

# 10A-6 PNEUMATIC CYLINDER

## COMPLETE FULL MODEL CHANGE

- Cushion valve of new type adopted.
- Floating packing adopted for cushion.
- Large size sintered oil-impregnated copper alloy bearing adopted.
- Fitting boss adopted for rod cover and head cover.
- Rod diameter of general-purpose size in Japan adopted.
- For rod seal and piston seal, JPAS Specifications adopted.



## CYLINDER SPECIFICATIONS/STANDARD

| Structure                                          |                    | Double-acting single rod                                                                         |                                                          | Double-acting double rod                                                        |                                                          |
|----------------------------------------------------|--------------------|--------------------------------------------------------------------------------------------------|----------------------------------------------------------|---------------------------------------------------------------------------------|----------------------------------------------------------|
| Type                                               |                    | Standard type                                                                                    | Val set                                                  | Standard type                                                                   | Val set                                                  |
| Series                                             |                    | 10A-6                                                                                            | 10A-6V                                                   | 10A-6D                                                                          | 10A-6VD                                                  |
| Cylinder bore (mm)                                 |                    | $\phi$ 32, $\phi$ 40, $\phi$ 50, $\phi$ 63<br>$\phi$ 80, $\phi$ 100, $\phi$ 125                  | $\phi$ 40, $\phi$ 50, $\phi$ 63, $\phi$ 80<br>$\phi$ 100 | $\phi$ 32, $\phi$ 40, $\phi$ 50, $\phi$ 63<br>$\phi$ 80, $\phi$ 100, $\phi$ 125 | $\phi$ 40, $\phi$ 50, $\phi$ 63, $\phi$ 80<br>$\phi$ 100 |
| Fluid used                                         |                    | Air                                                                                              |                                                          |                                                                                 |                                                          |
| Lubrication                                        |                    | Not necessary                                                                                    |                                                          |                                                                                 |                                                          |
| Operating pressure range                           |                    | 0.05~1MPa                                                                                        | 0.17~0.7MPa                                              | 0.1~1MPa                                                                        | 0.17~0.7MPa                                              |
| Pressure proof                                     |                    | 1.5MPa                                                                                           | 1.05MPa                                                  | 1.5MPa                                                                          | 1.05MPa                                                  |
| Note 1) Operating speed range                      |                    | $\phi$ 32 : 30~800mm/s<br>$\phi$ 40~ $\phi$ 125 : 30~700mm/s                                     |                                                          | $\phi$ 32 : 50~800mm/s<br>$\phi$ 40~ $\phi$ 125 : 50~700mm/s                    |                                                          |
| Operating temperature range                        |                    | -10~+70℃<br>(But no freezing is allowed.)                                                        | +5~+50℃                                                  | -10~+70℃<br>(But no freezing is allowed.)                                       | +5~+50℃                                                  |
| Cushion mechanism                                  |                    | With cushion on both ends (with lock mechanism)                                                  |                                                          |                                                                                 |                                                          |
| Cushion stroke (Cushion ring parallel area length) |                    | $\phi$ 32, $\phi$ 40 : 16mm $\phi$ 50, $\phi$ 63 : 20mm $\phi$ 80, $\phi$ 100, $\phi$ 125 : 25mm |                                                          |                                                                                 |                                                          |
| Thread tolerance                                   |                    | JIS6g/6H                                                                                         |                                                          |                                                                                 |                                                          |
| Stroke length tolerance                            |                    | 250mm max. : $^{+1.0}_0$ 251~1000mm : $^{+1.5}_0$ 1001mm min. : $^{+2.0}_0$                      |                                                          |                                                                                 |                                                          |
| Mounting type                                      |                    | Type SD, LA, LB, FA, FB, CA, CC, CB, TC                                                          |                                                          | Type SD, LA, LB, FA, TC                                                         |                                                          |
| Accessories                                        | Note 2) Dust cover | Standard : Nylon tarpaulin, Semi-standard: Chloroprene, CONEX, ALMIX                             |                                                          |                                                                                 |                                                          |
|                                                    | Rod end attachment | With eye spherical bearing (S-type), eye (T-type), clevis (Y-type) with pin, F joint (F-type)    |                                                          |                                                                                 |                                                          |
|                                                    | Others             | Bracket for CB, bracket for TC                                                                   |                                                          | Bracket for TC                                                                  |                                                          |

- Notes) 1. When setting a switch in the intermediate position, set the cylinder speed to 300 mm/s max. in consideration of the response speed of load relay and others.  
2. CONEX: Registered trade mark of TEIJIN LIMITED

Caution: It shall be noted that an attachment of the old 10A-5 Series can not be mounted for 10A-6 Series.

# PNEUMATIC CYLINDER 10A-6

## CYLINDER SPECIFICATIONS/NON-ROTATING TYPE

| Structure                                          |                    | Double-acting type single rod                                                                                                                                                                 |             | Double-acting type double rod             |             |
|----------------------------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------------------------------------|-------------|
| Type                                               |                    | Standard type                                                                                                                                                                                 | Val set     | Standard type                             | Val set     |
| Series                                             |                    | 10A-6G                                                                                                                                                                                        | 10A-6VG     | 10A-6GD                                   | 10A-6VGD    |
| Cylinder bore (mm)                                 |                    | φ 40, φ 50, φ 63, φ 80, φ 100                                                                                                                                                                 |             |                                           |             |
| Fluid used                                         |                    | Air                                                                                                                                                                                           |             |                                           |             |
| Lubrication                                        |                    | Not necessary                                                                                                                                                                                 |             |                                           |             |
| Operating pressure range                           |                    | 0.1~1MPa                                                                                                                                                                                      | 0.17~0.7MPa | 0.15~1MPa                                 | 0.17~0.7MPa |
| Pressure proof                                     |                    | 1.5MPa                                                                                                                                                                                        | 1.05MPa     | 1.5MPa                                    | 1.05MPa     |
| Note 1) Operating speed range                      |                    | 50~500mm/s                                                                                                                                                                                    |             |                                           |             |
| Operating temperature                              |                    | -10~+70℃<br>(But no freezing is allowed.)                                                                                                                                                     | +5~+50℃     | -10~+70℃<br>(But no freezing is allowed.) | +5~+50℃     |
| Cushion mechanism                                  |                    | With cushion on both ends (with lock mechanism)                                                                                                                                               |             |                                           |             |
| Cushion stroke (Cushion ring parallel area length) |                    | φ 40 : 16mm   φ 50, φ 63 : 20mm   φ 80, φ 100 : 25mm                                                                                                                                          |             |                                           |             |
| Note 3) Rotating angle tolerance                   |                    | φ 40 : ±1°   φ 50, φ 63 : ±0.8°   φ 80, φ 100 : ±0.5°                                                                                                                                         |             |                                           |             |
| Allowable torque                                   |                    | φ 40 : 1N・m   φ 50, φ 63 : 3.4N・m   φ 80, φ 100 : 10N・m                                                                                                                                       |             |                                           |             |
| Thread tolerance                                   |                    | JIS6g/6H                                                                                                                                                                                      |             |                                           |             |
| Stroke length tolerance                            |                    | 250mm max. : $\begin{smallmatrix} +1.0 \\ 0 \end{smallmatrix}$ 251~1000mm : $\begin{smallmatrix} +1.5 \\ 0 \end{smallmatrix}$ 1001mm min. : $\begin{smallmatrix} +2.0 \\ 0 \end{smallmatrix}$ |             |                                           |             |
| Mounting type                                      |                    | Type SD, LA, LB, FA, FB, CA, CC, CB, TC                                                                                                                                                       |             | Type SD, LA, LB, FA, TC                   |             |
| Accessories                                        | Note 2) Dust cover | Standard : Nylon tarpaulin, Semi-standard: Chloroprene, CONEX, ALMIX                                                                                                                          |             |                                           |             |
|                                                    | Rod end attachment | Eye(T-type), clevis(Y-type) with pin                                                                                                                                                          |             |                                           |             |
|                                                    | Others             | Bracket for CB, bracket for TC                                                                                                                                                                |             | Bracket for TC                            |             |

- Notes) 1. When setting a switch in the intermediate position, set the cylinder speed to 300 mm/s max. in consideration of the response speed of load relay and others.  
2. CONEX: Registered trade mark of TEIJIN LIMITED  
3. Rotating angle tolerance means the clearance at stroke end in the piston rod rotating direction.  
4. When using in combination with other guide, use a round rod.

## VALVE SPECIFICATIONS

| Rated voltage                                          |                                 | AC100V       |    | AC200V  |                      | DC24V              |
|--------------------------------------------------------|---------------------------------|--------------|----|---------|----------------------|--------------------|
| Operating voltage range V                              |                                 | 90~132       |    | 180~264 |                      | 21.6~26.4          |
| Current value<br>(when rated<br>voltage is<br>applied) | Frequency Hz                    | 50           | 60 | 50      | 60                   | —                  |
|                                                        | Starting current mA<br>(r.m.s.) | 34           | 32 | 17      | 16                   | —                  |
|                                                        | Exciting current mA<br>(r.m.s.) | 22           | 20 | 11      | 10                   | 75(1.8W)           |
| Allowable circuit leak current value mA                |                                 | 4            |    | 2       |                      | 4                  |
| Insulation class                                       |                                 | Class B      |    |         |                      |                    |
| Insulation resistance MΩ                               |                                 | 100 min.     |    |         |                      |                    |
| Protective circuit                                     |                                 | —            |    |         | Flywheel diode       |                    |
| DIN terminal<br>type                                   | Indicator lamp                  | Yellow       |    | Green   |                      | Red                |
|                                                        | Terminal No.                    | No. 1, No. 2 |    |         | No. 1 (–), No. 2 (+) |                    |
| Lead wire type                                         | Lead wire color                 | Yellow       |    | White   |                      | Black (–), Red (+) |

# 10A-6 PNEUMATIC CYLINDER

MAXIMUM ALLOWABLE STROKE (DOUBLE-ACTING SINGLE-ROD) Unit: mm

| Bore  | Round rod (standard) | Non-rotating type |
|-------|----------------------|-------------------|
| φ 32  | 700                  | —                 |
| φ 40  | 1000                 | 500               |
| φ 50  | 1500                 |                   |
| φ 63  |                      |                   |
| φ 80  |                      |                   |
| φ 100 |                      |                   |
| φ 125 |                      | —                 |

MAXIMUM ALLOWABLE STROKE (DOUBLE-ACTING DOUBLE-ROD) Unit: mm

| Bore  | Round rod (standard) | Non-rotating type |
|-------|----------------------|-------------------|
| φ 32  | 500                  | —                 |
| φ 40  | 800                  | 500               |
| φ 50  |                      |                   |
| φ 63  |                      |                   |
| φ 80  | 1000                 |                   |
| φ 100 |                      |                   |
| φ 125 |                      | —                 |

MINIMUM STROKE CYLINDER WITH SWITCH Unit: mm

| Type                                | Magnetic proximity type |        |            |        |
|-------------------------------------|-------------------------|--------|------------|--------|
|                                     | AX                      |        | SR         |        |
|                                     | Switch set              | SV set | Switch set | SV set |
| 1 piece mounting                    | 25                      | 50     | 15(25)     | 50     |
| 2 pieces mounting on same side      | 25                      | 50     | 15(25)     | 50     |
| 2 pieces mounting on opposite sides | 25                      | 50     | 15(25)     | 50     |
| In case of trunnion(Type TC)        | 120                     | 120    | 90(130)    | 125    |

Notes) 1. Minimum stroke of trunnion (Type TC) applies when the trunnion attachment is at the center.

2. Those in ( ) are minimum strokes of φ 80~φ 125 bore cylinders.

3. When the bore is φ 32, the stroke is 50 for SR type.

PROMPT DELIVERY SIZE (10A-6)

Except Type TC Unit: mm

| Bore \ Stroke | Prompt delivery stroke |    |     |     |     |     |     |     |     |     |     |     |
|---------------|------------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|               | 50                     | 75 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 |
| φ 32          | ○                      | ○  | ○   | ○   | ○   | ○   | ○   | ○   | ○   | ○   | ○   | ○   |
| φ 40          | ○                      | ○  | ○   | ○   | ○   | ○   | ○   | ○   | ○   | ○   | ○   | ○   |
| φ 50          | ○                      | ○  | ○   | ○   | ○   | ○   | ○   | ○   | ○   | ○   | ○   | ○   |
| φ 63          | ○                      | ○  | ○   | ○   | ○   | ○   | ○   | ○   | ○   | ○   | ○   | ○   |
| φ 80          | ○                      | ○  | ○   | ○   | ○   | ○   | ○   | ○   | ○   | ○   | ○   | ○   |
| φ 100         | ○                      | ○  | ○   | ○   | ○   | ○   | ○   | ○   | ○   | ○   | ○   | ○   |

Note) The above table applies to double-acting single-rod of standard type. But, except TC type.

# PNEUMATIC CYLINDER 10A-6

## WEIGHT TABLE

### STANDARD TYPE Double-acting single rod

Unit: kg

| Bore<br>mm | Basic weight     |         | Additional<br>weight<br>per 1 mm<br>of stroke |
|------------|------------------|---------|-----------------------------------------------|
|            | Standard<br>type | Val set |                                               |
| φ 32       | 0.57             | —       | 0.00218                                       |
| φ 40       | 0.65             | 0.89    | 0.00300                                       |
| φ 50       | 1.02             | 1.26    | 0.00428                                       |
| φ 63       | 1.36             | 1.61    | 0.00515                                       |
| φ 80       | 2.32             | 2.15    | 0.00834                                       |
| φ 100      | 2.94             | 3.22    | 0.01061                                       |
| φ 125      | 4.43             | —       | 0.01490                                       |

Note) Basic weight includes the weight of end lock nut.

### NON-ROTATING TYPE Double-acting single rod

Unit: kg

| Bore<br>mm | Basic weight     |         | Additional<br>weight<br>per 1 mm<br>of stroke |
|------------|------------------|---------|-----------------------------------------------|
|            | Standard<br>type | Val set |                                               |
| φ 40       | 0.65             | 0.89    | 0.00276                                       |
| φ 50       | 1.02             | 1.26    | 0.00425                                       |
| φ 63       | 1.36             | 1.61    | 0.00512                                       |
| φ 80       | 2.32             | 2.15    | 0.00810                                       |
| φ 100      | 2.94             | 3.22    | 0.00869                                       |

Note) Basic weight includes the weight of end lock nut.

### STANDARD TYPE Double-acting double rod

Unit: kg

| Bore<br>mm | Basic weight     |         | Additional<br>weight<br>per 1 mm<br>of stroke |
|------------|------------------|---------|-----------------------------------------------|
|            | Standard<br>type | Val set |                                               |
| φ 32       | 0.68             | —       | 0.00306                                       |
| φ 40       | 0.84             | 1.08    | 0.00457                                       |
| φ 50       | 1.35             | 1.59    | 0.00673                                       |
| φ 63       | 1.86             | 2.11    | 0.00760                                       |
| φ 80       | 3.16             | 3.41    | 0.01217                                       |
| φ 100      | 4.22             | 4.50    | 0.01612                                       |
| φ 125      | 9.48             | —       | 0.02240                                       |

Note) Basic weight includes the weight of end lock nut.

### NON-ROTATING TYPE Double-acting double rod

Unit: kg

| Bore<br>mm | Basic weight     |         | Additional<br>weight<br>per 1 mm<br>of stroke |
|------------|------------------|---------|-----------------------------------------------|
|            | Standard<br>type | Val set |                                               |
| φ 40       | 0.84             | 1.08    | 0.00433                                       |
| φ 50       | 1.35             | 1.59    | 0.00670                                       |
| φ 63       | 1.86             | 2.11    | 0.00757                                       |
| φ 80       | 3.16             | 3.41    | 0.01193                                       |
| φ 100      | 4.22             | 4.50    | 0.01420                                       |

Note) Basic weight includes the weight of end lock nut.

## ADDITIONAL WEIGHT TABLE

Unit: kg

| Bore<br>mm | Mounting accessory weight |            |                          |            |            |            |                       |            |                       | Rod end attachment weight |                    |                       | Valve additional weight                                                           |                               |                                                                              | Switch additional weight |                 |                   |      |
|------------|---------------------------|------------|--------------------------|------------|------------|------------|-----------------------|------------|-----------------------|---------------------------|--------------------|-----------------------|-----------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------------------|--------------------------|-----------------|-------------------|------|
|            | LA<br>Type                | LB<br>Type | FA<br>Type<br>FB<br>Type | CA<br>Type | CC<br>Type | CB<br>Type | CB<br>Type<br>bracket | TC<br>Type | TC<br>Type<br>bracket | Eye<br>(S<br>type)        | Eye<br>(T<br>type) | Clevis<br>(Y<br>type) | Push type<br>during current<br>passing,<br>Pull type<br>during current<br>passing | Self-<br>hold-<br>ing<br>type | 3-position<br>closed<br>center type,<br>3-position<br>exhaust<br>center type | Magnetic proximity type  |                 |                   |      |
|            |                           |            |                          |            |            |            |                       |            |                       |                           |                    |                       |                                                                                   |                               |                                                                              | AX                       |                 | connector<br>type | SR   |
|            |                           |            |                          |            |            |            |                       |            |                       |                           |                    |                       |                                                                                   |                               |                                                                              | With cord<br>1.5m        | With cord<br>5m |                   |      |
| φ 32       | 0.14                      | 0.11       | 0.20                     | 0.12       | —          | 0.19       | 0.46                  | 0.30       | 0.22                  | 0.08                      | 0.16               | 0.22                  | —                                                                                 | —                             | —                                                                            | 0.05                     | 0.13            | 0.04              | 0.22 |
| φ 40       | 0.20                      | 0.13       | 0.37                     | 0.18       | 0.38       | 0.27       | 0.70                  | 0.48       | 0.50                  | 0.11                      | 0.16               | 0.27                  | 0.51                                                                              | 0.59                          | 0.63                                                                         |                          |                 |                   |      |
| φ 50       | 0.32                      | 0.17       | 0.39                     | 0.26       | 0.50       | 0.39       | 0.70                  | 0.55       | 0.50                  | 0.20                      | 0.21               | 0.34                  | 0.52                                                                              | 0.60                          | 0.64                                                                         |                          |                 |                   |      |
| φ 63       | 0.52                      | 0.23       | 0.53                     | 0.42       | 0.67       | 0.48       | 0.70                  | 0.70       | 0.50                  | 0.20                      | 0.21               | 0.34                  | 0.52                                                                              | 0.60                          | 0.64                                                                         |                          |                 |                   |      |
| φ 80       | 0.85                      | 0.38       | 1.60                     | 1.08       | 1.76       | 0.92       | 0.72                  | 1.16       | 0.72                  | 0.36                      | 0.62               | 0.87                  | 0.55                                                                              | 0.63                          | 0.67                                                                         | 0.07                     | 0.14            | 0.06              |      |
| φ 100      | 1.28                      | 0.47       | 2.22                     | 1.39       | 2.04       | 1.24       | 0.72                  | 1.53       | 0.72                  | 0.36                      | 0.62               | 0.87                  | 0.55                                                                              | 0.63                          | 0.67                                                                         |                          |                 |                   |      |
| φ 125      | 1.38                      | 0.47       | 2.87                     | 2.45       | —          | 1.97       | 2.81                  | 3.41       | 1.55                  | —                         | 1.24               | 1.47                  | —                                                                                 | —                             | —                                                                            | 0.07                     | 0.14            | 0.06              |      |

Note) In the case of Val set, add the valve additional weight according to the operating method.

### Calculation formula

Cylinder weight (kg) = Basic weight + (Switch additional weight) + Valve additional weight + Mounting accessory weight + Additional weight per 1 mm of stroke x Cylinder stroke mm

### Example of calculation

Standard double-acting type

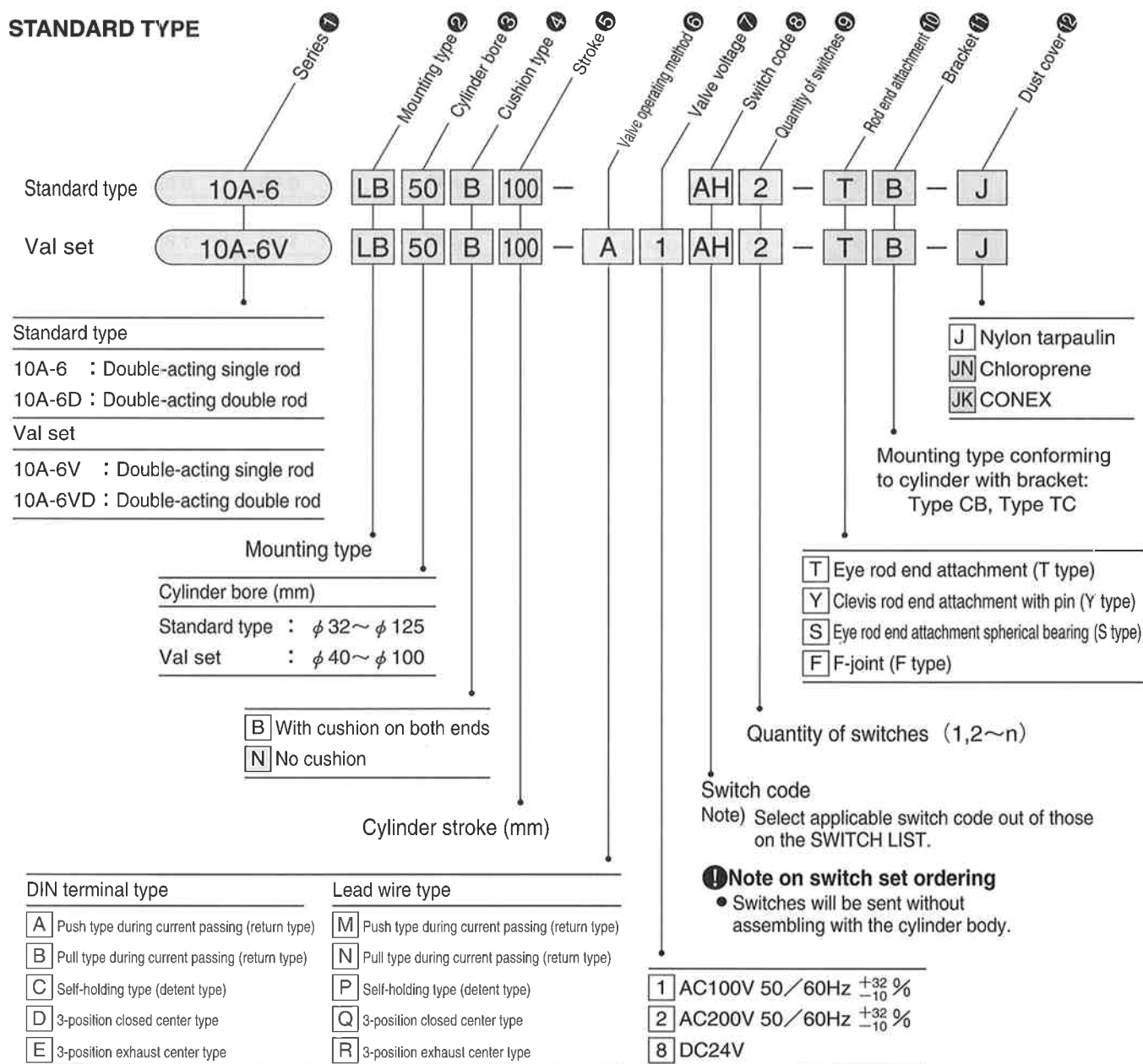
Val set cylinder push-during-current-passing-type A x 215 (with cord 5 m), 2 pcs of switches, Type LB, Cylinder bore 80 mm, cylinder stroke 200 mm  
 $2.15 + 0.52 + 0.13 \times 2 + 0.38 + 0.00834 \times 200 = 4.978 \text{ kg}$

# 10A-6 PNEUMATIC CYLINDER

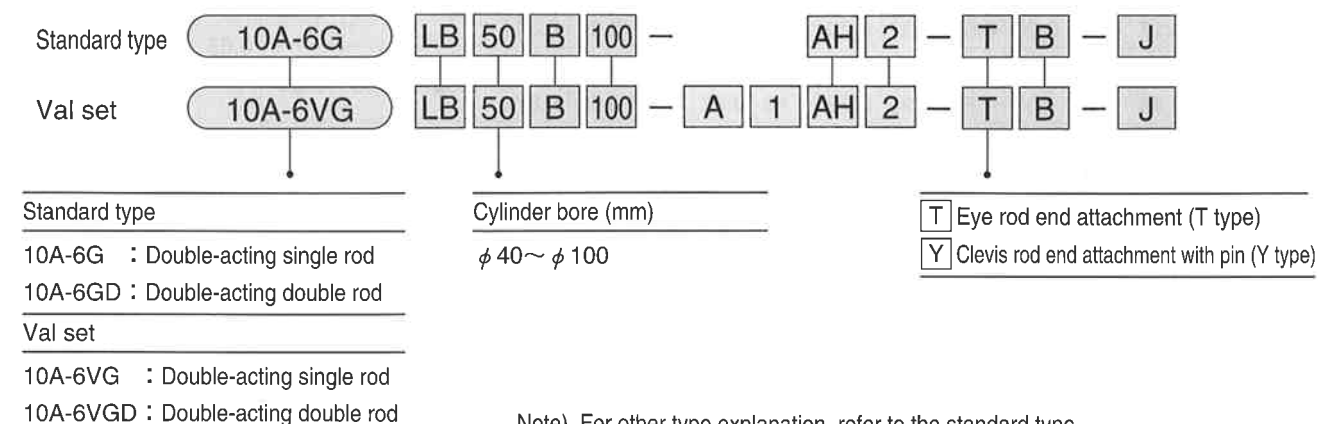
## ⚠ Cautions

Take cautions that the metal fitting of former 10A-5 Series can not be mounted for 10A-6 Series.

### STANDARD TYPE



### NON-ROTATING TYPE



Note) For other type explanation, refer to the standard type.

# PNEUMATIC CYLINDER 10A-6

## SWITCH LIST

Semi-standard components

| Kind                                        | Switch symbol | Load voltage range                | Load current range               | Maximum open /close capacity | Protective circuit | Indicating lamp                               | Wiring method                                                                       | Cord length | Applicable load device                     |
|---------------------------------------------|---------------|-----------------------------------|----------------------------------|------------------------------|--------------------|-----------------------------------------------|-------------------------------------------------------------------------------------|-------------|--------------------------------------------|
| con-<br>tact                                | AF AX101CE    | DC : 5 - 30V<br>AC : 5 - 120V     | DC : 5 - 40mA<br>AC : 5 - 20mA   | DC : 1.5W<br>AC : 2VA        | None               | LED<br>(Red light lights up during ON)        | Core of 0.3 mm <sup>2</sup> , outer diameter of φ 4 mm, cord extended from the rear | 1.5m        | Small relay,<br>programmable<br>controller |
|                                             | AG AX105CE    |                                   |                                  |                              | Present            |                                               |                                                                                     | 5m          |                                            |
|                                             | AH AX111CE    |                                   |                                  |                              |                    |                                               |                                                                                     | 1.5m        |                                            |
|                                             | AJ AX115CE    |                                   |                                  |                              | 5m                 |                                               |                                                                                     |             |                                            |
|                                             | AE AX125CE    | DC:30V or less<br>AC:120V or less | DC:40V or less<br>AC:20V or less | None                         | None               | 5m                                            |                                                                                     |             |                                            |
|                                             | AK AX11ACE    | AC : 5 - 120V                     | 5 - 20mA                         | 2VA                          | Present            | LED<br>(Red light lights up during ON)        | 4-pin connector, type<br>Rear wiring                                                | 0.5m        |                                            |
|                                             | AL AX11BCE    | DC : 5 - 30V                      | 5 - 40mA                         | 1.5W                         |                    |                                               |                                                                                     | 0.5m        |                                            |
|                                             | AM AX135CE    | AC : 90 - 240V<br>DC : 90 - 240V  | 5 - 300mA                        | NC contact output            | Present            | LED<br>(Red lamp lights up during OFF)        | Core of 0.3mm <sup>2</sup> , outer diameter of φ 4mm, cord extended from the rear   | 5m          |                                            |
|                                             | S SR405       | AC : 80 - 220V                    | 2 - 300mA                        | 30VA                         | Present            | Neon lamp<br>(Red light lights up during OFF) | Core of 0.5mm <sup>2</sup> , outer diameter of φ 6mm, cord extended from the rear   | 5m          |                                            |
| No<br>con-<br>tact                          | BE AX201CE-1  | DC : 5 - 30V                      | 5 - 40mA                         | —                            | Present            | LED<br>(Red light lights up during ON)        | Core of 0.3mm <sup>2</sup> , outer diameter of φ 4 mm, cord extended from the rear  | 1.5m        | Small relay,<br>programmable<br>controller |
|                                             | BF AX205CE-1  |                                   |                                  |                              |                    | LED<br>(2-lamp type in red/green)             |                                                                                     | 5m          |                                            |
|                                             | CE AX211CE-1  |                                   |                                  |                              |                    |                                               |                                                                                     | 1.5m        |                                            |
|                                             | CF AX215CE-1  |                                   |                                  |                              |                    |                                               |                                                                                     | 5m          |                                            |
| No<br>con-<br>tact<br>(CE<br>cofor-<br>med) | CT AX211CE-1  | DC : 5 - 30V                      | 5 - 40mA                         | —                            | Present            | LED<br>(2-lamp type in red/green)             | Core of 0.3mm <sup>2</sup> , outer diameter of φ 4 mm, cord extended from the rear  | 1.5m        |                                            |
|                                             | CU SX215CE-1  |                                   |                                  |                              |                    |                                               | 4-pin connector,<br>type Rear wiring                                                | 5m          |                                            |
|                                             | CV AX21BCE-1  |                                   |                                  |                              |                    |                                               |                                                                                     | 0.5m        |                                            |
|                                             | CW AZ211CE-1  |                                   |                                  |                              |                    |                                               | Core of 0.3mm <sup>2</sup> , outer diameter of φ 4 mm, cord extended from the top   | 1.5m        |                                            |
|                                             | CX AZ215CE-1  |                                   |                                  |                              |                    |                                               | 4-pin connector, cord extended from the top                                         | 5m          |                                            |
|                                             | CY AZ21BCE-1  |                                   |                                  |                              |                    |                                               |                                                                                     | 0.5m        |                                            |

Notes) ● For the switches without a protective circuit, be sure to provide the protective circuit (SK-100) with load devices when using induction load devices (relay, etc.).  
● AX135CE : NC contact output ; Switch off (indicator light) when detecting piston.  
● For the handling of switches, be sure to refer to the switch specifications in the end of this catalogue.  
● All the AX type switches can be mounted. For the types other than the above, refer to the switch specifications in the end of this catalogue.  
● We recommend AND UNIT (AU series) for multiple switches connected in series.

## AX TYPE SWITCH

### Cord type



## Connector type



## SR TYPE SWITCH

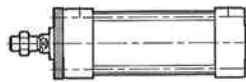


## MOUNTING TYPE

### SD Type (Basic type)



### FA Type (Rod side flange type)



### CC Type (Eye type)

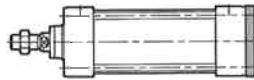
Bore  $\phi$  40 ~  $\phi$  100



### LA Type (Side lugs mounting type)



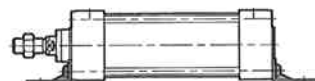
### FB Type (Head side flange type)



### CB Type (Clevis type)



### LB Type (Axial foot type)



### CA CA Type (Eye type)

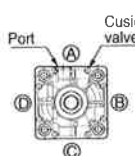


### TC Type (Intermediate trunnion type)



## ORDER OUTLINE

### 1. Standard specifications



- With cushion on both ends
- Port position (A), cushion valve position (A)
- Notes) • Please consult us, if positions designated are other than the port position (A) and the cushion valve position (A).
- In the case of Val set, the position of cushion valve on the head side is (B).

### 2. Semi-standard manufacturing range

- Double-rod type with dust cover without cushion
- Piston rod end changed (Dimension code: WA, A and KK)
- TC accessory position changed (Dimension code: PH)
- Note) For other specifications, please consult us separately.

# 10A-6 PNEUMATIC CYLINDER

## EXTERNAL DIMENSIONAL DRAWING/ SD TYPE (STANDARD TYPE)

### Double-Acting Single Rod

### Standard type

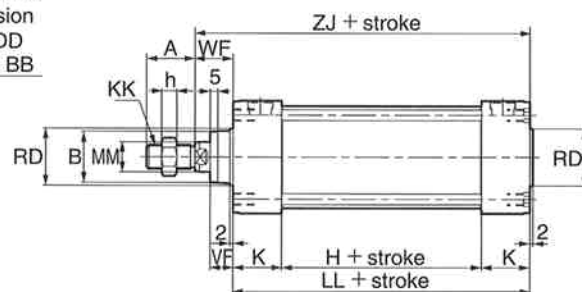
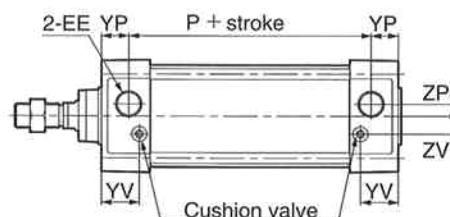
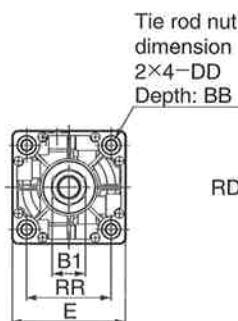
### Non-rotating type

Unit: mm

- Standard Type  $\phi 32 \sim \phi 125$
- Non-rotating type  $\phi 40 \sim \phi 100$



- Non-rotating type: Dimensions are same as those of standard type except the rod end.
- For switch set dimensions, see the switch set external dimensional drawing.
- For Val set dimensions, see the Val set external dimensional drawing.
- For rod end attachment dimensions, refer to those of relevant parts.



### Double-Acting Double Rod

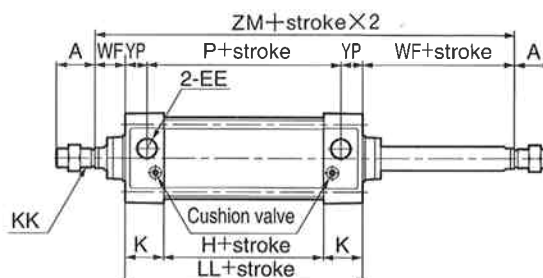
### Standard type

### Non-rotating type

Non-rotating type ( $\phi 40 \sim \phi 100$ )



Note) Hex. rod on one side, round rod on one side



- For other dimensions, refer to those of double-acting single rod.

## DIMENSION TABLE

| Code<br>Bore | A      | B         | B1 | BB | D  | DD       | E    | EE    | H  | K  | KK       | LL  | MG |
|--------------|--------|-----------|----|----|----|----------|------|-------|----|----|----------|-----|----|
| $\phi 32$    | 22(19) | $\phi 24$ | 17 | 14 | 10 | M6×1     | □44  | Rc1/8 | 31 | 31 | M10×1.25 | 93  | —  |
| $\phi 40$    | 24(21) | $\phi 30$ | 19 | 14 | 14 | M6×1     | □50  | Rc1/4 | 31 | 31 | M12×1.25 | 93  | 14 |
| $\phi 50$    | 32(29) | $\phi 34$ | 22 | 14 | 17 | M6×1     | □62  | Rc1/4 | 31 | 31 | M16×1.5  | 93  | 19 |
| $\phi 63$    | 32(29) | $\phi 34$ | 22 | 14 | 17 | M8×1.25  | □75  | Rc3/8 | 32 | 32 | M16×1.5  | 96  | 19 |
| $\phi 80$    | 40(37) | $\phi 39$ | 27 | 15 | 21 | M10×1.5  | □94  | Rc3/8 | 36 | 36 | M20×1.5  | 108 | 23 |
| $\phi 100$   | 40(37) | $\phi 46$ | 27 | 15 | 26 | M10×1.5  | □112 | Rc1/2 | 36 | 36 | M20×1.5  | 108 | 23 |
| $\phi 125$   | 54(50) | $\phi 55$ | 36 | 15 | 32 | M12×1.75 | □136 | Rc1/2 | 42 | 36 | M27×2    | 114 | —  |

| Code<br>Bore | MM        | P  | RD        | RR   | VF | WF | YP | YV   | ZJ  | ZM  | ZP | ZV | h  |
|--------------|-----------|----|-----------|------|----|----|----|------|-----|-----|----|----|----|
| $\phi 32$    | $\phi 12$ | 61 | $\phi 26$ | □33  | 15 | 25 | 16 | 25.5 | 118 | 143 | 3  | 7  | 6  |
| $\phi 40$    | $\phi 16$ | 57 | $\phi 32$ | □37  | 15 | 25 | 18 | 25.5 | 118 | 143 | 4  | 10 | 7  |
| $\phi 50$    | $\phi 20$ | 57 | $\phi 38$ | □47  | 15 | 25 | 18 | 24   | 118 | 143 | 7  | 12 | 10 |
| $\phi 63$    | $\phi 20$ | 60 | $\phi 38$ | □56  | 15 | 25 | 18 | 25   | 121 | 146 | 8  | 12 | 10 |
| $\phi 80$    | $\phi 25$ | 68 | $\phi 44$ | □70  | 21 | 35 | 20 | 29   | 143 | 178 | 11 | 16 | 12 |
| $\phi 100$   | $\phi 30$ | 68 | $\phi 50$ | □84  | 21 | 35 | 20 | 29   | 143 | 178 | 12 | 18 | 12 |
| $\phi 125$   | $\phi 35$ | 74 | $\phi 60$ | □104 | 21 | 35 | 20 | 29   | 149 | 184 | 14 | 20 | 16 |

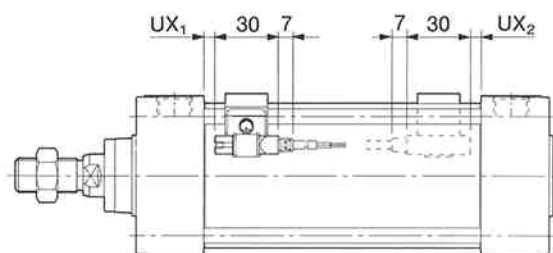
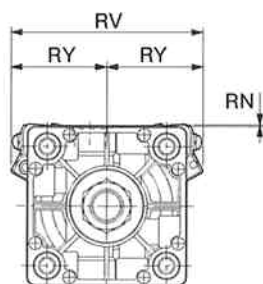
Parenthesized figure of A is the dimension of screw length.

# PNEUMATIC CYLINDER 10A-6

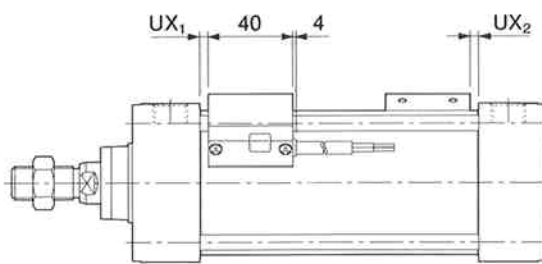
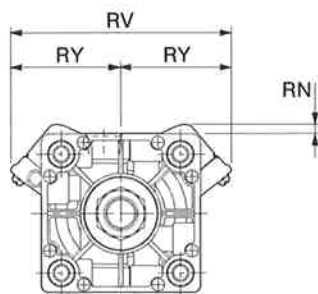
## EXTERNAL DIMENSIONAL DRAWING/SWITCH SET

Unit: mm

### ● AX Type



### ● SR Type



**DIMENSION TABLE**

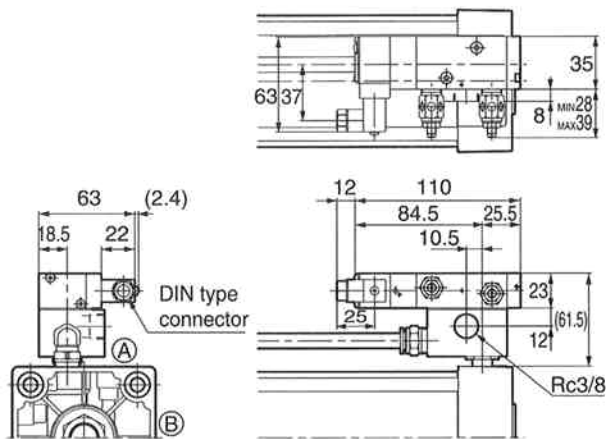
| Code<br>Bore | RY      |         | RV      |         | RN      |         | UX <sub>1</sub> |         | UX <sub>2</sub> |         |
|--------------|---------|---------|---------|---------|---------|---------|-----------------|---------|-----------------|---------|
|              | AX type | SR type | AX type | SR type | AX type | SR type | AX type         | SR type | AX type         | SR type |
| φ 32         | 32      | 38      | 64      | 76      | 4       | 5       | 8               | 2       | 4               | 0       |
| φ 40         | 36      | 40      | 72      | 80      | 3       | 4       | 8               | 2       | 4               | 0       |
| φ 50         | 40      | 45      | 80      | 90      | 2       | 3       | 9               | 2       | 5               | 0       |
| φ 63         | 47      | 52      | 94      | 104     | 2       | 5       | 9               | 2       | 5               | 0       |
| φ 80         | 52      | 60      | 104     | 120     | 0       | 2       | 11              | 4       | 6               | 0       |
| φ 100        | 60      | 67      | 120     | 134     | 0       | 0       | 11              | 4       | 6               | 0       |
| φ 125        | 72      | 76      | 144     | 152     | 0       | 0       | 13              | 4       | 9               | 3       |

Note) The dimension UX indicates the optimum switch mounting position at the detection of the stroke end.

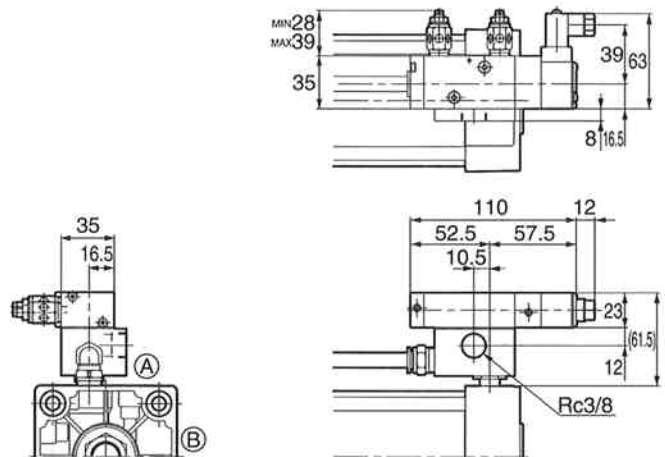
# 10A-6 PNEUMATIC CYLINDER

## EXTERNAL DIMENSION/VAL SET

### Push type during current passing

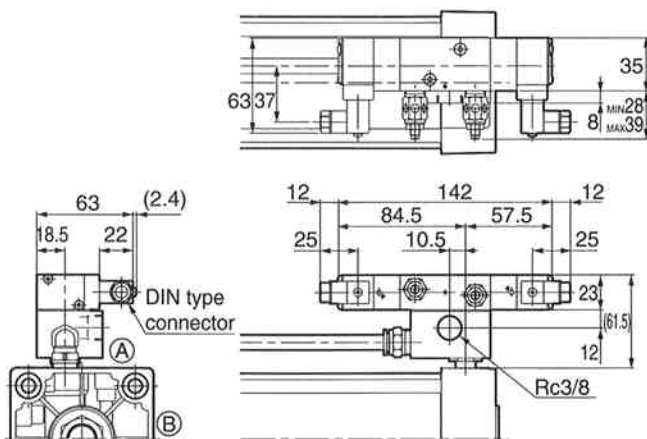


### Pull type during current passing



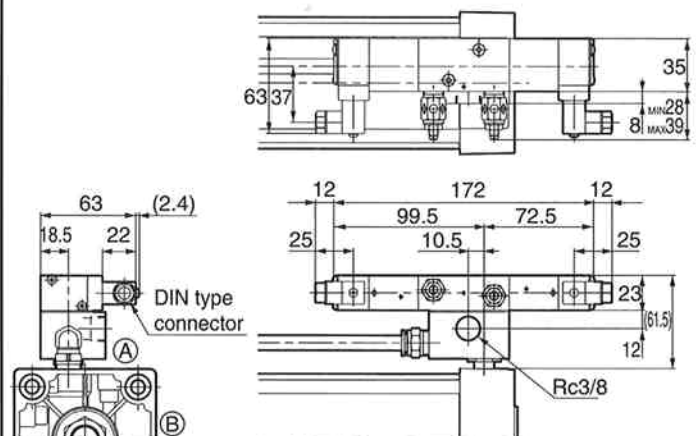
Unit: mm

### Self-holding type



### 3-position closed center type

### 3-position exhaust center type



- Positions of cushion valves on the rod side and the head side are (A) and (B) respectively.
- For cylinder body dimensions, refer to the external dimensional drawings of mounting types.

## Order Key for valve

### ● Valve assembly kit order (With muffler, block and tube)

| VS552                      | R                                        | MM                           | Voltage                         | Wiring method               | Bore                                                          |
|----------------------------|------------------------------------------|------------------------------|---------------------------------|-----------------------------|---------------------------------------------------------------|
| <input type="checkbox"/> R | 2-position single solenoid type (Return) | <input type="checkbox"/> 40  | <input type="checkbox"/> AC100V | <input type="checkbox"/> R  | Lead wire type (AC type)                                      |
| <input type="checkbox"/> D | 2-position double solenoid type (Detent) | <input type="checkbox"/> 63  | <input type="checkbox"/> AC200V | <input type="checkbox"/> RK | Lead wire type/with protective circuit (DC type)              |
| <input type="checkbox"/> C | 3-position closed center type            | <input type="checkbox"/> 100 | <input type="checkbox"/> DC24V  | <input type="checkbox"/> DL | DIN terminal type/with lamp (AC type)                         |
| <input type="checkbox"/> E | 3-position exhaust center type           |                              |                                 | <input type="checkbox"/> DW | DIN terminal type/with lamp/with protective circuit (DC type) |

Note) The kit includes the valve, muffler, piping block and tube (1m). The valve and the block are not assembled in shipping. Also be careful for the valve direction in mounting on the cylinder at the single solenoid type.

### ● Valve kit order (With bolt and gasket)

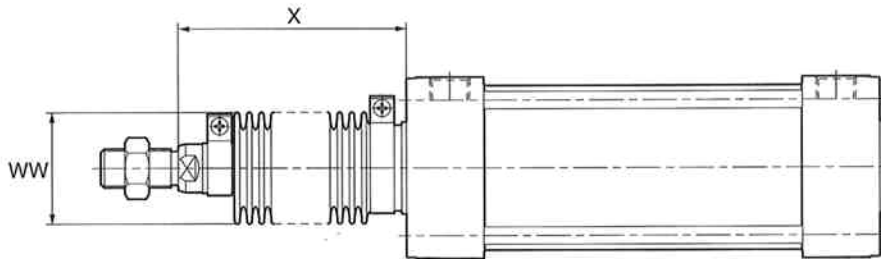
| VS552 —                    |                                          | R | MM | Voltage                     | Wiring method                                                 |
|----------------------------|------------------------------------------|---|----|-----------------------------|---------------------------------------------------------------|
| <input type="checkbox"/> R | 2-position single solenoid type (Return) |   |    |                             |                                                               |
| <input type="checkbox"/> D | 2-position double solenoid type (Detent) |   |    |                             |                                                               |
| <input type="checkbox"/> C | 3-position closed center type            |   |    |                             |                                                               |
| <input type="checkbox"/> E | 3-position exhaust center type           |   |    |                             |                                                               |
| <input type="checkbox"/> I | AC100V                                   |   |    | <input type="checkbox"/> R  | Lead wire type (AC type)                                      |
| <input type="checkbox"/> 2 | AC200V                                   |   |    | <input type="checkbox"/> RK | Lead wire type/with protective circuit (DC type)              |
| <input type="checkbox"/> 8 | DC24V                                    |   |    | <input type="checkbox"/> DL | DIN terminal type/with lamp (AC type)                         |
| <input type="checkbox"/> W |                                          |   |    | <input type="checkbox"/> DW | DIN terminal type/with lamp/with protective circuit (DC type) |

Note) Bolt and gasket attached to the valve order.

# PNEUMATIC CYLINDER 10A-6

## EXTERNAL DIMENSIONAL DRAWING/WITH DUST COVER

Unit: mm



|                 | Standard        | Semi-standard |       |
|-----------------|-----------------|---------------|-------|
| Material        | Nylon tarpaulin | Chloroprene   | CONEX |
| Heat resistance | 80°C            | 100°C         | 200°C |

Notes) ● CONEX is a registered trade mark of TEIJIN Limited.  
 ● Heat resistance indicates the heat resistant temperature of dust cover. It differs from the heat resistant temperature of cylinder body.  
 ● Dust cover will be sent after it is mounted on the cylinder.

### DIMENSION TABLE (NYLON TARPAULIN • CHLOROPRENE)

| Code<br>Bore | WW   | X (Standard stroke) |    |     |     |     |     |     |     |     |     |     |     | X (other than standard stroke) |
|--------------|------|---------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------------------------------|
|              |      | 50                  | 75 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | Nylon tarpaulin · chloroprene  |
| φ 32         | φ 36 | 62                  | 70 | 79  | 87  | 95  | 112 | 129 | 145 | 162 | 179 | 195 | 212 | $\frac{1}{3}$ stroke + 45      |
| φ 40         | φ 41 | 62                  | 70 | 79  | 87  | 95  | 112 | 129 | 145 | 162 | 179 | 195 | 212 |                                |
| φ 50         | φ 47 | 67                  | 75 | 84  | 92  | 100 | 117 | 134 | 150 | 167 | 184 | 200 | 217 | $\frac{1}{3}$ stroke + 50      |
| φ 63         | φ 47 | 67                  | 75 | 84  | 92  | 100 | 117 | 134 | 150 | 167 | 184 | 200 | 217 |                                |
| φ 80         | φ 56 | 68                  | 74 | 80  | 87  | 93  | 105 | 118 | 130 | 143 | 155 | 168 | 180 | $\frac{1}{4}$ stroke + 55      |
| φ 100        | φ 61 | 68                  | 74 | 80  | 87  | 93  | 105 | 118 | 130 | 143 | 155 | 168 | 180 |                                |
| φ 125        | φ 71 | 68                  | 74 | 80  | 87  | 93  | 105 | 118 | 130 | 143 | 155 | 168 | 180 |                                |

Note) Fractions less than decimal point shall be raised.

### DIMENSION TABLE (CONEX)

| Code<br>Bore | WW   | X (Standard stroke) |    |     |     |     |     |     |     |     |     |     |     | X (other than standard stroke) |
|--------------|------|---------------------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------------------------------|
|              |      | 50                  | 75 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | CONEX                          |
| φ 32         | φ 61 | 70                  | 83 | 95  | 108 | 120 | 145 | 170 | 195 | 220 | 245 | 270 | 295 | $\frac{1}{2}$ stroke + 45      |
| φ 40         | φ 61 | 70                  | 83 | 95  | 108 | 120 | 145 | 170 | 195 | 220 | 245 | 270 | 295 |                                |
| φ 50         | φ 61 | 75                  | 88 | 100 | 113 | 125 | 150 | 175 | 200 | 225 | 250 | 275 | 300 | $\frac{1}{2}$ stroke + 50      |
| φ 63         | φ 61 | 75                  | 88 | 100 | 113 | 125 | 150 | 175 | 200 | 225 | 250 | 275 | 300 |                                |
| φ 80         | φ 61 | 75                  | 85 | 95  | 105 | 115 | 135 | 155 | 175 | 195 | 215 | 235 | 255 | $\frac{2}{5}$ stroke + 55      |
| φ 100        | φ 61 | 75                  | 85 | 95  | 105 | 115 | 135 | 155 | 175 | 195 | 215 | 235 | 255 |                                |
| φ 125        | φ 71 | 75                  | 85 | 95  | 105 | 115 | 135 | 155 | 175 | 195 | 215 | 235 | 255 |                                |

Note) Fractions less than decimal point shall be raised.

# 10A-6 PNEUMATIC CYLINDER

## EXTERNAL DIMENSIONAL DRAWING/LA TYPE (SIDE LUGS MOUNTING TYPE)

Unit: mm

### Double-Acting Single Rod

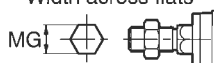
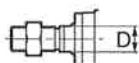
#### Standard type

#### Non-rotating type

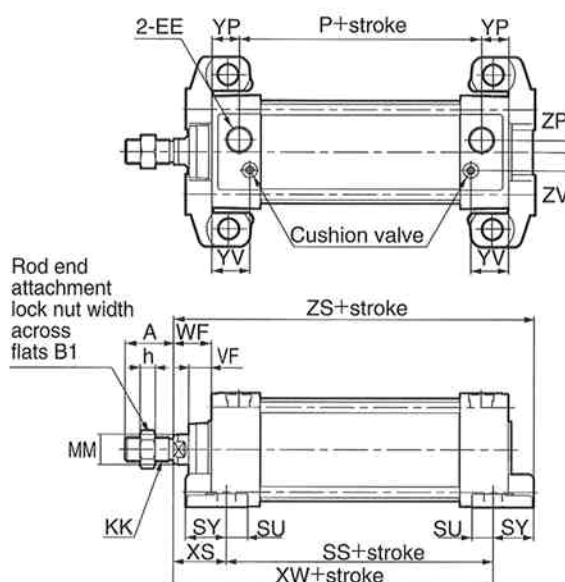
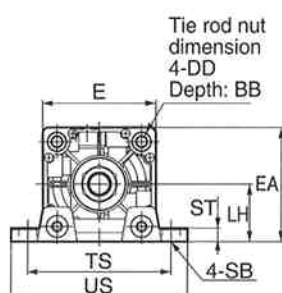
● Standard  $\phi 32 \sim \phi 125$

Non-rotating type  $\phi 40 \sim \phi 100$

Hex. rod  
Width across flats



- For other dimensions, see those of SD type (basic type).
- Non-rotating type: Dimensions are same as those of standard type except the rod end shown above.
- For rod end attachment dimensions, refer to those of relevant parts.
- For switch set dimensions, see the switch set external dimensional drawing.
- For Val set dimensions, see the Val set external dimensional drawing.



### Double-Acting Double Rod

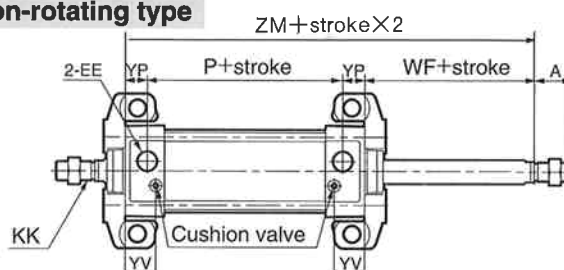
#### Standard type

#### Non-rotating type

Non-rotating type ( $\phi 40 \sim \phi 100$ )



Note) Hex. rod on one side,  
round rod on one side



- For other dimensions, refer to those of double-acting single rod.

## DIMENSION TABLE

| Code<br>Bore | A      | B1 | BB | D  | DD       | E    | EA   | EE    | KK       | LH | MG | MM        | P  | SB        | SS |
|--------------|--------|----|----|----|----------|------|------|-------|----------|----|----|-----------|----|-----------|----|
| $\phi 32$    | 22(19) | 17 | 14 | 10 | M6×1     | □44  | 44   | Rc1/8 | M10×1.25 | 22 | —  | $\phi 12$ | 61 | $\phi 9$  | 73 |
| $\phi 40$    | 24(21) | 19 | 14 | 14 | M6×1     | □50  | 50   | Rc1/4 | M12×1.25 | 25 | 14 | $\phi 16$ | 57 | $\phi 12$ | 73 |
| $\phi 50$    | 32(29) | 22 | 14 | 17 | M6×1     | □62  | 62   | Rc1/4 | M16×1.5  | 31 | 19 | $\phi 20$ | 57 | $\phi 12$ | 73 |
| $\phi 63$    | 32(29) | 22 | 14 | 17 | M8×1.25  | □75  | 75.5 | Rc3/8 | M16×1.5  | 38 | 19 | $\phi 20$ | 60 | $\phi 12$ | 76 |
| $\phi 80$    | 40(37) | 27 | 15 | 21 | M10×1.5  | □94  | 94   | Rc3/8 | M20×1.5  | 47 | 23 | $\phi 25$ | 68 | $\phi 14$ | 82 |
| $\phi 100$   | 40(37) | 27 | 15 | 26 | M10×1.5  | □112 | 113  | Rc1/2 | M20×1.5  | 57 | 23 | $\phi 30$ | 68 | $\phi 14$ | 82 |
| $\phi 125$   | 54(50) | 36 | 15 | 32 | M12×1.75 | □136 | 137  | Rc1/2 | M27×2    | 69 | —  | $\phi 35$ | 74 | $\phi 18$ | 80 |

| Code<br>Bore | ST | SU | SY | TS  | US  | VF | WF | XS | XW  | YP | YV   | ZM  | ZP | ZS  | ZV | h  |
|--------------|----|----|----|-----|-----|----|----|----|-----|----|------|-----|----|-----|----|----|
| $\phi 32$    | 8  | 14 | 23 | 63  | 81  | 15 | 25 | 35 | 108 | 16 | 25.5 | 143 | 3  | 131 | 7  | 6  |
| $\phi 40$    | 8  | 14 | 23 | 70  | 92  | 15 | 25 | 35 | 108 | 18 | 25.5 | 143 | 4  | 131 | 10 | 7  |
| $\phi 50$    | 9  | 14 | 25 | 83  | 105 | 15 | 25 | 35 | 108 | 18 | 24   | 143 | 7  | 133 | 12 | 10 |
| $\phi 63$    | 9  | 14 | 27 | 95  | 117 | 15 | 25 | 35 | 111 | 18 | 25   | 146 | 8  | 138 | 12 | 10 |
| $\phi 80$    | 13 | 18 | 34 | 121 | 147 | 21 | 35 | 48 | 130 | 20 | 29   | 178 | 11 | 164 | 16 | 12 |
| $\phi 100$   | 14 | 18 | 38 | 140 | 168 | 21 | 35 | 48 | 130 | 20 | 29   | 178 | 12 | 168 | 18 | 12 |
| $\phi 125$   | 18 | 21 | 46 | 175 | 213 | 21 | 35 | 52 | 132 | 20 | 29   | 184 | 14 | 178 | 20 | 16 |

Parenthesized figure of A is the dimension of screw length.

# PNEUMATIC CYLINDER 10A-6

## EXTERNAL DIMENSIONAL DRAWING/LB TYPE (AXIAL FOOT TYPE)

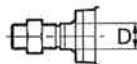
Unit: mm

### Double-Acting Single Rod

#### Standard type

#### Non-rotating type

- Standard  $\phi 32 \sim \phi 125$

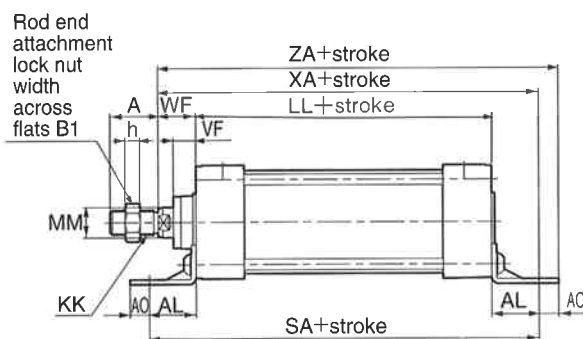
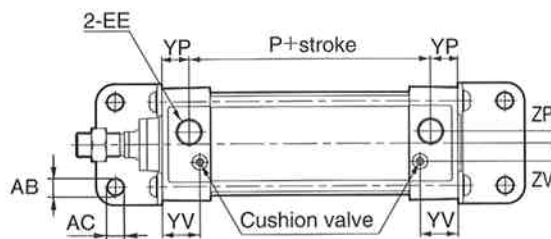
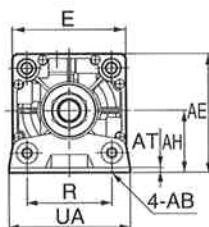


- Non-rotating type  $\phi 40 \sim \phi 100$

Hex. rod  
Width across flats



- For other dimensions, refer to those of SD type (basic type).
- Non-rotating type: Dimensions are same as those of standard type except the rod end shown above.
- For rod end attachment dimensions, refer to those of relevant parts.
- For switch set dimensions, see the switch set external dimensional drawing.
- For Val set dimensions, see the Val set external dimensional drawing.



### Double-Acting Double Rod

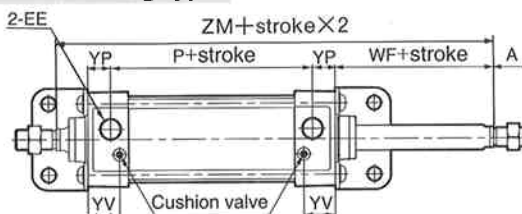
#### Standard type

#### Non-rotating type

- Non-rotating type ( $\phi 40 \sim \phi 100$ )



Note) Hex. rod on one side,  
round rod on one side



- For other dimensions, refer to those of double-acting single rod.

## DIMENSION TABLE

| Code<br>Bore | A      | AB | AC | AE   | AH   | AL   | AO   | AT  | B1 | D  | DD       | E    | EE    | H  | K  | KK       |
|--------------|--------|----|----|------|------|------|------|-----|----|----|----------|------|-------|----|----|----------|
| $\phi 32$    | 22(19) | 9  | 11 | 50   | 28   | 20.5 | 9.5  | 3.2 | 17 | 10 | M6×1     | □44  | Rc1/8 | 31 | 31 | M10×1.25 |
| $\phi 40$    | 24(21) | 11 | 13 | 55   | 30   | 23.5 | 12.5 | 3.2 | 19 | 14 | M6×1     | □50  | Rc1/4 | 31 | 31 | M12×1.25 |
| $\phi 50$    | 32(29) | 11 | 13 | 67.5 | 36.5 | 28   | 12   | 3.2 | 22 | 17 | M6×1     | □62  | Rc1/4 | 31 | 31 | M16×1.5  |
| $\phi 63$    | 32(29) | 11 | 13 | 78.5 | 41   | 31   | 13   | 3.2 | 22 | 17 | M8×1.25  | □75  | Rc3/8 | 32 | 32 | M16×1.5  |
| $\phi 80$    | 40(37) | 14 | 16 | 96   | 49   | 30   | 16   | 4   | 27 | 21 | M10×1.5  | □94  | Rc3/8 | 36 | 36 | M20×1.5  |
| $\phi 100$   | 40(37) | 14 | 16 | 113  | 57   | 30   | 16   | 4   | 27 | 26 | M10×1.5  | □112 | Rc1/2 | 36 | 36 | M20×1.5  |
| $\phi 125$   | 54(50) | 18 | 20 | 138  | 70   | 35   | 18   | 6   | 36 | 32 | M12×1.75 | □136 | Rc1/2 | 42 | 36 | M27×2    |

| Code<br>Bore | LL  | MG | MM        | P  | R   | SA  | UA  | VF | WF | XA    | YP | YV   | ZA  | ZM  | ZP | ZV | h  |
|--------------|-----|----|-----------|----|-----|-----|-----|----|----|-------|----|------|-----|-----|----|----|----|
| $\phi 32$    | 93  | —  | $\phi 12$ | 61 | 33  | 134 | 50  | 15 | 25 | 138.5 | 16 | 25.5 | 148 | 143 | 3  | 7  | 6  |
| $\phi 40$    | 93  | 14 | $\phi 16$ | 57 | 36  | 140 | 57  | 15 | 25 | 141.5 | 18 | 25.5 | 154 | 143 | 4  | 10 | 7  |
| $\phi 50$    | 93  | 19 | $\phi 20$ | 57 | 47  | 149 | 68  | 15 | 25 | 146   | 18 | 24   | 158 | 143 | 7  | 12 | 10 |
| $\phi 63$    | 96  | 19 | $\phi 20$ | 60 | 56  | 158 | 80  | 15 | 25 | 152   | 18 | 25   | 165 | 146 | 8  | 12 | 10 |
| $\phi 80$    | 108 | 23 | $\phi 25$ | 68 | 70  | 168 | 97  | 21 | 35 | 173   | 20 | 29   | 189 | 178 | 11 | 16 | 12 |
| $\phi 100$   | 108 | 23 | $\phi 30$ | 68 | 84  | 168 | 112 | 21 | 35 | 173   | 20 | 29   | 189 | 178 | 12 | 18 | 12 |
| $\phi 125$   | 114 | —  | $\phi 35$ | 74 | 104 | 184 | 136 | 21 | 35 | 184   | 20 | 29   | 202 | 184 | 14 | 20 | 16 |

Parenthesized figure of A is the dimension of screw length.

# 10A-6 PNEUMATIC CYLINDER

## EXTERNAL DIMENSIONAL DRAWING/FA TYPE (ROD SIDE FLANGE TYPE)

Unit: mm

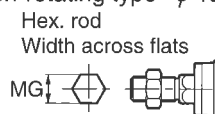
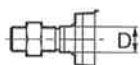
### Double-Acting Single Rod

#### Standard type

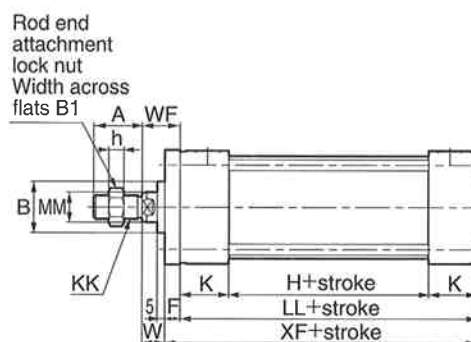
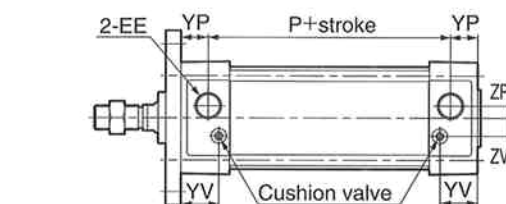
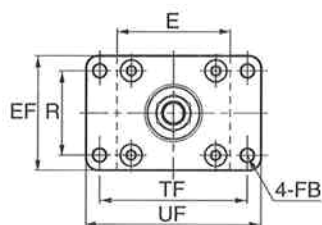
#### Non-rotating type

● Standard  $\phi 32 \sim \phi 125$

Non-rotating type  $\phi 40 \sim \phi 100$



- For other dimensions, refer to those of SD type (basic type).
- Non-rotating type: Dimensions are same as those of standard type except the rod end shown above.
- For rod end attachment dimensions, refer to those of relevant parts.
- For switch set dimensions, see the switch set external dimensional drawing.
- For Val set dimensions, see the Val set external dimensional drawing.



### Double-Acting Double Rod

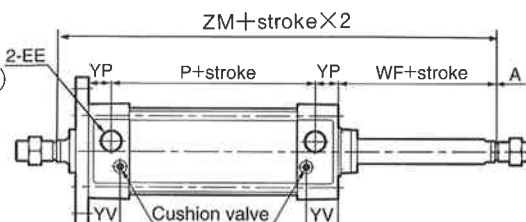
#### Standard type

#### Non-rotating type

Non-rotating type ( $\phi 40 \sim \phi 100$ )



Note) Hex. rod on one side,  
round rod on one side



- For other dimensions, refer to those of double-acting single rod.

## DIMENSION TABLE

| Code<br>Bore | A      | B         | B1 | D  | DD       | E    | EE    | EF  | F  | FB        | H  | K  | KK       | LL  |
|--------------|--------|-----------|----|----|----------|------|-------|-----|----|-----------|----|----|----------|-----|
| $\phi 32$    | 22(19) | $\phi 24$ | 17 | 10 | M6X1     | □44  | Rc1/8 | 47  | 10 | $\phi 7$  | 31 | 31 | M10X1.25 | 93  |
| $\phi 40$    | 24(21) | $\phi 30$ | 19 | 14 | M6X1     | □50  | Rc1/4 | 52  | 10 | $\phi 7$  | 31 | 31 | M12X1.25 | 93  |
| $\phi 50$    | 32(29) | $\phi 34$ | 22 | 17 | M6X1     | □62  | Rc1/4 | 65  | 10 | $\phi 9$  | 31 | 31 | M16X1.5  | 93  |
| $\phi 63$    | 32(29) | $\phi 34$ | 22 | 17 | M8X1.25  | □75  | Rc3/8 | 76  | 10 | $\phi 9$  | 32 | 32 | M16X1.5  | 96  |
| $\phi 80$    | 40(37) | $\phi 39$ | 27 | 21 | M10X1.5  | □94  | Rc3/8 | 95  | 16 | $\phi 12$ | 36 | 36 | M20X1.5  | 108 |
| $\phi 100$   | 40(37) | $\phi 46$ | 27 | 26 | M10X1.5  | □112 | Rc1/2 | 115 | 16 | $\phi 12$ | 36 | 36 | M20X1.5  | 108 |
| $\phi 125$   | 54(50) | $\phi 55$ | 36 | 32 | M12X1.75 | □136 | Rc1/2 | 138 | 16 | $\phi 14$ | 42 | 36 | M27X2    | 114 |

| Code<br>Bore | MG | MM        | P  | R   | TF  | UF  | W  | WF | XF  | YP | YV   | ZM  | ZP | ZV | h  |
|--------------|----|-----------|----|-----|-----|-----|----|----|-----|----|------|-----|----|----|----|
| $\phi 32$    | —  | $\phi 12$ | 61 | 33  | 58  | 72  | 15 | 25 | 103 | 16 | 25.5 | 143 | 3  | 7  | 6  |
| $\phi 40$    | 14 | $\phi 16$ | 57 | 36  | 70  | 84  | 15 | 25 | 103 | 18 | 25.5 | 143 | 4  | 10 | 7  |
| $\phi 50$    | 19 | $\phi 20$ | 57 | 47  | 86  | 104 | 15 | 25 | 103 | 18 | 24   | 143 | 7  | 12 | 10 |
| $\phi 63$    | 19 | $\phi 20$ | 60 | 56  | 98  | 116 | 15 | 25 | 106 | 18 | 25   | 146 | 8  | 12 | 10 |
| $\phi 80$    | 23 | $\phi 25$ | 68 | 70  | 119 | 143 | 19 | 35 | 124 | 20 | 29   | 178 | 11 | 16 | 12 |
| $\phi 100$   | 23 | $\phi 30$ | 68 | 84  | 138 | 162 | 19 | 35 | 124 | 20 | 29   | 178 | 12 | 18 | 12 |
| $\phi 125$   | —  | $\phi 35$ | 74 | 104 | 168 | 196 | 19 | 35 | 130 | 20 | 29   | 184 | 14 | 20 | 16 |

Parenthesized figure of A is the dimension of screw length.

# PNEUMATIC CYLINDER 10A-6

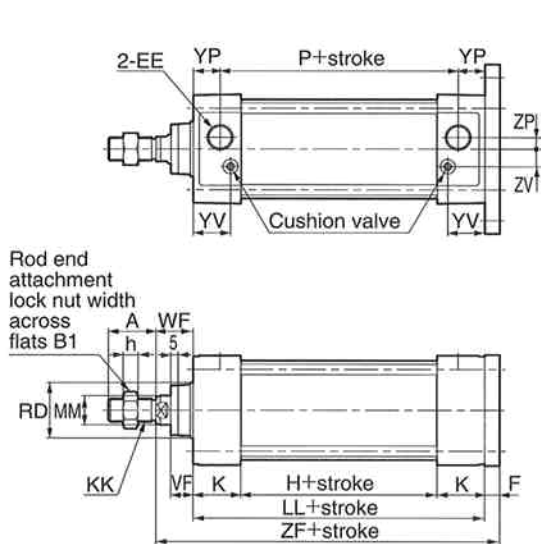
## EXTERNAL DIMENSIONAL DRAWING/FB TYPE (HEAD SIDE FLANGE TYPE)

Unit: mm

Double-Acting Single Rod

Standard type

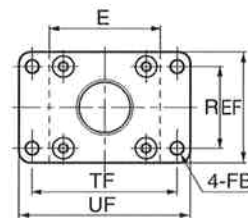
Non-rotating type



●Standard  $\phi 32 \sim \phi 125$

Non-rotating type  $\phi 40 \sim \phi 100$

Hex. rod  
Width across flats



- For other dimensions, see those of SD type (basic type).
- Non-rotating type: Dimensions are same as those of standard type except the rod end shown above.
- For rod end attachment dimensions, refer to those of relevant parts.
- For switch set dimensions, see the switch set external dimensional drawing.
- For Val set dimensions, see the Val set external dimensional drawing.

### DIMENSION TABLE

| Code<br>Bore | A      | B1 | D  | DD       | E             | EE    | EF  | F  | FB        | H  | K  | KK       | LL  | MG |
|--------------|--------|----|----|----------|---------------|-------|-----|----|-----------|----|----|----------|-----|----|
| $\phi 32$    | 22(19) | 17 | 10 | M6X1     | $\square 44$  | Rc1/8 | 47  | 10 | $\phi 7$  | 31 | 31 | M10X1.25 | 93  | —  |
| $\phi 40$    | 24(21) | 19 | 14 | M6X1     | $\square 50$  | Rc1/4 | 52  | 10 | $\phi 7$  | 31 | 31 | M12X1.25 | 93  | 14 |
| $\phi 50$    | 32(29) | 22 | 17 | M6X1     | $\square 62$  | Rc1/4 | 65  | 10 | $\phi 9$  | 31 | 31 | M16X1.5  | 93  | 19 |
| $\phi 63$    | 32(29) | 22 | 17 | M8X1.25  | $\square 75$  | Rc3/8 | 76  | 10 | $\phi 9$  | 32 | 32 | M16X1.5  | 96  | 19 |
| $\phi 80$    | 40(37) | 27 | 21 | M10X1.5  | $\square 94$  | Rc3/8 | 95  | 16 | $\phi 12$ | 36 | 36 | M20X1.5  | 108 | 23 |
| $\phi 100$   | 40(37) | 27 | 26 | M10X1.5  | $\square 112$ | Rc1/2 | 115 | 16 | $\phi 12$ | 36 | 36 | M20X1.5  | 108 | 23 |
| $\phi 125$   | 54(50) | 36 | 32 | M12X1.75 | $\square 136$ | Rc1/2 | 138 | 16 | $\phi 14$ | 42 | 36 | M27X2    | 114 | —  |

| Code<br>Bore | MM        | P  | R   | RD        | TF  | UF  | VF | WF | YP | YV   | ZF  | ZP | ZV | h  |
|--------------|-----------|----|-----|-----------|-----|-----|----|----|----|------|-----|----|----|----|
| $\phi 32$    | $\phi 12$ | 61 | 33  | $\phi 26$ | 58  | 72  | 15 | 25 | 16 | 25.5 | 128 | 3  | 7  | 6  |
| $\phi 40$    | $\phi 16$ | 57 | 36  | $\phi 32$ | 70  | 84  | 15 | 25 | 18 | 25.5 | 128 | 4  | 10 | 7  |
| $\phi 50$    | $\phi 20$ | 57 | 47  | $\phi 38$ | 86  | 104 | 15 | 25 | 18 | 24   | 128 | 7  | 12 | 10 |
| $\phi 63$    | $\phi 20$ | 60 | 56  | $\phi 38$ | 98  | 116 | 15 | 25 | 18 | 25   | 131 | 8  | 12 | 10 |
| $\phi 80$    | $\phi 25$ | 68 | 70  | $\phi 44$ | 119 | 143 | 21 | 35 | 20 | 29   | 159 | 11 | 16 | 12 |
| $\phi 100$   | $\phi 30$ | 68 | 84  | $\phi 50$ | 138 | 162 | 21 | 35 | 20 | 29   | 159 | 12 | 18 | 12 |
| $\phi 125$   | $\phi 35$ | 74 | 104 | $\phi 60$ | 168 | 196 | 21 | 35 | 20 | 29   | 165 | 14 | 20 | 16 |

Parenthesized figure of A is the dimension of screw length.

# 10A-6 PNEUMATIC CYLINDER

## EXTERNAL DIMENSIONAL DRAWING/CA TYPE • CC TYPE (EYE TYPE)

Unit: mm

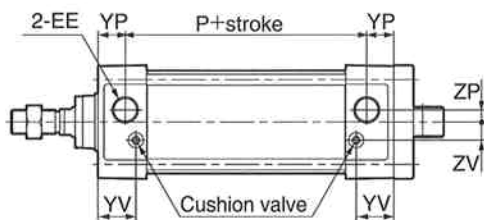
### Double-Acting Single Rod

### Standard type

### Non-rotating type

#### CA Type

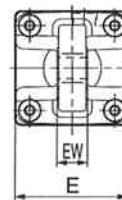
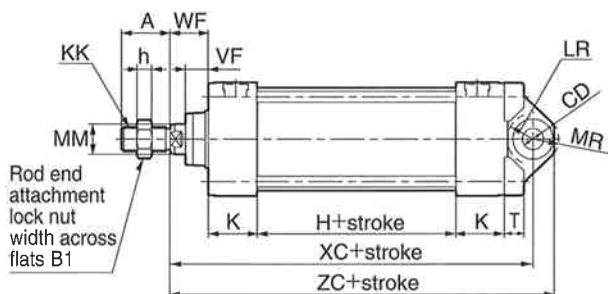
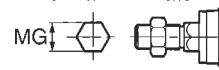
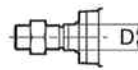
● Bore  $\phi 32 \sim \phi 125$



● Standard  $\phi 32 \sim \phi 125$

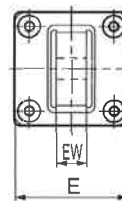
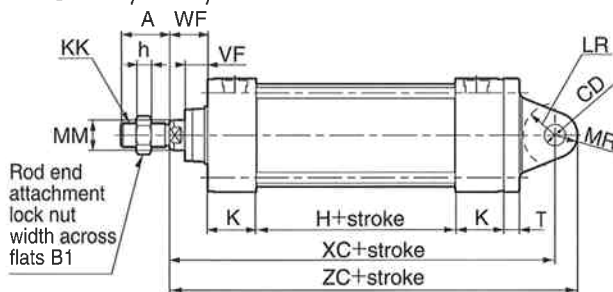
Non-rotating type  $\phi 40 \sim \phi 100$

Hex. rod  
Width across flats



#### CC Type

● Bore  $\phi 40 \sim \phi 100$



● For other dimensions, refer to those of SD Type (basic type).

● Non-rotating type: Dimensions are same as those of standard type except the rod end shown above.

● For rod end attachment dimensions, refer to those of relevant parts.

● For switch set dimensions, see the switch set external dimensional drawing.

● For Val set dimensions, see the Val set external dimensional drawing.

## DIMENSION TABLE

| Bore  | Code   | A  | B1     | CD      |         | D    | E     | EE                                | EW                              |         | H  | K        | KK  | LR      |         | MG |
|-------|--------|----|--------|---------|---------|------|-------|-----------------------------------|---------------------------------|---------|----|----------|-----|---------|---------|----|
|       |        |    |        | CA Type | CC Type |      |       |                                   | CA Type                         | CC Type |    |          |     | CA Type | CC Type |    |
| φ 32  | 22(19) | 17 | φ 12H9 | —       | 10      | □44  | Rc1/8 | 16 <sup>0</sup> <sub>-0.070</sub> | —                               | 31      | 31 | M10X1.25 | R16 | —       | —       |    |
| φ 40  | 24(21) | 19 | φ 14H9 | φ 14H9  | 14      | □50  | Rc1/4 | 20 <sup>0</sup> <sub>-0.084</sub> | 20 <sup>0</sup> <sub>-0.3</sub> | 31      | 31 | M12X1.25 | R17 | R21     | 14      |    |
| φ 50  | 32(29) | 22 | φ 14H9 | φ 14H9  | 17      | □62  | Rc1/4 | 20 <sup>0</sup> <sub>-0.084</sub> | 20 <sup>0</sup> <sub>-0.3</sub> | 31      | 31 | M16X1.5  | R17 | R21     | 19      |    |
| φ 63  | 32(29) | 22 | φ 14H9 | φ 14H9  | 17      | □75  | Rc3/8 | 20 <sup>0</sup> <sub>-0.084</sub> | 20 <sup>0</sup> <sub>-0.3</sub> | 32      | 32 | M16X1.5  | R17 | R21     | 19      |    |
| φ 80  | 40(37) | 27 | φ 20H9 | φ 20H9  | 21      | □94  | Rc3/8 | 32 <sup>0</sup> <sub>-0.100</sub> | 32 <sup>0</sup> <sub>-0.3</sub> | 36      | 36 | M20X1.5  | R25 | R25     | 23      |    |
| φ 100 | 40(37) | 27 | φ 20H9 | φ 20H9  | 26      | □112 | Rc1/2 | 32 <sup>0</sup> <sub>-0.100</sub> | 32 <sup>0</sup> <sub>-0.3</sub> | 36      | 36 | M20X1.5  | R26 | R25     | 23      |    |
| φ 125 | 54(50) | 36 | φ 20H9 | —       | 32      | □136 | Rc1/2 | 32 <sup>0</sup> <sub>-0.100</sub> | —                               | 42      | 36 | M27X2    | R30 | —       | —       |    |

| Bore  | Code | MM   | MR      |         | P  | T       |         | VF | WF | XC      |         | YP | YV   | ZC      |         | ZP | ZV | h  |
|-------|------|------|---------|---------|----|---------|---------|----|----|---------|---------|----|------|---------|---------|----|----|----|
|       |      |      | CA Type | CC Type |    | CA Type | CC Type |    |    | CA Type | CC Type |    |      | CA Type | CC Type |    |    |    |
| φ 32  |      | φ 12 | R16     | —       | 61 | 8       | —       | 15 | 25 | 137     | —       | 16 | 25.5 | 150     | —       | 3  | 7  | 6  |
| φ 40  |      | φ 16 | R17     | R14     | 57 | 8       | 11      | 15 | 25 | 137     | 152     | 18 | 25.5 | 151     | 166     | 4  | 10 | 7  |
| φ 50  |      | φ 20 | R17     | R15     | 57 | 10      | 11      | 15 | 25 | 137     | 152     | 18 | 24   | 151     | 167     | 7  | 12 | 10 |
| φ 63  |      | φ 20 | R17     | R15     | 60 | 13      | 11      | 15 | 25 | 140     | 155     | 18 | 25   | 154     | 170     | 8  | 12 | 10 |
| φ 80  |      | φ 25 | R24     | R20     | 68 | 18      | 15      | 21 | 35 | 175     | 191     | 20 | 29   | 196     | 211     | 11 | 16 | 12 |
| φ 100 |      | φ 30 | R24     | R20     | 68 | 18      | 15      | 21 | 35 | 175     | 191     | 20 | 29   | 195     | 211     | 12 | 18 | 12 |
| φ 125 |      | φ 35 | R25     | —       | 74 | 21      | —       | 21 | 35 | 181     | —       | 20 | 29   | 201     | —       | 14 | 20 | 16 |

Parenthesized figure of A is the dimension of screw length.

# PNEUMATIC CYLINDER 10A-6

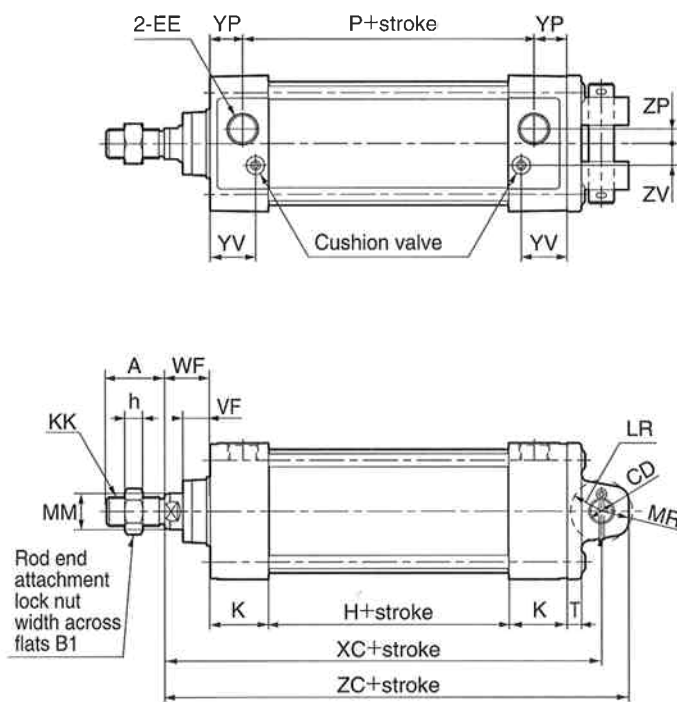
## EXTERNAL DIMENSIONAL DRAWING/CB TYPE (CLEVIS TYPE)

Unit: mm

Double-Acting Single Rod

Standard type

Non-rotating type

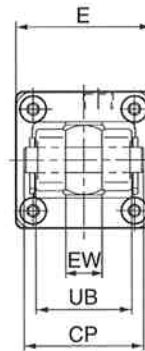
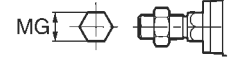
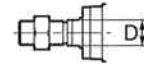


● Standard  $\phi 32 \sim \phi 125$

Non-rotating type  $\phi 40 \sim \phi 100$

Hex. rod

Width across flats



- For other dimensions, refer to those of SD Type (basic type).
- Non-rotating type: Dimensions are same as those of standard type except the rod end shown above.
- For rod end attachment dimensions, refer to those of relevant parts.
- For switch set dimensions, see the switch set external dimensional drawing.
- For Val set dimensions, see the Val set external dimensional drawing.

## DIMENSION TABLE

| Code<br>Bore | A      | B1 | CD                  | CP | D  | E             | EE    | EW                 | H  | K  | KK       | LR  | MG |
|--------------|--------|----|---------------------|----|----|---------------|-------|--------------------|----|----|----------|-----|----|
| $\phi 32$    | 22(19) | 17 | $\phi 12^{H9}_{f8}$ | 46 | 10 | $\square 44$  | Rc1/8 | $16^{+0.7}_{+0.5}$ | 31 | 31 | M10X1.25 | R17 | —  |
| $\phi 40$    | 24(21) | 19 | $\phi 14^{H9}_{f8}$ | 58 | 14 | $\square 50$  | Rc1/4 | $20^{+0.7}_{+0.5}$ | 31 | 31 | M12X1.25 | R17 | 14 |
| $\phi 50$    | 32(29) | 22 | $\phi 14^{H9}_{f8}$ | 66 | 17 | $\square 62$  | Rc1/4 | $20^{+0.7}_{+0.5}$ | 31 | 31 | M16X1.5  | R17 | 19 |
| $\phi 63$    | 32(29) | 22 | $\phi 14^{H9}_{f8}$ | 66 | 17 | $\square 75$  | Rc3/8 | $20^{+0.7}_{+0.5}$ | 32 | 32 | M16X1.5  | R17 | 19 |
| $\phi 80$    | 40(37) | 27 | $\phi 20^{H9}_{f8}$ | 78 | 21 | $\square 94$  | Rc3/8 | $32^{+0.7}_{+0.5}$ | 36 | 36 | M20X1.5  | R30 | 23 |
| $\phi 100$   | 40(37) | 27 | $\phi 20^{H9}_{f8}$ | 78 | 26 | $\square 112$ | Rc1/2 | $32^{+0.7}_{+0.5}$ | 36 | 36 | M20X1.5  | R30 | 23 |
| $\phi 125$   | 54(50) | 36 | $\phi 20^{H9}_{f8}$ | 78 | 32 | $\square 136$ | Rc1/2 | $32^{+0.7}_{+0.5}$ | 42 | 36 | M27X2    | R30 | —  |

| Code<br>Bore | MM        | MR  | P  | T  | UB | VF | WF | XC  | YP | YV   | ZC  | ZP | ZV | h  |
|--------------|-----------|-----|----|----|----|----|----|-----|----|------|-----|----|----|----|
| $\phi 32$    | $\phi 12$ | R15 | 61 | 8  | 33 | 15 | 25 | 137 | 16 | 25.5 | 150 | 3  | 7  | 6  |
| $\phi 40$    | $\phi 16$ | R15 | 57 | 8  | 45 | 15 | 25 | 137 | 18 | 25.5 | 150 | 4  | 10 | 7  |
| $\phi 50$    | $\phi 20$ | R17 | 57 | 8  | 53 | 15 | 25 | 137 | 18 | 24   | 152 | 7  | 12 | 10 |
| $\phi 63$    | $\phi 20$ | R17 | 60 | 8  | 53 | 15 | 25 | 140 | 18 | 25   | 155 | 8  | 12 | 10 |
| $\phi 80$    | $\phi 25$ | R24 | 68 | 11 | 67 | 21 | 35 | 175 | 20 | 29   | 196 | 11 | 16 | 12 |
| $\phi 100$   | $\phi 30$ | R24 | 68 | 11 | 67 | 21 | 35 | 175 | 20 | 29   | 196 | 12 | 18 | 12 |
| $\phi 125$   | $\phi 35$ | R22 | 74 | 14 | 65 | 21 | 35 | 181 | 20 | 29   | 197 | 14 | 20 | 16 |

Parenthesized figure of A is the dimension of screw length.

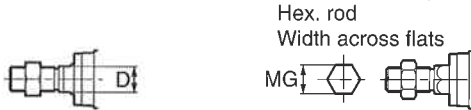
# 10A-6 PNEUMATIC CYLINDER

## EXTERNAL DIMENSIONAL DRAWING/TC TYPE (INTERMEDIATE TRUNNION TYPE)

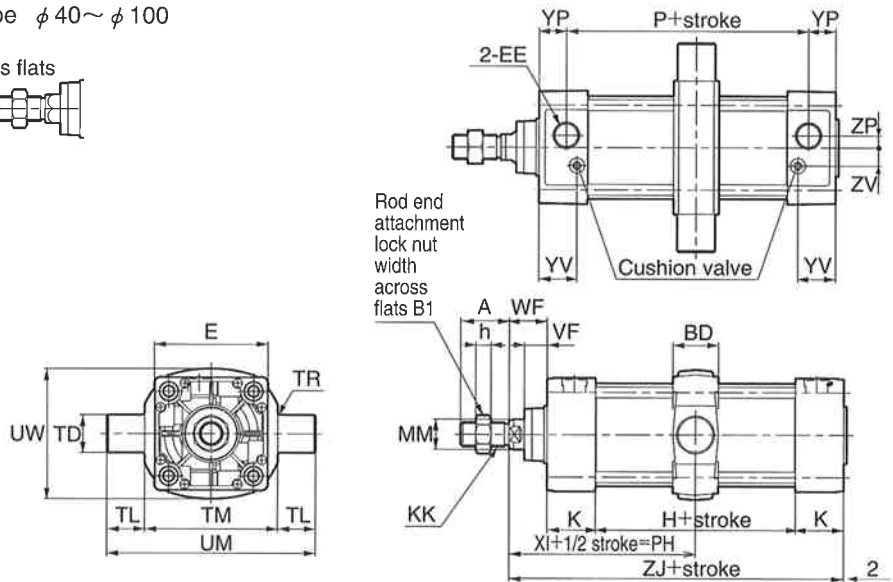
Unit: mm

### Double-Acting Single Rod      Standard type      Non-rotating type

- Standard  $\phi 32 \sim \phi 125$       Non-rotating type  $\phi 40 \sim \phi 100$



- For other dimensions, see those of SD Type (basic type).
- Non-rotating type: Dimensions are same as those of standard type except the rod end shown above.
- For rod end attachment dimensions, refer to those of relative parts.
- For switch set dimensions, see the switch set external dimensional drawing.
- For Val set dimensions, see the Val set external dimensional drawing.

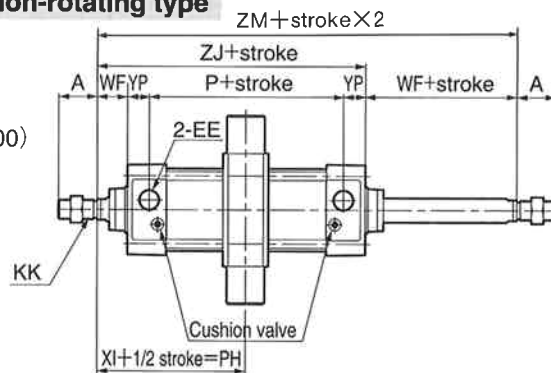


### Double-Acting Double Rod      Standard type      Non-rotating type

- Non-rotating type ( $\phi 40 \sim \phi 100$ )



Note) Hex. rod on one side, round rod on one side



- For other dimensions, refer to those of double-acting single rod.

## DIMENSION TABLE

| Code<br>Bore | A      | B1 | BD | D  | E    | EE    | H  | K  | KK       | MG | MM        | P  | Min. PH |
|--------------|--------|----|----|----|------|-------|----|----|----------|----|-----------|----|---------|
| $\phi 32$    | 22(19) | 17 | 30 | 10 | □44  | Rc1/8 | 31 | 31 | M10X1.25 | —  | $\phi 12$ | 61 | 71      |
| $\phi 40$    | 24(21) | 19 | 30 | 14 | □50  | Rc1/4 | 31 | 31 | M12X1.25 | 14 | $\phi 16$ | 57 | 71      |
| $\phi 50$    | 32(29) | 22 | 30 | 17 | □62  | Rc1/4 | 31 | 31 | M16X1.5  | 19 | $\phi 20$ | 57 | 71      |
| $\phi 63$    | 32(29) | 22 | 30 | 17 | □75  | Rc3/8 | 32 | 32 | M16X1.5  | 19 | $\phi 20$ | 60 | 72      |
| $\phi 80$    | 40(37) | 27 | 35 | 21 | □94  | Rc3/8 | 36 | 36 | M20X1.5  | 23 | $\phi 25$ | 68 | 88.5    |
| $\phi 100$   | 40(37) | 27 | 40 | 26 | □112 | Rc1/2 | 36 | 36 | M20X1.5  | 23 | $\phi 30$ | 68 | 91      |
| $\phi 125$   | 54(50) | 36 | 43 | 32 | □136 | Rc1/2 | 42 | 36 | M27X2    | —  | $\phi 35$ | 74 | 92.5    |

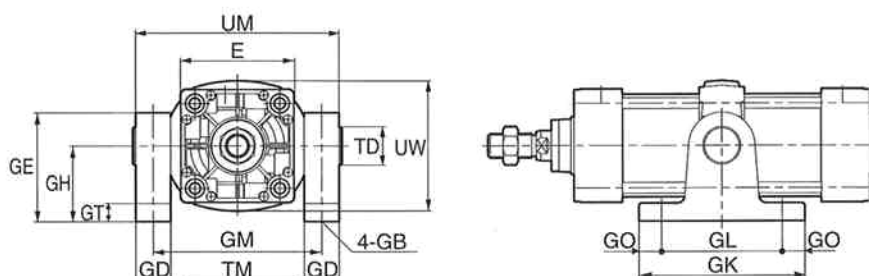
| Code<br>Bore | TD          | TL | TM  | TR   | UM  | UW  | VF | WF | XI   | YP | YV   | ZJ  | ZM  | ZP | ZV | h  |
|--------------|-------------|----|-----|------|-----|-----|----|----|------|----|------|-----|-----|----|----|----|
| $\phi 32$    | $\phi 16e9$ | 16 | 55  | R1   | 87  | 53  | 15 | 25 | 71.5 | 16 | 25.5 | 118 | 143 | 3  | 7  | 6  |
| $\phi 40$    | $\phi 25e9$ | 25 | 63  | R1.6 | 113 | 60  | 15 | 25 | 71.5 | 18 | 25.5 | 118 | 143 | 4  | 10 | 7  |
| $\phi 50$    | $\phi 25e9$ | 25 | 76  | R1.6 | 126 | 72  | 15 | 25 | 71.5 | 18 | 24   | 118 | 143 | 7  | 12 | 10 |
| $\phi 63$    | $\phi 25e9$ | 25 | 88  | R1.6 | 138 | 87  | 15 | 25 | 73   | 18 | 25   | 121 | 146 | 8  | 12 | 10 |
| $\phi 80$    | $\phi 25e9$ | 25 | 114 | R1.6 | 164 | 105 | 21 | 35 | 89   | 20 | 29   | 143 | 178 | 11 | 16 | 12 |
| $\phi 100$   | $\phi 25e9$ | 25 | 132 | R2   | 182 | 129 | 21 | 35 | 89   | 20 | 29   | 143 | 178 | 12 | 18 | 12 |
| $\phi 125$   | $\phi 25e9$ | 25 | 158 | R2   | 208 | 159 | 21 | 35 | 92   | 20 | 29   | 149 | 184 | 14 | 20 | 16 |

Parenthesized figure of A is the dimension of screw length.

# PNEUMATIC CYLINDER 10A-6

## Bracket for TC

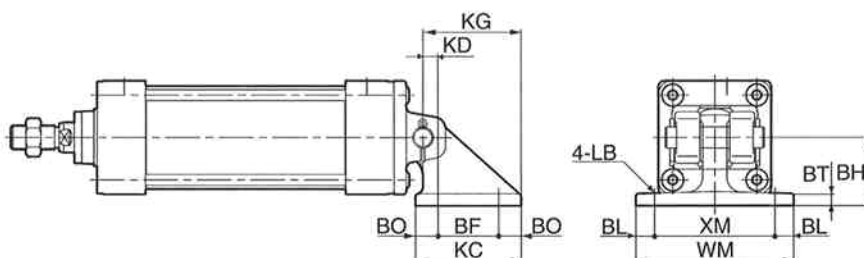
Unit: mm



**DIMENSION TABLE**

| Code<br>Bore | Part type  | E    | GB   | GD | GE  | GH | GK  | GL  | GM  | GO   | GT | TD   | TM  | UM  | UW  |
|--------------|------------|------|------|----|-----|----|-----|-----|-----|------|----|------|-----|-----|-----|
| φ 32         | BTA-16-A   | □44  | φ 9  | 15 | 56  | 40 | 81  | 60  | 70  | 10.5 | 12 | φ 16 | 55  | 87  | 53  |
| φ 40         | BTA-25-A   | □50  | φ 12 | 23 | 74  | 50 | 111 | 80  | 86  | 15.5 | 14 | φ 25 | 63  | 113 | 60  |
| φ 50         |            | □62  | φ 12 | 23 | 74  | 50 | 111 | 80  | 99  | 15.5 | 14 | φ 25 | 76  | 126 | 72  |
| φ 63         |            | □75  | φ 12 | 23 | 74  | 50 | 111 | 80  | 111 | 15.5 | 14 | φ 25 | 88  | 138 | 87  |
| φ 80         | BTA-25-1-A | □94  | φ 14 | 23 | 92  | 70 | 121 | 85  | 137 | 18   | 14 | φ 25 | 114 | 164 | 105 |
| φ 100        |            | □112 | φ 14 | 23 | 92  | 70 | 121 | 85  | 155 | 18   | 14 | φ 25 | 132 | 182 | 129 |
| φ 125        | BTA-25-2-A | □136 | φ 18 | 25 | 116 | 85 | 145 | 105 | 183 | 20   | 27 | φ 25 | 158 | 208 | 159 |

## Bracket for CB



**DIMENSION TABLE**

| Code<br>Bore | Part type  | BF | BH | BL   | BO   | BT | KC  | KD   | KG    | LB   | WM  | XM  |
|--------------|------------|----|----|------|------|----|-----|------|-------|------|-----|-----|
| φ 32         | BCA-12-A   | 40 | 35 | 10   | 11.5 | 8  | 63  | 5    | 56.5  | φ 9  | 85  | 65  |
| φ 40         | BCA-14-A   | 40 | 45 | 12.5 | 16.5 | 8  | 73  | 10   | 66.5  | φ 11 | 105 | 80  |
| φ 50         |            |    |    |      |      |    |     |      |       |      |     |     |
| φ 63         | BCA-20-A   | 65 | 60 | 15   | 16.5 | 12 | 98  | 5    | 86.5  | φ 14 | 135 | 105 |
| φ 80         |            |    |    |      |      |    |     |      |       |      |     |     |
| φ 100        | BCA-20-1-A | 77 | 75 | 17.5 | 20   | 15 | 117 | 17.5 | 114.5 | φ 18 | 145 | 110 |
| φ 125        |            |    |    |      |      |    |     |      |       |      |     |     |

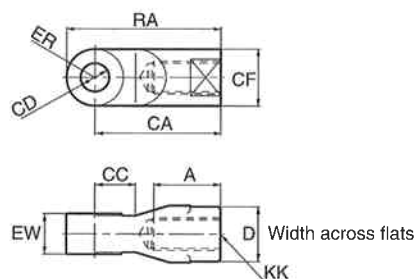
# 10A-6 PNEUMATIC CYLINDER

## ROD END ATTACHMENT

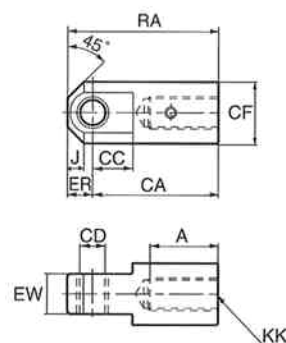
### Eye rod end attachment (T-type)

Unit: mm

$\phi 32 \sim \phi 100$



$\phi 125$

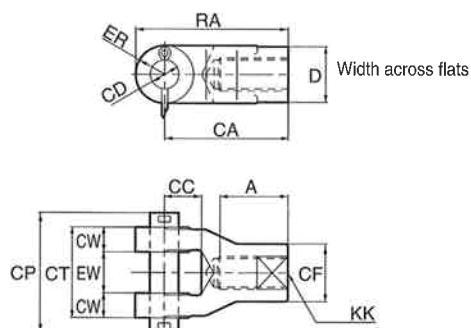


## DIMENSION TABLE

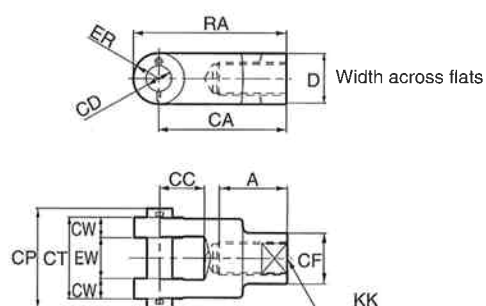
| Code<br>Bore | Part type | A  | CA  | CC | CD          | CF        | D  | ER  | EW                 | J  | KK       | RA  |
|--------------|-----------|----|-----|----|-------------|-----------|----|-----|--------------------|----|----------|-----|
| $\phi 32$    | RTA-10-A  | 23 | 55  | 20 | $\phi 12H9$ | $\phi 24$ | 24 | R12 | $16^{+0.1}_{-0.1}$ | —  | M10X1.25 | 67  |
| $\phi 40$    | RTA-12-A  | 25 | 60  | 20 | $\phi 14H9$ | $\phi 24$ | 24 | R12 | $20^{+0.1}_{-0.1}$ | —  | M12X1.25 | 72  |
| $\phi 50$    | RTA-16-A  | 33 | 60  | 20 | $\phi 14H9$ | $\phi 28$ | 27 | R14 | $20^{+0.1}_{-0.1}$ | —  | M16X1.5  | 74  |
| $\phi 63$    |           |    |     |    |             |           |    |     |                    | —  |          |     |
| $\phi 80$    | RTA-20-A  | 41 | 85  | 30 | $\phi 20H9$ | $\phi 36$ | 36 | R19 | $32^{+0.1}_{-0.1}$ | —  | M20X1.5  | 104 |
| $\phi 100$   |           |    |     |    |             |           |    |     |                    | —  |          |     |
| $\phi 125$   | RTA-27-A  | 56 | 100 | 32 | $\phi 20H9$ | $\phi 49$ | —  | 20  | $32^{+0.1}_{-0.1}$ | 13 | M27X2    | 120 |

### Clevis rod end attachment (Y-type) with pin

$\phi 32 \sim \phi 100$



$\phi 125$



## DIMENSION TABLE

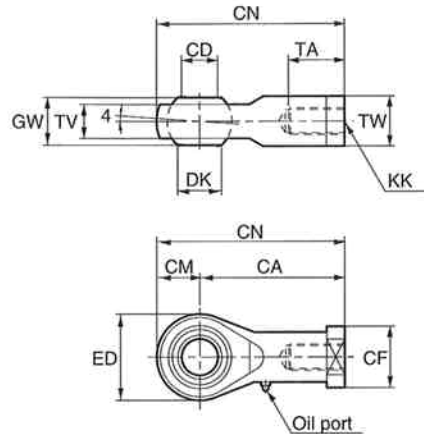
| Code<br>Bore | Part type  | A  | CA  | CC | CD                    | CF        | CP | CT | CW | D  | ER  | EW                 | KK       | RA  |
|--------------|------------|----|-----|----|-----------------------|-----------|----|----|----|----|-----|--------------------|----------|-----|
| $\phi 32$    | RYA-10-1-A | 23 | 55  | 20 | $\phi 12^{+H9}_{-f8}$ | $\phi 24$ | 46 | 32 | 8  | 24 | R12 | $16^{+1.5}_{+0.5}$ | M10X1.25 | 67  |
| $\phi 40$    | RYA-12-1-A | 25 | 60  | 20 | $\phi 14^{+H9}_{-f8}$ | $\phi 24$ | 58 | 44 | 12 | 24 | R12 | $20^{+1.5}_{+0.5}$ | M12X1.25 | 71  |
| $\phi 50$    | RYA-16-A   | 33 | 60  | 18 | $\phi 14^{+H9}_{-f8}$ | $\phi 28$ | 58 | 44 | 12 | 27 | R14 | $20^{+1.5}_{+0.5}$ | M16X1.5  | 74  |
| $\phi 63$    |            |    |     |    |                       |           |    |    |    |    |     |                    |          |     |
| $\phi 80$    | RYA-20-A   | 41 | 85  | 28 | $\phi 20^{+H9}_{-f8}$ | $\phi 36$ | 78 | 64 | 16 | 36 | R19 | $32^{+1.5}_{+0.5}$ | M20X1.5  | 104 |
| $\phi 100$   |            |    |     |    |                       |           |    |    |    |    |     |                    |          |     |
| $\phi 125$   | RYA-27-A   | 56 | 100 | 35 | $\phi 20^{+H9}_{-f8}$ | $\phi 40$ | 78 | 64 | 16 | 40 | R20 | $32^{+1.5}_{+0.5}$ | M27X2    | 120 |

# PNEUMATIC CYLINDER 10A-6

## ROD END ATTACHMENT

Eye rod end attachment  
with spherical bearing (S-type)

Unit: mm



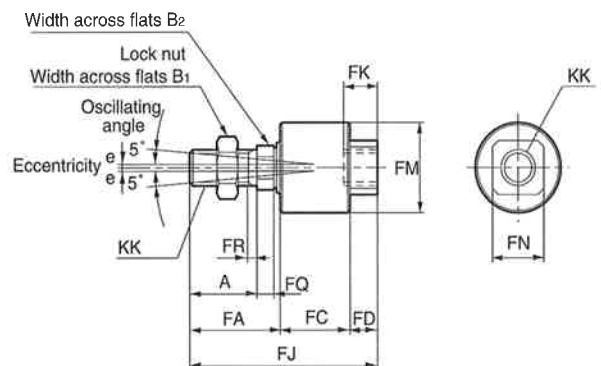
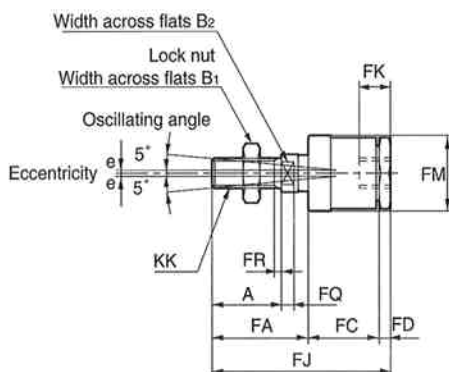
DIMENSION TABLE

| Code<br>Bore | Part type | CA | CD     | CF   | CM | CN  | DK     | ED | GW                                 | KK       | TA | TV   | TW |
|--------------|-----------|----|--------|------|----|-----|--------|----|------------------------------------|----------|----|------|----|
| φ 32         | RSA-10-A  | 43 | φ 10H9 | φ 19 | 13 | 56  | φ 12.9 | 26 | 14 <sup>+0.1</sup> <sub>-0.1</sub> | M10X1.25 | 21 | 10.5 | 17 |
| φ 40         | RSA-12-A  | 50 | φ 12H9 | φ 22 | 15 | 65  | φ 15.4 | 30 | 16 <sup>+0.1</sup> <sub>-0.1</sub> | M12X1.25 | 24 | 12   | 19 |
| φ 50         | RSA-16-A  | 64 | φ 16H9 | φ 27 | 19 | 83  | φ 19.4 | 38 | 21 <sup>+0.1</sup> <sub>-0.1</sub> | M16X1.5  | 33 | 15   | 22 |
| φ 63         |           |    |        |      |    |     |        |    |                                    |          |    |      |    |
| φ 80         | RSA-20-A  | 77 | φ 20H9 | φ 34 | 23 | 100 | φ 24.4 | 46 | 25 <sup>+0.1</sup> <sub>-0.1</sub> | M20X1.5  | 40 | 18   | 30 |
| φ 100        |           |    |        |      |    |     |        |    |                                    |          |    |      |    |

## F-joint (F-type)

φ 32

φ 40 ~ φ 125



Note) Do not turn F-joint into the socket to the dimension larger than the screw bore diameter. (Fix the joint with lock nut by turning it back by 1 ~ 2 turns after the joint thrust.) Excessive turning-in will cause malfunction of the cylinder. ● Do not use the F-joint in combination with CA, CB, CC, TC types.

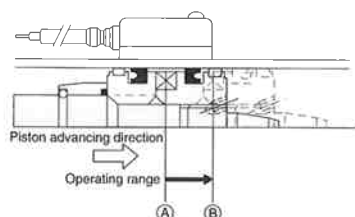
DIMENSION TABLE

| Code<br>Bore | Part type  | A    | B1 | B2 | e   | FA | FC   | FD | FJ   | FK   | FM   | FN  | FQ  | FR  | KK       |
|--------------|------------|------|----|----|-----|----|------|----|------|------|------|-----|-----|-----|----------|
| φ 32         | RFS-10T    | 24.5 | 17 | 10 | 1   | 31 | 28   | 4  | 63   | 11   | φ 25 | 24  | 4.5 | 2.5 | M10X1.25 |
| φ 40         | RFS-12T    | 24   | 19 | 13 | 1   | 33 | 25.5 | 11 | 69.5 | 13.5 | φ 32 | □19 | 7   | 3.5 | M12X1.25 |
| φ 50, φ 63   | RFS-16T    | 32   | 22 | 17 | 1.5 | 43 | 33   | 13 | 89   | 16   | φ 40 | □24 | 8   | 4   | M16X1.5  |
| φ 80         | RFS-20T080 | 40   | 27 | 22 | 2   | 53 | 42   | 15 | 110  | 22   | φ 50 | □30 | 9   | 5   | M20X1.5  |
| φ 100        | RFS-20T100 | 40   | 27 | 24 | 2.5 | 56 | 49   | 18 | 123  | 24   | φ 64 | □36 | 12  | 6   | M20X1.5  |
| φ 125        | RFS-27T    | 54   | 36 | 32 | 2.5 | 74 | 62   | 21 | 157  | 30   | φ 76 | □46 | 14  | 7   | M27X2    |

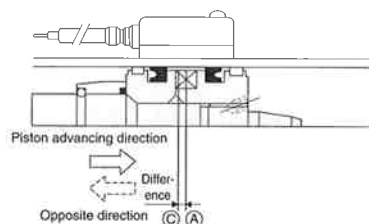
# 10A-6 PNEUMATIC CYLINDER

## EXPLANATION OF SWITCH OPERATION

The magnetic proximity switch is mounted on the tube periphery, and the piston fitted with magnet actuates the switch as it is located at the lower position. Then the non-contact detection of the cylinder stroke position from the outside is achieved.



When the piston moves in the direction indicated by → and the magnet comes to the position (A), the switch turns ON. The ON state continues for the distance between (A) and (B). This range is called the operating range.

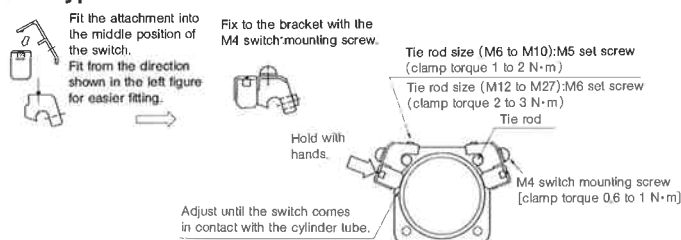


When the piston moves in the direction indicated by → and the magnet comes to the position (A), the switch turns ON. Then, when the piston moves from the position in ← opposite direction, the ON condition continues until the piston reaches the position (C). The distance between (A) and (C) is called the difference. The difference takes place at both ends of the operating range.

Note) The above diagrams indicate YR type, YS type switches.

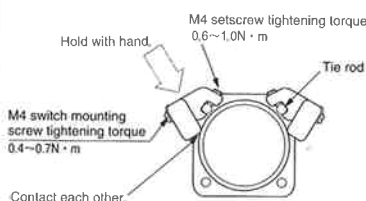
## SWITCH DETECTING POSITION SETTING METHOD

### AX Type



1. Loosen the two set screws with an allen wrench, and move them along with the tie rod.
2. Adjust the detecting position (for the 2-LED type, the position that the green lamp lights up) 2 to 5 mm (about half of the working range is appropriate) before the required position that the switch indicator lamp starts to light up (ON). Then, gently hold the top of the switch so that the cylinder tube contacts the detecting face of the switch, and clamp the set screw with the appropriate clamp torque.  
Note) Inappropriate clamp torque may cause the off-center of the switch position.
3. The indicator lamp lights up when the switch is set to the ON position.
4. Switches can be mounted to any of four tie rods and on the most suitable position depending on the mounting space of the cylinder and wiring method.
5. Mount a switch to the most suitable position to detect the stroke end with the "Switch mounting dimension" (dimension UX).

### SR Type



1. Loosen 2 setscrews with the hexagonal wrench, and move them along the tie rod.
2. Make arrangement so that the switch is set in position to start detection 2~5mm (about half of the operating range is appropriate) from the position where the switch indicating lamp starts to come on (turning ON) at the desired position. Then, hold the upper face of switch lightly to make the switch detecting surface contact the cylinder tube, and tighten the setscrew with appropriate tightening torque.  
Note) Switch positional deviation may be caused, unless the tightening torque is appropriate.
3. The indicating lamp goes out when the switch turns ON.
4. Switch can be mounted on any one of 4 tie rods. The switch position can be changed to the optimum position conforming the applicable cylinder mounting space, wiring method, etc.
5. Mount the switch in the optimum position for stroke end detection according to "Switch Mounting Dimensions"(Dimension UX).

## OPERATING RANGE AND DIFFERENCE

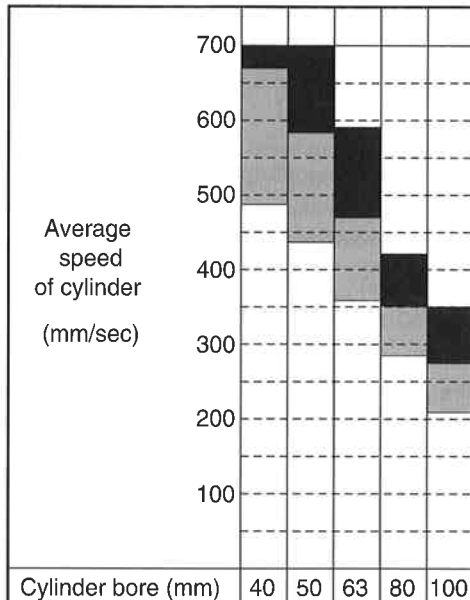
Unit : mm

| Bore  | Contact type    |            |                 |            | Contactless type |            |
|-------|-----------------|------------|-----------------|------------|------------------|------------|
|       | AX1※※Type       |            | SR Type         |            | AX2※※Type        |            |
|       | Operating range | Difference | Operating range | Difference | Operating range  | Difference |
| φ 32  | 5~10            | 1 max.     | 8~12            | 2 max.     | 3~6              | 1 max.     |
| φ 40  |                 |            |                 |            |                  |            |
| φ 50  | 6~12            |            | 9~13            |            | 4~8              |            |
| φ 63  |                 |            |                 |            |                  |            |
| φ 80  |                 |            |                 |            |                  |            |
| φ 100 |                 |            |                 |            |                  |            |
| φ 125 | 8~14            |            |                 |            |                  |            |

Note) Those in ( ) are the optimum setting (green lighting) ranges.

## REFERENCE DATA

### AVERAGE SPEED OF VAL SET CYLINDER



□ Load factor 70% ▨ Load factor 50% ■ Load factor 30%

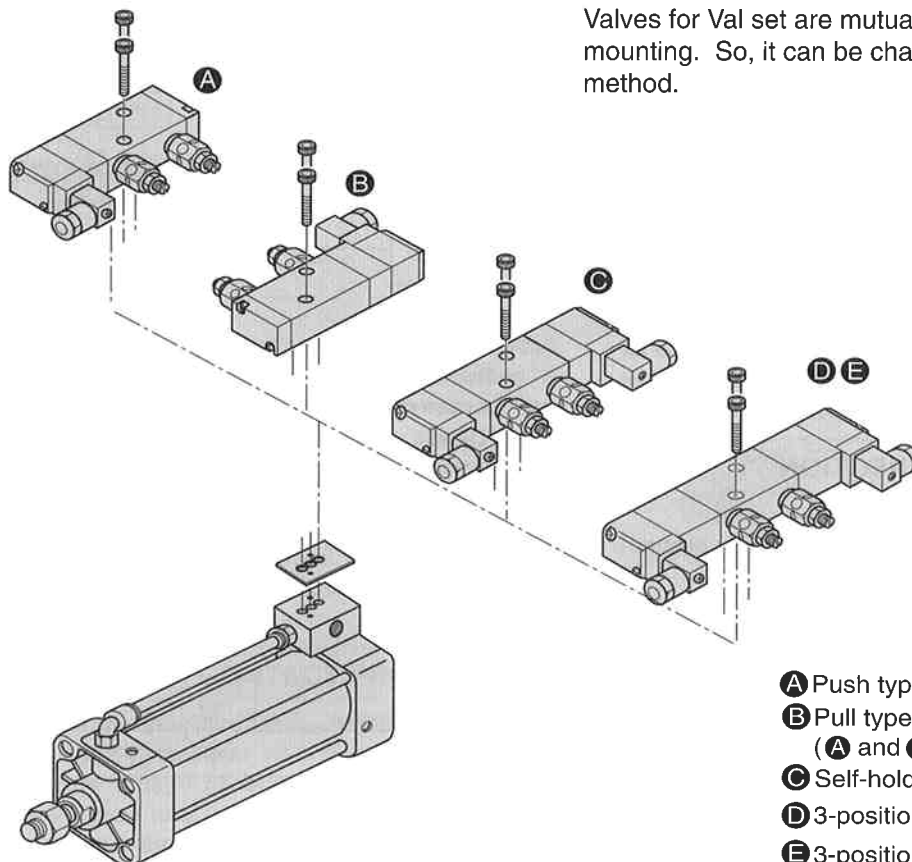
### SETTING CONDITIONS

- Pneumatic pressure : 0.5 MPa
- Driving direction : Vertically upward
- Cylinder stroke : 250 mm
- Average speed : Average speed for the cylinder to reach the stroke end after start

**CAUTION:** Use the table at left as a guide value of cylinder speed.  
Actual speed is different depending on the operating condition.  
Operate the cylinder with the speed adjusted within the operating speed range.

## HANDLING PROCEDURE

### VALVE REASSEMBLING METHOD



Valves for Val set are mutually interchangeable for mounting. So, it can be changed to meet any operating method.

- A Push type during current passing
- B Pull type during current passing (A and B are the same valves).
- C Self-holding type
- D 3-position closed center type
- E 3-position exhaust center type