

Lug Butterfly Valve Type 57L (Manual Type)

Features

- Significantly reduces the burden of fluid removal work.
- The over tightening prevention mechanism eliminates the risk of seat breakage.
- Plastic gear box with excellent corrosion resistance and high operability.



Basic specifications

- Valve Type : Lug Butterfly Valve Type 57L
- Size / Lever Type : 80 mm - 200 mm (3 inch – 8 inch)
- / Gear Type : 80 mm - 250 mm (3 inch – 10 inch)
- Body Material / : PDCPD
- Seal Material / Seat : EPDM, FKM, etc.
- Connection / Wafer : JIS B2220 10K, DIN/EN1092-1

| | | | FLUID TEMPERATURE °C {°F} | MAXIMUM WORKING PRESSURE (NORMAL TEMPERATURE) MPa {psi} |
|-------|------------------|--------|------------------------------|--|
| | | | | FOR WAFER |
| PDCPD | (DISC MATERIAL- | PP) | -20 ~ 80 { -5~175 } | 1.0 {150} |
| PDCPD | (DISC MATERIAL- | PVDF) | -20 ~ 100 { -5~210 } | 1.0 {150} |

Note: The maximum working pressure is the value including the water hammer pressure.
Be careful that the maximum working pressure is not exceeded during use.

* Concerning the allowable pressure for each temperature and material, see the technical documents at the next page of this sheet.

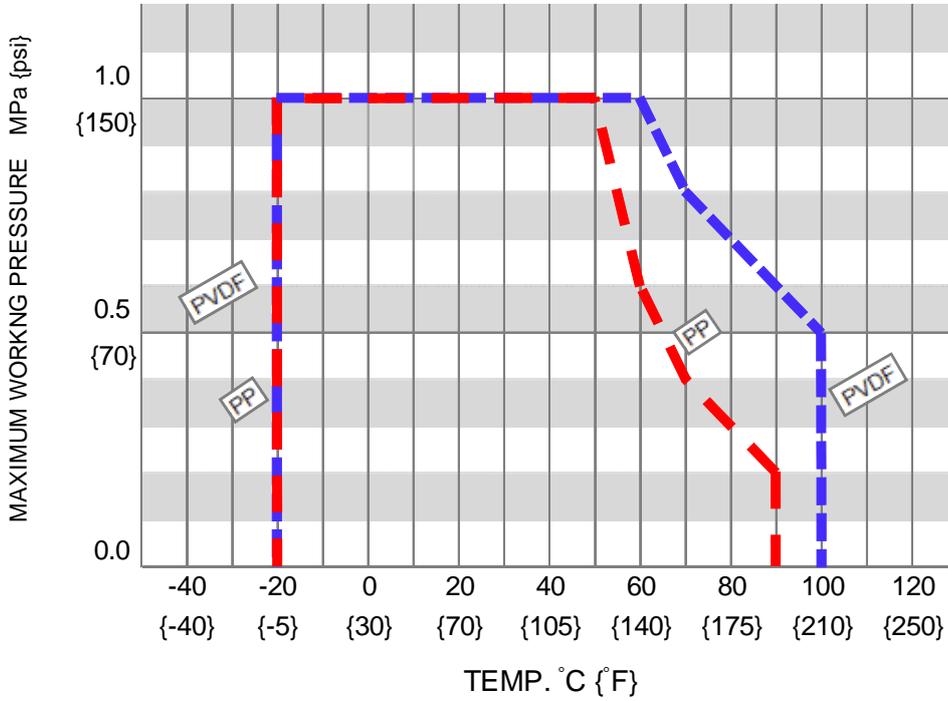
Certificate / Approval

PED

“For details of applicable products, please consult us.”

Working pressure vs. Temperature

BUTTERFLY VALVE TYPE 57L (PDCPD WAFER)
MANUAL : 80mm - 250mm



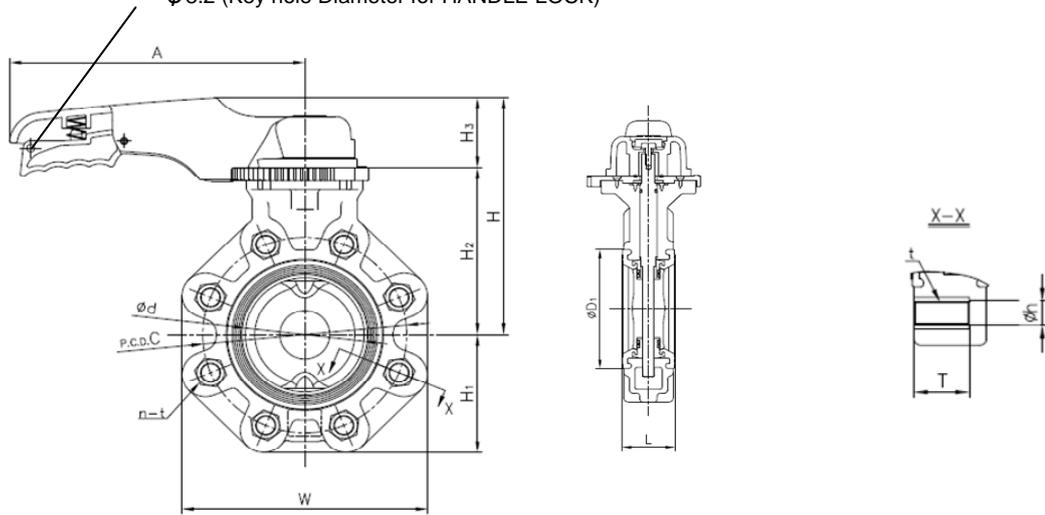
Note: Make sure that the temperature and pressure are within the working range during operation.
(If the tolerance range is exceeded during use, the valve may be damaged.)

Product dimension

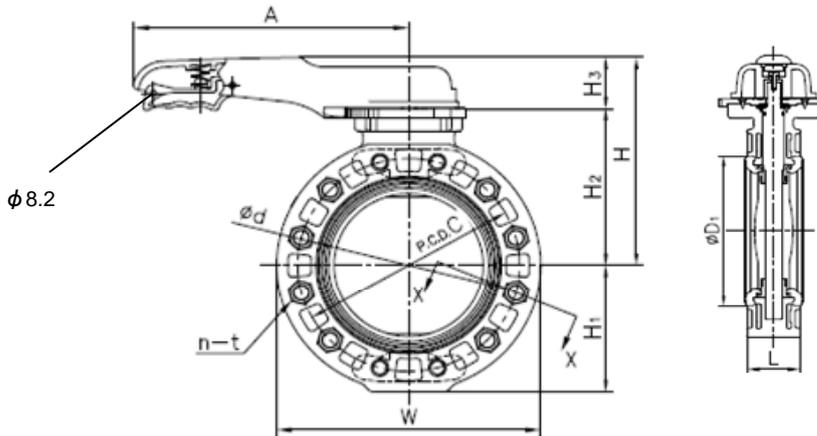
[LEVER TYPE]

φ 8.2 (Key hole Diameter for HANDLE LOCK)

80-150mm



200mm



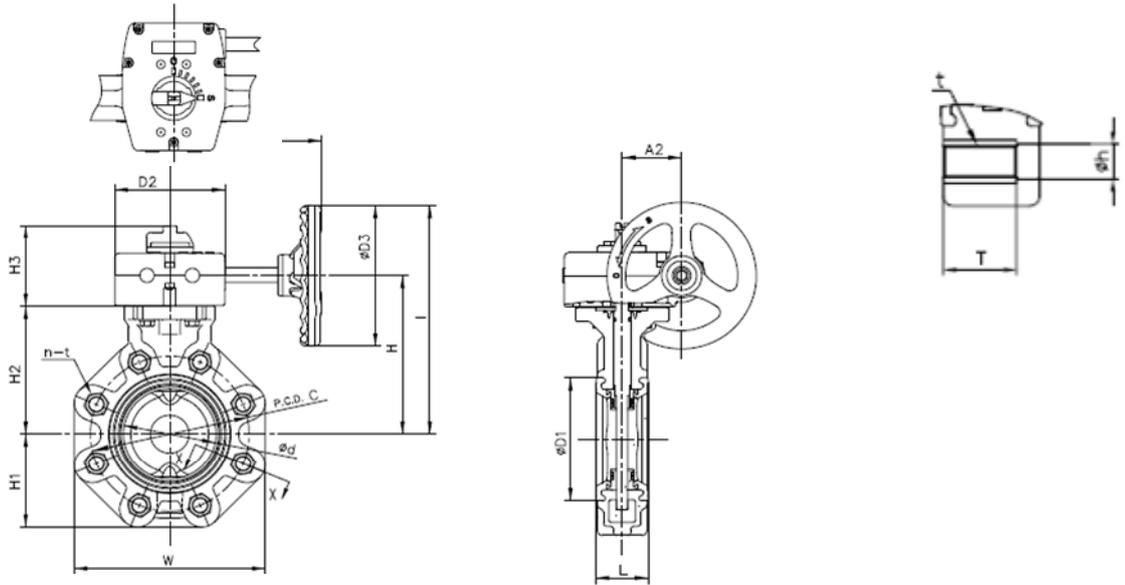
■ JIS,DIN (Unit: mm)

| mm | inch | d | D ₁ | L | H | H ₁ | H ₂ | H ₃ | A | W | T | t | JIS 10K | | | DIN PN10 | | |
|-----|------|-----|----------------|----|-----|----------------|----------------|----------------|-----|-----|----|----------------------------|---------|----|----|----------|---|----|
| | | | | | | | | | | | | | C | n | h | C | n | h |
| 80 | 3 | 77 | 105 | 46 | 191 | 94 | 135 | 56 | 250 | 193 | 40 | M16X40 width across fat 24 | 150 | 8 | 19 | 160 | 8 | 18 |
| 100 | 4 | 102 | 134 | 56 | 206 | 105 | 150 | 56 | 250 | 217 | 40 | M16X40 width across fat 24 | 175 | 8 | 19 | 180 | 8 | 18 |
| 125 | 5 | 129 | 169 | 66 | 237 | 124 | 168 | 69 | 320 | 247 | 50 | M20X50 width across fat 30 | 210 | 8 | 23 | 210 | 8 | 18 |
| 150 | 6 | 150 | 190 | 71 | 252 | 138 | 183 | 69 | 320 | 285 | 50 | M20X50 width across fat 30 | 240 | 8 | 23 | 240 | 8 | 23 |
| 200 | 8 | 195 | 242 | 87 | 283 | 173 | 214 | 69 | 400 | 345 | 60 | M20X60 width across fat 30 | 295 | 12 | 23 | 295 | 8 | 23 |

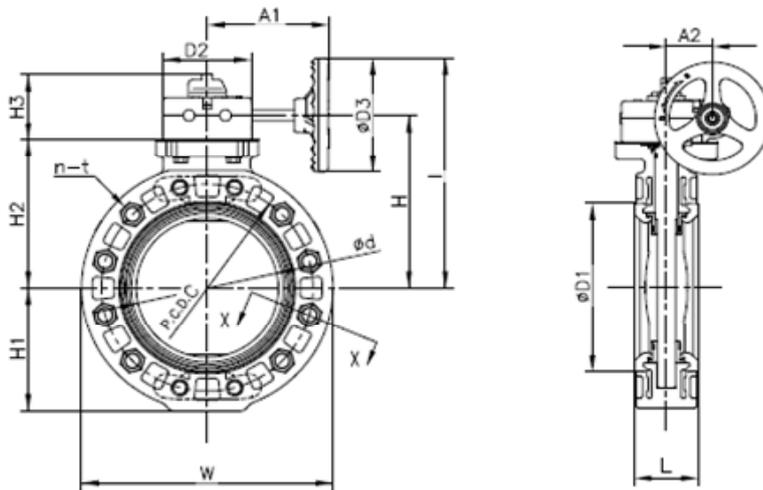
DATASHEET

[GEAR TYPE]

80-150mm



200, 250mm



■JIS,DIN (Unit: mm)

| mm | inch | d | D ₁ | D ₂ | D ₃ | L | H | H ₁ | H ₂ | H ₃ | I | A ₁ | A ₂ | W | T | t | JIS 10K | | | DIN PN10 | | | Number of Handle Wheel | GEAR BOX TYPE |
|-----|------|-----|----------------|----------------|----------------|-----|-----|----------------|----------------|----------------|-----|----------------|----------------|-----|----|----------------------------|---------|----|----|----------|----|----|------------------------|---------------|
| | | | | | | | | | | | | | | | | | C | n | h | C | n | h | | |
| 80 | 3 | 77 | 105 | 122 | 160 | 46 | 165 | 94 | 130 | 92 | 245 | 167 | 64 | 193 | 40 | M16X40 width across fat 24 | 150 | 8 | 19 | 160 | 8 | 18 | 9.5 | TYPE 1 |
| 100 | 4 | 102 | 134 | 122 | 160 | 56 | 180 | 105 | 145 | 92 | 260 | 167 | 64 | 217 | 40 | M16X40 width across fat 24 | 175 | 8 | 19 | 180 | 8 | 18 | | |
| 125 | 5 | 129 | 169 | 122 | 160 | 66 | 195 | 124 | 160 | 92 | 275 | 167 | 64 | 247 | 50 | M20X50 width across fat 30 | 210 | 8 | 23 | 210 | 8 | 18 | | |
| 150 | 6 | 150 | 190 | 122 | 160 | 71 | 210 | 138 | 175 | 92 | 290 | 167 | 64 | 285 | 50 | M20X50 width across fat 30 | 240 | 8 | 23 | 240 | 8 | 23 | | |
| 200 | 8 | 195 | 242 | 122 | 160 | 87 | 241 | 173 | 206 | 92 | 321 | 167 | 64 | 345 | 60 | M20X60 width across fat 30 | 290 | 12 | 23 | 295 | 8 | 23 | | |
| 250 | 10 | 250 | 302 | 122 | 160 | 112 | 276 | 208 | 241 | 92 | 356 | 167 | 64 | 415 | 70 | M20X70 width across fat 30 | 355 | 12 | 25 | 350 | 12 | 23 | | |

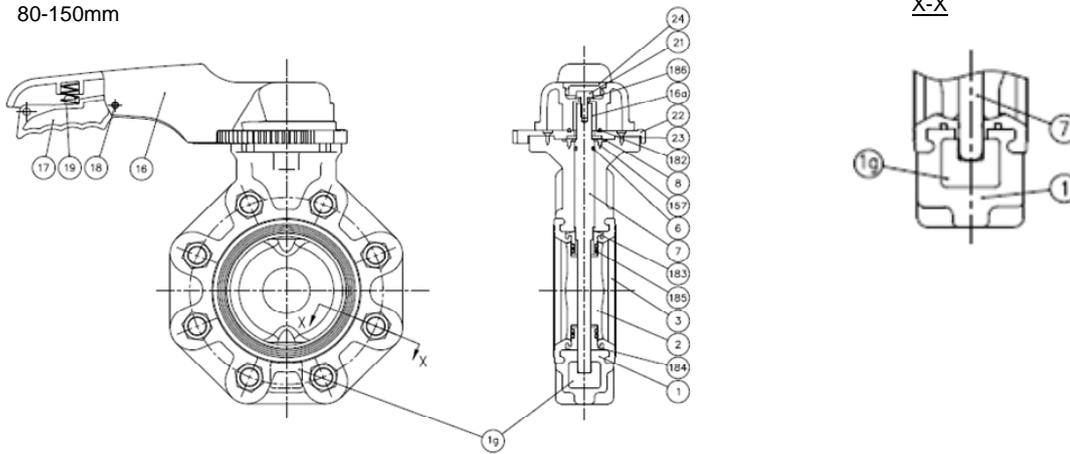
The shape and appearance of assembly differ a little with nominal size compared to this drawing.

DATASHEET

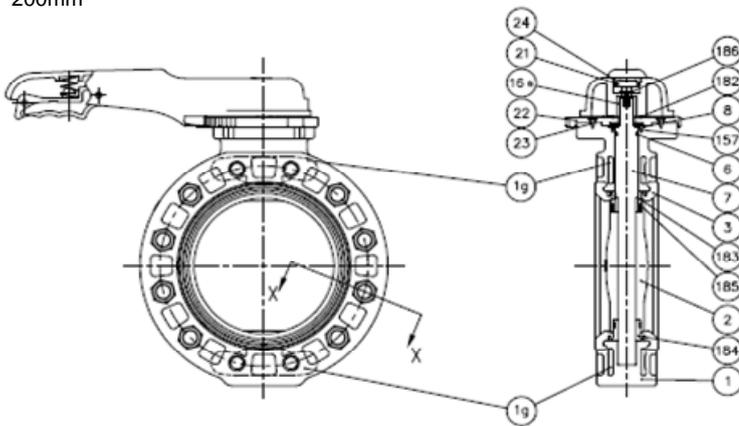
Parts list

[LEVER TYPE]

80-150mm



200mm

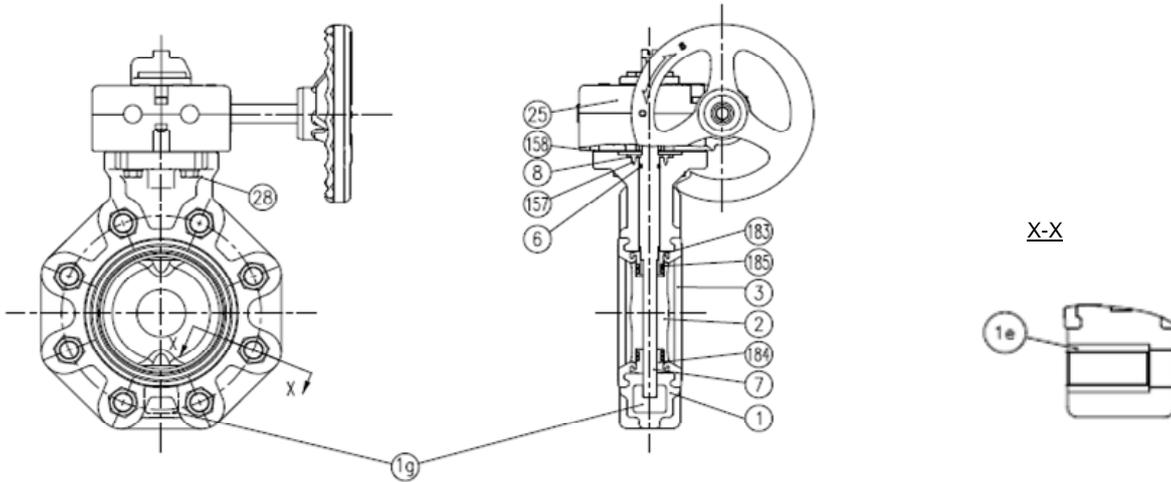


| PART NO./NAME | QTY | MATERIAL | PART NO./NAME | QTY | MATERIAL | PART NO./NAME | QTY | MATERIAL |
|---------------|-----|--|---------------|-----|-------------------------|---------------|-----|----------------------|
| 1 | 1 | PDCPD | 6 | 1 | EPDM, FKM, FKM-F, FKM-C | 21 | 1 | STAINLESS STEEL |
| 1e | 8 | STAINLESS STEEL (Antiscoring Coat) | 185 | - | EPDM, FKM, FKM-F, FKM-C | 22 | 1 | PPG |
| 1g | 1 | STAINLESS STEEL Used for 125, 150mm | 7 | 1 | STAINLESS STEEL | 23 | 4 | STAINLESS STEEL |
| | 2 | STAINLESS STEEL Used for 200mm | 8 | 1 | PP | 24 | 1 | PP |
| 2 | 1 | PP, PVDF | 16 | 1 | PP | 157 | 4 | STAINLESS STEEL |
| 3 | 1 | EPDM, FKM, FKM-F, FKM-C | 16a | 1 | STAINLESS STEEL | 182 | 1 | EPDM |
| | | | 17 | 1 | PPG | 183 | 1 | PP, PVDF |
| | | | 18 | 1 | PPG | 184 | 1 | PP, PVDF |
| | | | 19 | 1 | STAINLESS STEEL | 186 | 1 | STAINLESS STEEL+EPDM |

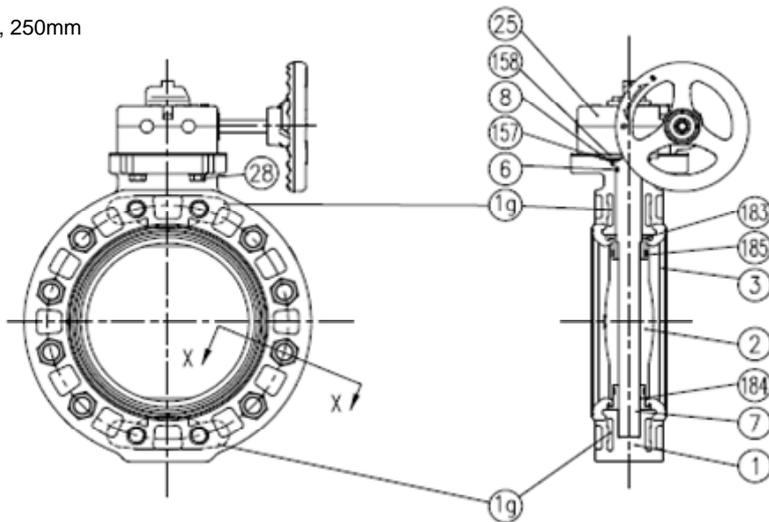
DATASHEET

[GEAR TYPE]

80-150mm



200, 250mm

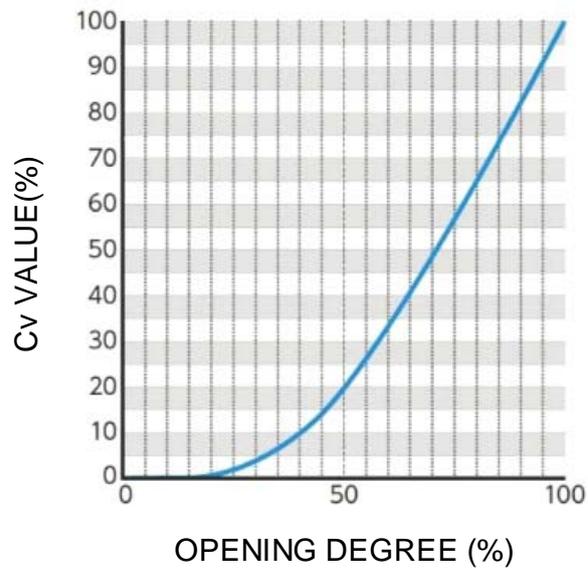


| PART NO./NAME | QTY | MATERIAL |
|----------------|-----|--|
| 1 BODY | 1 | PDCPD |
| 1e LUG-INSERT | 8 | STAINLESS STEEL (Antiscoring Coat) |
| 1g BODY-INSERT | 1 | STAINLESS STEEL Used for 125, 150mm |
| | 2 | STAINLESS STEEL Used for 200, 250mm |

| PART NO./NAME | QTY | MATERIAL |
|---------------------|-----|-------------------------|
| 2 DISC | 1 | PP, PVDF |
| 3 SEAT | 1 | EPDM, FKM, FKM-F, FKM-C |
| 6 O-RING (C) | 1 | EPDM, FKM, FKM-F, FKM-C |
| 185 O-RING (I) | - | EPDM, FKM, FKM-F, FKM-C |
| 7 STEM | 1 | STAINLESS STEEL |
| 8 STEM HOLDER (A) | 1 | PP |

| PART NO./NAME | QTY | MATERIAL |
|---------------------|-----|-----------------|
| 25 GEAR BOX | 1 | PLASTIC etc. |
| 28 BOLT (C) | 4 | STAINLESS STEEL |
| 157 SCREW (F) | 4 | STAINLESS STEEL |
| 158 GASKET (L) | 1 | EPDM |
| 183 SEAT BUSH (A) | 1 | PP, PVDF |
| 184 SEAT BUSH (B) | 1 | |

Cv value for each opening degree



| | | | | | | |
|-----------------------------|-----|-----|-----|-------|-------|-------|
| mm | 80 | 100 | 125 | 150 | 200 | 250 |
| inch | 3 | 4 | 5 | 6 | 8 | 10 |
| BUTTERFLY VALVE TYPE 57L | 300 | 470 | 830 | 1,100 | 2,500 | 3,860 |

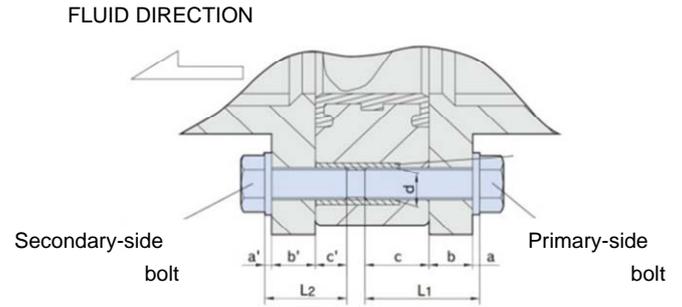
Stem torque

UNIT : N · m

| mm | inch | Stem torque (O→S) |
|-----|------|-------------------|
| 80 | 3 | 20 |
| 100 | 4 | 30 |
| 125 | 5 | 40 |
| 150 | 6 | 65 |
| 200 | 8 | 165 |
| 250 | 10 | 300 |

Dimension of bolt length

(reference:recommended data)



Bolt length when AV TS FLANGE 10K is used (with washer of ISO 7092 or equivalent)
 For 80 and 100 mm, bolts with the same length can be used for both primary and secondary sides.

Unit: mm

| mm | inch | BOLT d (SIZE) | BOLT LENGTH | | WASHER (SIZE) | HIGH NUT | | |
|-----|------|---------------|--------------|----------------|---------------|------------|--------------------|--------|
| | | | PRIMARY SIDE | SECONDARY SIDE | | SCREW SIZE | WIDTH ACROSS FLATS | HEIGHT |
| | | | L1 | L2 | | | | |
| 80 | 3 | M16 | 45 | 40 | 16 | M16 | 24 | 40 |
| 100 | 4 | M16 | 55 | 40 | 16 | M16 | 24 | 40 |
| 125 | 5 | M20 | 60 | 45 | 20 | M20 | 30 | 50 |
| 150 | 6 | M20 | 65 | 50 | 20 | M20 | 30 | 50 |
| 200 | 8 | M20 | 75 | 55 | 20 | M20 | 30 | 60 |
| 250 | 10 | M22 | 95 | 60 | 22 | M22 | 32 | 70 |

Bolt length when a FLANGE other than in 2.1 is used *High nuts listed above can be used.

<Primary side bolt length, L1>

Primary side bolt length L1 = a Washer thickness + b Flange thickness + c (Resin thickness + Engagement allowance)

Unit: mm

| mm | inch | a | b | c |
|-----|------|-----------------------------|-----------------------------|----|
| 80 | 3 | WASHER THICKNESS TO BE USED | FLANGE THICKNESS TO BE USED | 17 |
| 100 | 4 | | | 26 |
| 125 | 5 | | | 29 |
| 150 | 6 | | | 33 |
| 200 | 8 | | | 39 |
| 250 | 10 | | | 53 |

<Secondary side bolt length, L2>

Secondary side bolt length L2 = a' Washer thickness + b' Flange thickness + c' (Engagement allowance)

Unit: mm

| mm | inch | a' | b' | c' |
|-----|------|-----------------------------|-----------------------------|----|
| 80 | 3 | WASHER THICKNESS TO BE USED | FLANGE THICKNESS TO BE USED | 13 |
| 100 | 4 | | | 13 |
| 125 | 5 | | | 13 |
| 150 | 6 | | | 16 |
| 200 | 8 | | | 16 |
| 250 | 10 | | | 18 |

Product weight list (reference)

LUG BUTTERFLY VALVE TYPE 57L [MANUAL]

LEVER TYPE / GEAR TYPE

Unit: kg

| mm | inch | PDCPD | |
|-----|------|-------------|-------------|
| | | DISC: PP | DISC: PVDF |
| 80 | 3 | 2.7 / 4.7 | 2.8 / 4.9 |
| 100 | 4 | 3.3 / 5.3 | 3.5 / 5.6 |
| 125 | 5 | 6.3 / 8.5 | 6.9 / 9.0 |
| 150 | 6 | 7.3 / 8.9 | 8.1 / 9.6 |
| 200 | 8 | 13.7 / 15.1 | 15.0 / 16.5 |
| 250 | 10 | — / 20.3 | — / 22.7 |

Product model code list

| ACTUATION | TYPE | OPERATING SYSTEM | BODY MATERIAL | SEAL MATERIAL | CONNECTION | STANDARD | SIZE | DISC PVDF |
|----------------|-------------|------------------------------------|---------------|-----------------|------------|--------------------------|----------------------------|---------------------------------------|
| V | LG | ** | D | * | W | * | *** | 00Q [※] |
| ∴ | ∴ | ∴ | ∴ | ∴ | ∴ | ∴ | ∴ | ∴ |
| V MANUAL VALVE | LG TYPE 57L | LV LEVER TYPE SG SIDE GEAR TYPE | D PDCPD | E EPDM V FKM | W WAFER | 1 10K D DIN A ANSI | 080 80mm 5 250 250mm | ※Used when the disc material is PVDF. |

Installation, Operation and Maintenance Manual

"For details of Installation, Operation and Maintenance, please refer IOM at below link"

http://www.asahi-yukizai.co.jp/en/product/mt_pdf/a_manual_valve_3_03.pdf