

## GATE, GLOBE, LIFT CHECK - BOLTED BONNET

### Features

- ▶ Hawa Forged Steel Valves have been designed to meet the requirements of API 602 / BS 5352 / ASME B 16.34
- ▶ Socket weld ends dimensions conforms to ASME B 16.11
- ▶ Screwed ends dimensions conforms to ASME B 1.20.1
- ▶ Outside screw and yoke construction
- ▶ The gland is of two piece self aligning type
- ▶ Buckseat arrangement for Gate and Globe Valves.
- ▶ Valves meet the requirements of fugitive emission level Shell Catagory B as per MESG SPE 77/312

### Options

- ▶ For low temperature and cryogenic services (cold box and non cold box) extended bonnet as per BS 6364 available
- ▶ Welded bonnet construction
- ▶ Locking arrangement
- ▶ Welded on flanges
- ▶ **Bellow Seal for critical service and hazardous area**

### Materials

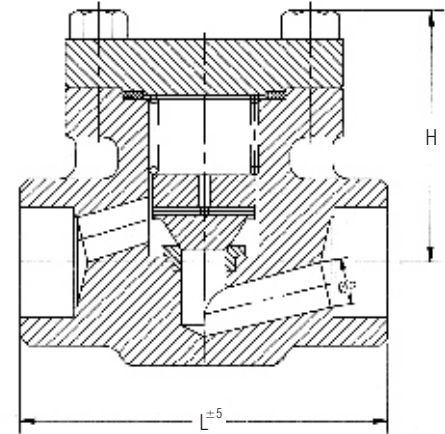
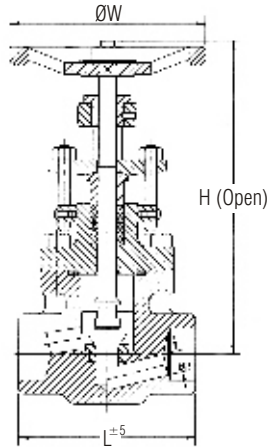
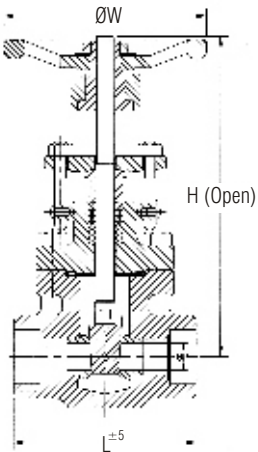
| Part Name                       | Material Option   |
|---------------------------------|---|
| <b>Body</b>                     | ASTM A 105 / 182 F304 / 182 F304L / 182 F316 / 182 F316L / 182 F11 / 182 F22 / 350 LF2      |
| <b>Bonnet</b>                   | ASTM A 105 / 182 F304 / 182 F304L / 182 F316 / 182 F316L / 182 F11 / 182 F22 / 350 LF2      |
| <b>Wedge / Plug<sup>@</sup></b> | ASTM A 182 F6a / 182 F304/182 F304L / 182 F316 / 182 F316L / 182 F11 / 182 F22 / 350 LF2    |
| <b>Stem</b>                     | ASTM A 276 T410 / 182 F304 / 182 F304L / 182 F316 / 182 F316L / 182 F11 / 182 F22 / 350 LF2 |
| <b>Seat Rings<sup>@</sup></b>   | ASTM A 182 F6a / 182 F304 / 182 F304L / 182 F316 / 182 F316L / 182 F11 / 182 F22 / 350 LF2  |
| <b>Back Seat Bushing</b>        | Integral  |
| <b>Gland</b>                    | ASTM A 276 T410 / 182 F304 / 182 F304L / 182 F316 / 182 F316L / 182 F11 / 182 F22 / 350 LF2 |
| <b>Gland Flange</b>             | ASTM A 105 / 182 F304 / 182 F304L / 182 F316 / 182 F316L / 182 F11 / 182 F22 / 350 LF2      |
| <b>Stem Nut</b>                 | ASTM A 439 Gr.D2/AL.Bronze  |
| <b>Lock Nut</b>                 | Carbon Steel / SS 304   |
| <b>Gland Packing</b>            | Graphited Asbestos / Grafoil / PTFE   |
| <b>Bonnet Gasket</b>            | Spiral Wound SS 304 / 304L / 316 / 316L with Asbestos / Teflon or Grafoil                   |
| <b>Gland Eye Bolt &amp; Nut</b> | SS 410/SS 304   |
| <b>Hand Wheel</b>               | Carbon Steel  |
| <b>Hand Wheel Nut</b>           | Carbon Steel  |
| <b>Studs / Bolts</b>            | ASTM A 193 B7 / A 193 B7M / A 193 B8 / A 193 B8M / A 320 L7                                 |
| <b>Nut</b>                      | ASTM A 194 2H / A 194 2HM / A 194 8 / A 194 8M / A 194 4/7                                  |

\* Valves are available in Duplex & Super Duplex Stainless Steel and Nickel Aluminium Bronze. Please indicate Trim required and ask for individual technical data sheets provided separately for these special materials.

@ Wedge / Plug and Seat Rings will be overlaid with STELLITE 6 as per customer specifications.

\* Compliant to NACE MR-0175 (2002)





## Dimensions

### Gate Valve - Class 800

| Size            | DN | 6   | 10  | 15  | 20   | 25   | 32   | 40   | 50   |
|-----------------|----|-----|-----|-----|------|------|------|------|------|
| L               |    | 85  | 85  | 85  | 92   | 105  | 125  | 125  | 135  |
| P               |    | 6.4 | 6.4 | 9.5 | 12.7 | 17.5 | 22.8 | 22.6 | 36.5 |
| H (approx)      |    | 165 | 165 | 165 | 175  | 195  | 265  | 265  | 275  |
| ØW              |    | 85  | 85  | 85  | 85   | 150  | 150  | 150  | 150  |
| Wt. (approx) kg |    | 2   | 2   | 2   | 3    | 3    | 8    | 8    | 10   |

### Gate Valve - Class 1500

| Size            | DN | 6   | 10  | 15  | 20   | 25   | 32  | 40  |
|-----------------|----|-----|-----|-----|------|------|-----|-----|
| L               |    | 92  | 92  | 92  | 105  | 125  | 125 | 135 |
| P               |    | 6.4 | 6.4 | 9.5 | 12.7 | 15.9 | 19  | 27  |
| H (approx)      |    | 175 | 175 | 175 | 195  | 265  | 275 | 275 |
| ØW              |    | 90  | 90  | 90  | 100  | 150  | 150 | 150 |
| Wt. (approx) kg |    | 3   | 3   | 3   | 4    | 8    | 10  | 10  |

### Globe Valve - Class 800

| Size               | DN | 6   | 10  | 15  | 20   | 25   | 32   | 40   | 50  |
|--------------------|----|-----|-----|-----|------|------|------|------|-----|
| L - SP             |    | 85  | 85  | 92  | 105  | 125  | 125  | 135  | -   |
| L - RP             |    | 85  | 85  | 85  | 92   | 105  | 125  | 125  | 135 |
| P - SP             |    | 6   | 9   | 12  | 17.5 | 22.5 | 29.5 | 35   | -   |
| P - RP             |    | 6   | 6   | 9   | 12   | 17.5 | 22.5 | 29.5 | 35  |
| H - SP             |    | 175 | 175 | 175 | 190  | 250  | 250  | 285  | -   |
| H - RP             |    | 170 | 170 | 170 | 175  | 190  | 250  | 250  | 285 |
| W - SP             |    | 90  | 90  | 90  | 100  | 150  | 150  | 150  | -   |
| W - RP             |    | 85  | 85  | 85  | 85   | 100  | 150  | 150  | 150 |
| Wt.-SP (approx) kg |    | 3   | 3   | 3   | 4    | 8    | 8    | 11   | 11  |
| Wt.-RP (approx) kg |    | 2   | 2   | 2   | 3    | 4    | 8    | 8    | 11  |

### Globe Valve - Class 1500

| Size            | DN | 6   | 10  | 15  | 20   | 25  | 32  | 40  |
|-----------------|----|-----|-----|-----|------|-----|-----|-----|
| L               |    | 92  | 92  | 92  | 105  | 125 | 130 | 135 |
| P               |    | 6   | 6   | 11  | 14.5 | 19  | 27  | 31  |
| H (approx)      |    | 175 | 175 | 175 | 190  | 250 | 250 | 255 |
| ØW              |    | 90  | 90  | 90  | 100  | 150 | 150 | 150 |
| Wt. (approx) kg |    | 3   | 3   | 3   | 4    | 8   | 8   | 11  |

### Lift Check Valve - Class 800

| Size               | DN | 6  | 10 | 15 | 20   | 25   | 32   | 40   | 50  |
|--------------------|----|----|----|----|------|------|------|------|-----|
| L - SP             |    | 85 | 85 | 92 | 105  | 125  | 125  | 135  | -   |
| L - RP             |    | 85 | 85 | 85 | 92   | 105  | 125  | 125  | 135 |
| P - SP             |    | 6  | 9  | 12 | 17.5 | 22.5 | 29.5 | 35   | -   |
| P - RP             |    | 6  | 6  | 9  | 12   | 17.5 | 22.5 | 29.5 | 35  |
| H - SP             |    | 55 | 55 | 55 | 70   | 105  | 105  | 115  | -   |
| H - RP             |    | 55 | 55 | 55 | 65   | 70   | 105  | 105  | 115 |
| Wt.-SP (approx) kg |    | 2  | 2  | 2  | 4    | 6    | 6    | 9    | -   |
| Wt.-RP (approx) kg |    | 2  | 2  | 2  | 3    | 4    | 6    | 6    | 8   |

### Lift Check Valve - Class 1500

| Size            | DN | 6  | 10 | 15 | 20   | 25  | 32  | 40  |
|-----------------|----|----|----|----|------|-----|-----|-----|
| L - SP          |    | 92 | 92 | 92 | 105  | 125 | 130 | 135 |
| P - SP          |    | 6  | 6  | 11 | 14.5 | 18  | 27  | 31  |
| H - SP          |    | 65 | 65 | 65 | 70   | 105 | 115 | 115 |
| Wt. (approx) kg |    | 4  | 4  | 4  | 4    | 7   | 10  | 10  |

Abbreviations : SP - Standard Port • RP - Reduced Port