

GLOBE VALVE

Cast Steel • Bolted Bonnet



**PROFI Globe Valve
Cast Steel, Bolted Bonnet Type**

DESIGN

PROFI Globe Valves are designed and manufactured to provide maximum service life and highest reliability. All Globe Valves are designed to meet the requirements of American Petroleum Institute (API) API Standard 600 and British Standard (BS) BS EN 13709, and conform to American Society of Mechanical Engineers (ASME) standard ASME B16.34.

PROFI Globe Valves are available in various material trims and body/bonnet materials to meet every customer's specific needs.

MATERIALS

Standard body/bonnet materials include nine grades of carbon, low alloy, and stainless steels. For special applications, other grades of alloy and stainless steel can be supplied according to customers' requirements.

Full range of material trims, including optional packing and gasket materials, are available in order to provide customers with the complete valve trim selection. Valves are also available in full bore and reduced bore designs to meet any customer needs.

FEATURES

Operation

PROFI Globe Valves come with field proven and reliable mechanism that ensure reliability and low torque operation. Gear box, electrical, hydraulic and pneumatic actuation are also available for more demanding services.

Seat Ring Design

Seat ring design and material selection allows heavy duty application while ensuring full pressure containment when required. Seat is welded or screwed to the body for easy servicing.

Body and Bonnet Connection

For Globe Valves up to 600LB class, flat graphite gasket (with stainless steel coil spring) is offered as standard. Ring joint with steel gasket is for 900LB class and above Globe Valve.

Bolted and Welded Bonnet

Bolted bonnet is offered as standard. Welded and pressure seal bonnet design are available for services that require frequent cycling with high pressure and temperature variations.

Disc Plug

The disc plug is guided by the valve stem on all valve sizes. The disc and seat design has point contact design for maximum sealing. The "V" shape disc provides stability in throttling operation. Soft TEFLON ring for low temperature is available upon request.

Yoke Design

Integral Bonnet-Yoke design for 10" and smaller valve. Yoke sleeve is made from aluminium bronze and comes with ball bearing to reduce operation torque.

Live Load Packing

For services requiring frequent cycling and/or high pressure-temperature variations, live loading packing extends the service life of the valve. Belleville springs are installed to provide constant packing load.

End Connections

Various end connections are available. Common options include Raised Face (RF) and Ring Type Joint (RTJ) Flange and butt weld ends. Other type of end connection is available upon request.

Double Stem Packing

Double stem packing is available for critical services.

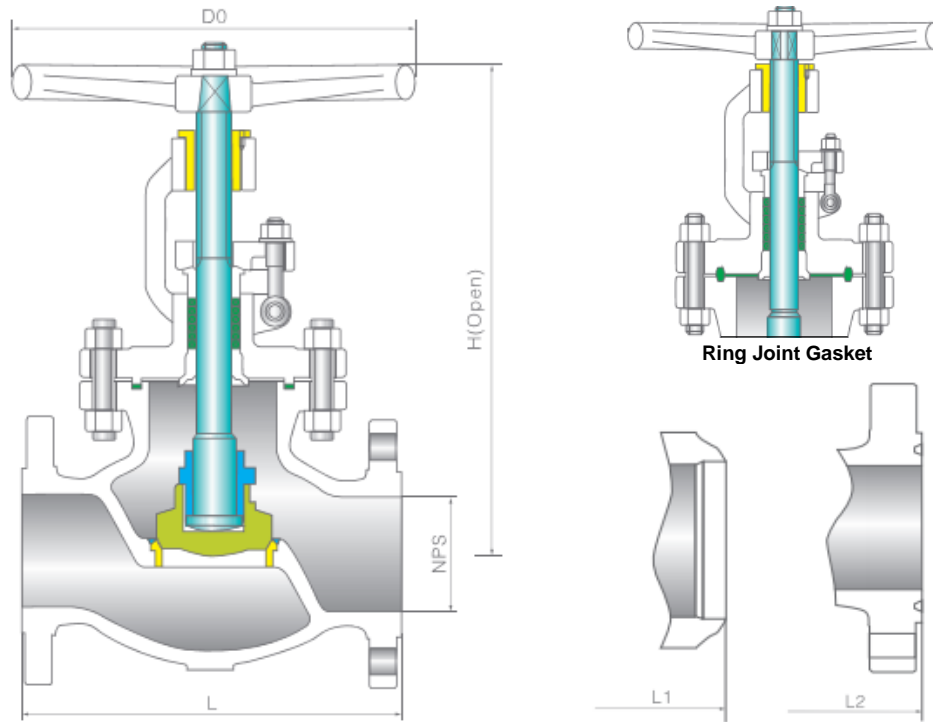
AVAILABLE MODIFICATIONS

PROFI Globe Valves are offered with various modifications, which include:

- Trim changes
- End connection modification
- Packing and gasket selection
- Different types of actuation
- Oxygen and Chlorine cleaning and packaging
- Customer specific coatings
- Weld end bore option
- Pressure seal bolted bonnet, welded bonnet

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APPLICABLE STANDARDS	
Globe Valve Design	API Std. 600, BS EN 13709, BS 1873, ASME B16.34
Face-to-Face Dim.	ASME B16.10
End Flanges	ASME B16.5
Butt Weld Ends	ASME B16.25
Inspection and Testing	API Std. 598

DESIGN FEATURES	
• External screw and yoke	• Rising stem design
• Integral yoke/bonnet	• Replaceable seat ring
• Straight pattern body	• Horizontal Service
• Bolted bonnet	• Flange or butt weld ends
• Free moving disc, plug and ball type available	• Manual bevel gear box is available

VALVE COMPONENTS

Part Name	ASTM Material		
	Carbon Steel - WCB	1-1/4 Cr – 1/2 Mo	Carbon Steel - LCB
Body	A216-WCB	A217-WC6	A352-LCB
Bonnet	A216-WCB	A217-WC6	A352-LCB
Disc ***	A105 + Cr13	A182-F11 + HF	A350-LF2 + Cr13
Stem	A182-F6a	Cr-Mo-V	A182-F6a
Seat Ring	A105 + Cr13 A105 + HF *	A182-F11 + HF	A350-LF2 + Cr13 A350-LF2 + HF *
Stem Backseat	A276-420	A276-304	A276-420
Bonnet Gasket	Graphite + 304 (Coiled Spring Construction)		
	Steel Ring **	304SS Ring **	304SS Ring **
Bonnet Stud	A193-B7	A193-B16	A320-L7
Bonnet Nut	A194-2H	A194-7	A194-4
Packing		Graphite	
Gland	A276-420	A276-304	A276-420
Gland Flange	A216-WCB	A217-WC6	A352-LCB
Yoke Sleeve		Aluminium Bronze	
Handwheel		Malleable Iron	

* HF is for 600LB and above valve ** Ring Joint Gasket is for 1500LB and above valve

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VALVE DIMENSIONS AND WEIGHT– 150LB

Size		L (RF) / L1 (BW)		L2 (RTJ)		H		D0		Weight (KG)	
in	mm	in	mm	in	mm	in	mm	in	mm	RF / RTJ	BW
2	50	8.00	203	8.00	203	15.00	381	7.00	180	18	14
2-1/2	65	8.50	216	8.50	216	16.00	406	10.00	240	30	22
3	80	9.50	241	9.50	241	17.50	445	11.00	280	41	33
4	100	11.50	292	11.50	292	20.25	514	11.00	280	64	43
6	150	16.50	419	16.00	406	22.00	559	13.00	320	86	72
8	200	19.50	495	19.50	495	24.25	616	13.00	320	110	88
10	250	24.50	622	24.50	622	32.00	813	16.00	400	280	245
12	300	27.50	699	27.50	699	35.88	911	18.00	450	380	345
14	350	31.00	787	31.00	787	48.38	1229	20.00	500	510	450
16	400	36.00	914	36.00	914	57.00	1448	24.00	600	740	665

VALVE DIMENSIONS AND WEIGHT– 300LB

Size		L (RF) / L1 (BW)		L2 (RTJ)		H		D0		Weight (KG)	
in	mm	in	mm	in	mm	in	mm	in	mm	RF / RTJ	BW
2	50	10.50	267	11.12	282	16.75	425	8.00	200	25	20
2-1/2	65	11.50	292	12.12	308	19.00	483	10.00	240	32	0
3	80	12.50	318	13.12	333	19.88	505	11.00	280	38	27
4	100	14.00	356	14.62	371	22.50	572	13.00	320	56	41
6	150	17.50	445	18.12	460	25.25	641	16.00	400	96	75
8	200	22.00	559	22.62	575	33.25	845	18.00	450	150	117
10	250	24.50	622	25.12	638	35.50	902	20.00	500	360	310
12	300	28.00	711	28.62	727	38.62	981	24.00	600	550	492
14	350	-	-	-	-	-	-	-	-	-	-
16	400	-	-	-	-	-	-	-	-	-	-

VALVE DIMENSIONS AND WEIGHT– 600LB

Size		L (RF) / L1 (BW)		L2 (RTJ)		H		D0		Weight (KG)	
in	mm	in	mm	in	mm	in	mm	in	mm	RF / RTJ	BW
2	50	11.50	292	11.62	295	17.50	445	10.00	240	35	27
2-1/2	65	13.00	330	13.12	333	19.75	502	11.00	280	50	34
3	80	14.00	356	14.12	359	21.00	533	13.00	320	60	42
4	100	17.00	432	17.12	435	24.50	622	16.00	400	110	84
6	150	22.00	559	22.12	562	29.50	749	18.00	450	230	192
8	200	26.00	660	26.12	663	36.50	927	20.00	500	410	350
10	250	31.00	787	31.12	790	44.88	1140	24.00	600	770	680
12	300	33.00	838	33.12	841	53.12	1349	24.00	600	1140	1030

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VALVE DIMENSIONS AND WEIGHT- 900LB

Size		L (RF) / L1 (BW)		L2 (RTJ)		H		D0		Weight (KG)	
in	mm	in	mm	in	mm	in	mm	in	mm	RF / RTJ	BW
2	50	14.50	368	14.62	371	22.00	559	11.00	280	57	41
2-1/2	65	16.50	419	16.62	422	23.25	591	13.00	320	82	53
3	80	15.00	381	15.12	384	25.25	641	16.00	400	92	58
4	100	18.00	457	18.12	460	31.88	810	18.00	450	168	117
6	150	24.00	610	24.12	613	41.38	1051	20.00	500	365	238
8	200	29.00	737	29.12	740	53.50	1359	24.00	600	665	538
10	250	33.00	838	33.12	841	61.88	1572	24.00	600	1250	1060
12	300	-	-	-	-	-	-	-	-	-	-

VALVE DIMENSIONS AND WEIGHT- 1500LB

Size		L (RF) / L1 (BW)		L2 (RTJ)		H		D0		Weight (KG)	
in	mm	in	mm	in	mm	in	mm	in	mm	RF / RTJ	BW
2	50	14.50	368	14.62	371	22.00	559	13.00	320	68	57
2-1/2	65	16.50	419	16.62	422	23.25	591	16.00	400	97	61
3	80	18.50	470	18.62	473	29.50	749	18.00	450	116	95
4	100	21.50	546	21.62	549	36.00	914	20.00	500	215	184
6	150	27.75	705	28.00	711	48.62	1235	24.00	600	445	347
8	200	32.75	832	33.12	841	65.00	1651	28.00	700	795	635

VALVE DIMENSIONS AND WEIGHT- 2500LB

Size		L (RF) / L1 (BW)		L2 (RTJ)		H		D0		Weight (KG)	
in	mm	in	mm	in	mm	in	mm	in	mm	RF / RTJ	BW
2	50	17.75	451	17.88	454	25.50	648	16.00	400	97	75
2-1/2	65	20.00	508	20.50	521	28.12	714	18.00	450	138	95
3	80	22.75	578	23.00	584	32.50	826	20.00	500	167	105
4	100	26.50	673	26.88	683	47.00	1194	24.00	600	305	196
6	150	36.00	914	36.50	927	70.50	1791	28.00	700	633	351
8	200	-	-	-	-	-	-	-	-	-	-

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Pressure-Temperature Ratings



ASME B16.34 MATERIAL GROUPS			
Group 1.1	A105 ^{e)}	A216-WCB ^{e)}	
Group 1.2	A216-WCC ^{e)}	A352-LCC ^{a)}	
Group 1.3	A352-LCB ^{a)}		
Group 1.9	A217-WC6 ^{d)}		
Group 1.10	A217-WC9 ^{d)}		
Group 1.13	A217-C5		
Group 2.1	A182-F304	A351-CF8	A351-CF3 ^{b)}
Group 2.2	A182-F316	A352-CF8M	A351-CF3M ^{c)}

Notes:

- a) Not to be used over 650°F (343°C)
- b) Not to be used over 800°F (427°C)
- c) Not to be used over 1000°F (538°C)
- d) Not to be used over 1100°F (593°C)
- e) Permissible but not recommended for prolonged uses above 800°F (427°C)

ASME B16.34 Maximum Allowable Non-Shock Pressure (Psi) – ANSI Class 150LB and 300LB

Temperature		ANSI Class 150LB								ANSI Class 300LB							
°F	°C	Group 1.1	Group 1.2	Group 1.3	Group 1.9	Group 1.10	Group 1.13	Group 2.1	Group 2.2	Group 1.1	Group 1.2	Group 1.3	Group 1.9	Group 1.10	Group 1.13	Group 2.1	Group 2.2
-20 to 100	-20 to 38	285	290	265	290	290	290	275	275	740	750	695	750	750	750	720	720
200	93	260	260	250	260	260	260	230	230	640	750	655	750	750	745	600	620
300	149	230	230	230	230	230	230	205	205	655	730	640	720	730	715	540	560
400	204	200	200	200	200	200	200	190	190	635	705	620	695	705	705	495	515
500	260	170	170	170	170	170	170	170	170	600	665	585	665	665	665	465	480
600	316	140	140	140	140	140	140	140	140	550	605	535	605	605	605	435	450
650	343	125	125	125	125	125	125	125	125	535	590	525	590	590	590	430	445
700	371	110	110		110	110	110	110	110	535	570		570	570	570	425	430
750	399	95	95		95	95	95	95	95	505	505		530	530	530	415	425
800	427	80	80		80	80	80	80	80	410	410		510	510	510	405	420
850	454				65	65	65	65	65				485	485	485	395	420
900	482				50	50	50	50	50				450	450	370	390	415
950	510				35	35	35	35	35				320	375	275	380	385
1000	538				20	20	20	20	20				215	260	200	320	350
1050	566				20*	20*	20*	20*	20*				145	175	145	310	345
1100	593				20*	20*	20*	20*	20*				95	110	100	255	305

Test Pressure Per API 598 (Psi) – ANSI Class 150LB and 300LB

Hydro. Shell Test	450	450	450	450	450	450	450	450	450	1125	1125	1050	1125	1125	1125	1100	1100
Hydro. Seat Test	315	320	295	320	320	320	305	320	320	815	825	765	825	825	825	795	795
Air Seal Test	80 ± 20								80 ± 20								

*For welding end valve only. Flanged end rating terminates at 1000°F

GLOBE VALVE

Pressure-Temperature Ratings



ASME B16.34 Maximum Allowable Non-Shock Pressure (Psi) – ANSI Class 600LB and 900LB

Temperature		ANSI Class 600LB								ANSI Class 900LB							
°F	°C	Group 1.1	Group 1.2	Group 1.3	Group 1.9	Group 1.10	Group 1.13	Group 2.1	Group 2.2	Group 1.1	Group 1.2	Group 1.3	Group 1.9	Group 1.10	Group 1.13	Group 2.1	Group 2.2
-20 to 100	-20 to 38	1480	1500	1390	1500	1500	1500	1440	1440	2220	2250	2085	2250	2250	2250	2160	2160
200	93	1350	1500	1315	1500	1500	1490	1200	1240	2025	2250	1970	2250	2250	2235	1800	1860
300	149	1315	1455	1275	1455	1455	1430	1080	1120	1970	2185	1915	2165	2185	2150	1620	1680
400	204	1270	1410	1235	1410	1410	1410	995	1025	1900	2115	1850	2080	2115	2115	1490	1540
500	260	1200	1330	1165	1330	1330	1330	930	965	1795	1995	1745	1995	1995	1995	1395	1535
600	316	1095	1210	1065	1210	1210	1210	875	900	1640	1815	1600	1815	1815	1815	1310	1355
650	343	1075	1175	1045	1175	1175	1175	860	890	1610	1765	1570	1765	1765	1765	1290	1330
700	371	1065	1135		1135	1135	1135	850	870	1600	1705		1705	1705	1705	1275	1305
750	399	1010	1010		1065	1065	1065	830	855	1510	1510		1595	1595	1585	1245	1280
800	427	825	825		1015	1015	1015	805	845	1235	1235		1525	1525	1525	1210	1265
850	454				975	975	965	790	835				1460	1460	1450	1190	1255
900	482				900	900	740	780	830				1350	1350	1110	1165	1245
950	510				640	755	550	765	775				955	1130	825	1145	1160
1000	538				430	520	400	640	700				650	790	595	965	1050
1050	566				290	350	290	615	685				430	525	430	925	1030
1100	593				190	220	200	515	610				290	330	300	770	915

Test Pressure Per API 598 (Psi) – ANSI Class 600LB and 900LB

Hydro. Shell Test	2225	2250	2100	2250	2250	2250	2175	2175	3350	3375	3150	3375	3375	3375	3250	3250
Hydro. Seat Test	1630	1650	1530	1650	1650	1650	1585	1585	2445	2475	2295	2475	2475	2475	2380	2380
Air Seal Test	80 ± 20								80 ± 20							

ASME B16.34 Maximum Allowable Non-Shock Pressure (Psi) – ANSI Class 1500LB and 2500LB

Temperature		ANSI Class 1500LB								ANSI Class 2500LB							
°F	°C	Group 1.1	Group 1.2	Group 1.3	Group 1.9	Group 1.10	Group 1.13	Group 2.1	Group 2.2	Group 1.1	Group 1.2	Group 1.3	Group 1.9	Group 1.10	Group 1.13	Group 2.1	Group 2.2
-20 to 100	-20 to 38	3705	3750	3470	3570	3750	3750	3600	3600	6170	6250	5785	6250	6250	6250	6000	6000
200	93	3375	3750	3280	3570	3750	3725	3000	3095	5625	6250	5480	6250	6250	6205	5000	5160
300	149	3280	3640	3190	3610	3640	3580	2700	2795	5470	6070	5315	6015	6070	5965	4500	4660
400	204	3170	3530	3085	3465	3530	3530	2485	2570	5280	5880	5145	5775	5880	5880	4140	4280
500	260	2995	3325	2910	3325	3325	3325	2330	2390	4990	5540	4850	5540	5540	5540	3880	3980
600	316	2735	3025	2665	3025	3025	3025	2185	2255	4560	5040	4440	5040	5040	5040	3640	3760
650	343	2685	2940	2615	2940	2940	2940	2150	2220	4475	4905	4355	4905	4905	4905	3580	3700
700	371	2665	2840		2840	2840	2840	2125	2170	4440	4730		4730	4730	4730	3540	3620
750	399	2520	2520		2660	2660	2640	2075	2135	4200	4200		4430	4430	4400	3460	3560
800	427	2060	2060		2540	2540	2540	2015	2110	3430	3430		4230	4230	4230	3360	3520
850	454				2435	2435	2415	1980	2090				4060	4060	4030	3300	3480
900	482				2245	2245	1850	1945	2075				3745	3745	3085	3240	3460
950	510				1595	1885	1370	1910	1930				2655	3145	2285	3180	3220
1000	538				1080	1305	995	1605	1750				1800	2170	1655	2675	2915
1050	566				720	875	720	1545	1720				1200	1455	1200	2570	2865
1100	593				480	550	495	1285	1525				800	915	830	2145	2545

Test Pressure Per API 598 (Psi) – ANSI Class 1500LB and 2500LB

Hydro. Shell Test	5575	5625	5225	5625	5625	5625	5400	5400	9275	9375	8700	9375	9375	9375	9000	9000
Hydro. Seat Test	4080	4125	3820	4125	4125	4125	3960	3960	6790	6875	6365	6875	6875	6875	6600	6600
Air Seal Test	80 ± 20								80 ± 20							

QUALITY, TESTING, AND SERVICES

PROFI's End-to-End Support



PRODUCT QUALITY ASSURANCE

PROFI high performance Globe Valves are designed to the latest edition of API Std. 600 requirements. PROFI has the license to apply the API monogram to all of its valve products.

In addition, PROFI manufactures all valve products in accordance to with API Spec. Q1 and ISO 9000:2008 Quality System.

On top of the pressure testing requirement required by API, PROFI has the capability of conducting various additional test to meet customer requirements.

- Factory Acceptance Test (FAT)
- Supplementary extended hydrostatic or gas test
- Antistatic testing, torque functional test
- Valve endurance test
- Valve fire test on specific valve size

TESTING AND QUALIFICATIONS

PROFI's extensive testing, research and development program is geared to exceed the API specifications requirements and to meet specific customer requirements. PROFI high performance Globe Valves have been designed and tested to various standards:

- **API Std. 600**
Steel Gate Valves – Flanged and Butt-welding ends, Bolted Bonnets.
- **API Std. 598**
Valve Inspection and Testing.

FIELD SUPPORT AND SERVICES

PROFI's Service and Technical Team are on call 24-hours a day and 7 days a week to answer your on-site service needs. This team is highly skilled in providing field equipment installations, making field repairs, performing routine and schedule maintenances of your equipment.

Installation

PROFI service personnel are trained in equipment installation and in providing training to our customers. They are also available for a variety of special jobs, including workover, de-commissioning, equipment trim changes, and installation of new safety equipment.

Maintenance

Preventive maintenance and servicing help to minimize down time and extend the life of equipment. PROFI provides routine inspections and scheduled maintenance services which would reduce the operation burden of our customers.

Field Repair

As and when required, PROFI service personnel is well equipped to perform troubleshooting and on-site repair, without the need to ship the equipment to the onshore base.

Technical Support and Expertise

Full expert's supports in quality, engineering, and field installation are available to ensure customer successful operation.

REPAIR AND RECONDITIONING OF EQUIPMENT

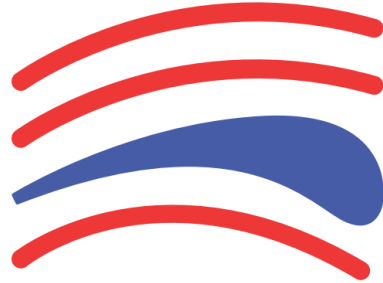
From valves to risers, tubing spool to drilling adapters, a growing number of customers trust PROFI's Service and Technical Team for performing equipment repairs, remanufacturing, and recertification.

Repair

PROFI (with its subsidiary and parent company) owns a numbers of repair facilities that would be able to offer a full range of equipment repair services, and not just for PROFI products. Typical PROFI repair services include disassembly, inspection, engineering review / disposition, parts replacement or repair, reassembly and testing. Your repaired equipment will be brought back to the specified service level, and they comes with factory warranty and installation support.

Remanufacture

Remanufacture of equipment is able to bring equipment back to the service level required by customers. On top of the activity stated for repair, remanufacture includes re-machining, welding, or other manufacturing operations necessary to bring the equipment to useable condition.



TURCOMP



API 6A and 6D Products



6A-1763
6D-1589