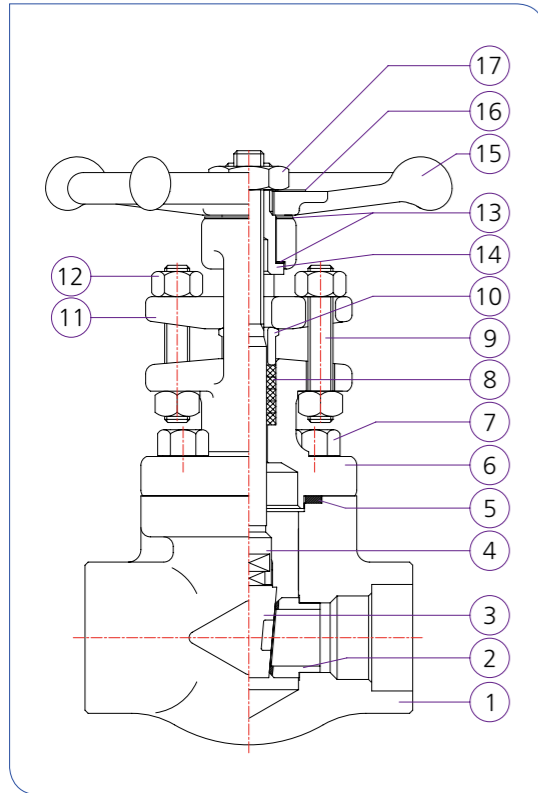


Typical Configurations for Gate Values

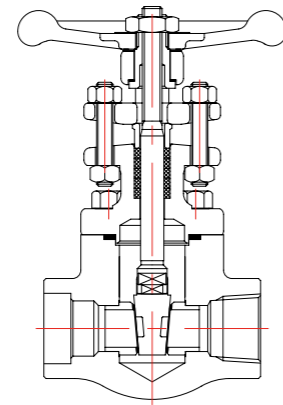
(Design Standard: API 602, BS 5352, ISO 15761, ASME B16.34)

Assembly for General Gate Value



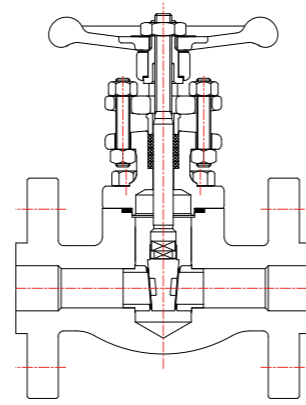
- | | |
|----------------|-------------------|
| 1. Body | 10. Gland |
| 2. Seat Ring | 11. Gland Flange |
| 3. Wedge | 12. Gland Nut |
| 4. Stem | 13. Sleeve Washer |
| 5. Gasket | 14. Yoke Sleeve |
| 6. Bonnet | 15. Handwheel |
| 7. Bonnet Bolt | 16. Nameplate |
| 8. Packing | 17. H/W Nut |
| 9. Gland Bolt | |

SW, NPT Ends



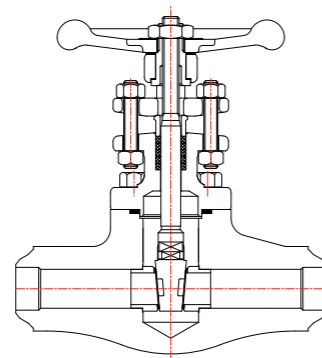
Socket Weld(SW) : ASME B16.11
Thread(NPT) : ASME B1.20.1

Flanged Ends



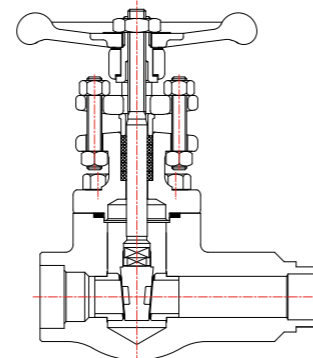
Flange(FLG) : ASME B16.5
Face-to-Face : ASME B16.10

Long Pattern BW Ends



Butt Weld(BW) : ASME B16.25
End-to-End : ASME B16.10

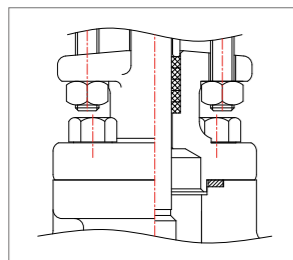
Extended Body Ends



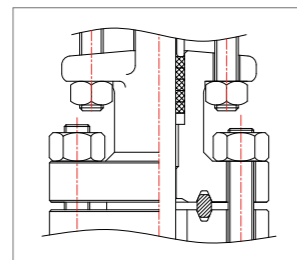
Extended End : API 602
ISO 15761

Typical Configurations for Bonnet Joint

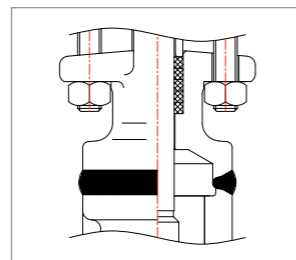
Bolted Bonnet (BB) (Spiral Wound Type)



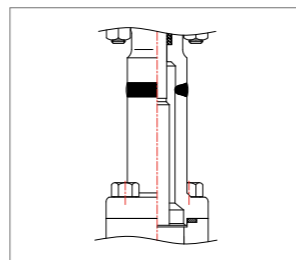
Bolted Bonnet (BB) (Ring Type Joint)



Welded Bonnet (WB) (Full Penetration Welding)



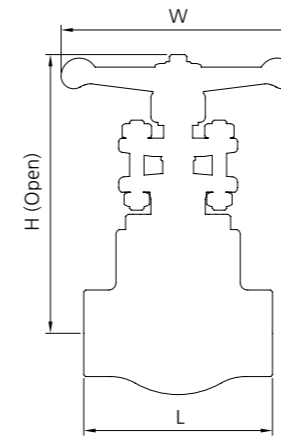
Extended Bonnet (EB) (Fabricated Welding)



※ Extended Bonnet is applied to Cryogenic(SS) & Low temperature(LF2) services.

Value Dimensions - Gate

SW, NPT



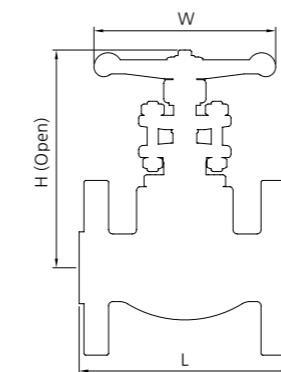
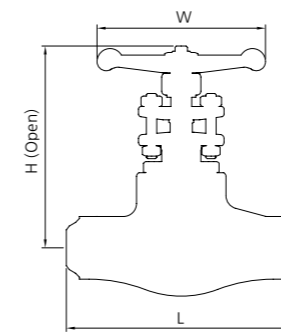
Unit : mm, unless otherwise specified.

| Symbol | Bonnet Joint | Class | RP | 1/4 | 3/8,1/2 | 3/4 | 1 | 1-1/2 | 2 |
|-------------------|---------------|-------|-----|-----|---------|---------|------|-------|-------|
| | | | FP | | 1/4 | 3/8,1/2 | 3/4 | 1 | 1-1/2 |
| L (End-to-end) | All Type | 800 | 76 | 76 | 92 | 104 | 115 | 183 | 220 |
| | | 1500 | 92 | 92 | 104 | 115 | 183 | 210 | |
| W (Handwheel) | All Type | 800 | 82 | 82 | 102 | 129 | 156 | 156 | 200 |
| | | 1500 | 102 | 102 | 129 | 156 | 156 | 200 | |
| P (Port Dia.) | All Type | 800 | 6.4 | 9.6 | 12.7 | 18.0 | 28.6 | 37 | 46.5 |
| | | 1500 | 6.4 | 9.6 | 12.7 | 18.0 | 28.6 | 37 | |
| H (Height) | BB, WB | 800 | 138 | 138 | 147 | 174 | 217 | 261 | 333 |
| | | 1500 | 147 | 147 | 170 | 207 | 246 | 303 | |
| | EB (LowT.) | 800 | 249 | 249 | 277 | 305 | 390 | 494 | |
| | | 1500 | 257 | 257 | 305 | 345 | 410 | 528 | |
| | EB (Cryo.) | 800 | 407 | 407 | 417 | 446 | 509 | 569 | |
| | | 1500 | 417 | 417 | 445 | 485 | 519 | 599 | |
| Wt (kg) | BB, WB | 800 | 1.5 | 1.5 | 2.1 | 2.8 | 4.8 | 8.2 | 13.0 |
| | | 1500 | 2.2 | 2.2 | 2.9 | 5.0 | 8.2 | 22.0 | |
| | EB (LowT.) | 800 | 2.5 | 2.5 | 3.0 | 4.6 | 8.8 | 12.5 | |
| | | 1500 | 2.9 | 2.9 | 4.8 | 8.6 | 12.1 | 19.9 | |
| | EB (Cryo.) | 800 | 3.1 | 3.1 | 3.7 | 5.3 | 9.5 | 13.1 | |
| | | 1500 | 3.7 | 3.7 | 5.3 | 9.5 | 13.1 | 21.0 | |

※ Abbreviations

BB: Bolted Bonnet / WB: Welded Bonnet / EB: Extended Bonnet / Cryo.: Cryogenic Service / Low T.: Low Temperature Service
RP: Reduced Port / FP: Full Port

BW(Long), FLG



Unit : mm, unless otherwise specified.

| Symbol | Bonnet Joint | Class | 1/2 (DN15) | 3/4 (DN20) | 1 (DN25) | 1-1/2 (DN40) | 2 (DN50) |
|--------------------------------|---------------|---------|-------------------|---------------|-------------|-----------------|-------------|
| | | | L (End-to-end) | All Type | 150 | 108 | 117 |
| W (Handwheel) | All Type | 300 | 140 | 152 | 165 | 190 | 216 |
| | | 600 | 165 | 190 | 216 | 241 | 292 |
| P (Port Dia.) | All Type | 150-600 | 216 | 229 | 254 | 305 | 368 |
| | | 1500 | 82 | 102 | 129 | 156 | 156 |
| H (Height) | BB, WB | 150-600 | 9.6 | 12.7 | 18.0 | 28.6 | 37.0 |
| | | 1500 | 9.6 | 12.7 | 18.0 | 28.6 | 37.0 |
| | EB (LowT.) | 150-600 | 138 | 147 | 174 | 217 | 261 |
| | | 1500 | 147 | 170 | 207 | 246 | 303 |
| | EB (Cryo.) | 150-600 | 249 | 277 | 305 | 390 | 494 |
| | | 1500 | 258 | 303 | 345 | 410 | 529 |
| Wt (kg) BW(Long) /FLG | BB, WB | 150 | 1.7/2.7 | 2.3/3.5 | 3.2/5.0 | 5.8/9.2 | 8.5/12.7 |
| | | 300 | 1.8/3.0 | 2.6/3.7 | 3.6/5.3 | 6.2/10.7 | 9.5/13.1 |
| | EB (LowT.) | 600 | 2.0/3.6 | 2.9/5.4 | 4.2/6.7 | 7.2/12.4 | 11.5/16.5 |
| | | 1500 | 3.5/8.3 | 4.7/10.2 | 8.9/13.5 | 16.7/38.2 | 28.0/42.0 |
| | EB (Cryo.) | 150 | 2.5/3.1 | 3.1/4.3 | 4.8/6.6 | 9.7/13.3 | 12.3/16.5 |
| | | 300 | 2.6/3.8 | 3.4/5.4 | 5.2/6.9 | 10.1/14.6 | 13.3/16.9 |
| | EB (Cryo.) | 600 | 2.8/4.4 | 3.7/7.1 | 5.8/8.3 | 11.1/16.3 | 15.3/20.3 |
| | | 1500 | 4.2/9.0 | 5.6/11.1 | 10.0/14.6 | 18.7/40.2 | 31.9/45.9 |
| | EB (Cryo.) | 150 | 3.2/3.8 | 3.9/5.1 | 5.6/7.4 | 10.5/14.1 | 13.0/17.2 |
| | | 300 | 3.3/4.5 | 4.2/6.2 | 6.0/7.7 | 10.9/15.4 | 14.0/17.6 |
| | EB (Cryo.) | 600 | 3.5/5.1 | 4.5/7.9 | 6.6/9.1 | 11.9/17.1 | 16.0/21.0 |
| | | 1500 | 5.4/10.2 | 6.6/12.1 | 11.4/16.0 | 20.2/41.7 | 33.4/47.4 |

※ ASME Class 900 is same as Class 1500.