

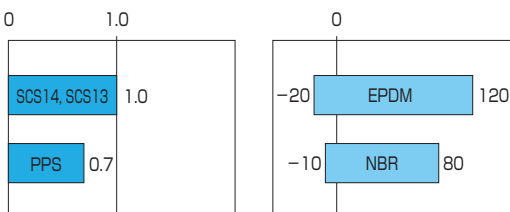
# 700Z

Valve nominal size

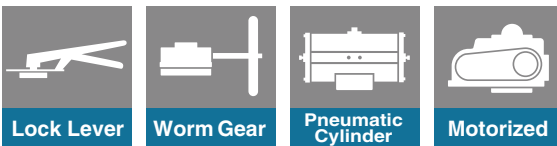
**40 to 300mm**

Max. working pressure MPa

Working temperature range °C

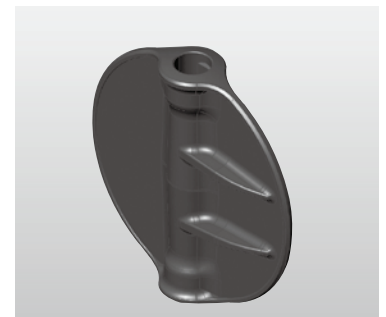
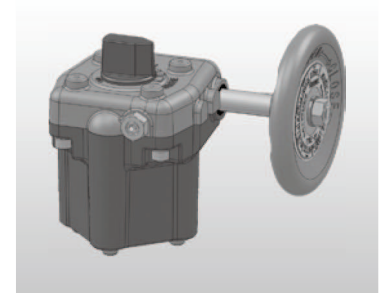


**JIS** JIS B 2032 Compliant  
(This product conforms to General Specifications for Machinery and Equipment of the Ministry of Land, Infrastructure, Transport and Tourism.)



## Evolution of Long Sellers Sealing performance and Durability Improved!

- Gears and lever have been integrated with valve body to achieve both functionality and downsizing.
- Resin-aluminum hybrid gearbox improves the strength and durability of valves with anti-condensation performance added.
- High anti-condensation performance of the Z series has been inherited. (Gear valves)
- New lightweight valve disc with optimized seal shape improves the sealing performance and operability of valves.
- Modified rubber seat structure stabilizes the sealing performance of valve seat.
- Strong bearings have been adopted to significantly improve the durability of valve opening/closing. (Automatic valves)
- Special valve body has been developed for automatic valves to improve their strength and durability.



**\*Note : These valves are different in face-to-face dimensions from the first 700Z (Coating color: Light blue; Munsell 10BG-6/4) developed in 1980 and discontinued in August 2003.**

## Standard Specifications

|                                                       |                    |                                                                                                                              |
|-------------------------------------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------|
| Body type (Connection)                                |                    | Concentric rubber seated butterfly valve, flangeless (wafer) type                                                            |
| Valve nominal size                                    |                    | 40, 50, 65, 80, 100, 125, 150, 200, 250, 300mm                                                                               |
| Flange accommodation                                  |                    | JIS5K/10K, ASME125/150Lb, DIN NP10, BS4504 PN10, GB/T 9113.1 1MPa                                                            |
| Face-to-face dimensions                               |                    | JIS B 2002 <sup>1987</sup> Series 46 (ISO 5752 table5/BS5155/API609)                                                         |
| Max. working pressure                                 |                    | (Valve disc material) SCS14, SCS13: 1.0 MPa / PPS: 0.7 MPa                                                                   |
| Allowable seat leakage rate                           |                    | JIS B 2003 <sup>2013</sup> Rate A (Tight shut-off)                                                                           |
| Flow direction                                        |                    | Bi-direction                                                                                                                 |
| Test                                                  | Body shell test    | 1.5 MPa (Hydraulic pressure)                                                                                                 |
|                                                       | Seat leak test     | 1.1 MPa (Pneumatic pressure)                                                                                                 |
| Working temperature range                             |                    | EPDM: -20 ~ 120°C (Option: NBR: -10 ~ 80°C)                                                                                  |
| Allowable temperature in continuous use <sup>*1</sup> |                    | EPDM: -10 ~ 100°C (Option: NBR: -0 ~ 60°C)                                                                                   |
| Standard materials                                    | Body               | Aluminum die cast alloy ADC12                                                                                                |
|                                                       | Disc <sup>*2</sup> | SCS13 (A351 CF8), SCS14 (A351 CF8M), PPS (40~200mm)                                                                          |
|                                                       | Stem <sup>*2</sup> | SUS420J2 (AISI420)                                                                                                           |
|                                                       | Seat ring          | EPDM <sup>*3,4</sup> (Option: NBR)                                                                                           |
| Top flange                                            |                    | Lever/Gear type: Valve integrated type, Cylinder/ Electric motor type: In accordance with ISO 5211                           |
| Actuator <sup>*5</sup>                                |                    | Manual, pneumatic, electric                                                                                                  |
| Pipe flow velocity (limit value)                      |                    | Up to 3 m/s (Valve fully-open, continuous operation, ambient temp. and fresh water)                                          |
| Coating                                               |                    | Urethane coating (Munsell 2.5BG 6/12)                                                                                        |
| Condensation property                                 |                    | No condensation in the upper part of gears at ambient temperature 30°C and humidity 80% with cold water at 5°C <sup>*6</sup> |

※1 Fluid temperature range for more than one hour of continuous use. It is required that the fluid does not freeze.

※2 Materials shown in ( ): equivalent materials in ASTM/AISI standard.

※3 If the fluid contains even a slight amount of oil, never use an EPDM rubber seat ring. If the fluid contains chlorine, the seat ring may deteriorate early due to combined factors including density and temperature. For details consult our sales office.

※4 In the pipe lines where chemicals containing calcium are supplied, it is recommended to use an EPDM rubber seat ring to protect pipes.

※5 The actuator of the product cannot be replaced.

※6 These values are based on data obtained in a laboratory and may vary if the temperature and humidity distributions in the field are not uniform. Even in an environment having these values, condensation can occur if ambient or water temperature changes suddenly.

## Butterfly Valve

**TRITEC**

**TT2**

**334A**

**302A/303Q**

**304A/304Q**

**302Y/304Y**

**304M  
(HLV)**

**507V/508V**

**DTM**

**846T/847T/847Q**

**841T/842T**

**700Z**

**700G/704G/705G**

**700GB**

**731P/732P/  
731Q/732Q**

**71LG**

**700E/700K/700S**

**704G/722F/720F**

**KRV**

**227P**

**907H/908H  
(MKT)**

**903C**

## 700Z Actuator Selection Chart

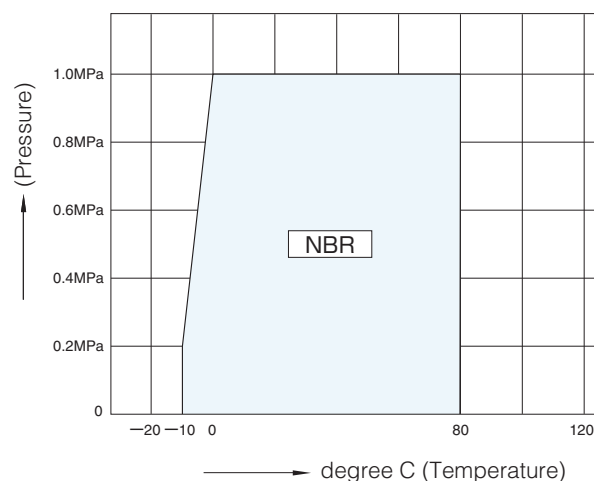
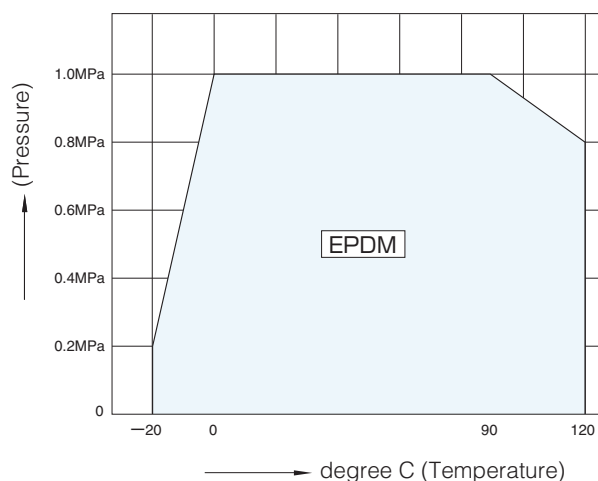
| Type                    | Model            | Category   | Size <small>(mm<br/>inch)</small> |    |        |      |        |       |        |         |        |     |
|-------------------------|------------------|------------|-----------------------------------|----|--------|------|--------|-------|--------|---------|--------|-----|
|                         |                  |            | 40                                | 50 | 65     | 80   | 100    | 125   | 150    | 200     | 250    | 300 |
|                         |                  |            | 1 1/2                             | 2  | 2 1/2  | 3    | 4      | 5     | 6      | 8       | 10     | 12  |
| Lock lever              | 1J, 1T           | Standard   | 1J-1                              |    |        | 1J-2 | 1T-2   |       |        |         |        |     |
|                         |                  | Heavy duty |                                   |    |        |      |        |       |        |         |        |     |
| Worm gear               | 2F               | Standard   | 2F-G0Z                            |    | 2F-G00 |      | 2F-G01 |       | 2F-G02 | 2F-G03  |        |     |
|                         |                  | Heavy duty |                                   |    |        |      |        |       |        |         |        |     |
| Double-action pneumatic | 7E               | Standard   | T35                               |    |        | T85  |        | T200  |        | T380    | T750   |     |
|                         |                  | Heavy duty |                                   |    |        |      |        |       |        |         |        |     |
| Single-action pneumatic | 7G, 7F<br>3K, 3U | Standard   | T85S                              |    | T200S  |      | T380S  |       | T750S  |         | TG-12S |     |
|                         |                  | Heavy duty |                                   |    |        |      |        |       |        |         |        |     |
| Single-action pneumatic | 4 I              | ON-OFF     | 4 I-00                            |    | 4 I-0  |      | 4 I-1  | 4 I-2 |        | 4 I-2.5 | 4 I-3  |     |
|                         |                  | Control    |                                   |    |        |      |        |       |        |         |        |     |

Note) In case of the single-phase motorized actuator 4I that has the following optional equipment, "Control" specification is applied.

- Micom unit
- Servo unit
- Speed control unit
- Potentiometer

|                    |            |                                                                                                                                                                                                         |
|--------------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Selection criteria | Standard   | Select when none of the following heavy duty items apply.                                                                                                                                               |
|                    | Heavy duty | Select when any of the following items apply.<br>① Gas, powder or high viscosity slurry (crude oil, etc.)<br>② Control specification (with positioner)<br>③ Emergency open valve or pipe dead end valve |

## 700Z Pressure-Temperature Rating

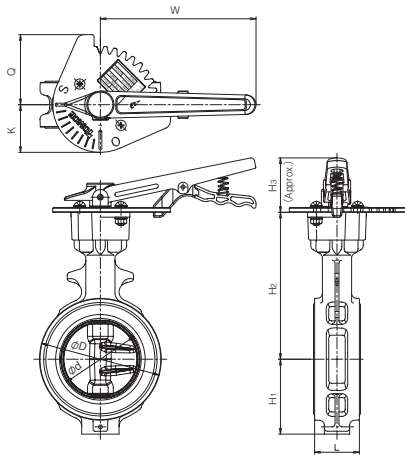


※Prolonged use in high temperature may deteriorate sealing ability or durability.

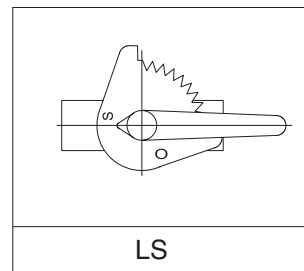
## Lock Lever Type 700Z-1J(40mm to 125m)、1T(150m)

| Nominalsize |       | Dimension (mm) |     |    |                |                |                |    |    |     | Approx. Weight (kg) |
|-------------|-------|----------------|-----|----|----------------|----------------|----------------|----|----|-----|---------------------|
| mm          | inch  | φd             | φD  | L  | H <sub>1</sub> | H <sub>2</sub> | H <sub>3</sub> | Q  | K  | W   |                     |
| 40          | 1 1/2 | 45             | 80  | 35 | 47             | 144            | 56             | 72 | 49 | 160 | 0.8                 |
| 50          | 2     | 56             | 91  | 43 | 57             | 150            | 56             | 72 | 49 | 160 | 0.9                 |
| 65          | 2 1/2 | 69             | 111 | 46 | 64             | 163            | 56             | 72 | 49 | 160 | 1.1                 |
| 80          | 3     | 84             | 125 | 46 | 77             | 151            | 56             | 72 | 49 | 160 | 1.4                 |
| 100         | 4     | 104            | 147 | 52 | 94             | 162            | 70             | 72 | 49 | 200 | 1.9                 |
| 125         | 5     | 130            | 180 | 56 | 108            | 190            | 70             | 72 | 49 | 200 | 3.0                 |
| 150         | 6     | 153.5          | 210 | 56 | 125            | 201            | 96             | 88 | 63 | 300 | 5.0                 |

### 700Z-1J



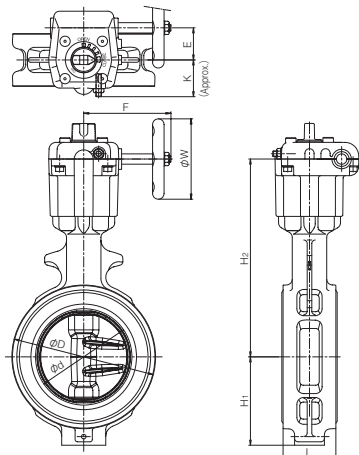
### 1J Installation direction



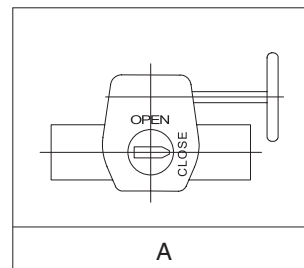
## Worm Gear Type 700Z-2F(40mm to 300mm)

| Nominalsize |       | Dimension (mm) |     |    |                |                |      |    |     |     | Approx. Weight (kg) |
|-------------|-------|----------------|-----|----|----------------|----------------|------|----|-----|-----|---------------------|
| mm          | inch  | φd             | φD  | L  | H <sub>1</sub> | H <sub>2</sub> | E    | K  | F   | φW  |                     |
| 40          | 1 1/2 | 45             | 80  | 35 | 47             | 160            | 22.5 | 26 | 72  | 70  | 0.8                 |
| 50          | 2     | 56             | 91  | 43 | 57             | 166            | 22.5 | 26 | 72  | 70  | 1.0                 |
| 65          | 2 1/2 | 69             | 111 | 46 | 64             | 179            | 22.5 | 26 | 72  | 70  | 1.2                 |
| 80          | 3     | 84             | 125 | 46 | 77             | 172            | 28   | 31 | 76  | 70  | 1.7                 |
| 100         | 4     | 104            | 147 | 52 | 94             | 183            | 28   | 31 | 76  | 70  | 2.2                 |
| 125         | 5     | 130            | 180 | 56 | 108            | 211            | 46   | 42 | 133 | 100 | 3.8                 |
| 150         | 6     | 153.5          | 210 | 56 | 125            | 222            | 46   | 42 | 133 | 100 | 4.7                 |
| 200         | 8     | 199            | 255 | 60 | 167            | 257            | 53   | 40 | 162 | 125 | 7.2                 |
| 250         | 10    | 253            | 322 | 68 | 186            | 316            | 71   | 54 | 206 | 200 | 13                  |
| 300         | 12    | 302            | 375 | 78 | 216            | 348            | 71   | 54 | 206 | 200 | 18                  |

### 700Z-2F



### 2F Installation direction



### Butterfly Valve

#### TRITEC

#### TT2

#### 334A

#### 302A/303Q

#### 304A/304Q

#### 302Y/304Y

#### 304M (HLV)

#### 507V/508V

#### DTM

#### 846T/847T/847Q

#### 841T/842T

#### 700Z

#### 700G/704G/705G

#### 700GB

#### 731P/732P/731Q/732Q

#### 71LG

#### 700E/700K/700S

#### 704G/722F/720F

#### KRV

#### 227P

#### 907H/908H (MKT)

#### 903C

## Double-acting Pneumatic Cylinder Type 700Z-7E (40mm to 300mm)

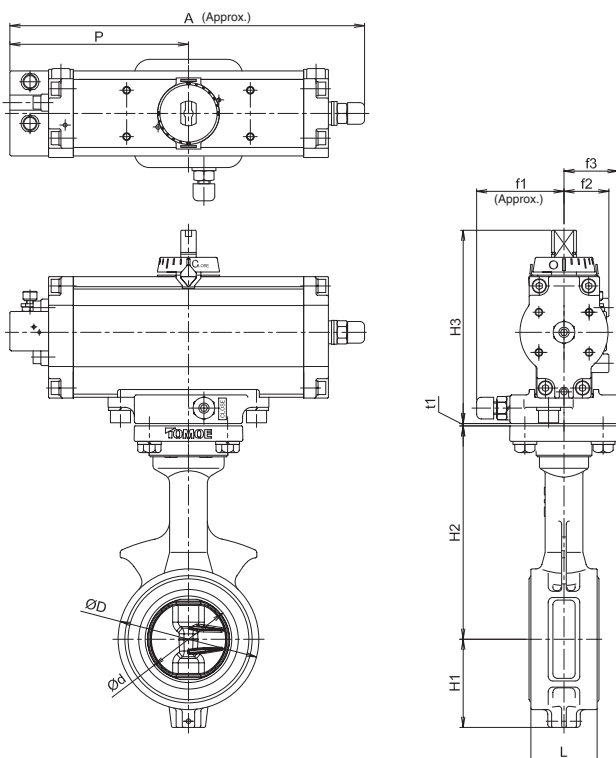
### Standard

| Nominal size |       | Dimension (mm) |          |    |                |                |                |     |     |                |                |                |                | Cylinder type | Approx. Weight (kg) |
|--------------|-------|----------------|----------|----|----------------|----------------|----------------|-----|-----|----------------|----------------|----------------|----------------|---------------|---------------------|
| mm           | inch  | $\phi d$       | $\phi D$ | L  | H <sub>1</sub> | H <sub>2</sub> | H <sub>3</sub> | A   | P   | f <sub>1</sub> | f <sub>2</sub> | f <sub>3</sub> | t <sub>1</sub> |               |                     |
| 40           | 1 1/2 | 45             | 80       | 35 | 47             | 132            | 125            | 228 | 116 | 57             | 29             | 35             | 1              | T35           | 2.6                 |
| 50           | 2     | 56             | 91       | 43 | 57             | 138            | 125            | 228 | 116 | 57             | 29             | 35             | 1              | T35           | 2.7                 |
| 65           | 2 1/2 | 69             | 111      | 46 | 64             | 151            | 125            | 228 | 116 | 57             | 29             | 35             | 1              | T35           | 2.9                 |
| 80           | 3     | 84             | 125      | 46 | 77             | 156            | 125            | 228 | 116 | 57             | 29             | 35             | 1              | T35           | 3.4                 |
| 100          | 4     | 104            | 147      | 52 | 94             | 167            | 168            | 276 | 142 | 75             | 47             | 51             | 1              | T85           | 6.8                 |
| 125          | 5     | 130            | 180      | 56 | 108            | 191            | 168            | 276 | 142 | 75             | 47             | 51             | 1.5            | T85           | 8.1                 |
| 150          | 6     | 153.5          | 210      | 56 | 125            | 202            | 203            | 346 | 176 | 79             | 57             | 51             | 1.5            | T200          | 12.3                |
| 200          | 8     | 199            | 255      | 60 | 167            | 227            | 203            | 346 | 176 | 79             | 57             | 51             | 1.5            | T200          | 14.5                |
| 250          | 10    | 253            | 322      | 68 | 186            | 280            | 231            | 423 | 214 | 91             | 69             | 63             | 1.5            | T380          | 25.5                |
| 300          | 12    | 302            | 375      | 78 | 216            | 312            | 269            | 546 | 270 | 118            | 85             | 70             | 1.5            | T750          | 39.6                |

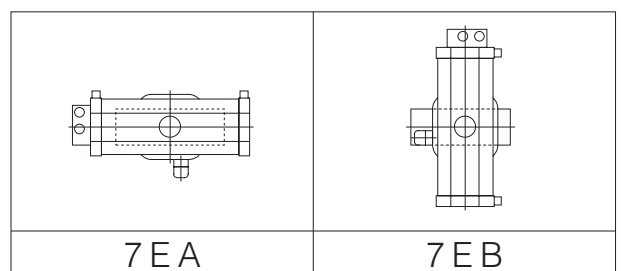
### Heavy Duty

| Nominal size |       | Dimension (mm) |          |    |                |                |                |     |     |                |                |                |                | Cylinder type | Approx. Weight (kg) |
|--------------|-------|----------------|----------|----|----------------|----------------|----------------|-----|-----|----------------|----------------|----------------|----------------|---------------|---------------------|
| mm           | inch  | $\phi d$       | $\phi D$ | L  | H <sub>1</sub> | H <sub>2</sub> | H <sub>3</sub> | A   | P   | f <sub>1</sub> | f <sub>2</sub> | f <sub>3</sub> | t <sub>1</sub> |               |                     |
| 40           | 1 1/2 | 45             | 80       | 35 | 47             | 132            | 125            | 228 | 116 | 57             | 29             | 35             | 1              | T35           | 2.6                 |
| 50           | 2     | 56             | 91       | 43 | 57             | 138            | 125            | 228 | 116 | 57             | 29             | 35             | 1              | T35           | 2.7                 |
| 65           | 2 1/2 | 69             | 111      | 46 | 64             | 151            | 125            | 228 | 116 | 57             | 29             | 35             | 1              | T35           | 2.9                 |
| 80           | 3     | 84             | 125      | 46 | 77             | 156            | 168            | 276 | 142 | 75             | 47             | 51             | 1              | T85           | 6.4                 |
| 100          | 4     | 104            | 147      | 52 | 94             | 167            | 168            | 276 | 142 | 75             | 47             | 51             | 1              | T85           | 6.8                 |
| 125          | 5     | 130            | 180      | 56 | 108            | 191            | 203            | 346 | 176 | 79             | 57             | 51             | 1.5            | T200          | 11.4                |
| 150          | 6     | 153.5          | 210      | 56 | 125            | 202            | 203            | 346 | 176 | 79             | 57             | 51             | 1.5            | T200          | 12.3                |
| 200          | 8     | 199            | 255      | 60 | 167            | 227            | 231            | 423 | 214 | 91             | 69             | 63             | 1.5            | T380          | 20.7                |
| 250          | 10    | 253            | 322      | 68 | 186            | 280            | 231            | 423 | 214 | 91             | 69             | 63             | 1.5            | T380          | 25.5                |
| 300          | 12    | 302            | 375      | 78 | 216            | 312            | 269            | 546 | 270 | 118            | 85             | 70             | 1.5            | T750          | 39.6                |

### 700Z-7E



### 7E Installation Direction



# Single-acting Pneumatic Cylinder Type 700Z-7G(40mm to 200mm)/700Z-7F(40mm to 200mm)

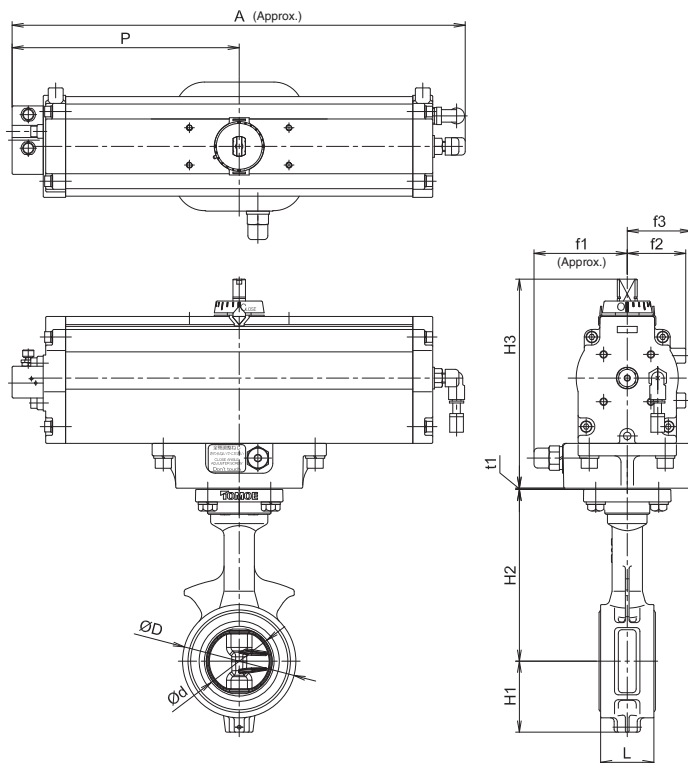
## ■Standard

| Nominalsize |       | Dimension (mm) |     |    |                |                |                |     |     |                |                |                |                | Cylinder type | Approx. Weight (kg) |
|-------------|-------|----------------|-----|----|----------------|----------------|----------------|-----|-----|----------------|----------------|----------------|----------------|---------------|---------------------|
| mm          | inch  | φd             | φD  | L  | H <sub>1</sub> | H <sub>2</sub> | H <sub>3</sub> | A   | P   | f <sub>1</sub> | f <sub>2</sub> | f <sub>3</sub> | t <sub>1</sub> |               |                     |
| 40          | 1 1/2 | 45             | 80  | 35 | 47             | 132            | 168            | 364 | 183 | 75             | 47             | 51             | 1              | T85S          | 7.2                 |
| 50          | 2     | 56             | 91  | 43 | 57             | 138            | 168            | 364 | 183 | 75             | 47             | 51             | 1              | T85S          | 7.3                 |
| 65          | 2 1/2 | 69             | 111 | 46 | 64             | 151            | 168            | 364 | 183 | 75             | 47             | 51             | 1              | T85S          | 7.5                 |
| 80          | 3     | 84             | 125 | 46 | 77             | 156            | 203            | 449 | 226 | 79             | 57             | 51             | 1              | T200S         | 12.5                |
| 100         | 4     | 104            | 147 | 52 | 94             | 167            | 203            | 449 | 226 | 79             | 57             | 51             | 1              | T200S         | 12.9                |
| 125         | 5     | 130            | 180 | 56 | 108            | 191            | 231            | 550 | 276 | 91             | 69             | 63             | 1.5            | T380S         | 22.5                |
| 150         | 6     | 153.5          | 210 | 56 | 125            | 202            | 231            | 550 | 276 | 91             | 69             | 63             | 1.5            | T380S         | 23.4                |
| 200         | 8     | 199            | 255 | 60 | 167            | 227            | 269            | 723 | 360 | 118            | 85             | 70             | 1.5            | T750S         | 39.2                |
| 250         | 10    | 253            | 322 | 68 | 186            | 280            | 269            | 723 | 360 | 118            | 85             | 70             | 1.5            | T750S         | 43.8                |

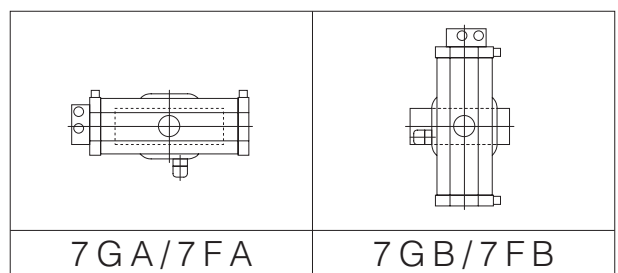
## ■Heavy Duty

| Nominalsize |       | Dimension (mm) |     |    |                |                |                |     |     |                |                |                |                | Cylinder type | Approx. Weight (kg) |
|-------------|-------|----------------|-----|----|----------------|----------------|----------------|-----|-----|----------------|----------------|----------------|----------------|---------------|---------------------|
| mm          | inch  | φd             | φD  | L  | H <sub>1</sub> | H <sub>2</sub> | H <sub>3</sub> | A   | P   | f <sub>1</sub> | f <sub>2</sub> | f <sub>3</sub> | t <sub>1</sub> |               |                     |
| 40          | 1 1/2 | 45             | 80  | 35 | 47             | 132            | 168            | 364 | 183 | 75             | 47             | 51             | 1              | T85S          | 7.2                 |
| 50          | 2     | 56             | 91  | 43 | 57             | 138            | 168            | 364 | 183 | 75             | 47             | 51             | 1              | T85S          | 7.3                 |
| 65          | 2 1/2 | 69             | 111 | 46 | 64             | 151            | 203            | 449 | 226 | 79             | 57             | 51             | 1              | T200S         | 12.0                |
| 80          | 3     | 84             | 125 | 46 | 77             | 156            | 203            | 449 | 226 | 79             | 57             | 51             | 1              | T200S         | 12.5                |
| 100         | 4     | 104            | 147 | 52 | 94             | 167            | 231            | 550 | 276 | 91             | 69             | 63             | 1              | T380S         | 21.2                |
| 125         | 5     | 130            | 180 | 56 | 108            | 191            | 231            | 550 | 276 | 91             | 69             | 63             | 1.5            | T380S         | 22.5                |
| 150         | 6     | 153.5          | 210 | 56 | 125            | 202            | 269            | 723 | 360 | 118            | 85             | 70             | 1.5            | T750S         | 37.0                |
| 200         | 8     | 199            | 255 | 60 | 167            | 227            | 269            | 723 | 360 | 118            | 85             | 70             | 1.5            | T750S         | 39.2                |

## ■700Z-7G/7F



## ■7G/7F Installation Direction



## Butterfly Valve

## TRITEC

## TT2

## 334A

## 302A/303Q

## 304A/304Q

## 302Y/304Y

## 304M (HLV)

## 507V/508V

## DTM

## 846T/847T/847Q

## 841T/842T

## 700Z

## 700G/704G/705G

## 700GB

## 731P/732P/ 731Q/732Q

## 71LG

## 700E/700K/700S

## 704G/722F/720F

## KRV

## 227P

## 907H/908H (MKT)

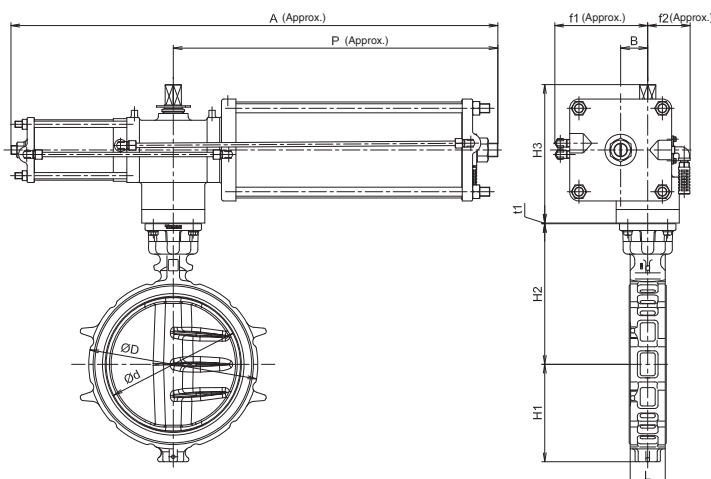
## 903C

## Single-acting Pneumatic Cylinder Type 700Z-3U (250mm to 300mm)

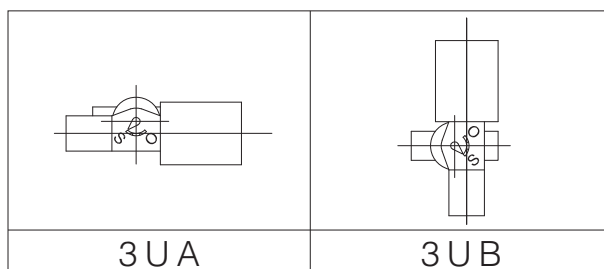
### Standard

| Nominal size |      | Dimension (mm) |          |    |                |                |                |      |     |    |                |                |                | Cylinder type | Approx. Weight (kg) |
|--------------|------|----------------|----------|----|----------------|----------------|----------------|------|-----|----|----------------|----------------|----------------|---------------|---------------------|
| mm           | inch | $\phi d$       | $\phi D$ | L  | H <sub>1</sub> | H <sub>2</sub> | H <sub>3</sub> | A    | P   | B  | f <sub>1</sub> | f <sub>2</sub> | t <sub>1</sub> |               |                     |
| 250          | 10   | 253            | 322      | 68 | 186            | 280            | 307            | 1080 | 720 | 60 | 206            | 94             | 1.5            | TG-12S        | 110.8               |
| 300          | 12   | 302            | 375      | 78 | 216            | 312            | 307            | 1080 | 720 | 60 | 206            | 94             | 1.5            | TG-12S        | 115.3               |

### 700Z-3U



### 3U Installation Direction

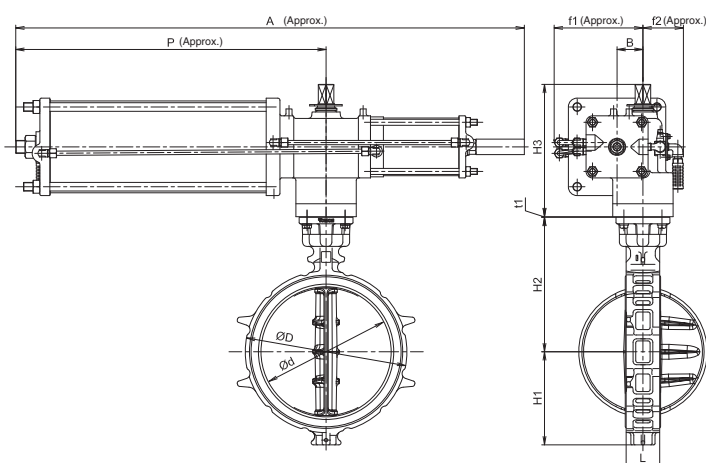


## Single-acting Pneumatic Cylinder Type 700Z-3K (250mm to 300mm)

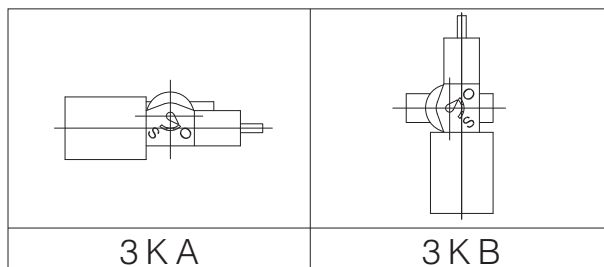
### Standard/Heavy Duty

| Nominal size |      | Dimension (mm) |          |    |                |                |                |      |     |    |                |                |                | Cylinder type | Approx. Weight (kg) |
|--------------|------|----------------|----------|----|----------------|----------------|----------------|------|-----|----|----------------|----------------|----------------|---------------|---------------------|
| mm           | inch | $\phi d$       | $\phi D$ | L  | H <sub>1</sub> | H <sub>2</sub> | H <sub>3</sub> | A    | P   | B  | f <sub>1</sub> | f <sub>2</sub> | t <sub>1</sub> |               |                     |
| 250          | 10   | 253            | 322      | 68 | 186            | 280            | 307            | 1080 | 720 | 60 | 206            | 94             | 1.5            | TG-12S        | 110.8               |
| 300          | 12   | 302            | 375      | 78 | 216            | 312            | 307            | 1080 | 720 | 60 | 206            | 94             | 1.5            | TG-12S        | 115.3               |

### 700Z-3K



### 3K Installation Direction

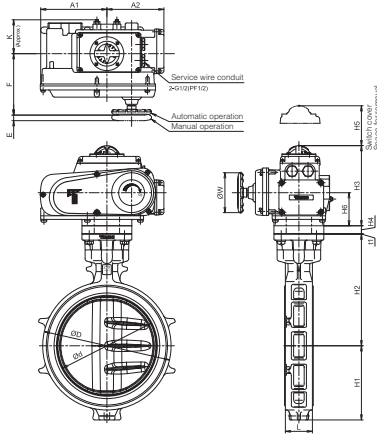


## Single Phase Electric Motor Type 700Z-4 I (40mm to 300mm)

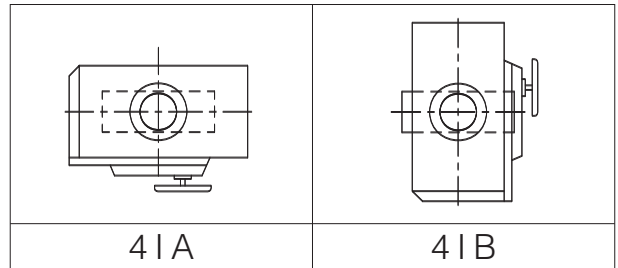
### ON-OFF

| Nominal size |       | Dimension (mm) |     |    |                |                |                |                |                |                |                |                |    |     |     |     |                | Motor type | Approx. Weight (kg) |
|--------------|-------|----------------|-----|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|-----|-----|-----|----------------|------------|---------------------|
| mm           | inch  | φd             | φD  | L  | H <sub>1</sub> | H <sub>2</sub> | H <sub>3</sub> | H <sub>4</sub> | H <sub>5</sub> | H <sub>6</sub> | A <sub>1</sub> | A <sub>2</sub> | E  | F   | K   | φW  | t <sub>1</sub> |            |                     |
| 40           | 1 1/2 | 45             | 80  | 35 | 47             | 132            | 121            | —              | 100            | 57             | 84             | 77             | 39 | 58  | 45  | 80  | 1              | 4 I-00     | 3.0                 |
| 50           | 2     | 56             | 91  | 43 | 57             | 138            | 121            | —              | 100            | 57             | 84             | 77             | 39 | 58  | 45  | 80  | 1              | 4 I-00     | 3.1                 |
| 65           | 2 1/2 | 69             | 111 | 46 | 64             | 151            | 121            | —              | 100            | 57             | 84             | 77             | 39 | 58  | 45  | 80  | 1              | 4 I-00     | 3.3                 |
| 80           | 3     | 84             | 125 | 46 | 77             | 156            | 150            | —              | 100            | 43             | 100            | 102            | 43 | 85  | 54  | 80  | 1              | 4 I-0      | 6.1                 |
| 100          | 4     | 104            | 147 | 52 | 94             | 167            | 150            | —              | 100            | 43             | 100            | 102            | 43 | 85  | 54  | 80  | 1              | 4 I-0      | 6.5                 |
| 125          | 5     | 130            | 180 | 56 | 108            | 191            | 165            | —              | 100            | 61             | 138            | 114            | 12 | 126 | 65  | 70  | 1.5            | 4 I-1      | 10.3                |
| 150          | 6     | 153.5          | 210 | 56 | 125            | 202            | 198            | —              | 100            | 80             | 167            | 143            | 14 | 154 | 85  | 100 | 1.5            | 4 I-2      | 16.2                |
| 200          | 8     | 199            | 255 | 60 | 167            | 227            | 198            | —              | 100            | 80             | 167            | 143            | 14 | 154 | 85  | 100 | 1.5            | 4 I-2      | 18.4                |
| 250          | 10    | 253            | 322 | 68 | 186            | 280            | 201            | 20             | 100            | 80             | 167            | 143            | 14 | 154 | 85  | 100 | 1.5            | 4 I-2.5    | 26.3                |
| 300          | 12    | 302            | 375 | 78 | 216            | 312            | 230            | 4              | 100            | 98             | 223            | 165            | 23 | 246 | 136 | 200 | 1.5            | 4 I-3      | 41.0                |

### 700Z-4 I (ON-OFF)



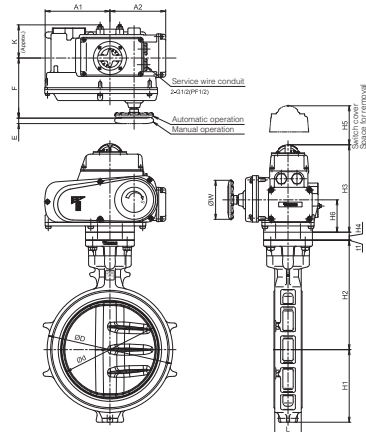
### 4 I Installation Direction



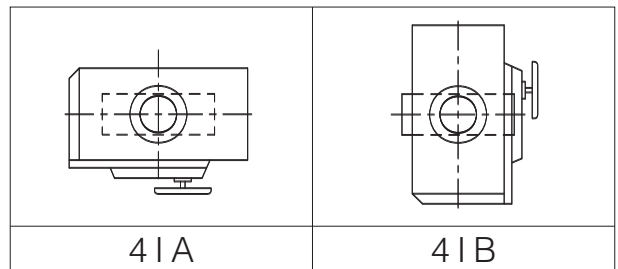
### Control

| Nominal size |       | Dimension (mm) |     |    |                |                |                |                |                |                |                |                |    |     |     |     |                | Motor type | Approx. Weight (kg) |
|--------------|-------|----------------|-----|----|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----|-----|-----|-----|----------------|------------|---------------------|
| mm           | inch  | φd             | φD  | L  | H <sub>1</sub> | H <sub>2</sub> | H <sub>3</sub> | H <sub>4</sub> | H <sub>5</sub> | H <sub>6</sub> | A <sub>1</sub> | A <sub>2</sub> | E  | F   | K   | φW  | t <sub>1</sub> |            |                     |
| 40           | 1 1/2 | 45             | 80  | 35 | 47             | 132            | 176            | —              | 100            | 43             | 100            | 102            | 43 | 85  | 54  | 80  | 1              | 4 I-0      | 5.3                 |
| 50           | 2     | 56             | 91  | 43 | 57             | 138            | 176            | —              | 100            | 43             | 100            | 102            | 43 | 85  | 54  | 80  | 1              | 4 I-0      | 5.4                 |
| 65           | 2 1/2 | 69             | 111 | 46 | 64             | 151            | 176            | —              | 100            | 43             | 100            | 102            | 43 | 85  | 54  | 80  | 1              | 4 I-0      | 5.6                 |
| 80           | 3     | 84             | 125 | 46 | 77             | 156            | 176            | —              | 100            | 43             | 100            | 102            | 43 | 85  | 54  | 80  | 1              | 4 I-0      | 6.1                 |
| 100          | 4     | 104            | 147 | 52 | 94             | 167            | 176            | —              | 100            | 43             | 100            | 102            | 43 | 85  | 54  | 80  | 1              | 4 I-0      | 6.5                 |
| 125          | 5     | 130            | 180 | 56 | 108            | 191            | 191            | —              | 100            | 61             | 138            | 114            | 12 | 126 | 65  | 70  | 1              | 4 I-1      | 10.3                |
| 150          | 6     | 153.5          | 210 | 56 | 125            | 202            | 224            | —              | 100            | 80             | 167            | 143            | 14 | 154 | 85  | 100 | 1              | 4 I-2      | 16.2                |
| 200          | 8     | 199            | 255 | 60 | 167            | 227            | 224            | —              | 100            | 80             | 167            | 143            | 14 | 154 | 85  | 100 | 1              | 4 I-2.5    | 20.0                |
| 250          | 10    | 253            | 322 | 68 | 186            | 280            | 227            | 20             | 100            | 80             | 167            | 143            | 14 | 154 | 85  | 100 | 1.5            | 4 I-2.5    | 26.3                |
| 300          | 12    | 302            | 375 | 78 | 216            | 312            | 255            | 4              | 100            | 98             | 223            | 165            | 23 | 246 | 136 | 200 | 1.5            | 4 I-3      | 41.0                |

### 700Z-4 I (Control)



### 4 I Installation Direction



Butterfly Valve

**TRITEC**

**TT2**

**334A**

**302A/303Q**

**304A/304Q**

**302Y/304Y**

**304M (HLV)**

**507V/508V**

**DTM**

**846T/847T/847Q**

**841T/842T**

**700Z**

**700G/704G/705G**

**700GB**

**731P/732P/731Q/732Q**

**71LG**

**700E/700K/700S**

**704G/722F/720F**

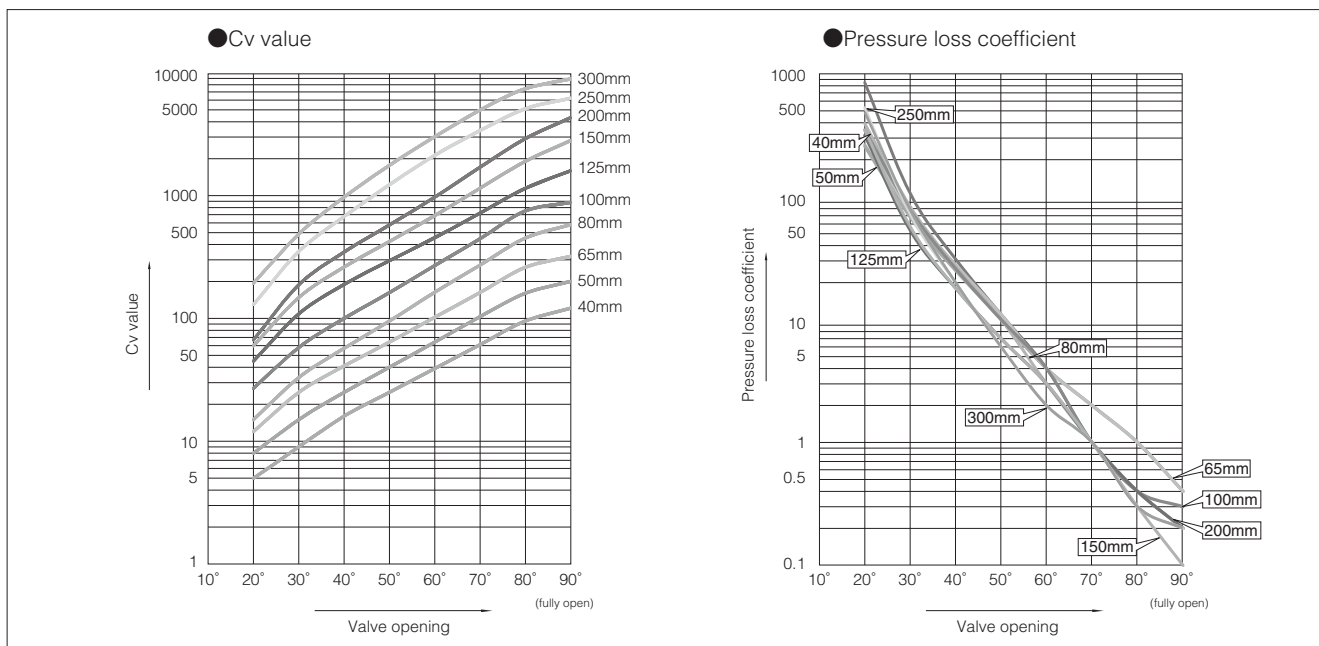
**KRV**

**227P**

**907H/908H (MKT)**

**903C**

## 700Z Cv value / pressure loss coefficient



### 700Z Cv value

| Nominal size |       | Valve opening |     |     |      |      |      |      |      |
|--------------|-------|---------------|-----|-----|------|------|------|------|------|
| mm           | inch  | 20°           | 30° | 40° | 50°  | 60°  | 70°  | 80°  | 90°  |
| 40           | 1 1/2 | 5             | 9   | 16  | 25   | 39   | 61   | 95   | 121  |
| 50           | 2     | 8             | 15  | 25  | 40   | 64   | 103  | 160  | 200  |
| 65           | 2 1/2 | 12            | 25  | 41  | 64   | 102  | 162  | 260  | 320  |
| 80           | 3     | 15            | 33  | 57  | 95   | 163  | 271  | 450  | 580  |
| 100          | 4     | 27            | 58  | 100 | 162  | 269  | 444  | 749  | 880  |
| 125          | 5     | 45            | 109 | 189 | 295  | 453  | 719  | 1144 | 1590 |
| 150          | 6     | 60            | 148 | 262 | 423  | 685  | 1147 | 1897 | 2800 |
| 200          | 8     | 67            | 188 | 347 | 576  | 969  | 1698 | 2902 | 4300 |
| 250          | 10    | 130           | 351 | 675 | 1225 | 2125 | 3375 | 5091 | 6200 |
| 300          | 12    | 194           | 487 | 972 | 1764 | 3011 | 4966 | 7412 | 8900 |

### 700Z Pressure loss coefficient

| Nominal size |       | Valve opening |     |     |     |     |     |     |     |
|--------------|-------|---------------|-----|-----|-----|-----|-----|-----|-----|
| mm           | inch  | 20°           | 30° | 40° | 50° | 60° | 70° | 80° | 90° |
| 40           | 1 1/2 | 264           | 72  | 26  | 10  | 4   | 2   | 1   | 0.4 |
| 50           | 2     | 257           | 68  | 25  | 10  | 4   | 2   | 1   | 0.4 |
| 65           | 2 1/2 | 310           | 75  | 28  | 11  | 4   | 2   | 1   | 0.4 |
| 80           | 3     | 394           | 83  | 27  | 10  | 3   | 1   | 0.4 | 0.2 |
| 100          | 4     | 350           | 78  | 26  | 10  | 4   | 1   | 0.4 | 0.3 |
| 125          | 5     | 316           | 53  | 18  | 7   | 3   | 1   | 0.4 | 0.2 |
| 150          | 6     | 348           | 57  | 18  | 7   | 3   | 1   | 0.3 | 0.1 |
| 200          | 8     | 849           | 106 | 31  | 11  | 4   | 1   | 0.4 | 0.2 |
| 250          | 10    | 528           | 72  | 20  | 6   | 2   | 1   | 0.3 | 0.2 |
| 300          | 12    | 488           | 78  | 20  | 6   | 2   | 1   | 0.3 | 0.2 |

# 700Z Applicable pipe list in case of A, B

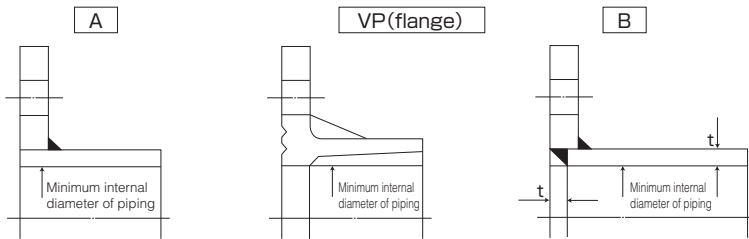
| Nominal size |       | SGP | Sch20 | Sch40 | VP<br>(TS flange) | Sch10S | Sch20S | Minimum internal<br>diameter of piping<br>(mm) |
|--------------|-------|-----|-------|-------|-------------------|--------|--------|------------------------------------------------|
| mm           | inch  |     |       |       |                   |        |        |                                                |
| 40           | 1 1/2 | ○   | —     | ○     | ○                 | ○      | ○      | 25                                             |
| 50           | 2     | ○   | ○     | ○     | ○                 | ○      | ○      | 34                                             |
| 65           | 2 1/2 | ○   | ○     | ○     | ○                 | ○      | ○      | 51                                             |
| 80           | 3     | ○   | ○     | ○     | ○                 | ○      | ○      | 70                                             |
| 100          | 4     | ○   | ○     | ○     | ○                 | ○      | ○      | 91                                             |
| 125          | 5     | ○   | ○     | ○     | ○                 | ○      | ○      | 118                                            |
| 150          | 6     | ○   | ○     | ○     | ○                 | ○      | ○      | 144                                            |
| 200          | 8     | ○   | ○     | ○     | ○                 | ○      | ○      | 194                                            |
| 250          | 10    | ○   | ○     | ○     | ○                 | ○      | ○      | 246                                            |
| 300          | 12    | ○   | ○     | ○     | ○                 | ○      | ○      | 295                                            |

Remark 1: The symbols above mean the following.

○: Piping possible —: Not standardized

Remark 2: Butterfly valves are inserted into a pipe that was fitted with the disc when fully open.

In cases where you are using a pipe or flange that is less than the minimum inner pipe diameter, use is still possible if means are taken such as inserting a spacer between the valve and flange. For details, please consult us.



| Butterfly Valve            |
|----------------------------|
| <b>TRITEC</b>              |
| <b>TT2</b>                 |
| <b>334A</b>                |
| <b>302A/303Q</b>           |
| <b>304A/304Q</b>           |
| <b>302Y/304Y</b>           |
| <b>304M (HLV)</b>          |
| <b>507V/508V</b>           |
| <b>DTM</b>                 |
| <b>846T/847T/847Q</b>      |
| <b>841T/842T</b>           |
| <b>700Z</b>                |
| <b>700G/704G/705G</b>      |
| <b>700GB</b>               |
| <b>731P/732P/731Q/732Q</b> |
| <b>71LG</b>                |
| <b>700E/700K/700S</b>      |
| <b>704G/722F/720F</b>      |
| <b>KRV</b>                 |
| <b>227P</b>                |
| <b>907H/908H (MKT)</b>     |
| <b>903C</b>                |

## 700Z Piping bolt and nut sizes

### ■Hexagon bolt & nut

| Nominal size |       | JIS 5K                 | JIS 10K                |
|--------------|-------|------------------------|------------------------|
| mm           | inch  | Hexagon bolts and nuts | Hexagon bolts and nuts |
| 40           | 1 1/2 | 4-M12× 75×30           | 4-M16× 90×38           |
| 50           | 2     | 4-M12× 90×30           | 4-M16×100×38           |
| 65           | 2 1/2 | 4-M12× 90×30           | 4-M16×105×38           |
| 80           | 3     | 4-M16× 95×38           | 8-M16×105×38           |
| 100          | 4     | 8-M16×105×38           | 8-M16×110×38           |
| 125          | 5     | 8-M16×110×38           | 8-M20×125×46           |
| 150          | 6     | 8-M16×115×38           | 8-M20×130×52           |
| 200          | 8     | 8-M20×130×52           | 12-M20×130×52          |
| 250          | 10    | 12-M20×140×52          | 12-M22×150×60          |
| 300          | 12    | 12-M20×150×52          | 16-M22×160×60          |

### ■Long bolt & nut

| Nominal size |       | JIS 5K              | JIS 10K             | ANSI 125Lb/150Lb    |
|--------------|-------|---------------------|---------------------|---------------------|
| mm           | inch  | Long bolts and nuts | Long bolts and nuts | Long bolts and nuts |
| 40           | 1 1/2 | 4-M12× 95×25        | 4-M16×110×25        | 4-U1/2 ×110×32      |
| 50           | 2     | 4-M12×105×25        | 4-M16×120×30        | 4-U5/8 ×140×38      |
| 65           | 2 1/2 | 4-M12×110×25        | 4-M16×125×30        | 4-U5/8 ×140×38      |
| 80           | 3     | 4-M16×120×30        | 8-M16×125×30        | 4-U5/8 ×140×38      |
| 100          | 4     | 8-M16×130×30        | 8-M16×130×30        | 8-U5/8 ×150×38      |
| 125          | 5     | 8-M16×130×30        | 8-M20×150×40        | 8-U3/4 ×160×51      |
| 150          | 6     | 8-M16×140×35        | 8-M20×155×40        | 8-U3/4 ×165×51      |
| 200          | 8     | 8-M20×155×40        | 12-M20×155×40       | 8-U3/4 ×175×51      |
| 250          | 10    | 12-M20×165×40       | 12-M22×175×45       | 12-U7/8 ×195×58     |
| 300          | 12    | 12-M20×175×40       | 16-M22×185×45       | 12-U7/8 ×205×58     |

Remark: Please use a hexagon nut with 80% threading. (For ANSI, use heavy nut.)

#### Example

Long bolts : 12 - M22 × 185 × 45      Hexagon bolts : 12 - M22 × 60 × 50

N      M      L      S
N      M      L      S

