

TECHNICAL DATA SHEET · VALVES

Gate Valve

NPS ½" to 24", Class 150 to 1500 (Class 800 forged), tested to API 598, in A216 WCB, A351 CF8M and forged A105 / F316.

OEM MANUFACTURER

Gate valves are on-off isolation valves. A wedge moves at right angles to the flow; fully open, the bore is clear and pressure drop is minimal. They are not intended for throttling.

Specification

Product	Gate Valve
Supply	OEM manufacturer — Teshi Group, Howrah, India
Design standard	API 600 (cast, bolted bonnet); API 602 (forged, NPS ¼"–4"); API 603 (corrosion resistant)
Size range	NPS ½" to 24"
Pressure rating	Class 150 to 1500 (Class 800 forged); pressure-temperature rating to ASME B16.34
Construction	Rising stem, outside screw and yoke; solid, flexible or split wedge; bolted, welded or pressure-seal bonnet
End connections	Flanged RF / RTJ to ASME B16.5; butt weld to ASME B16.25; socket weld and threaded to ASME B16.11 on forged valves
Face-to-face	ASME B16.10
Testing	API 598 — shell, backseat and seat tests on every valve
Trim	13% Cr, stellited, SS 304 or SS 316 (API 600 trim numbers 1, 5, 8, 10, 12)

Materials

Cast carbon steel	ASTM A216 WCB
Cast stainless steel	ASTM A351 CF8M
Forged steel	ASTM A105, ASTM A182 F304, ASTM A182 F316, ASTM A182 F11 Cl.2, ASTM A182 F22 Cl.3

Manufacturing

- Body and bonnet: steel castings or forgings from approved foundries and forges, heat treated to the material specification.
- Machining of body, seats, wedge / disc / ball and stem; seat faces lapped.
- Assembly, gland packing and gasket fitting, followed by pressure testing of every valve.

Inspection and testing

- Hydrostatic shell test at 1.5 times the 38 °C rating to API 598.
- Seat test (hydrostatic at 1.1 times rating and / or low-pressure air at 4–7 bar) to API 598.
- Backseat test where the design has a backseat.
- Material certificates for pressure-containing parts; radiography, MPI or DPT of castings when specified.
- Third-party inspection as required by the order.

Marking, documentation and packing

Marking	Body marking and nameplate to MSS SP-25 and the design standard: manufacturer, size, class, body and trim material, and serial number.
Documentation	Hydrostatic test certificate against each valve serial number, material test certificates for body, bonnet and trim to EN 10204 3.1, and general arrangement drawing. IBR certification on request.
Packing	End protectors on flange faces and weld ends, valves closed (ball valves open), packed in seaworthy wooden cases.

Typical applications

- Isolation of process, steam, water and hydrocarbon lines
- Refinery, power and steel plant utilities

Ordering information

- Valve type and design standard
- Size and pressure class
- End connection and facing
- Body, bonnet and trim materials
- Operation: handwheel, lever, gear or actuator
- Service fluid, pressure and temperature
- Inspection and certification requirements

Dimension charts

ASME B16.5 Class 150 flange dimensions; ASME B16.5 Class 300 flange dimensions; ASME B16.5 pressure-temperature ratings — www.teshigroup.com/dimensional-standards/

Reference information compiled from the published standard for convenience. It does not replace the current edition of the governing standard, which takes precedence. Verify critical dimensions and properties before design, purchase or fabrication. Teshi Engineers & Sales Promoters (P) Ltd accepts no liability for errors or omissions.

Teshi Group

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