



API 6D Expanding Gate Valve



Model AOV-6D Expanding Gate Valve

High integrity expanding gate valves for pipeline, power plant, ESD & other isolation applications.

Introduction

Model AOV-6D through-conduit expanding gate valve provides dependable shutoff and sealing reliability for a variety of demanding isolation applications including, but not limited to:

- Liquid Pipelines

→ Emergency Shutdown

→ Meter Bypass Valves

→ Double Block and Bleed Applications
- Power Plants

→ Liquids Storage

→ Mainline Isolations (*Full Bore Design*)

The AOV gate valve provides 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.

Table of Contents

| | |
|--|----|
| Introduction | 2 |
| Features | 3 |
| Standard Materials of Construction and Size Availability | 4 |
| Open and Close Sequence | 5 |
| AOV Typical Valve Configuration 2" - 4" | 6 |
| Size Range and Materials of Construction 2" - 4" | 7 |
| Dimension Tables 2" - 4" | 8 |
| AOV Typical Valve Configuration 6" - 12" | 10 |
| Design Features 6" - 12" | 11 |
| Dimension Tables 6" - 12" | 12 |
| AOV Typical Valve Configuration 14" - 36" | 14 |
| Design Features 14" - 36" | 15 |
| Dimension Tables 14" - 36" | 16 |
| Operator Sizing Requirments 2" - 12" | 18 |
| Operator Sizing Requirments 14" - 36" | 19 |
| Operator Interface Dimensions 2" - 12" | 20 |
| Operator Interface Dimensions 14" - 36" | 21 |

Gate Valve Features

Model AOV-6D expanding gate valve is ideal for applications that require positive shut-off, verifiable zero leakage and double block and bleed (DB&B) capability. Some of the more common applications include:

Block and Bleed Capability

When in the closed position the valve forms a tight seal on both seats, allowing the valve body to be drained. For specific application please consult American Oilfield Valves.

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

Thermal Relief Options

A thermal relief system can be provided to relieve excess body pressure in the body cavities of closed valve and in cases where excess body pressure develops in the body cavity due to thermal expansion.

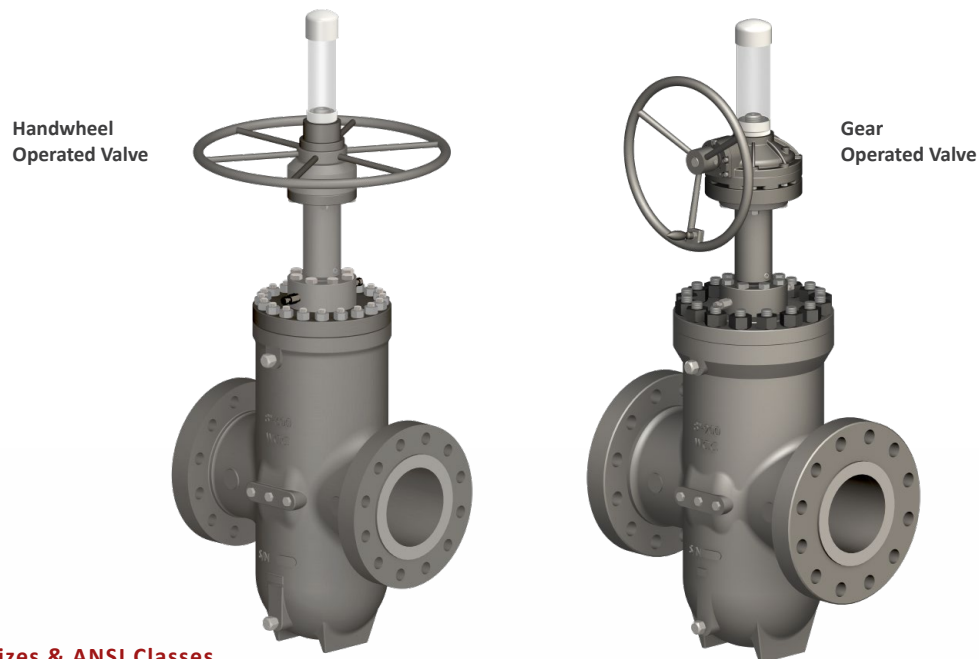


Materials of Construction and Size Availability

Standard Materials of Construction (For Alternative Materials, Please Consult American Oilfield Valves.)

All AOV gate valves with standard materials of construction meet the requirements of NACE MR0175 / ISO 15156.

| Component | Standard Temp. (-20° to 300° F) (-29° to 150° C) | Low Temp. (-50° to 300° F) (-46° to 150° C) |
|----------------------|--|--|
| Body | ASTM A216 WCC | ASTM A352 LCC |
| Bonnet | ASTM A216 WCC / ANSI 4130 / A350 LF6 Cl.2 | ASTM A352 LCC / ANSI 4130 / A350 LF6 Cl.2 |
| Seat | ANSI 4130 + ENP with PTFE insert | ANSI 4130 + ENP with PTFE insert |
| Gate Assembly | ASTM A216 WCC / ANSI 4130 / A350 LF6 Cl.2 / ASTM A487 4C/4D +ENP | ASTM A216 WCC / ANSI 4130 / A350 LF6 Cl.2 / ASTM A487 4C/4D +ENP |
| LeverLock Arm | ASTM 410SS / A747-CB7-Cu1 | Forged ASTM A350 Gr. LF2 |
| Stem | ASTM A564 GR. 630(17-4 PH) | Pre-Formed Flexible Graphite |
| Stem Packing | Viton Duck / Graphite | Pre-Formed Flexible Graphite |
| O-Ring | Viton B | Viton GFLT ⁽⁴⁾ |
| Bonnet to Body Studs | ASTM A320 L7M | ASTM A320 Gr. L7M |
| Bonnet Nuts | ASTM A194 2HM | ASTM A194 Gr. 2HM |



Available Sizes & ANSI Classes

| ANSI Class | Sizes (inches) | | | | | | | | | | | | | | | | |
|------------|----------------|----|----|----|-------|-------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 2 | 3 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 24 | 28 | 30 | 32 | 34 | 36 |
| 150 | HW | HW | HW | HW | HW | HW | HW | GO | GO | GO | GO | GO | GO | GO* | GO* | GO* | GO* |
| 300 | HW | HW | HW | HW | HW | HW | HW/GO | GO | GO | GO | GO | GO | GO | GO* | GO* | GO* | GO* |
| 600 | HW | HW | HW | HW | HW | HW/GO | GO | GO | GO | GO | GO | GO | GO | GO* | GO* | GO* | GO* |
| 900 | HW | HW | HW | HW | HW/GO | HW/GO | GO | GO | GO | N/a | N/a | N/a | N/a | N/a | N/a | N/a | N/a |
| 1500 | HW | HW | HW | GO | GO | GO | N/a | N/a | N/a | N/a | N/a | N/a | N/a | N/a | N/a | N/a | N/a |

HW = Available Only as Handwheel Operated

GO = Available Only as Gear Operated

HW/GO = Available as Handwheel or Gear Operated

* These sizes have lifting lugs

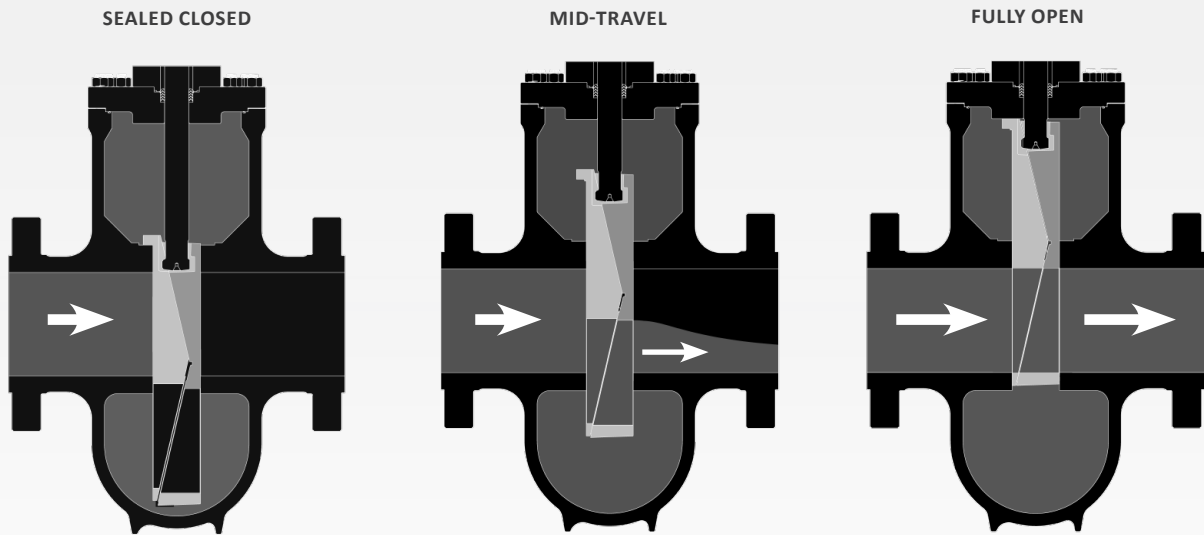
Open and Close Sequence

Top of the line expanding gate valve with block and bleed capability.

The AOV design is such that the gate moves in parallel unison to provide an extremely tight seal that is unaffected by variations in pressure. Each seat contains a plastic face seal that is press fit into the valve body in order to affect a metal-to-metal body-seat seal.

The center of the valve body is designed and cast as a single piece with a unique full bore design. This is to ensure that the valve provides the necessary strength to resist any bending in the pipeline, and to also to keep the pressure constant.

There are similar, but key differences between the OPEN and CLOSED positions. in the CLOSED position the valve segment stops moving when it comes into contact with the stop, and the continued stem movement causes the gate to slide down the top angles. This causes the gate-segment to expand outwards against both seats. in the OPEN position, however, everything appears to be similar except that the gate slides up from the bottom angles, which causes the gate-segment to again expand against both seats. There is a centralizing mechanism that allows for the gate-segment to be placed only in full open and closed modes in order to avoid partial openings- leading to leakage.



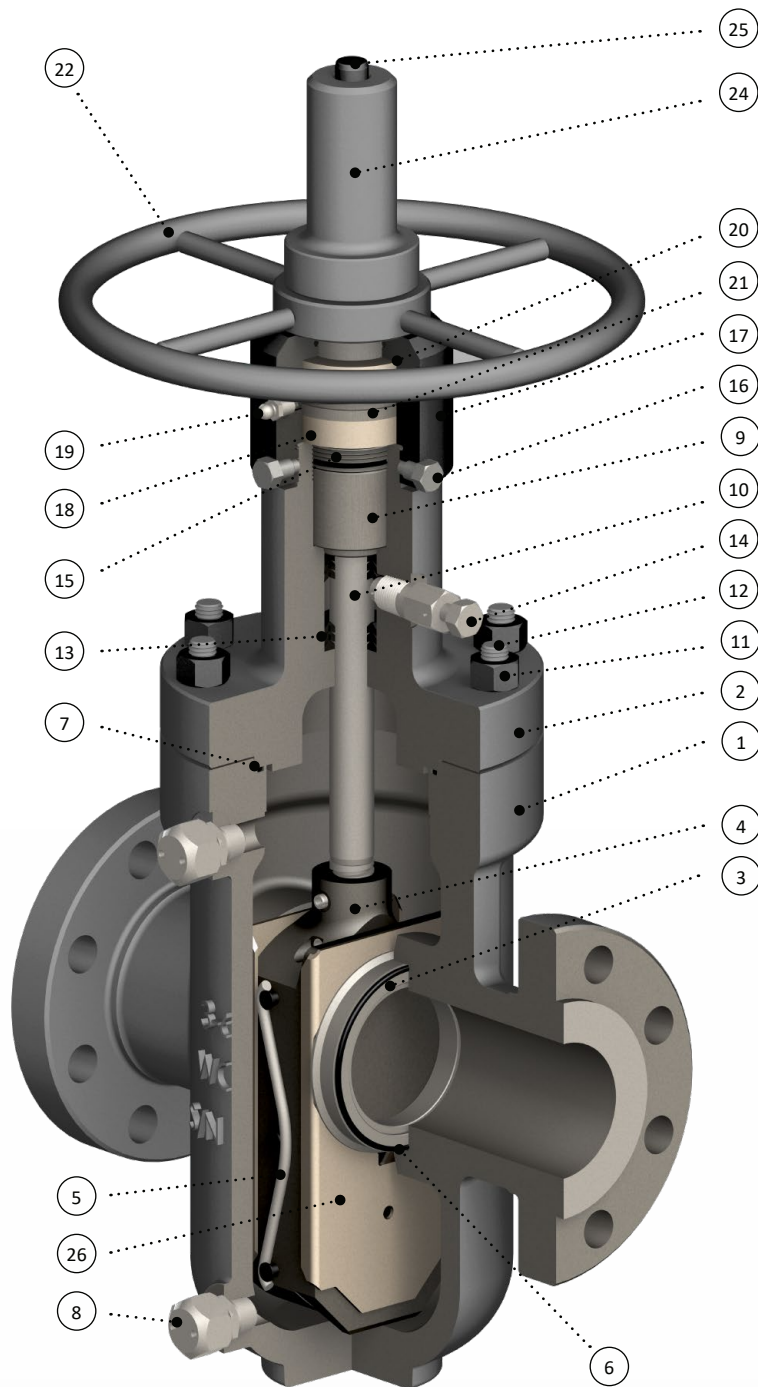
In the fully closed position the segment has engaged with an end-stop and the gate is wedged downward, expanding the segment and gate so that they form a tight mechanical closure against the upstream and downstream seats. Venting the body cavity will provide total, tight shut off.

During travel towards the open position, the gate slides across the wedge angle of the segment, collapsing the assembly so that it travels freely between the seal faces. The patented Leverlock gate centralizer holds the mechanism in the neutral position until seal expansion is required.

When the bore in the segment is aligned with the conduit bore, an end-stop prevents further travel and the gate slides across the wedge angle, expanding the gate and the segment, isolating the flow from the body. The preferred flow direction assures easier operation.

AOV Typical Valve Configuration

2" → 4" Handwheel Operated / AOV 6D Expanding Gate Valve



Size Range and Materials of Construction

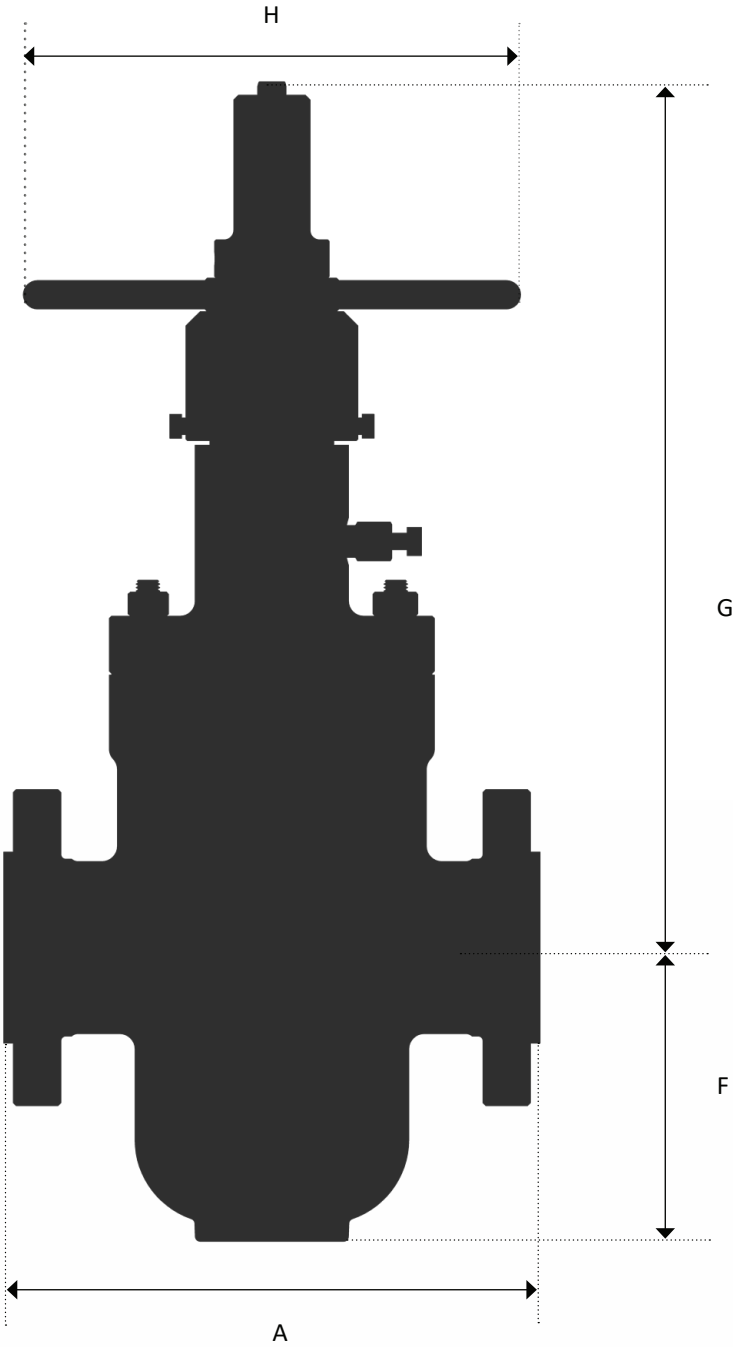
2" → 4" Handwheel Operated / AOV 6D Expanding Gate Valve

| 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 | Gate Spring | inconel | 2 |
| 6 | O ring (seat) | Viton | 2 |
| 7 | O Ring (bonnet) | Viton | 1 |
| 8 | Grease Fittings | 316SS | 2 |
| 9 | Gland Bushing | 4130 75k | 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 | Packing Retainer Nut | AISI 1018/1020 | 1 |
| 16 | Hex. Bolt | ASTM A193 Gr. B7 | 4 |
| 17 | Bearing Housing | AISI 1018/1020 | 1 |
| 18 | Thrust Bearing | STD | 2 |
| 19 | Grease Nipple | IS: 4009 | 1 |
| 20 | O Ring (Stem Nut) | Viton | 1 |
| 21 | Stem Nut | ASTM B505/C954 Alu. Bronze | 1 |
| 22 | Handwheel | AISI 1018/1020 | 1 |
| 23 (NS) | Key | AISI 1018/1020 | 2 |
| 24 | Stem Protector | AISI 1018/1020 | 2 |
| 25 | indicator Rod | 316SS | 1 |
| 26 | Gate Guide | AISI 1018/1020 | 2 |

(NS) - Not Shown

Dimension Tables

2" → 4" Handwheel Operated / AOV 6D Expanding Gate Valve



Dimension Tables

2" → 4" Handwheel Operated / AOV 6D Expanding Gate Valve

ASME 300

| Size | | A | | G (Open) | | F | | H | | Weight | | N* |
|------|-----|-------|-----|-------------|-----|------|-----|-------|-----|--------|-----|------|
| in | mm | in | mm | in | mm | in | mm | in | mm | Lb. | Kg | |
| 4 | 100 | 12.00 | 305 | 37.21 | 945 | 8.88 | 226 | 15.50 | 394 | 277 | 126 | 20.0 |

ASME 600

| Size | | A | | G (Open) | | F | | H | | Weight | | N* |
|------|-----|-------|-----|-------------|-------|------|-------|-------|-----|--------|-----|------|
| in | mm | in | mm | in | mm | in | mm | in | mm | Lb. | Kg | |
| 2 | 50 | 11.50 | 292 | 19.52 | 495.8 | 5.17 | 131.3 | 13.00 | 330 | 109 | 49 | 12.8 |
| 3 | 80 | 14.00 | 356 | 28.23 | 717.0 | 7.70 | 195.6 | 13.00 | 330 | 207 | 94 | 19.8 |
| 4 | 100 | 12.00 | 305 | 37.21 | 945.3 | 8.88 | 225.6 | 15.50 | 394 | 277 | 126 | 19.0 |

ASME 900

| Size | | A | | G (Open) | | F | | H | | Weight | | N* |
|------|-----|-------|-----|-------------|-------|------|-------|-------|-----|--------|-----|------|
| in | mm | in | mm | in | mm | in | mm | in | mm | Lb. | Kg | |
| 2 | 50 | 14.50 | 368 | 19.52 | 495.8 | 5.17 | 131.3 | 13.00 | 330 | 170 | 77 | 12.8 |
| 3 | 80 | 15.00 | 381 | 28.23 | 717.0 | 7.70 | 195.6 | 13.00 | 330 | 270 | 122 | 19.8 |
| 4 | 100 | 17.00 | 432 | 37.21 | 945.3 | 8.88 | 225.6 | 15.50 | 394 | 441 | 200 | 19.0 |

ASME 1500

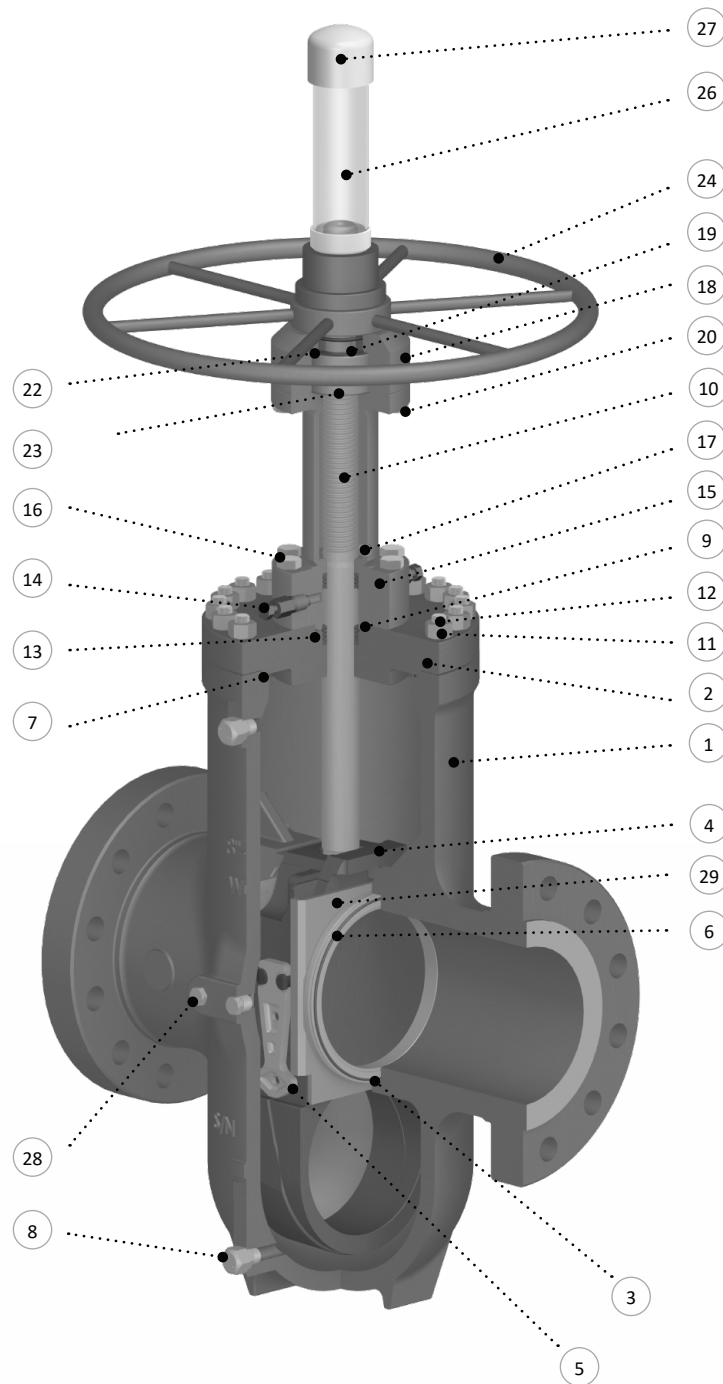
| Size | | A | | G (Open) | | F | | H | | Weight | | N* |
|------|-----|-------|-----|-------------|-----|-------|-----|-------|-----|--------|-----|------|
| in | mm | in | mm | in | mm | in | mm | in | mm | Lb. | Kg | |
| 2 | 50 | 14.50 | 368 | 19.52 | 494 | 5.64 | 143 | 13.00 | 330 | 170 | 77 | 12.8 |
| 3 | 80 | 18.50 | 470 | 28.23 | 717 | 8.25 | 210 | 13.00 | 330 | 331 | 150 | 19.8 |
| 4 | 100 | 21.50 | 546 | 37.21 | 945 | 10.20 | 259 | 15.50 | 394 | 644 | 292 | 19.0 |

| ASME Class | MAX. WP @ 100°F (38°C) | |
|------------|------------------------|------|
| Size | CWP | Test |
| 300 | 750 | 1125 |
| 600 | 1500 | 2250 |
| 900 | 2250 | 3375 |
| 1500 | 3750 | 5625 |

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

AOV Typical Valve Configuration

6" → 12" Handwheel Operated & Bevel Gear Operated / AOV 6D Expanding Gate Valve



Design Features

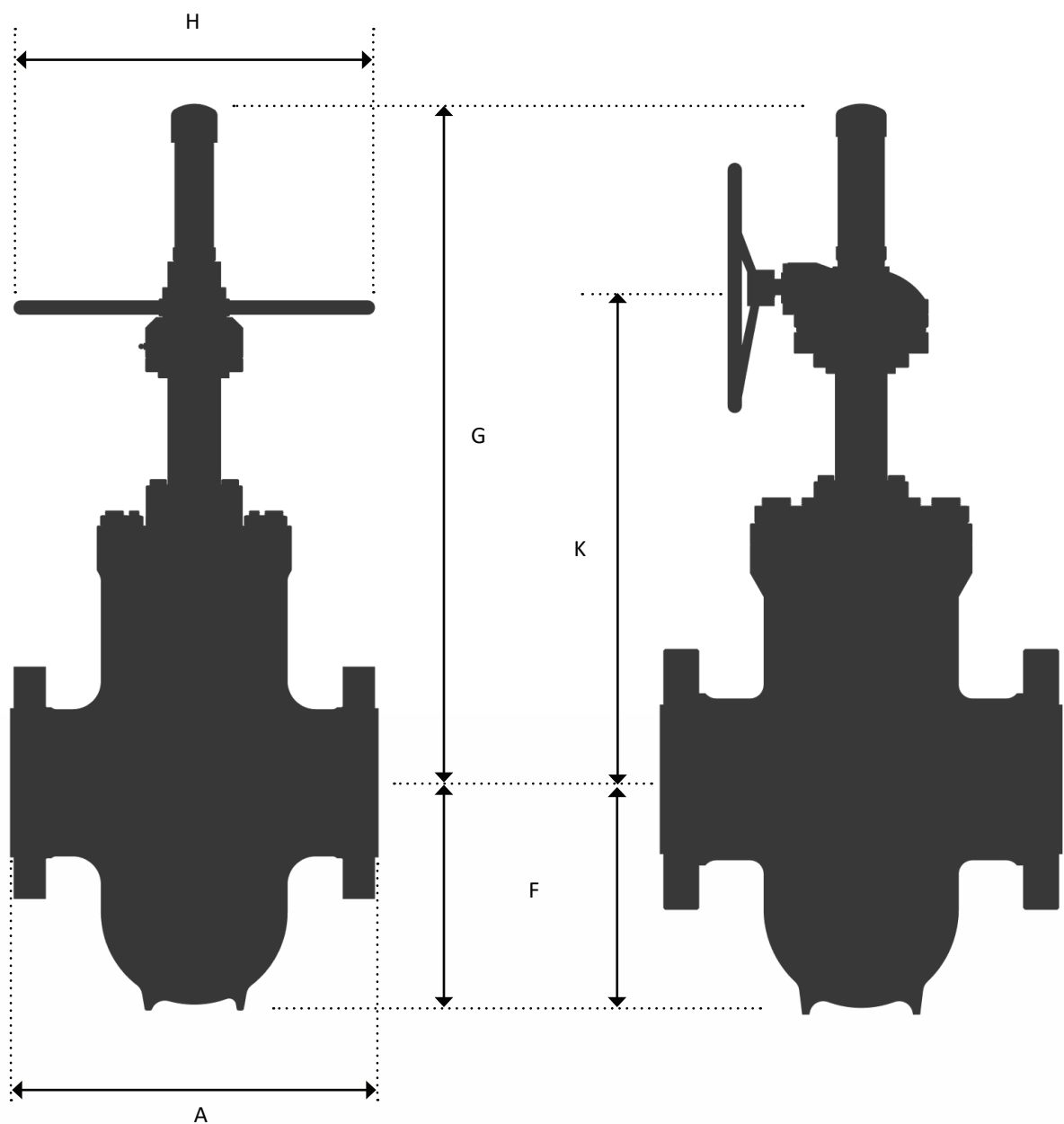
6" → 12" Handwheel Operated & Bevel Gear Operated / AOV 6D Expanding Gate Valve

| 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 | 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 | Bearing Housing | ASI 1018/1020 | 1 |
| 19 | Trust Bearing | STD | 2 |
| 20 | Hex Bolt | ASTM A193 Gr. B7 | 4 |
| 21 (NS) | Grease Nipple | IS: 4009 | 1 |
| 22 | O Ring (Stem Nut) | Viton | 1 |
| 23 | Stem Nut | ASTM B505/C954 Alu. Bronze | 1 |
| 24 | Handwheel | AISI 1018/1020 | 1 |
| 25 (NS) | Key | AISI 1018/1020 | 1 |
| 26 | Stem Protector | AISI 1018/1020 | 2 |
| 27 | Plastic Protector | 1st Gr. HDPE | 1 |
| 28 | Pipe Plug | ASTM A105 | 3 |
| 29 | Gate Guide | AISI 1018/1020 | 2 |

(NS) - Not Shown

Dimension Tables

6" → 12" Handwheel Operated & Bevel Gear Operated / AOV 6D Gate Valve



Dimension Tables

6" → 12" Handwheel Operated & Bevel Gear Operated / AOV 6D Gate Valve

ASME 150

| Size | | A | | G | | F | | H | | K | | Weight | | N* |
|------|-----|-------|-----|-------|-------|-------|-----|-------|-----|-------|-------|--------|-----|-----|
| in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | lb. | kg | |
| 8 | 200 | 11.50 | 292 | 58.64 | 1,489 | 17.17 | 436 | 25.50 | 648 | n/a | n/a | 644 | 292 | 146 |
| 10 | 250 | 13.00 | 330 | 69.54 | 1,766 | 20.00 | 508 | 29.80 | 757 | n/a | n/a | 1,045 | 474 | 180 |
| 12* | 300 | 14.00 | 356 | 66.14 | 586 | 23.06 | 586 | 23.25 | 591 | 46.25 | 1,175 | 1,510 | 685 | 239 |

* 12" 300 class valves have 400 class end-to-end dimensions

ASME 300

| Size | | A | | G | | F | | H | | K | | Weight | | N* |
|------|-----|-------|-----|-------|-------|-------|-----|-------|-----|-------|-------|--------|-------|-----|
| in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | lb. | kg | |
| 6 | 150 | 15.90 | 403 | 47.72 | 1,212 | 12.73 | 323 | 22.00 | 559 | n/a | n/a | 520 | 235 | 114 |
| 8 | 200 | 16.50 | 419 | 58.64 | 1,489 | 17.17 | 436 | 25.50 | 648 | n/a | n/a | 717 | 325 | 146 |
| 10 | 250 | 18.00 | 457 | 69.54 | 1,766 | 20.00 | 508 | 29.80 | 757 | n/a | n/a | 1,279 | 580 | 180 |
| 12* | 300 | 14.00 | 356 | 66.14 | 1,680 | 23.06 | 586 | 23.25 | 591 | 46.25 | 1,175 | 2,482 | 1,125 | 239 |

* 12" 300 class valves have 400 class end-to-end dimensions

ASME 600

| Size | | A | | G | | F | | H | | K | | Weight | | N* |
|------|-----|-------|-----|-------|-------|-------|-----|-------|-----|-------|-------|--------|-------|-----|
| in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | lb. | kg | |
| 6 | 150 | 22.00 | 559 | 47.72 | 1,212 | 12.73 | 321 | 22.00 | 559 | n/a | n/a | 602 | 273 | 114 |
| 8 | 200 | 26.00 | 660 | 58.64 | 1,489 | 16.25 | 413 | 25.50 | 648 | n/a | n/a | 1,015 | 488 | 146 |
| 10 | 250 | 31.00 | 787 | 69.54 | 1,766 | 20.00 | 508 | 17.79 | 452 | 39.72 | 1,009 | 2,007 | 860 | 203 |
| 12 | 300 | 33.00 | 838 | 66.14 | 1,680 | 23.06 | 586 | 23.25 | 591 | 46.25 | 1,175 | 3,030 | 1,374 | 239 |

ASME 900

| Size | | A | | G | | F | | H | | K | | Weight | | N* |
|------|-----|-------|-----|-------|-------|-------|-----|-------|-----|-------|-------|--------|-------|-----|
| in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | lb. | kg | |
| 6 | 150 | 24.00 | 610 | 47.72 | 1,212 | 13.13 | 333 | 22.00 | 559 | n/a | n/a | 823 | 365 | 114 |
| 8 | 200 | 29.00 | 737 | 58.64 | 1,489 | 16.75 | 426 | 17.79 | 452 | 34.98 | 888 | 1,433 | 603 | 146 |
| 10 | 250 | 33.00 | 838 | 69.54 | 1,766 | 17.98 | 457 | 23.25 | 591 | 40.75 | 1,035 | 2,448 | 1,050 | 203 |
| 12 | 300 | 38.00 | 965 | 66.14 | 1,680 | 24.05 | 611 | 23.25 | 591 | 46.25 | 1,175 | 3,600 | 1,633 | 318 |

ASME 1500

| Size | | A | | G | | F | | H | | K | | Weight | | N* |
|------|-----|-------|-----|-------|-------|-------|-----|-------|-----|-------|-------|--------|-------|-----|
| in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | lb. | kg | |
| 6 | 150 | 27.80 | 705 | 47.72 | 1,212 | 13.86 | 352 | 17.79 | 452 | 30.51 | 775 | 1,235 | 365 | 114 |
| 8 | 200 | 32.75 | 832 | 58.64 | 1,489 | 16.75 | 451 | 17.80 | 452 | 34.98 | 888 | 2,002 | 603 | 146 |
| 10 | 250 | 39.00 | 991 | 69.54 | 1,766 | 21.70 | 551 | 23.25 | 591 | 40.75 | 1,035 | 3,649 | 1,050 | 203 |
| 12 | 300 | 44.50 | 965 | 79.82 | 2,027 | 25.50 | 648 | n/a | n/a | n/a | n/a | n/a | n/a | 318 |

ASME Class MAX. WP @ 100°F (38°C)

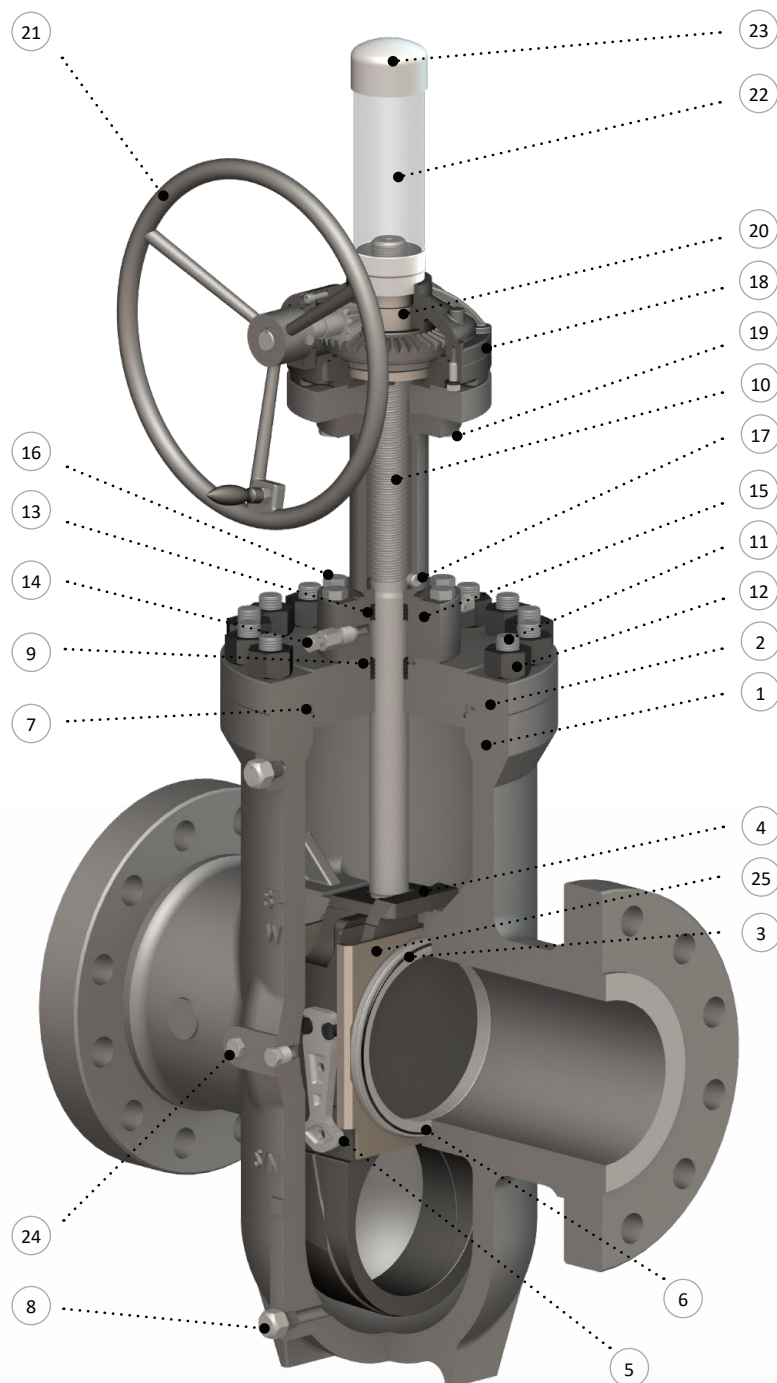
| Size | CWP | TEST |
|------|------|------|
| 300 | 750 | 1125 |
| 600 | 1500 | 2250 |
| 900 | 2250 | 3375 |

N* = Number of turns of handwheel or bevel gear operator

handwheel to fully open or close the valve.

AOV Typical Valve Configuration

14" → 36" Bevel Gear Operated / AOV 6D Gate Valve



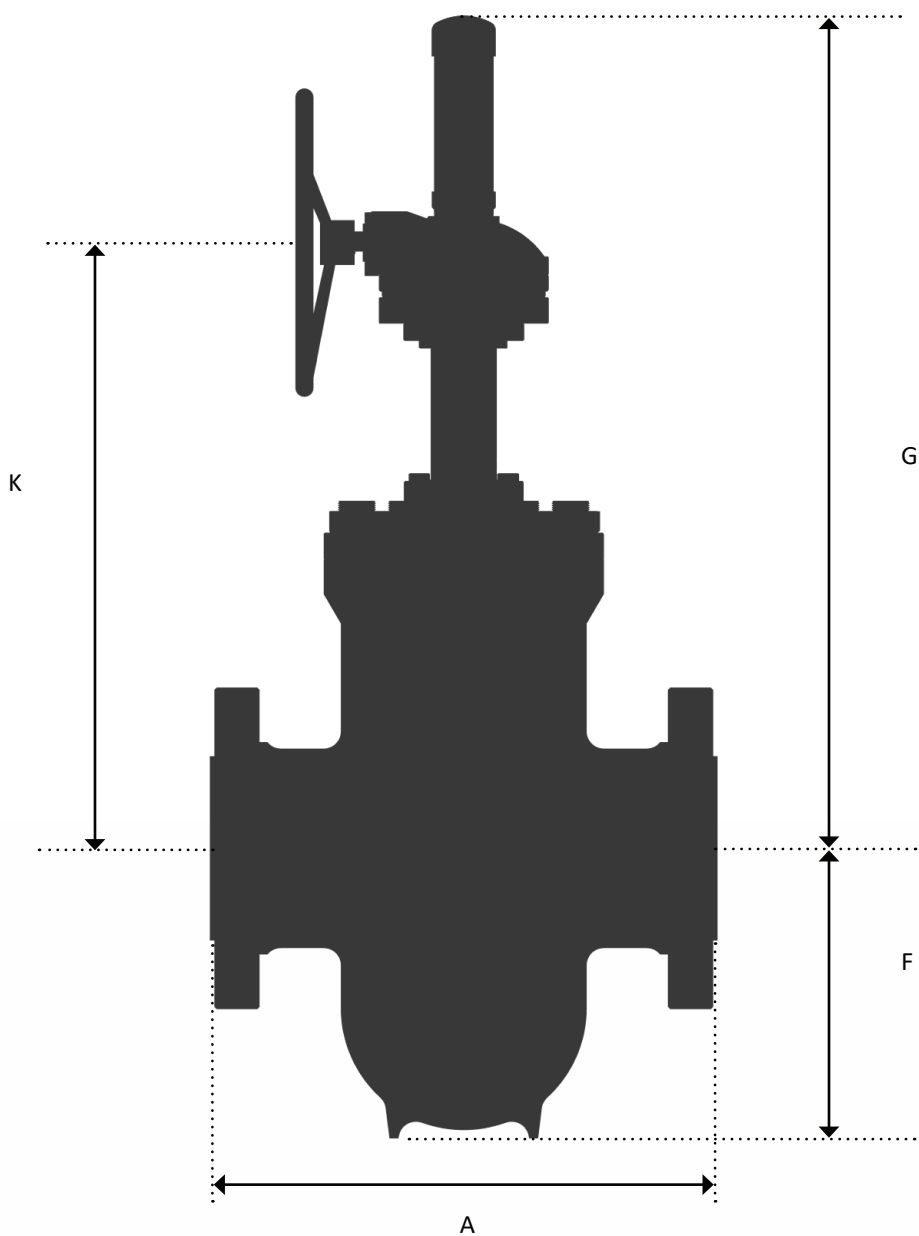
Design Features

14" → 36" Bevel Gear Operated / AOV 6D Gate Valve

| 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 |

Dimension Tables

14" → 36" Bevel Gear Operated / AOV 6D Gate Valve



ASME CLASS

MAX. WP @ 100°F (38°C)

| SIZE | CWP | TEST |
|------|------|------|
| 300 | 750 | 1125 |
| 600 | 1500 | 2250 |
| 900 | 2250 | 3375 |

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

Dimension Tables

14" → 36" Bevel Gear Operated / AOV 6D Gate Valve

ASME 150

| Size | | A | | G | | F | | H | | K | | Weight | |
|------|-----|-------|-----|--------|-------|-------|-------|-------|-----|--------|-------|--------|-------|
| in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | lbs | kg |
| 16 | 400 | 16.00 | 406 | 102.89 | 2,613 | 27.88 | 708 | 23.25 | 591 | 62.03 | 1,576 | 2,298 | 2,298 |
| 20 | 500 | 18.00 | 470 | 116.85 | 2,968 | 36.00 | 914 | 23.25 | 591 | 71.26 | 1,810 | 3,830 | 1,042 |
| 24 | 600 | 20.00 | 508 | 143.34 | 3,641 | 43.00 | 1,092 | 36.00 | 914 | 85.01 | 2,159 | 6,229 | 2,825 |
| 26 | 650 | 22.00 | 559 | 149.13 | 3,788 | 47.80 | 1,214 | 36.00 | 914 | 91.70 | 2,329 | 8,600 | 3,901 |
| 28 | 700 | 24.00 | 610 | 158.00 | 4,013 | 49.80 | 1,265 | 36.00 | 914 | 93.50 | 2,375 | 9,526 | 4,321 |
| 30 | 750 | 26.00 | 660 | 171.68 | 4,361 | 55.12 | 1,400 | 36.00 | 914 | 103.10 | 2,619 | 11,581 | 5,253 |
| 32 | 800 | 28.00 | 711 | 186.00 | 4,724 | 58.25 | 1,480 | n/a | n/a | n/a | n/a | 14,467 | 6,562 |
| 34 | 850 | 30.00 | 864 | 233.00 | 4,724 | 58.25 | 1,480 | n/a | n/a | n/a | n/a | 14,758 | 6,694 |
| 36 | 900 | 32.00 | 914 | 170.77 | 4,338 | 66.1 | 1,680 | n/a | n/a | n/a | n/a | 20,601 | 9,344 |

ASME 300

| Size | | A | | G | | F | | H | | K | | Weight | |
|------|-----|-------|-------|--------|-------|-------|-------|-------|-----|--------|-------|--------|--------|
| in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | lbs | kg |
| 14 | 350 | 30.00 | 762 | 90.50 | 2,299 | 25.50 | 648 | 23.25 | 592 | 54.03 | 1,372 | 2,697 | 1,223 |
| 16 | 400 | 33.00 | 838 | 102.89 | 2,613 | 27.88 | 708 | 23.25 | 592 | 61.07 | 1,551 | 3,385 | 1,535 |
| 18 | 450 | 36.00 | 914 | 110.44 | 2,805 | 32.40 | 823 | 23.25 | 592 | 66.22 | 1,682 | - | - |
| 20 | 500 | 39.00 | 991 | 116.85 | 2,968 | 36.00 | 914 | 36.00 | 914 | 72.61 | 1,844 | 6,395 | 2,901 |
| 24 | 600 | 45.00 | 1,143 | 118.95 | 3,021 | 41.87 | 1,064 | 36.00 | 914 | 85.51 | 2,172 | 9,400 | 4,264 |
| 26 | 650 | 49.00 | 1,245 | 149.13 | 3,788 | 48.00 | 1,219 | 36.00 | 914 | 91.70 | 2,329 | 17,358 | 7,873 |
| 28 | 700 | 53.00 | 1,346 | 158.00 | 4,013 | 50.00 | 1,270 | 36.00 | 914 | 93.50 | 2,375 | 18,191 | 8,251 |
| 30 | 750 | 55.00 | 1,397 | 140.86 | 3,578 | 55.12 | 1,400 | 36.00 | 914 | 103.10 | 2,619 | 18,506 | 8,394 |
| 32 | 800 | 60.00 | 1,524 | 186.00 | 4,724 | 58.25 | 1,480 | n/a | n/a | n/a | n/a | 24,090 | 10,927 |
| 34 | 850 | 64.00 | 1,626 | 233.00 | 4,724 | 58.25 | 1,480 | n/a | n/a | n/a | n/a | 27,386 | 12,422 |
| 36 | 900 | 68.00 | 1,727 | 170.77 | 4,338 | 66.1 | 1,680 | n/a | n/a | n/a | n/a | 30,561 | 13,862 |

ASME 600

| Size | | A | | G | | F | | H | | K | | Weight | |
|------|-----|-------|-------|--------|-------|-------|-------|-------|-----|--------|-------|--------|--------|
| in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | lbs | kg |
| 14 | 350 | 35.00 | 889 | 90.50 | 2,299 | 25.50 | 641 | 23.25 | 592 | 54.03 | 1,372 | 3,308 | 1,500 |
| 16 | 400 | 39.00 | 991 | 102.89 | 2,613 | 27.88 | 708 | 23.25 | 592 | 61.17 | 1,551 | 4,178 | 1,895 |
| 18 | 450 | 43.00 | 1,092 | 92.02 | 2,337 | 32.25 | 819 | 23.25 | 592 | 66.22 | 1,681 | 6,251 | 2,835 |
| 20 | 500 | 47.00 | 1,194 | 96.69 | 2,456 | 36.00 | 914 | 36.00 | 914 | 72.61 | 1,844 | 8,445 | 3,831 |
| 22 | 550 | 51.00 | 1,295 | 124.56 | 3,164 | 39.25 | 997 | 36.00 | 914 | 79.73 | 2,025 | 10,329 | 4,685 |
| 24 | 600 | 55.00 | 1,397 | 118.95 | 3,022 | 43.00 | 1,092 | 36.00 | 914 | 85.51 | 2,171 | 12,502 | 5,671 |
| 26 | 650 | 57.00 | 1,448 | 149.13 | 3,788 | 48.50 | 1,232 | 36.00 | 914 | 91.70 | 2,329 | 25,851 | 11,726 |
| 28 | 700 | 61.00 | 1,549 | 158.00 | 4,013 | 50.30 | 1,278 | 36.00 | 914 | 93.50 | 2,375 | 26,460 | 12,002 |
| 30 | 750 | 65.00 | 1,651 | 140.86 | 3,578 | 57.09 | 1,450 | 36.00 | 914 | 111.55 | 2,833 | 25,798 | 11,702 |
| 32 | 800 | 70.00 | 1,778 | 186.00 | 4,724 | 58.25 | 1,480 | n/a | n/a | n/a | n/a | 37,838 | 17,163 |
| 34 | 750 | 76.00 | 1,930 | 233.00 | 4,724 | 58.25 | 1,480 | n/a | n/a | n/a | n/a | 40,034 | 18,159 |
| 36 | 900 | 82.00 | 2,083 | 171.68 | 4,338 | 66.14 | 1,680 | n/a | n/a | n/a | n/a | 39,359 | 17,853 |

ASME 900

| Size | | A | | G | | F | | H | | K | | Weight | |
|------|-----|-------|-------|--------|-------|-------|-------|-------|-----|-------|-------|--------|-------|
| in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | lbs | kg |
| 14 | 350 | 40.50 | 1,029 | 90.50 | 2,299 | 25.50 | 648 | n/a | n/a | n/a | n/a | n/a | n/a |
| 16 | 400 | 44.50 | 1,130 | 102.89 | 2,613 | 27.88 | 708 | 23.25 | 592 | 61.17 | 1,551 | 4,178 | 1,895 |
| 18 | 450 | 48.00 | 1,219 | 110.44 | 2,337 | 32.25 | 819 | 36.00 | 914 | 68.07 | 1,729 | n/a | n/a |
| 20 | 500 | 52.00 | 1,321 | 96.69 | 2,456 | 37.22 | 945 | 36.00 | 914 | 72.61 | 1,844 | 11,245 | 5,100 |
| 24 | 600 | 61.00 | 1,548 | 143.34 | 3,641 | 43.00 | 1,092 | n/a | n/a | n/a | n/a | 18,687 | 8,476 |

ASME 1500

| Size | | A | | G | | F | | H | | K | | Weight | |
|------|-----|-------|-------|-------|-------|-------|-----|-------|-----|-------|-------|--------|-----|
| in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | lbs | kg |
| 14 | 356 | 49.50 | 1,257 | 90.50 | 2,299 | 27.62 | 702 | 36.00 | 914 | 57.60 | 1,463 | n/a | n/a |

Operator Sizing Requirments

2" → 12" Class 150-1500

ASME 150

| Valve Size | Size | | Pitch | | Lead | | Rec. Operating Thrust (Lbf) | Rec. Operating Torque (Ft-Lbf) | Block & Bleed Thrust (Lbf) | Block & Bleed Thrust (Ft-Lbf) | Max Operating Thrust (Lbf) | Max Operating Torque (Ft-Lbf) | Total Stem Travel | | Turns To Open HWO | Turns To Open BGO | |
|---------------|------|-------|-------|-------|------|-------|--------------------------------------|---|-------------------------------------|--|-------------------------------------|--|-------------------------|-------|----------------------------|----------------------------|-------|
| | in | mm | in | mm | in | mm | | | | | | | in | mm | | | |
| 8 | 250 | 1.750 | 46 | 0.250 | 8 | 0.250 | 8 | 3,496 | 49 | 4,195 | 59 | 70,578 | 1,065 | 11.04 | 280 | 44.2 | 165.7 |
| 10 | 250 | 2.000 | 51 | 0.250 | 8 | 0.250 | 8 | 5,570 | 88 | 6,683 | 105 | 10,5116 | 1,761 | 11.04 | 280 | 44.2 | 165.7 |
| 12 | 300 | 2.250 | 58 | 0.333 | 8 | 0.333 | 8 | 7,567 | 138 | 9,081 | 166 | 11,4954 | 2,249 | 12.98 | 330 | 39 | 168.9 |

ASME 300

| | | | | | | | | | | | | | | | | | |
|----|-----|-------|----|-------|---|-------|---|--------|-----|--------|-----|---------|-------|-------|-----|------|-------|
| 6 | 150 | 1.500 | 38 | 0.250 | 8 | 0.250 | 8 | 6,000 | 81 | 7,200 | 97 | 45,263 | 608 | 6.91 | 176 | 27.6 | n/a |
| 8 | 200 | 1.750 | 46 | 0.250 | 8 | 0.250 | 8 | 9,041 | 136 | 10,849 | 164 | 70,578 | 1,065 | 8.91 | 226 | 35.6 | n/a |
| 10 | 250 | 2.000 | 51 | 0.250 | 8 | 0.250 | 8 | 14,404 | 241 | 17,285 | 290 | 105,116 | 1,761 | 11 | 280 | 44.2 | 165.7 |
| 12 | 300 | 2.250 | 58 | 0.333 | 8 | 0.333 | 8 | 19,571 | 383 | 23,485 | 460 | 114,945 | 2,249 | 12.98 | 330 | 39 | 168.9 |

ASME 600

| | | | | | | | | | | | | | | | | | |
|----|-----|-------|----|-------|---|-------|---|--------|-----|--------|-----|---------|-------|-------|-----|------|-------|
| 2 | 50 | 0.875 | 23 | 0.200 | 5 | 0.200 | 5 | 2,246 | 19 | 2,696 | 23 | 13,942 | 120 | 2.55 | 65 | 12.8 | n/a |
| 3 | 75 | 1.000 | 25 | 0.200 | 5 | 0.200 | 5 | 3,778 | 36 | 4,533 | 43 | 19,957 | 188 | 3.96 | 101 | 19.8 | n/a |
| 4 | 100 | 1.250 | 33 | 0.250 | 8 | 0.250 | 8 | 7,215 | 85 | 8,658 | 102 | 35,082 | 413 | 4.76 | 121 | 19 | n/a |
| 6 | 150 | 0.250 | 38 | 0.250 | 8 | 0.250 | 8 | 13,521 | 182 | 16,225 | 218 | 45,263 | 608 | 6.91 | 176 | 27.6 | n/a |
| 8 | 200 | 1.750 | 46 | 0.250 | 8 | 0.250 | 8 | 18,082 | 273 | 21,698 | 327 | 70,578 | 1,065 | 8.91 | 226 | 35.6 | n/a |
| 10 | 250 | 2.000 | 51 | 0.250 | 8 | 0.250 | 8 | 28,808 | 483 | 34,570 | 579 | 105,116 | 1,761 | 11.04 | 280 | 44.2 | 165.7 |
| 12 | 300 | 2.250 | 58 | 0.333 | 8 | 0.333 | 8 | 39,142 | 766 | 46,971 | 919 | 114,954 | 2,249 | 12.98 | 330 | 39 | 168.9 |

ASME 900

| | | | | | | | | | | | | | | | | | |
|----|-----|-------|----|-------|---|-------|---|--------|-------|--------|------|---------|-------|-------|-----|------|-------|
| 2 | 50 | 0.875 | 23 | 0.200 | 5 | 0.200 | 5 | 3,370 | 29 | 4,043 | 35 | 13,942 | 120 | 2.55 | 65 | 12.8 | n/a |
| 3 | 75 | 1.000 | 25 | 0.200 | 5 | 0.200 | 5 | 7,464 | 70 | 8,957 | 84 | 19,957 | 188 | 3.96 | 101 | 19.8 | n/a |
| 4 | 100 | 1.250 | 33 | 0.250 | 8 | 0.250 | 8 | 10,822 | 127 | 12,987 | 153 | 35,082 | 413 | 4.76 | 121 | 19 | n/a |
| 6 | 150 | 1.500 | 38 | 0.250 | 8 | 0.250 | 8 | 17,083 | 229 | 20,500 | 275 | 45,263 | 608 | 6.91 | 176 | 27.6 | n/a |
| 8 | 200 | 1.750 | 46 | 0.250 | 8 | 0.250 | 8 | 27,123 | 409 | 32,547 | 491 | 70,578 | 1,065 | 8.91 | 226 | 35.6 | 133.6 |
| 10 | 250 | 2.000 | 51 | 0.250 | 8 | 0.250 | 8 | 43,212 | 724 | 51,855 | 869 | 105,116 | 1,761 | 11.04 | 280 | 44.2 | 165.7 |
| 12 | 300 | 2.250 | 58 | 0.333 | 8 | 0.333 | 8 | 58,117 | 1,149 | 70,456 | 1379 | 114,954 | 2,249 | 12.98 | 330 | 39 | 201.4 |

ASME 1500

| | | | | | | | | | | | | | | | | | |
|----|-----|-------|----|-------|---|-------|---|--------|------|--------|------|---------|-------|-------|-----|------|-------|
| 2 | 50 | 0.875 | 23 | 0.200 | 5 | 0.200 | 5 | 5,616 | 48 | 6,739 | 58 | 13,942 | 120 | 2.55 | 65 | 12.8 | n/a |
| 3 | 75 | 1.000 | 25 | 0.200 | 5 | 0.200 | 5 | 12,441 | 117 | 14,929 | 141 | 19,957 | 188 | 3.96 | 101 | 19.8 | n/a |
| 4 | 100 | 1.250 | 33 | 0.250 | 8 | 0.250 | 8 | 18,037 | 212 | 21,644 | 255 | 35,082 | 413 | 4.76 | 121 | 19 | n/a |
| 6 | 150 | 1.500 | 38 | 0.250 | 8 | 0.250 | 8 | 28,472 | 382 | 34,166 | 459 | 45,263 | 608 | 6.91 | 176 | 27.6 | 103.7 |
| 8 | 200 | 1.750 | 46 | 0.250 | 8 | 0.250 | 8 | 47,668 | 719 | 57,202 | 719 | 70,578 | 1,065 | 8.91 | 226 | 35.6 | 133.6 |
| 10 | 250 | 2.000 | 51 | 0.250 | 8 | 0.250 | 8 | 72,020 | 1207 | 86,424 | 1448 | 105,116 | 1,761 | 11.04 | 280 | 44.2 | 191.5 |

Note 1: Use Recommended Operating Thrust and Torques for sizing bevel gear operators.

Rec. = Recommended

Note 2: Use Block & Bleed Thrusts and Torques for sizing power operators (electric, gas, hydraulic, etc.).

Note 3: Maximum Operating Thrust and Torques are the maximum allowable for the valve.

Operator Sizing Requirments

14" → 36" Class 150-900

| | Valve Size | Size | | Pitch | | Lead | | Rec. Operating Thrust (Lbf) | Rec. Operating Torque (Ft-Lbf) | Block & Bleed Thrust (Lbf) | Block & Bleed Thrust (Ft-Lbf) | Max Operating Thrust (Lbf) | Max Operating Torque (Ft-Lbf) | Total Stem Travel | | Turns To Open HWO | Turns To Open BGO | |
|----------|---------------|-------------|-------|-------|-------|------|-------|--------------------------------------|---|-------------------------------------|--|-------------------------------------|--|-------------------------|-------|----------------------------|----------------------------|-------|
| | | STEM THREAD | | | | | | | | | | | | in | mm | | | |
| | | in | mm | in | mm | in | mm | | | | | | | | | | | |
| ASME 150 | 16 | 400 | 2.500 | 64 | 0.333 | 8 | 0.333 | 8 | 11,185 | 223 | 13,422 | 268 | 154,086 | 3,272 | 16.47 | 418 | 49.4 | 255 |
| | 20 | 500 | 2.500 | 64 | 0.400 | 10 | 0.800 | 20 | 13,691 | 437 | 15,060 | 481 | 154,086 | 3,272 | 20.63 | 524 | 25.8 | 133 |
| | 24 | 600 | 2.500 | 64 | 0.400 | 10 | 0.800 | 20 | 19,097 | 609 | 21,007 | 670 | 154,086 | 3,272 | 24.66 | 626 | 30.8 | 247 |
| | 26 | 650 | 2.875 | 74 | 0.400 | 10 | 0.800 | 20 | 22,896 | 779 | 25,186 | 857 | 213,437 | 4,945 | 26.53 | 674 | 33.2 | 265 |
| | 30 | 750 | 2.875 | 74 | 0.400 | 10 | 0.800 | 20 | 30,197 | 1,027 | 33,217 | 1,130 | 213,437 | 4,945 | 31.47 | 799 | 39.3 | 315 |
| | 36 | 900 | 2.500 | 84 | 0.400 | 10 | 0.800 | 20 | 42,040 | 1,571 | 46,244 | 1,729 | 244,786 | 7,644 | 36.72 | 933 | 45.9 | n/a |
| ASME 300 | 14 | 350 | 2.500 | 64 | 0.333 | 8 | 0.333 | 8 | 23,139 | 491 | 27,767 | 590 | 162,968 | 3,460 | 14.42 | 366 | 43.3 | 223.5 |
| | 16 | 400 | 2.500 | 64 | 0.333 | 8 | 0.333 | 8 | 28,927 | 614 | 34,713 | 737 | 154,086 | 3,272 | 16.47 | 418 | 49.4 | 255 |
| | 24 | 600 | 3.250 | 84 | 0.400 | 10 | 0.800 | 20 | 62,335 | 2,038 | 74,802 | 2,445 | 233,854 | 7,644 | 24.66 | 626 | 30.8 | 246.4 |
| | 30 | 750 | 3.750 | 91 | 0.400 | 10 | 0.800 | 20 | 107,437 | 3,868 | 128,924 | 4,641 | 346,676 | 12,481 | 31.47 | 799 | 39.3 | 314.4 |
| | 36 | 900 | 4.250 | 109 | 0.400 | 10 | 0.800 | 20 | 146,108 | 5,522 | 175,329 | 6,626 | 506,351 | 19,137 | 36.72 | 933 | 45.9 | n/a |
| ASME 600 | 14 | 350 | 2.500 | 64 | 0.250 | 8 | 0.333 | 8 | 46,278 | 983 | 55,534 | 1,179 | 162,968 | 3,460 | 14.42 | 366 | 43.3 | 223.5 |
| | 16 | 400 | 2.500 | 64 | 0.250 | 8 | 0.333 | 8 | 57,854 | 1,228 | 69,425 | 1,474 | 154,086 | 3,272 | 16.47 | 418 | 49.4 | 255 |
| | 18 | 450 | 2.875 | 74 | 0.400 | 10 | 0.800 | 20 | 70,057 | 1,623 | 84,068 | 1,948 | 213,437 | 4,945 | 18.37 | 467 | 23 | 118.7 |
| | 20 | 500 | 2.875 | 74 | 0.400 | 10 | 0.800 | 20 | 87,709 | 2,649 | 105,250 | 3,179 | 163,700 | 4,945 | 20.63 | 524 | 25.8 | 206.4 |
| | 22 | 550 | 2.500 | 84 | 0.400 | 10 | 0.800 | 20 | 105,898 | 3,307 | 127,078 | 3,968 | 244,786 | 7,644 | 22.79 | 579 | 28.5 | 227.9 |
| | 24 | 600 | 2.500 | 84 | 0.400 | 10 | 0.800 | 20 | 124,670 | 4,075 | 149,605 | 4,890 | 233,854 | 7,644 | 24.66 | 626 | 30.8 | 246.4 |
| | 30 | 750 | 3.750 | 97 | 0.400 | 10 | 0.800 | 20 | 214,874 | 7,736 | 257,848 | 9,283 | 346,676 | 12,481 | 31.47 | 799 | 39.3 | 235.8 |
| | 36 | 900 | 4.250 | 109 | 0.400 | 10 | 0.800 | 20 | 292,215 | 11,490 | 350,658 | 13,788 | 506,351 | 19,137 | 36.72 | 933 | 45.9 | n/a |
| ASME 900 | 16 | 400 | 2.500 | 64 | 0.333 | 8 | 0.333 | 8 | 86,782 | 1,843 | 104,138 | 2,211 | 154,086 | 3,272 | 16.47 | 418 | 49.4 | 255 |
| | 20 | 500 | 2.875 | 74 | 0.400 | 10 | 0.800 | 20 | 131,563 | 3,974 | 157,875 | 4,769 | 163,700 | 4,945 | 20.63 | 524 | 25.8 | 206.4 |

Note 1: Use Recommended Operating Thrust and Torques for sizing bevel gear operators.

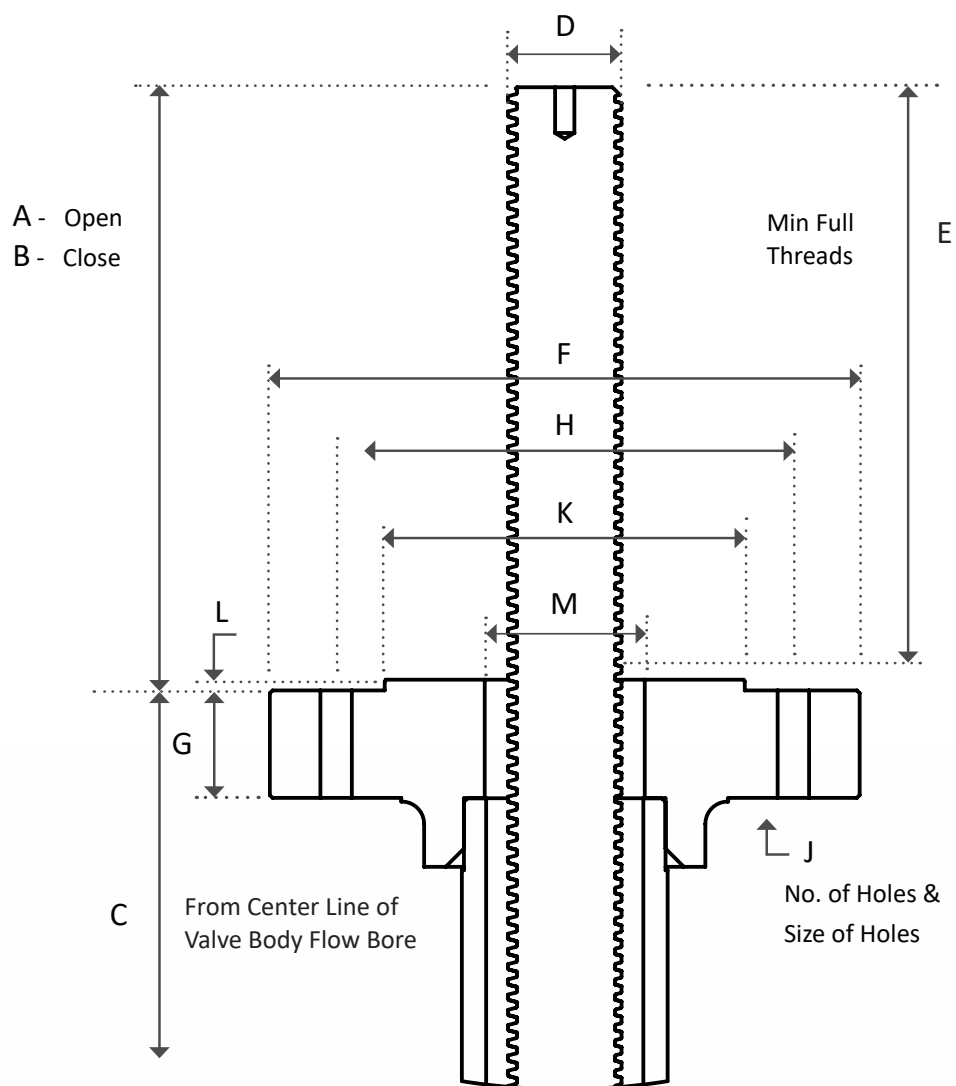
Rec. = Recommended

Note 2: Use Block & Bleed Thrusts and Torques for sizing power operators (Electric, Gas, Hydraulic, etc.).

Note 3: Maximum Operating Thrust and Torques are the maximum allowable for the valve.

Operator Interface Dimensions

2" → 12" Class 300-1500



Operator Interface Dimensions

2" → 12" Class 150-1500

ASME 150

| E | | | | C | | G | | M | | F | | H | | J | | J | | K | | L | | Bolt Pattern Centerline |
|---------------|-----|----------------|-----|-------------------|-------|-----------------|----|----------------|----|----------------|-----|----------------|-----|--------------|----|--------------------|------|---------------|------|----------------|-----------|-------------------------------|
| Valve Size | | Thread Min. | | To Body Center | | Flange Thick | | Flange Bore | | Flange O.D. | | Bolt Circle | | Bolt Hole | | No. of Bolts | | Pilot Dia. | | Pilot Depth | | |
| in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | | | in | mm | in | mm | |
| 4 | 100 | 10.25 | 262 | 18.05 | 460 | 0.88 | 23 | 1.63 | 41 | 6.88 | 175 | 5.50 | 140 | 0.69 | 18 | 4 | 4.31 | 109 | 0.18 | 5 | Straddle | |
| 8 | 200 | 16.56 | 422 | 30.36 | 722 | 1.00 | 25 | 2.63 | 66 | 6.88 | 175 | 5.50 | 140 | 0.69 | 18 | 4 | 4.31 | 109 | 0.18 | 5 | Straddle | |
| 10 | 250 | 17.07 | 434 | 36.04 | 914 | 1.79 | 46 | 2.76 | 71 | 8.27 | 211 | 6.50 | 165 | 0.88 | 23 | 8 | 5.20 | 132 | 0.39 | 10 | On Center | |
| 12 | 300 | 22.27 | 566 | 42.58 | 1,082 | 1.79 | 46 | 2.8 | 71 | 8.27 | 211 | 6.50 | 165 | 0.88 | 23 | 8 | 5.20 | 132 | 0.39 | 10 | On Center | |

ASME 300

| E | | | | C | | G | | M | | F | | H | | J | | J | | K | | L | | Bolt Pattern Centerline |
|---------------|-----|----------------|-----|-------------------|-------|-----------------|----|----------------|----|----------------|-----|----------------|-----|--------------|----|--------------------|------|---------------|------|----------------|-----------|-------------------------------|
| Valve Size | | Thread Min. | | To Body Center | | Flange Thick | | Flange Bore | | Flange O.D. | | Bolt Circle | | Bolt Hole | | No. of Bolts | | Pilot Dia. | | Pilot Depth | | |
| in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | | | in | mm | in | mm | |
| 4 | 100 | 10.25 | 262 | 18.5 | 470 | 0.88 | 23 | 1.63 | 41 | 6.88 | 175 | 5.50 | 140 | 0.69 | 18 | 4 | 4.31 | 109 | 0.18 | 5 | Straddle | |
| 6 | 150 | 12.56 | 320 | 25.83 | 655 | 1.03 | 25 | 2.63 | 66 | 6.88 | 175 | 5.50 | 140 | 0.69 | 18 | 4 | 4.31 | 109 | 0.18 | 5 | Straddle | |
| 8 | 200 | 16.56 | 422 | 30.36 | 722 | 1.00 | 25 | 2.63 | 66 | 6.88 | 175 | 5.50 | 140 | 0.69 | 18 | 4 | 4.31 | 109 | 0.18 | 5 | Straddle | |
| 10 | 250 | 17.07 | 434 | 36.04 | 914 | 1.79 | 46 | 2.76 | 71 | 8.27 | 211 | 6.50 | 165 | 0.88 | 23 | 8 | 5.20 | 132 | 0.39 | 10 | On Center | |
| 12 | 300 | 22.27 | 566 | 42.58 | 1,082 | 1.79 | 46 | 2.76 | 71 | 8.27 | 211 | 6.50 | 165 | 0.88 | 23 | 8 | 5.20 | 132 | 0.39 | 10 | On Center | |

ASME 600

| E | | | | C | | G | | M | | F | | H | | J | | J | | K | | L | | Bolt Pattern Centerline |
|---------------|-----|----------------|-----|-------------------|-------|-----------------|----|----------------|----|----------------|-----|----------------|-----|--------------|----|--------------------|------|---------------|------|----------------|-----------|-------------------------------|
| Valve Size | | Thread Min. | | To Body Center | | Flange Thick | | Flange Bore | | Flange O.D. | | Bolt Circle | | Bolt Hole | | No. of Bolts | | Pilot Dia. | | Pilot Depth | | |
| in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | | | in | mm | in | mm | |
| 4 | 100 | 10.25 | 262 | 18.5 | 470 | 0.88 | 23 | 1.63 | 41 | 6.88 | 175 | 5.50 | 140 | 0.69 | 18 | 4 | 4.31 | 109 | 0.18 | 5 | Straddle | |
| 6 | 150 | 12.56 | 320 | 25.83 | 655 | 1.00 | 25 | 2.63 | 41 | 6.88 | 175 | 5.50 | 140 | 0.69 | 18 | 4 | 4.31 | 109 | 0.18 | 5 | Straddle | |
| 8 | 200 | 16.56 | 424 | 30.36 | 722 | 1.00 | 25 | 2.63 | 66 | 6.88 | 175 | 5.50 | 140 | 0.69 | 18 | 4 | 4.31 | 109 | 0.18 | 5 | Straddle | |
| 10 | 250 | 17.07 | 434 | 36.04 | 914 | 1.79 | 46 | 2.76 | 71 | 8.27 | 211 | 6.50 | 140 | 0.88 | 23 | 8 | 5.20 | 132 | 0.39 | 10 | On Center | |
| 12 | 300 | 22.27 | 566 | 42.58 | 1,082 | 1.79 | 46 | 2.76 | 71 | 8.27 | 211 | 6.50 | 140 | 0.88 | 23 | 8 | 5.20 | 132 | 0.39 | 10 | On Center | |

ASME 900

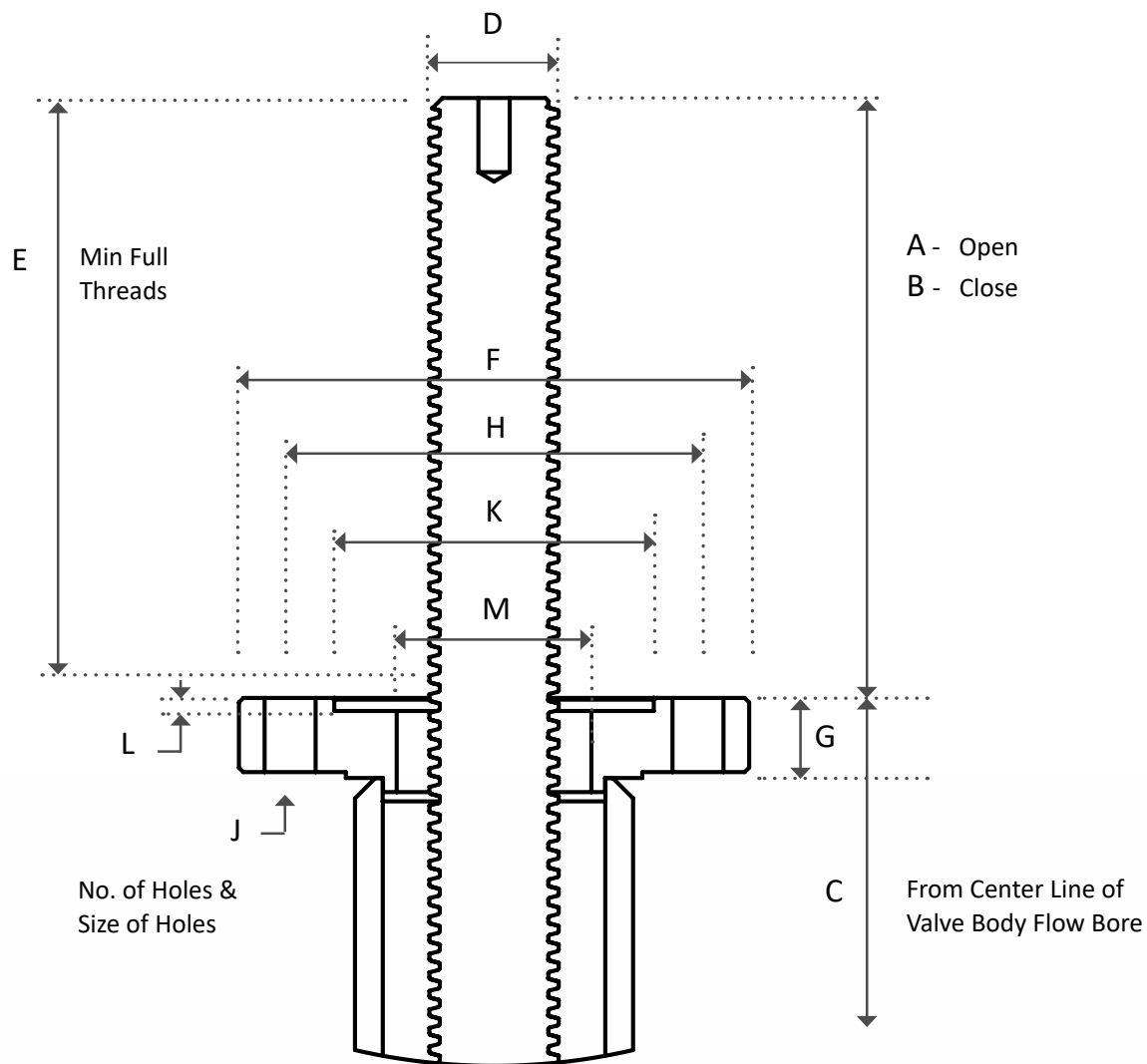
| E | | | | C | | G | | M | | F | | H | | J | | J | | K | | L | | Bolt Pattern Centerline |
|---------------|-----|----------------|-----|-------------------|-------|-----------------|----|----------------|----|----------------|-----|----------------|-----|--------------|----|--------------------|------|---------------|------|----------------|-----------|-------------------------------|
| Valve Size | | Thread Min. | | To Body Center | | Flange Thick | | Flange Bore | | Flange O.D. | | Bolt Circle | | Bolt Hole | | No. of Bolts | | Pilot Dia. | | Pilot Depth | | |
| in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | | | in | mm | in | mm | |
| 4 | 100 | 10.25 | 262 | 18.5 | 470 | 0.88 | 23 | 1.63 | 41 | 6.88 | 175 | 5.50 | 140 | 0.69 | 18 | 4 | 4.31 | 109 | 0.18 | 5 | Straddle | |
| 6 | 150 | 12.56 | 320 | 25.83 | 655 | 1.00 | 25 | 2.63 | 66 | 6.88 | 175 | 5.50 | 140 | 0.69 | 18 | 4 | 4.31 | 109 | 0.18 | 5 | Straddle | |
| 8 | 200 | 16.56 | 422 | 30.36 | 722 | 1.00 | 25 | 2.63 | 66 | 6.88 | 175 | 5.50 | 140 | 0.69 | 18 | 4 | 4.31 | 109 | 0.18 | 5 | Straddle | |
| 10 | 250 | 17.07 | 434 | 36.04 | 914 | 1.79 | 46 | 2.76 | 71 | 8.27 | 211 | 6.50 | 165 | 0.88 | 23 | 8 | 5.20 | 132 | 0.39 | 10 | On Center | |
| 12 | 300 | 22.27 | 566 | 42.58 | 1,082 | 1.79 | 46 | 2.76 | 71 | 8.27 | 211 | 6.50 | 165 | 0.88 | 23 | 8 | 5.20 | 132 | 0.39 | 10 | On Center | |

ASME 1500

| E | | | | C | | G | | M | | F | | H | | J | | J | | K | | L | | Bolt Pattern Centerline |
|---------------|-----|----------------|-----|-------------------|-------|-----------------|----|----------------|----|----------------|-----|----------------|-----|--------------|----|--------------------|------|---------------|------|----------------|-----------|-------------------------------|
| Valve Size | | Thread Min. | | To Body Center | | Flange Thick | | Flange Bore | | Flange O.D. | | Bolt Circle | | Bolt Hole | | No. of Bolts | | Pilot Dia. | | Pilot Depth | | |
| in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | | | in | mm | in | mm | |
| 4 | 100 | 10.25 | 262 | 18.5 | 470 | 0.88 | 23 | 1.63 | 41 | 6.88 | 175 | 5.50 | 140 | 0.69 | 18 | 4 | 4.31 | 109 | 0.18 | 5 | Straddle | |
| 6 | 150 | 12.56 | 319 | 25.83 | 655 | 1.00 | 25 | 2.63 | 66 | 6.88 | 175 | 5.50 | 140 | 0.69 | 18 | 4 | 4.31 | 109 | 0.18 | 5 | Straddle | |
| 8 | 200 | 16.56 | 422 | 30.36 | 722 | 1.00 | 25 | 2.63 | 66 | 6.88 | 175 | 5.50 | 140 | 0.69 | 18 | 4 | 4.31 | 109 | 0.18 | 5 | Straddle | |
| 10 | 250 | 17.07 | 434 | 36.04 | 914 | 1.79 | 46 | 2.76 | 71 | 8.27 | 211 | 6.50 | 165 | 0.69 | 18 | 8 | 5.20 | 132 | 0.39 | 10 | On Center | |
| 12 | 300 | 22.44 | 570 | 47.88 | 1,216 | 2.35 | 60 | 3.50 | 89 | 12.90 | 328 | 10.00 | 254 | 0.69 | 18 | 8 | 5.20 | 132 | 0.39 | 10 | On Center | |

Operator Interface Dimensions

14" → 36" Class 150 -1500



Operator Interface Dimensions

14" → 36" Class 150 -1500

ASME 150

| Valve Size | | E | | C | | G | | M | | F | | H | | J | | J | K | | L | | Bolt Pattern |
|------------|-----|-------------|-------|----------------|-------|--------------|----|-------------|----|-------------|-----|-------------|-----|-----------|--------------|------------|-------|-------------|------|----|--------------|
| | | Thread Min. | | To Body Center | | Flange Thick | | Flange Bore | | Flange O.D. | | Bolt Circle | | Bolt Hole | No. of Bolts | Pilot Dia. | | Pilot Depth | | | |
| in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | Bolts | in | mm | in | mm | Centerline |
| 16 | 400 | 30.50 | 775 | 56.75 | 1,443 | 2.35 | 61 | 3.50 | 89 | 12.90 | 328 | 10.00 | 254 | 0.69 | 18 | 8 | 7.87 | 201 | 0.39 | 10 | Straddle |
| 20 | 500 | 29.53 | 749 | 65.50 | 1,664 | 2.63 | 66 | 2.63 | 66 | 12.90 | 328 | 10.00 | 254 | 1.13 | 28 | 8 | 7.87 | 201 | 0.39 | 10 | Straddle |
| 24 | 600 | 39.30 | 998 | 77.91 | 1,979 | 2.63 | 66 | 3.50 | 89 | 16.34 | 414 | 14.02 | 356 | 1.13 | 28 | 8 | 10.24 | 259 | 0.18 | 5 | Straddle |
| 26 | 650 | 37.20 | 945 | 84.58 | 2,149 | 2.63 | 66 | 3.50 | 89 | 16.34 | 414 | 14.02 | 356 | 1.13 | 28 | 8 | 10.24 | 259 | 0.18 | 5 | Straddle |
| 30 | 750 | 43.58 | 1,107 | 95.99 | 2,413 | 2.63 | 66 | 3.50 | 89 | 16.34 | 414 | 14.02 | 356 | 1.13 | 28 | 8 | 10.24 | 259 | 0.18 | 5 | Straddle |
| 36 | 900 | 62.62 | 1,590 | 119.68 | 3,040 | 2.63 | 66 | 3.50 | 89 | 16.34 | 414 | 14.02 | 356 | 1.13 | 28 | 8 | 10.24 | 259 | 0.18 | 5 | Straddle |

ASME 300

| Valve Size | | E Thread Min. | | C To Body Center | | G Flange Thick | | M Flange Bore | | F Flange O.D. | | H Bolt Circle | | J Bolt Hole | | J No. of Bolts | K Pilot Dia. | | L Pilot Depth | | Bolt Pattern |
|------------|-----|---------------|-------|------------------|-------|----------------|----|---------------|-----|---------------|-----|---------------|-----|-------------|----|----------------|--------------|-----|---------------|------------|--------------|
| | | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | Centerline | |
| 14 | 350 | 27.13 | 688 | 48.99 | 1,219 | 1.79 | 46 | 2.79 | 71 | 8.27 | 211 | 6.50 | 165 | 0.88 | 23 | 8 | 5.20 | 132 | 0.39 | 10 | On Center |
| 16 | 400 | 30.50 | 775 | 56.75 | 1,443 | 2.35 | 61 | 3.50 | 89 | 12.90 | 328 | 10.00 | 254 | 0.69 | 18 | 8 | 7.87 | 201 | 0.39 | 10 | Straddle |
| 20 | 500 | 29.53 | 749 | 65.50 | 1,664 | 2.63 | 66 | 5.04 | 127 | 16.34 | 414 | 14.00 | 356 | 1.13 | 28 | 8 | 10.24 | 259 | 0.18 | 5 | Straddle |
| 24 | 600 | 39.30 | 998 | 77.91 | 1,979 | 2.63 | 66 | 5.04 | 127 | 16.34 | 414 | 14.00 | 356 | 1.13 | 28 | 8 | 10.24 | 259 | 0.18 | 5 | Straddle |
| 30 | 750 | 43.58 | 1,107 | 95.99 | 2,413 | 2.63 | 66 | 6.06 | 155 | 16.34 | 414 | 14.00 | 356 | 1.13 | 28 | 8 | 10.24 | 259 | 0.18 | 5 | Straddle |
| 36 | 900 | 62.62 | 1,590 | 119.7 | 3,040 | 3.00 | 76 | 7.48 | 191 | 22.1 | 561 | 19.02 | 483 | 1.38 | 36 | 12 | 15.57 | 396 | 0.39 | 10 | Straddle |

ASME 600

| Valve Size | | E | | C | | G | | M | | F | | H | | J | | J | K | | L | | Bolt Pattern Centerline |
|------------|-----|-------------|-------|----------------|-------|--------------|----|-------------|-----|-------------|-----|-------------|-----|-----------|--------------|------------|-------|-------------|------|----|-------------------------|
| | | Thread Min. | | To Body Center | | Flange Thick | | Flange Bore | | Flange O.D. | | Bolt Circle | | Bolt Hole | No. of Bolts | Pilot Dia. | | Pilot Depth | | | |
| in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | Bolts | in | mm | in | mm | |
| 14 | 350 | 27.13 | 688 | 48.99 | 1,219 | 1.79 | 46 | 2.79 | 71 | 8.27 | 211 | 6.50 | 165 | 0.88 | 23 | 8 | 5.20 | 132 | 0.39 | 10 | On Center |
| 16 | 400 | 30.50 | 775 | 56.75 | 1,443 | 2.35 | 61 | 3.50 | 89 | 12.90 | 328 | 10.00 | 254 | 0.69 | 18 | 8 | 7.87 | 201 | 0.39 | 10 | Straddle |
| 18 | 450 | 29.90 | 759 | 61.20 | 1,554 | 2.35 | 61 | 5.04 | 127 | 12.90 | 328 | 10.00 | 254 | 0.69 | 18 | 8 | 7.87 | 201 | 0.39 | 10 | Straddle |
| 20 | 500 | 29.53 | 749 | 65.50 | 1,664 | 2.63 | 66 | 5.04 | 127 | 16.34 | 414 | 14.00 | 356 | 1.13 | 28 | 8 | 10.24 | 259 | 0.18 | 5 | Straddle |
| 22 | 550 | 36.30 | 922 | 72.62 | 1,844 | 2.63 | 66 | 5.04 | 127 | 16.34 | 414 | 14.00 | 356 | 1.13 | 28 | 8 | 10.24 | 259 | 0.18 | 5 | Straddle |
| 24 | 600 | 39.30 | 998 | 77.91 | 1,979 | 2.63 | 66 | 5.04 | 127 | 16.34 | 414 | 14.00 | 356 | 1.13 | 28 | 8 | 10.24 | 259 | 0.18 | 5 | Straddle |
| 30 | 750 | 43.58 | 1,107 | 95.99 | 2,413 | 2.63 | 66 | 6.06 | 155 | 16.34 | 414 | 14.00 | 356 | 1.13 | 28 | 8 | 10.24 | 259 | 0.18 | 5 | Straddle |
| 36 | 900 | 62.62 | 1,590 | 119.7 | 3,040 | 3.00 | 76 | 7.48 | 191 | 22.1 | 561 | 19.02 | 483 | 1.38 | 36 | 12 | 15.57 | 396 | 0.39 | 10 | Straddle |

ASME 900

| Valve Size | | E | | C | | G | | M | | F | | H | | J | | J | K | | L | | Bolt Pattern |
|------------|-----|-------------|-----|----------------|-------|--------------|----|-------------|-----|-------------|-----|-------------|-----|-----------|----|--------------|------------|-----|-------------|----|--------------|
| | | Thread Min. | | To Body Center | | Flange Thick | | Flange Bore | | Flange O.D. | | Bolt Circle | | Bolt Hole | | No. of Bolts | Pilot Dia. | | Pilot Depth | | |
| in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | Bolts | in | mm | in | mm | Centerline |
| 14 | 350 | 27.13 | 688 | 48.99 | 1,219 | 1.79 | 46 | 2.79 | 71 | 8.27 | 211 | 6.50 | 165 | 0.69 | 18 | 8 | 5.20 | 132 | 0.39 | 10 | On Center |
| 16 | 400 | 30.5 | 775 | 56.75 | 1,443 | 2.35 | 61 | 3.50 | 89 | 12.90 | 328 | 10.00 | 254 | 0.69 | 18 | 8 | 7.87 | 201 | 0.39 | 10 | Straddle |
| 18 | 450 | 29.90 | 759 | 61.20 | 1,554 | 2.35 | 61 | 5.04 | 127 | 12.90 | 328 | 10.00 | 254 | 0.69 | 18 | 8 | 7.87 | 201 | 0.39 | 10 | Straddle |
| 20 | 500 | 29.53 | 749 | 65.50 | 1,664 | 2.63 | 66 | 5.04 | 127 | 16.34 | 414 | 14.02 | 356 | 1.13 | 28 | 8 | 10.24 | 259 | 0.18 | 5 | Straddle |
| 24 | 600 | 39.30 | 998 | 77.91 | 1,979 | 2.63 | 66 | 5.04 | 127 | 16.34 | 414 | 14.02 | 356 | 1.13 | 28 | 8 | 10.24 | 259 | 0.18 | 5 | Straddle |

ASME 1500

| Valve Size | | E Thread Min. | | C To Body Center | | G Flange Thick | | M Flange Bore | | F Flange O.D. | | H Bolt Circle | | J Bolt Hole | | J No. of Bolts | K Pilot Dia. | | L Pilot Depth | | Bolt Pattern |
|------------|-----|---------------|-----|------------------|-------|----------------|----|---------------|-----|---------------|-----|---------------|-----|-------------|----|----------------|--------------|-----|---------------|----|--------------|
| in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | Bolts | in | mm | in | mm | Centerline |
| 14 | 350 | 27.13 | 688 | 50.57 | 1,285 | 2.63 | 66 | 5.04 | 127 | 16.34 | 414 | 14.02 | 356 | 1.13 | 28 | 8 | 10.24 | 259 | 0.18 | 5 | Straddle |

Product Warranty

Limited Product Warranty

All products manufactured or sold by American Oilfield Valves 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 American Oilfield Valves manufacture, American Oilfield Valves liability shall be limited to the extent of American Oilfield Valves recovery from the original manufacturer of such products or parts under its warranty or liability to American Oilfield Valves.

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

American Oilfield Valves has no liability for removal or reinstallation of products or equipment. American Oilfield Valves, 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.

American Oilfield Valves warranty liability, including defects caused by American Oilfield Valves 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.

American Oilfield Valves 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 American Oilfield Valves, failures due to lack of compliance with recommended maintenance procedures or products which have been repaired or altered in such a way (in American Oilfield Valves 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 questions regarding this warranty or if you would like information about other American Oilfield Valves products and services please contact us at the address and phone numbers below.

American OilField Valves

610 Rio Garnde Drive

Mission, Texas

78572

 (956) 227-6332

 (956) 227-6332

 sales@aovvalves.com

 www.aovvalves.com



API 6D Expanding Gate Valve

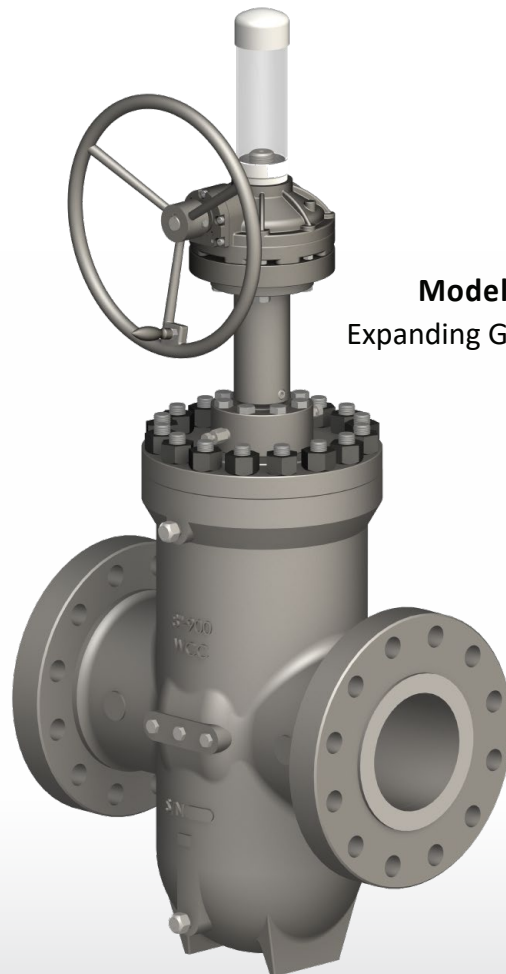


AOV is forging a solid and lasting relationships with our clients.
We distinguish ourselves through quality and reliability.

American OilField Valves

610 Rio Garnde Drive
Mission, Texas
78572

-  (956) 782-1111
-  (956) 227-6332
-  sales@aovvalves.com
-  www.aovvalves.com



Model AOV-6D
Expanding Gate Valve