

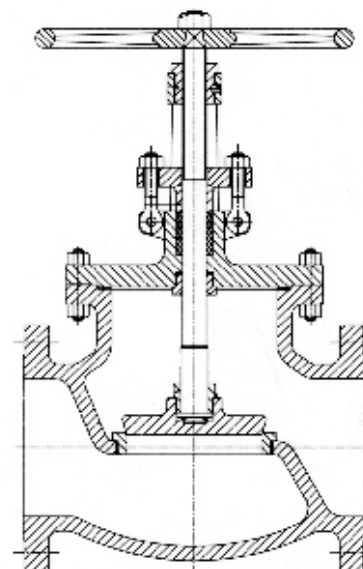
## CAST STEEL BOLTED BONNET

### Features

- ▶ Hawa Valves Cast Steel Globe Valves have been designed to meet the requirements BS 1873 / ASME B 16.34
- ▶ Face to Face and End to End dimensions conform to ASME B 16.10 / ISO 5752 / BS 2080 / DIN
- ▶ End flange dimensions conform to ASME B 16.5 / ISO 7005-1 / API 605 / BS 3293 / DIN
- ▶ Butt weld end dimensions conform to ASME B 16.25
- ▶ Anti-frictional Ball bearings are provided in higher sizes and classes.
- ▶ Outside screw and yoke construction
- ▶ All the valves provided with backseat arrangement
- ▶ The gland is of self aligning two piece type
- ▶ Deep stuffing box
- ▶ The Seat-rings are shoulder seated type having ample cross section for strength are provided with welded in and threaded Seat-rings will be supplied on request. In case of SS valves the Seat-rings are integral to Body
- ▶ The Body to Bonnet joint is a male & female in ISO PN 20, PN 50 & PN 110 / ASME 150#, 300# & 600# valves and ring joint is used in higher classes
- ▶ Valves meet the requirements of fugitive emission levels Shell category B as per MESC SPE 77/312

### Options

- ▶ Angle and Y type design available
- ▶ For low temperature and cryogenic services (cold box and non-cold box applications) extended bonnet as per BS 6364 available
- ▶ Locking arrangement
- ▶ Gear, Electrical, Hydraulic or Pneumatic actuator available
- ▶ Regulating, guided and soft seated plugs available
- ▶ Can be supplied with GRAYLOC END HUB, under project license from GRAYLOC PRODUCTS®, UK.
- ▶ **Bellow Seal for critical service and hazardous media ( MODEL NO. : GL BB BS)**



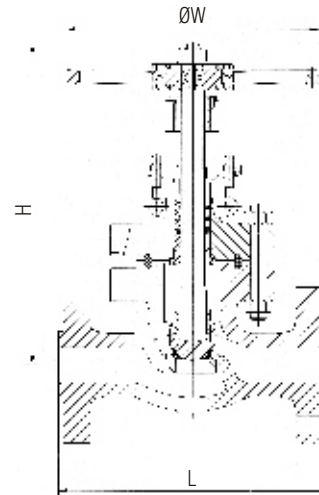
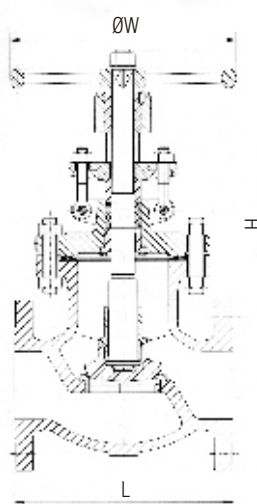
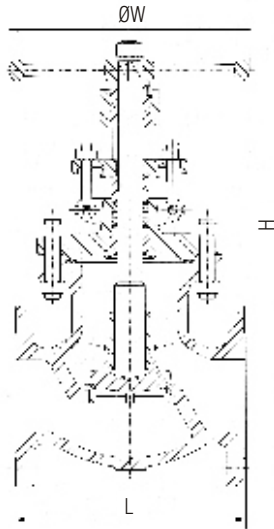
### Materials

Part Name	Material Option
<b>Body</b>	ASTM A 216 WCB / A 217 WC6 / A 217 WC9 / A 217 C5 / A 217 C12 / A 351 CF8 / A 351 CF8M / A 351 CF3 / A 351 CF3M / A 352 LCB
<b>Bonnet</b>	ASTM A 216 WCB / A 217 WC6 / A 217 WC9 / A 217 C5 / A 217 C12 / A 351 CF8 / A 351 CF8M / A 351 CF3 / A 351 CF3M / A 352 LCB
<b>Disc<sup>@</sup></b>	ASTM A 216 WCB / A 217 WC6 / A 217 WC9 / A 217 C5 / A 217 C12 / A 351 CF8 / A 351 CF8M / A 351 CF3 / A 351 CF3M / A 352 LCB
<b>Disc Nut</b>	ASTM A 276 410 / A 276 304 / A 276 304L / A 276 316L
<b>Stem</b>	ASTM A 276 410 / A 276 304 / A 276 304L / A 276 316L
<b>Seat Rings<sup>@</sup></b>	ASTM A 216 WCB / A 217 WC6 / A 217 WC9 / A 217 C5 / A 217 C12 / A 351 CF8 / A 351 CF8M / A 351 CF3 / A 351 CF3M / A 352 LCB
<b>Back Seat Bushing</b>	ASTM A 276 410 / A 276 304 / A 276 304L / A 276 316L
<b>Gland</b>	ASTM A 276 410 / A 276 304 / A 276 304L / A 276 316L
<b>Gland Flange</b>	Carbon Steel / Stainless Steel
<b>Stem Nut</b>	ASTM A 439 Gr.D2 / Al. Bronze
<b>Gland Packing</b>	Graphite Asbestos / Graphoil / PTFE
<b>Bonnet Gasket</b>	Corrugated Soft Iron / Corrugated SS / Spiral Wound SS 304 with Asbestos or Graphoil / Octagonal Ring
<b>Gland Eye - Bolt &amp; Nut</b>	Carbon Steel / Stainless Steel
<b>Cross Bolts &amp; Nuts</b>	Carbon Steel / Stainless Steel
<b>Hand Wheel</b>	Carbon Steel
<b>Hand Wheel Nut</b>	Carbon Steel
<b>Grub Screw</b>	Carbon Steel
<b>Studs / Bolts</b>	ASTM A 193 Gr B7 / A 193 Gr B7M / A 193 Gr B8 / A 193 Gr B8M / A 320 Gr L7
<b>Nut</b>	ASTM A 194 Gr 2H / A 194 Gr 2HM / A 194 Gr 8 / A 194 Gr 8M / A 194 Gr 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.

@ CS & Alloy Steel Wedges and Seat Rings will be overlaid with 13% CR. or STELLITE 6 as per customer specifications.

\* Compliant to NACE MR-0175 (2002)

**CAST STEEL BOLTED BONNET**

**Dimensions**
**ISO PN 20 / ASME 150 Class**

Size	DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
**L,L1-RFBW		203	216	241	292	356	406	495	622	699	787	914	977	977	1295
H (approx)		330	390	410	475	540	585	725	825	940	1200	1270	1300	1350	1450
ØW		200	250	250	300	350	350	450	500	600	600	650	650	700	750
Wt. (approx) kg		23	29	40	59	95	115	178	268	385	540	760	1050	1225	1650

**ISO PN 50 / ASME 300 Class**

Size	DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
**L,L1-RFBW		267	292	318	355	400	444	558	622	711	838	863	977	1016	1346
H (approx)		350	425	485	520	565	655	825	920	1155	1250	1295	1340	1385	1475
ØW		200	250	300	300	350	350	500	600	700	700	450*	500*	550*	550*
Wt. (approx) kg		30	45	60	83	135	162	265	375	525	765	1100	1470	1680	2475

**ISO PN 110 / ASME 600 Class**

Size	DN	50	65	80	100	125	150	200	250	300
**L,L1-RFBW		292	330	355	431	508	558	660	787	838
H (approx)		420	490	550	590	620	700	950	1140	1320
ØW		250	300	300	350	500	500	600	600	400*
Wt. (approx) kg		39	61	76	122	210	245	447	692	975

**ISO PN 150 / ASME 900 Class**

Size	DN	50	65	80	100	125	150	200	250	300
**L,L1-RFBW		368	419	381	457	559	610	737	838	965
H (approx)		495	540	600	655	670	780	1050	1300	1480
ØW		300	350	350	500	500	350*	350*	400*	450*
Wt. (approx) kg		96	79	117	178	305	355	730	1050	1350

**ISO PN 260 / ASME 1500 Class**

Size	DN	50	65	80	100	125	150	200	250
**L,L1-RFBW		368	419	470	546	673	705	832	991
H (approx)		550	580	625	750	810	925	1225	1450
ØW		300	350	400	450	500	600*	450*	500*
Wt. (approx) kg		116	125	145	210	395	475	925	1365

\* Gear Operation suggested. Dimensions on request.

