

MODEL DBB

Double Block & Bleed Expanding Plug Valve



INTRO

Ghatge Patil Ind. Ltd. API 6D through-conduit expanding gate valves provide dependable shutoff and sealing reliability for a variety of demanding isolation applications including, but not limited to:

- Pipelines
- Power Plants
- Emergency Shutdown
- Liquids Storage

GPI valves provide superior bi-directional, mechanical sealing by utilizing a two-piece gate assembly that expands against each valve seat sealing surface. Because the seal is achieved mechanically in either the open or closed position, the seal becomes tighter as the torque applied to the hand wheel increases. This provides a truly reliable seal that is typically not affected by heat, pressure surges, vibration or other abnormal service conditions.



Applications

BLOCK AND BIEED CAPABILITY :

When in the closed position the GPI 6D valve forms a tight seal on both seats, allowing the valve body to be drained. For specific applications, please consult factory.

TIGHT MECHANICAL SEAL :

Both upstream and downstream are blocked off simultaneously. This mechanical advantage is normally undisturbed by pressure gradient fluctuations or vibrational reflux. The seal is both TFE-to-metal and metal-to-metal.

SMOOTH, CONTINUOUS CONDUIT :

Virtual elimination of turbulence. Pressure gradient through valve stays the same, relative to the pressure drop in an equal-length pipe.

SEAT FACE PROTECTION :

Seat life is greatly extended by engineering the seats to face outwards in order to avoid contact with the flow medium and engage fully with the gate. This protection is in both the fully open and fully closed positions.

GATE CENTRALIZER :

Valve diameters that are 6 inch or large feature the leverlock gate centralizer, which retains the gate-segment assembly in a neutral position during opening and closing travel. However expansion of the assembly for seating, in an open or closed position, is permitted.

ACTUATION :

The GPI6D gate valve is furnished with either hand wheel or bevel gear operators, but they can readily be adapted to fit a wide range of power operators if desired. Power operators can be installed in the field or at the manufacturing facility.

THERMAL RELIEF OPTIONS :

The split gate design allows for excess body pressure to develop in the body cavities of closed valves and usually results from heating in the valves in liquid service. A thermal body cavity relief system can be provided to relieve the excess body pressure upon request.

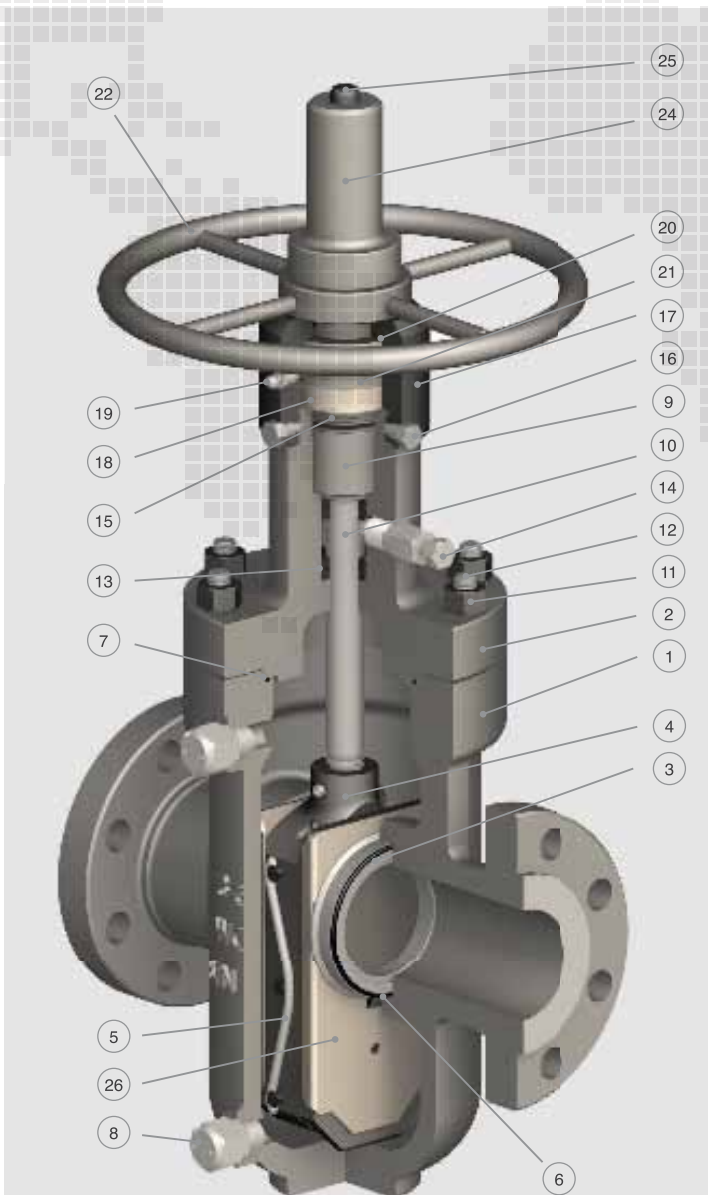
TANK FARMS (OIL DEPOTS) :

Tank isolation valves, which are operated frequently, require zero leak rate and a high degree of reliability. The GPI DB&B valve provides a reliable, high integrity seal designed for frequent and long-term use.

INTERNAL CONFIGURATION

GPI Typical Valve Configuration

2" - 4" HANDWHEEL OPERATED



Materials of Construction

2" - 4" HANDWHEEL OPERATED

| COMPONENT | PART DESCRIPTION |
|-----------|---------------------------|
| 1 | Valve Body |
| 2 | Bonnet |
| 3 | Seat Assembly |
| 4 | Gate Assembly |
| 5 | Gate Spring |
| 6 | O ring (seat) |
| 7 | O Ring (bonnet) |
| 8 | Grease Fittings |
| 9 | Gland Bushing |
| 10 | Stem |
| 11 | Heavy Hex. Nut |
| 12 | Stud |
| 13 | Packing Set |
| 14 | Packing Injection Fitting |
| 15 | Packing Retainer Nut |
| 16 | Hex. Bolt |
| 17 | Bearing Housing |
| 18 | Thrust Bearing |
| 19 | Grease Nipple |
| 20 | O Ring (Stem Nut) |
| 21 | Stem Nut |
| 22 | Handwheel |
| 23 (NS) | Key |
| 24 | Stem Protector |
| 25 | Indicator Rod |
| 26 | Gate Guide |

(NS) - Not Shown

Dimension Tables

See note below

2" - 4" HANDWHEEL OPERATED GPI 6D GATE VALVES

ASME 600

| DIMENSIONS | | | | | | | | | | | | | WEIGHT | |
|------------|-----|-------|-----|------|-----|------|-----|-------|-----|-----|-----|-----|--------|-----|
| SIZE | | A | | B | | F | | G | | H | | N * | LB. | KG |
| IN. | MM | IN. | MM | IN. | MM | IN. | MM | IN. | MM | IN. | MM | | | |
| 2 | 50 | 11.50 | 292 | 2.06 | 52 | 4.81 | 122 | 17.75 | 451 | 12 | 300 | 16 | 90 | 41 |
| 3 | 80 | 14.00 | 356 | 3.19 | 81 | 6.94 | 176 | 23.88 | 606 | 12 | 300 | 20 | 180 | 82 |
| 4 | 100 | 17.00 | 432 | 4.13 | 105 | 8.63 | 219 | 27.00 | 686 | 14 | 350 | 20 | 345 | 156 |

ASME 900

| DIMENSIONS | | | | | | | | | | | | | WEIGHT | |
|------------|-----|-------|-----|------|-----|------|-----|-------|-----|-----|-----|----|--------|-----|
| SIZE | | A | | B | | F | | G | | H | | N | LB. | KG |
| IN. | MM | IN. | MM | IN. | MM | IN. | MM | IN. | MM | IN. | MM | | | |
| 2 | 50 | 14.50 | 368 | 2.06 | 52 | 5.06 | 129 | 17.75 | 451 | 12 | 300 | 16 | 150 | 68 |
| 3 | 80 | 15.00 | 381 | 3.19 | 81 | 7.94 | 202 | 23.88 | 606 | 12 | 300 | 20 | 265 | 120 |
| 4 | 100 | 18.00 | 457 | 4.13 | 105 | 9.06 | 230 | 27.00 | 686 | 14 | 350 | 20 | 515 | 234 |

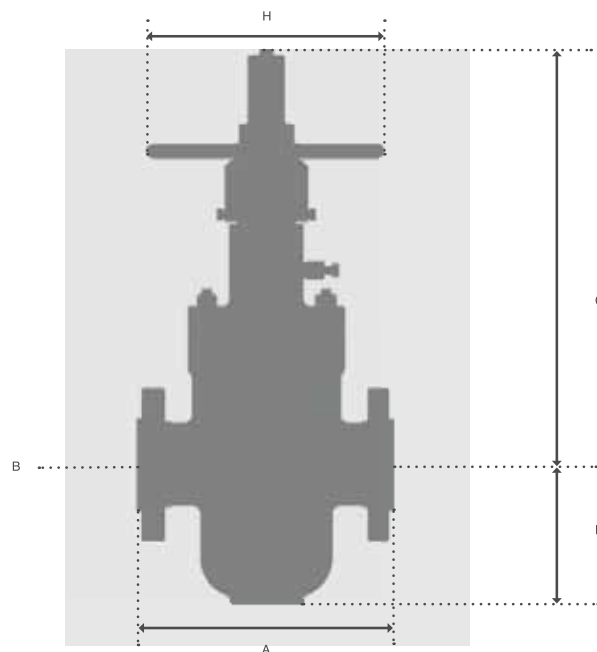
ASME 1500

| DIMENSIONS | | | | | | | | | | | | | WEIGHT | |
|------------|-----|-------|-----|------|-----|------|-----|-------|-----|-----|-----|----|--------|-----|
| SIZE | | A | | B | | F | | G | | H | | N | LB. | KG |
| IN. | MM | IN. | MM | IN. | MM | IN. | MM | IN. | MM | IN. | MM | | | |
| 2 | 50 | 14.50 | 368 | 2.06 | 52 | 5.06 | 129 | 17.75 | 451 | 12 | 300 | 16 | 150 | 68 |
| 3 | 80 | 15.00 | 381 | 3.19 | 81 | 7.94 | 202 | 23.88 | 606 | 12 | 300 | 20 | 295 | 134 |
| 4 | 100 | 18.00 | 457 | 4.13 | 105 | 9.06 | 230 | 27.00 | 686 | 14 | 350 | 20 | 530 | 240 |

* N= Number of turns of handwheel or bevel gear operator handwheel to fully open or close the valve.

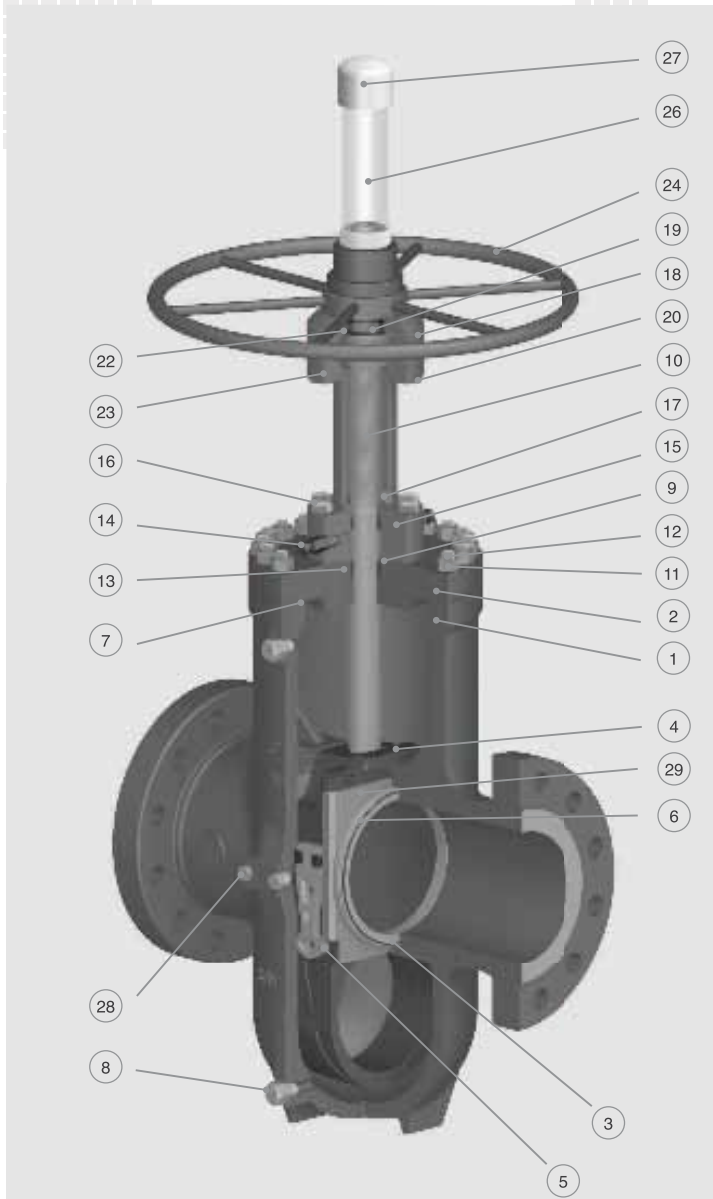
| ASME CLASS | MAX. WP @ 100°F (38°C) | |
|------------|------------------------|------|
| SIZE | CWP | TEST |
| 600 | 1500 | 2250 |
| 900 | 2250 | 3375 |
| 1500 | 3750 | 5625 |

2" - 4" HANDWHEEL OPERATED GPI 6D GATE VALVES



Internal Configuration

GPI 6 D Gate Valves
6'-12' Handwheel Operated & Bevel Gear Operated



Materials of Construction

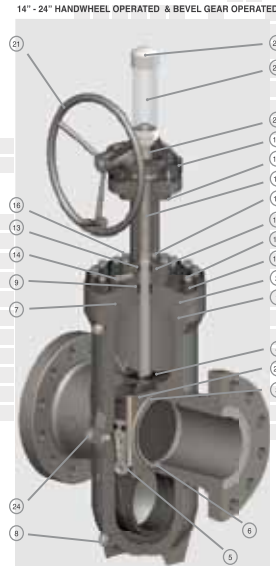
| COMPONENT | PART DESCRIPTION |
|-----------|---------------------------|
| 1 | Valve Body |
| 2 | Bonnet |
| 3 | Seat Assembly |
| 4 | Gate Assembly |
| 5 | Lever Lock Arm |
| 6 | O ring (seat) |
| 7 | O Ring (bonnet) |
| 8 | Grease Fittings |
| 9 | O Ring (Yoke Tube) |
| 10 | Stem |
| 11 | Heavy Hex. Nut |
| 12 | Stud |
| 13 | Packing Set |
| 14 | Packing Injection Fitting |
| 15 | Yoke Tube Assembly |
| 16 | Hex. Bolt |
| 17 | Pipe Plug |
| 18 | Bearing Housing |
| 19 | Trust Bearing |
| 20 | Hex Bolt |
| 21 (NS) | Grease Nipple |
| 22 | O Ring (Stem Nut) |
| 23 | Stem Nut |
| 24 | Handwheel |
| 25 (NS) | Key |
| 26 | Stem Protector |
| 27 | Plastic Protector |
| 28 | Pipe Plug |
| 29 | Gate Guide |

(NS) - Not Shown

Materials of Construction



14" - 24" Handwheel Operated & Bevel Gear Operated GPi 6D Gate Valves



| COMPONENT | PART DESCRIPTION | MATERIAL | QTY |
|-----------|---------------------------|----------------------------|--------|
| 1 | Valve Body | ASTM A216 WCC | 1 |
| 2 | Bonnet | ASTM A216 WCC | 1 |
| 3 | Seat Assembly | ASTM A216 WCC/ AISI-1018 | 2 |
| 4 | Gate Assembly | ASTM A216 WCC | 1 |
| 5 | Lever Lock Arm | 410SS | 2 |
| 6 | O ring (seat) | Viton | 2 |
| 7 | O Ring (bonnet) | Viton (See Note-1) | 1 |
| 8 | Grease Fittings | 316SS | 2 |
| 9 | O Ring (Yoke Tube) | Viton | 1 |
| 10 | Stem | 17-4 PH SS | 1 |
| 11 | Heavy Hex. Nut | ASTM A194 Gr. 2H | Varies |
| 12 | Stud | ASTM A193 Gr. B7 | Varies |
| 13 | Packing Set | 25% Glass Filled PTFE | 1 |
| 14 | Packing Injection Fitting | 316SS | 2 |
| 15 | Yoke Tube Assembly | AISI 1018/1020 | 1 |
| 16 | Hex. Bolt | ASTM A193 Gr. B7 | 8 |
| 17 | Pipe Plug | Steel | 1 |
| 18 | Actuator Assembly | | 1 |
| 19 | Hex Bolt | ASTM A193 Gr. B7 | 8 |
| 20 | Stem Nut | ASTM B505/C954 Alu. Bronze | 1 |
| 21 | Handwheel | AISI 1018/1020 | 1 |
| 22 | Stem Protector | AISI 1018/1020 | 1 |
| 23 | Plastic Protector | 1st Gr. HDPE | 1 |
| 24 | Pipe Plug | ASTM A105 | 3 |
| 25 | Gate Guide | AISI 1018/1020 | 2 |

(NS) - Not Shown

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Limited Product Warranty

All products manufactured or sold by GPI are warranted against defects of material and workmanship for a period of twelve (12) months from the date of installation or eighteen (18) months from date of shipment, whichever period first expires, when all such products are used in the service and within the pressure range for which they were manufactured.

In the case of products or parts not wholly of GPI manufacture, GPI liability shall be limited to the extent of GPI recovery from the original manufacturer of such products or parts under its warranty or liability to GPI.

Any repair work performed by GPI is warranted for one year from completion of such repairs and applies only to work performed. If, within these specified periods, GPI receives notice from Buyer of any alleged defect in or nonconformance of any product or repair and if in GPI sole judgment the product or repair does not conform or is found to be defective in material or workmanship, then, Buyer shall, at GPI request, return the part or product F.O.B. To GPI designated plant or service location.

GPI has no liability for removal or reinstallation of products or equipment. GPI, at its option and expense, shall repair or replace the defective part or product, or repay to Buyer the full price paid by Buyer for such defective part, repair or product. Any repayment of purchase price shall be without interest.

GPI warranty liability, including defects caused by GPI negligence, shall be limited to such repair, replacement or refund, and shall not include claims for labor costs, expenses of Buyer resulting from such defects, recovery under general tort law or strict liability or for damages resulting from delays, loss of use, or other direct, indirect, incidental or consequential damages of any kind.

GPI will not be responsible for failures of products which have been in any way tampered with or altered by anyone other than an authorized representative of GPI, failures due to lack of compliance with recommended maintenance procedures or products which have been repaired or altered in such a way (in GPI judgment) as to affect the products adversely.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, STATUTORY OR IMPLIED, INCLUDING THE WARRANTY OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE WHICH EXCEED THE FOREGOING WARRANTY.

If you have queries regarding this warranty or if you would like information about other GPI products and services please contact us at the address and phone numbers below.



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