

CAST STEEL, 3 PIECE, FLOATING BALL FULL and REDUCED PORT

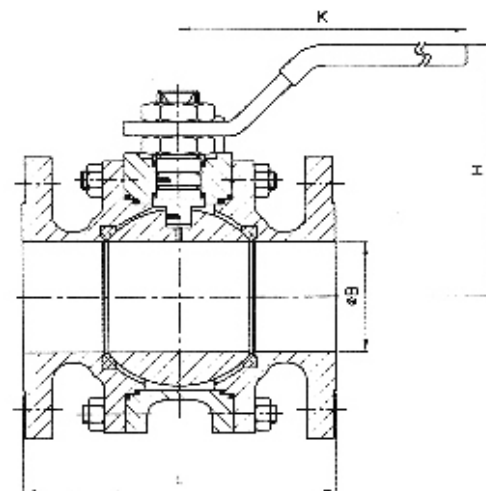


Features

- ▶ Hawa Valves Cast Steel Ball Valves have been designed to meet the requirements BS 5351/ASME B 16.34/API 6D-ISO 14313/API 608/MSS SP 72
- ▶ Face to Face and End to End dimensions conform to ASME B 16.10 / ISO 5752 / BS 2080 / API 6D-ISO 14313 / 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
- ▶ Fire tested design to API 607/API 6FA/BS 6755-II
- ▶ Flexible lip seats compensate for wear and changes in pressure
- ▶ Blow out proof stem construction
- ▶ Antistatic devices ensure electrical continuity between ball, stem & body
- ▶ Triple stem sealing
- ▶ ISO 5211 top pad for simplified gear/actuator mounting
- ▶ Valves meet the requirements of fugitive emission levels Shell category B as per MESG SPE 77/312

Options

- ▶ 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
- ▶ Soft seats are recommended for service temperature up to 260°C and for higher temperatures a metal to metal seating offered
- ▶ Can be supplied with GRAYLOC END HUB, under project license from GRAYLOC PRODUCTS®, UK.



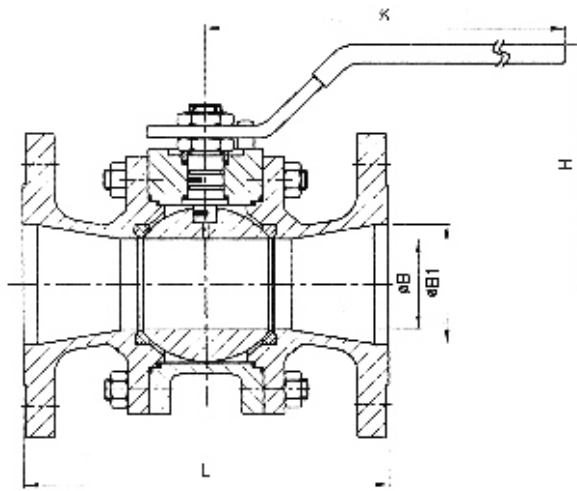
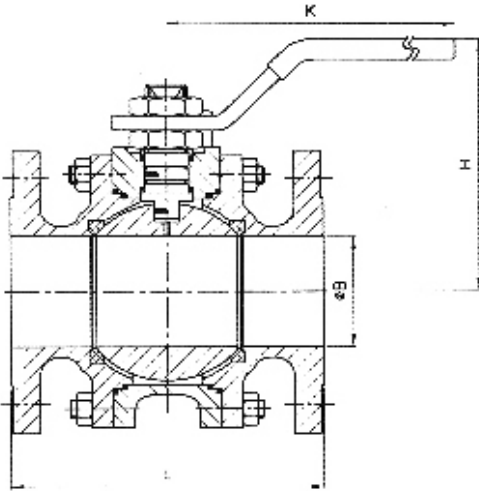
Materials

Part Name	Material Option
Body	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
Side Piece	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
Ball	ASTM A 351 CF8 / A 351 CF8M / A 182 F304 / A 182 F316 / A 182 F 6a
Body Seal	PTFE / Graphoil / Spiral Wound SS 316 with Graphoil
Seats	PTFE / GET / Graphite filled PTFE
Stem	ASTM A 182 F304 / A 182 F316 / A 182 F 6a
Gland Bush	ASTM A 182 F304 / A 182 F316 / A 182 F 6a
Gland Packing	Graphoil / PTFE
Stem Packing	Graphite filled PTFE / Graphoil
Gland Nut	Stainless Steel
Stem Nut	Stainless Steel
Lever	Carbon Steel with PVC
Disc Spring	Carbon Steel
Studs / Bolts	ASTM A 193 B7 / A 193 B7M / A 193 B8 / A 193 B8M / A 320 L7
Nut	ASTM A 194 2H / A 194 B7M / A 194 B / 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.

* Compliant to NACE MR-0175 (2002)

**CAST STEEL, 3 PIECE, FLOATING BALL
FULL and REDUCED PORT**



Dimensions

Full Port

ISO PN 20 / ASME 150 Class

Size	DN	15	20	25	40	50	65	80	100	150	200
L - RF		108	118	127	165	178	190	203	229	394	457
B		12.5	17	24	37	49	64	75	98	148	198
H (approx)		65	70	80	95	110	135	145	170	235	275
K		150	155	160	180	200	255	325	350	500	600
Wt. (approx) kg		3	4	5	8	13	22	28	45	83	158

ISO PN 50 / ASME 300 Class

Size	DN	15	20	25	40	50	65	80	100	150	200
L - RF		140	152	165	190	216	241	282	305	403	502
B		12.5	17	24	37	49	64	75	98	148	198
H (approx)		70	85	90	105	120	145	160	195	250	290
K		155	160	180	200	225	325	350	500	600	700
Wt. (approx) kg		3	5	7	14	17	30	35	58	110	175

Reduced Port

ISO PN 20 / ASME 150 Class

Size	DN	15	20	25	40	50	65	80	100	150	200
L - RF		108	118	127	165	178	190	203	229	394	457
B		9	12.5	17	28	36	50	57	75	98	144
H (approx)		65	70	80	95	110	135	145	170	210	250
K		145	150	155	160	180	200	225	325	350	500
Wt. (approx) kg		3	4	5	7	10	14	20	30	60	128

ISO PN 50 / ASME 300 Class

Size	DN	15	20	25	40	50	65	80	100	150	200
L - RF		140	152	165	190	216	241	282	305	403	502
B		9	12.5	17	28	36	50	57	75	98	144
H (approx)		70	85	90	105	120	145	160	195	225	275
K		150	155	160	180	200	225	325	350	500	600
Wt. (approx) kg		3	4	5	9	15	23	30	42	78	145

