 40   | 64 | 80 | 100 | 5.5        | 4.5 | 9.5       | 8.5  | 19.8 | 22.0         | 18             | 32  | 46                      | (stroke length/3.25) + 7 |      |
| $\phi 32$      | 90.5   | 39   | 12  | 40   | 64 | 80 | 100 | 5.5        | 4.5 | 9.5       | 8.5  | 24.3 | 25.5         | 15             | 32  | 46                      | (stroke length/3.25) + 7 |      |
| $\phi 40$      | 94.5   | 44   | 9.5 | 53   | 72 | 93 | 113 | 7.0        | 6.5 | 11.5      | 10.5 | 28.3 | 29.5         | 12             | 34  | 46                      | (stroke length/3.25) + 7 |      |

## Dimensions

● Head side trunnion type (TB)



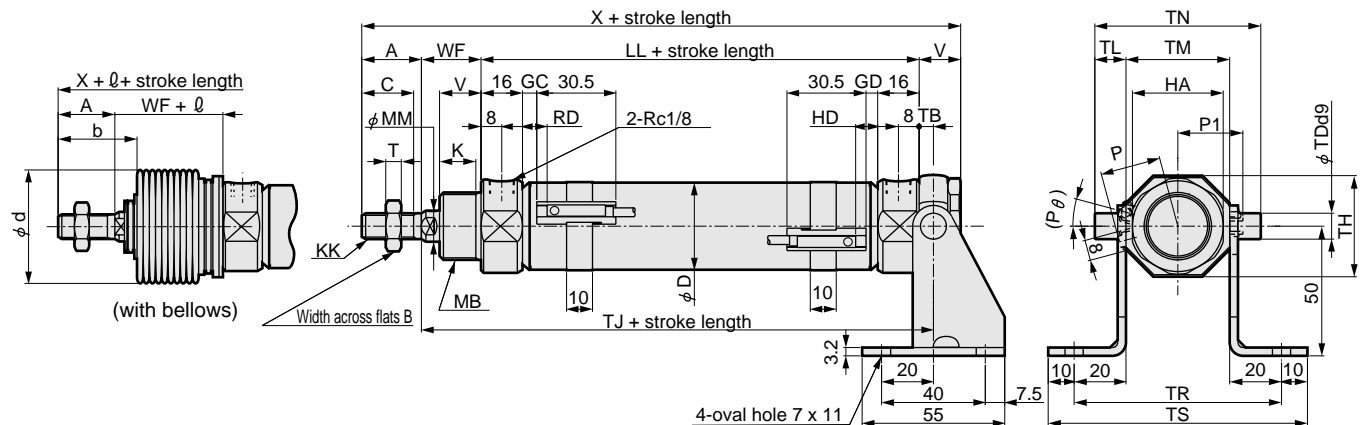
Note 1: For  $\ell$  dimensions, round up decimal point or less.

Note 2: Refer to page 188 for the HD, RD, and projecting dimensions of the T1\* and T8\* switches and 2-color indicator switch with preventive maintenance output.

Note 3: Refer to page 190 for dimensions of accessories.

| Symbol         | Head side trunnion type (TB) basic dimensions |       |      |      |    |    |            |     |           |      |      |      |              |     | Installation dimensions |  |    |
|----------------|---|-------|------|------|----|----|------------|-----|-----------|------|------|------|--------------|-----|-------------------------|--|----|
| Bore size (mm) | A   | B     | C    | D    | HA | K  | KK         | LL  | MB        | MM   | T    | V    | WF           | X   | TB                      | TD                                     | TE |
| φ20            | 20  | 13    | 18   | 21.4 | 26 | 12 | M8 x 1.0   | 66  | M18 x 1.5 | 10   | 5    | 14   | 24           | 124 | 4.5                     | 8 <sup>-0.040</sup> <sub>-0.076</sub>  | 9  |
| φ25            | 23  | 17    | 20   | 26.4 | 35 | 14 | M10 x 1.25 | 69  | M26 x 1.5 | 12   | 6    | 16   | 23           | 131 | 5.5                     | 10 <sup>-0.040</sup> <sub>-0.076</sub> | 11 |
| φ32            | 23  | 17    | 20   | 33.6 | 35 | 14 | M10 x 1.25 | 69  | M26 x 1.5 | 12   | 6    | 16   | 23           | 131 | 5.5                     | 10 <sup>-0.040</sup> <sub>-0.076</sub> | 11 |
| φ40            | 25  | 19    | 22   | 41.6 | 35 | 14 | M12 x 1.5  | 73  | M26 x 1.5 | 14   | 7    | 16   | 23           | 137 | 5.5                     | 10 <sup>-0.040</sup> <sub>-0.076</sub> | 11 |
| Symbol         | With switch                                   |       |      |      |    |    |            |     |           |      |      |      | With bellows |     |                         |  |    |
| Bore size (mm) | TH  | TJ    | TK   | TL   | TM | TN | GC         | GD  | RD        | HD   | P    | P1   | (Pθ)°        | b   | d                       | ℓ                                      |    |
| φ20            | 29.5  | 94.5  | 9.5  | 8    | 30 | 46 | 4.0        | 3.0 | 8.0       | 7.0  | 17.3 | 19.5 | 22           | 30  | 30                      | (stroke length/3) + 6                  |    |
| φ25            | 39  | 97.5  | 10.5 | 12   | 40 | 64 | 5.5        | 4.5 | 9.5       | 8.5  | 19.8 | 22.0 | 18           | 32  | 46                      | (stroke length/3.25) + 7               |    |
| φ32            | 39  | 97.5  | 10.5 | 12   | 40 | 64 | 5.5        | 4.5 | 9.5       | 8.5  | 24.3 | 25.5 | 15           | 32  | 46                      | (stroke length/3.25) + 7               |    |
| φ40            | 44  | 101.5 | 10.5 | 9.5  | 53 | 72 | 7.0        | 6.5 | 11.5      | 10.5 | 28.3 | 29.5 | 12           | 34  | 46                      | (stroke length/3.25) + 7               |    |

● Head side trunnion type (TB) with bracket (option symbol B2)



Note 1: For  $\ell$  dimensions, round up decimal point or less.

Note 2: Refer to page 188 for the HD, RD, and projecting dimensions of the T1\* and T8\* switches and 2-color indicator switch with preventive maintenance output.

Note 3: Refer to page 190 for dimensions of accessories.

| Symbol         | Head side trunnion type (TB) with bracket (option symbol B2) basic dimensions |     |    |      |    |     |            |     |           |      |      |      |              |     | Installation dimensions |  |      |
|----------------|---|-----|----|------|----|-----|------------|-----|-----------|------|------|------|--------------|-----|-------------------------|--|------|
| Bore size (mm) | A   | B   | C  | D    | HA | K   | KK         | LL  | MB        | MM   | T    | V    | WF           | X   | TB                      | TD                                     | TH   |
| φ20            | 20  | 13  | 18 | 21.4 | 26 | 12  | M8 x 1.0   | 66  | M18 x 1.5 | 10   | 5    | 14   | 24           | 124 | 4.5                     | 8 <sup>-0.040</sup> <sub>-0.076</sub>  | 29.5 |
| φ25            | 23  | 17  | 20 | 26.4 | 35 | 14  | M10 x 1.25 | 69  | M26 x 1.5 | 12   | 6    | 16   | 23           | 131 | 5.5                     | 10 <sup>-0.040</sup> <sub>-0.076</sub> | 39   |
| φ32            | 23  | 17  | 20 | 33.6 | 35 | 14  | M10 x 1.25 | 69  | M26 x 1.5 | 12   | 6    | 16   | 23           | 131 | 5.5                     | 10 <sup>-0.040</sup> <sub>-0.076</sub> | 39   |
| φ40            | 25  | 19  | 22 | 41.6 | 35 | 14  | M12 x 1.5  | 73  | M26 x 1.5 | 14   | 7    | 16   | 23           | 137 | 5.5                     | 10 <sup>-0.040</sup> <sub>-0.076</sub> | 44   |
| Symbol         | With switch   |     |    |      |    |     |            |     |           |      |      |      | With bellows |     |                         |  |      |
| Bore size (mm) | TJ  | TL  | TM | TN   | TR | TS  | GC         | GD  | RD        | HD   | P    | P1   | (Pθ)°        | b   | d                       | ℓ                                      |      |
| φ20            | 94.5  | 8   | 30 | 46   | 70 | 90  | 4.0        | 3.0 | 8.0       | 7.0  | 17.3 | 19.5 | 22           | 30  | 30                      | (stroke length/3) + 6                  |      |
| φ25            | 97.5  | 12  | 40 | 64   | 80 | 100 | 5.5        | 4.5 | 9.5       | 8.5  | 19.8 | 22.0 | 18           | 32  | 46                      | (stroke length/3.25) + 7               |      |
| φ32            | 97.5  | 12  | 40 | 64   | 80 | 100 | 5.5        | 4.5 | 9.5       | 8.5  | 24.3 | 25.5 | 15           | 32  | 46                      | (stroke length/3.25) + 7               |      |
| φ40            | 101.5   | 9.5 | 53 | 72   | 93 | 113 | 7.0        | 6.5 | 11.5      | 10.5 | 28.3 | 29.5 | 12           | 34  | 46                      | (stroke length/3.25) + 7               |      |

- SCP\*2
- CMK2
- CMA2
- SCM
- SCG
- SCA2
- SCS
- CKV2
- CA/OV2
- SSD
- CAT
- MDC2
- MVC
- SMD2
- MSD\*
- FC\*
- STK
- ULK\*
- JSK/M2
- JSG
- JSC3
- USSD
- USC
- JSB3
- LMB
- STG
- STS/L
- LCS
- LCG
- LCM
- LCT
- LCY
- STR2
- UCA2
- HCM
- HCA
- SRL2
- SRG
- SRM
- SRT
- MRL2
- MRG2
- SM-25
- CAC3
- UCAC
- RCC2
- MFC
- SHC
- GLC
- Ending

Medium bore size cylinder  
Standard type