DATASHEET FOR GLOBE VALVE - SRM, IMS, DRS, CNG-PRS AND IPRS (150# / 300#)

GUJARAT GAS

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Sr. No.	Description	GLOBE VALVE Specification	
1. General			
1.1	Valve Size	Below 2”	2” TO 12”
1.2	Pressure Rating	800#	150#/300#
1.3	Design Standard	BS EN ISO 15761 / API 602	API 602 / BS 1873 / ASME B 16.34
1.4	Corrosion allowance	1.5 mm	1.5 mm
1.5	Design Factor	0.4	0.4
2. Service Conditions			
2.1	Service	Natural Gas	Natural Gas
2.2	Design Pressure	138 Bar-g	1. For 150# - 19 Bar-g 2. For 300# - 49 Bar-g
2.3	Design Temperature	0°C to 65°C	0°C to 65°C
2.4	Operating Pressure Maximum	19 Bar-g for 150# application 49 Bar-g for 300# application	19 Bar-g for 150# application 49 Bar-g for 300# application
2.5	Operating Temperature	0°C to 50°C	0°C to 50°C
3. Valve Construction Design			
3.1	Location	Above Ground	Above Ground
3.2	Bore Type	Full Bore OR Reduced Bore	Full Bore OR Reduced Bore
3.3	End Connections	Socket Weld End (as per ASME B 16.11) Threaded End (as per ASME B 1.20.1)	1. Flange End Raised Face (as per ASME B 16.5) 2. Butt Welded (as per ASME B 16.25)
3.4	Locking Arrangement	Not Applicable	Not Applicable
3.5	Shutoff Class	Class: VI	Class: VI
3.6	Construction	-	Bolted Type
3.7	Valve Operation	Hand wheel operated (Rising stem type)	Hand wheel operated (Rising type)
3.8	Open & Close Ball Position Indicator	Required	Required

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3.9	Screw Type / Stem	OS & Y, Rising stem, Stem protection is required	OS & Y, Rising stem, Stem protection is required
3.10	Flange Facing	-	RF-125 AARH (ASME B 16.5)
4. Valve Material Specification (Equivalent Or Superior)			
	Part	**Specified Material**	**Specified Material**
4.1	Body	ASTM A 105 (Charpy test at 0°C)	ASTM A 216 Gr WCB (Charpy test at 0°C)
4.2	Stem (Anti-Blow Out) (No Casting)	ASTM A 479 Gr. SS 316 (No casting) / ASTM A 182 Gr. F316	ASTM A 479 Gr. SS 316 (No casting) / ASTM A 182 Gr.F316
4.3	Disc (Plug type)	ASTM A 479 Gr. SS 316 –Stellited	ASTM A 479 Gr. SS 316 – Stellited
4.4	Disc Nut	ASTM A 479 Gr. SS 316	ASTM A 479 Gr. SS 316
4.5	Disc Seat Ring	ASTM A 479 Gr. SS 316 –Stellited	ASTM A 479 Gr. SS 316 – Stellited
4.6	Gland / Gland Flange	ASTM A 479 Gr. SS 316	Gland: ASTM A 479 Gr. SS 316
4.7	Gland Packing	Grafoil	Grafoil
4.8	Stem seals (Renewable with valve open on Stream)	As per Manufacturer's recommendation	As per Manufacturer's recommendation
4.9	Stud and Nuts	Stud-ASTM A 193 Gr. B7 and Nut ASTM A 194 Gr. 2H, Hot Dipped Galvanized as per ASTM A 153	Stud-ASTM A 193 Gr. B7 and Nut ASTM A 194 Gr. 2H, Hot Dipped Galvanized as per ASTM A 153
4.10	Body Gasket	Spiral Wound with inner & outer ring SS 316 with CNAF fill	Spiral Wound with inner & outer ring SS 316 with CNAF fill
4.11	Seat and Back Seat arrangement	Renewable type	Renewable type
4.12	Hand Wheel	Carbon steel/Mild Steel with suitable Grip with suitable coating & painting	Carbon steel/mild steel with suitable Grip and with suitable coating & painting
5. Valve Testing Requirement			
5.1	Fire Resistant Design Requirement	As per API 6FA/API 607/BS:6755 (Part – II)/BS EN ISO 10497 / API 602	As per API 6FA/API 607/BS:6755 (Part – II)/BS EN ISO 10497

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5.2	Closure Test	High Pressure- 1.1 x Design Pressure (Water) Low Pressure- 7 Bar-g (Air)	High Pressure- 1.1 x Design Pressure (Water) Low Pressure- 7 Bar-g (Air)
5.3	Hydrostatic Test	Body: 1.5 X Design Pressure Seat: 1.1 X Design Pressure	Body: 1.5 X Design Pressure Seat: 1.1 X Design Pressure
5.4	Back Seat Test	High Pressure- 1.1 x Design Pressure (Water) Low Pressure- 7 Bar-g (Air)	High Pressure- 1.1 x Design Pressure (Water) Low Pressure- 7 Bar-g (Air)
5.5	Charpy Impact Test	Required for all pressure containing part as per the MOC standardIn case Charpy test value not specified in relevant codes and standards than Charpy shall be carried out at 0 °C and absorbed energy value shall be average 35 J and minimum 28 J respectively.	Required for all pressure containing part as per the MOC standardIn case Charpy test value not specified in relevant codes and standards than Charpy shall be carried out at 0 °C and absorbed energy value shall be average 35 J and minimum 28 J respectively.
5.6	Hardness test	Applicable as per Material of construction standard	Applicable as per Material of construction standard
5.7	NDE Test	As per notes	As per notes
5.8	Marking & Painting	SSPC-SP/MSS SP 25 /BS EN ISO 15761/API 602 As per GGL Technical Specification	SSPC-SP/MSS SP 25 /BS EN ISO 15761/API 602 As per GGL Technical Specification

Note:

1. This data sheet shall be read in conjunction with SOR, Technical Specifications and Piping Material Specification.
2. Inspection and Testing: As per this Data Sheet, GGL Specification and applicable standards. Inspection shall be carried out by TPI at Manufacture's work as per QAP approved by GGL.
3. Vendor to submit GA drawing and QAP for approval prior to commencement of manufacturing.
4. Test Certificates shall be reviewed by client/TPIA as per approved QAP, GA drawing, Inspection & Test certificates including NDE.
5. In case valve is supplied in accordance with API 6D/ BS EN ISO 15761/API 602, Min. body valve thickness shall be as per ASME B 16.34 and corrosion allowance.
6. 100% of valve shall undergo hydro test of seat. After that all ball valves shall be air tested.

7. Vendor to submit suitable type of corrosion protection coating system for Underground and above ground valve for salient atmosphere for GGL approval prior to commencement of work along with GA drawing.
8. TPIA shall issue EN 10204 3.1/3.2 certification for testing & inspection of valves as per requirement of PO
9. Vendor to provide suitable provison for valve lifting and valve support. The same shall be shown in valve GAD.
10. Painting and coating of valve shall be as per technical specifications for valves.
11. Vendor to mentioned weight of Globe valve in GAD for reference.
12. Globe Valve Shell Test Duration:
    - Below 2" : 15 Second
    - 2" to 6" : 60 Second
    - 8" & Above : 120 Second
13. Globe Valve Closure Test Duration:
    - Below 2" : 15 Second
    - 2" to 6" : 30 Second
    - 8" & Above : 60 Second
14. Non Destructive Examination:
    - For all sizes, body casting shall be subjected to 100% radiography.
    - Body castings of all valves shall be 100% radio graphically examined as per ASME B16.34. Procedure and acceptance criteria shall be as per ASME B 16.34. All forgings shall be ultrasonically examined in accordance with the procedure and acceptance standard of Annexure E of ASME B 16.34.
    - All forgings shall be ultrasonically examined in accordance with the procedure and acceptance standard of Annexure E of ASME B 16.34.
    - Full inspection by radiography shall be carried out on all welds of pressure containing parts. Acceptance criteria shall be as per ASME B 31.3 or ASME B31.8 as applicable and API 1104.
    - All finished weld ends subject to welding in field shall be 100% ultrasonically tested for lamination type defects for a distance of 50 mm from the end. Laminations shall not be acceptable.
    - Weld ends of all cast valves subject to welding in field shall be 100% radio graphically examined and acceptance criteria shall be as per ASME B16.34.
    - After final machining, all bevel surfaces shall be inspected by dye penetrate or wet - magnetic particle methods. All defects longer than 6.35 mm shall be rejected. Reject able defects must be removed.
    - Weld repair of bevel surface is not permitted.

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