



ABSOLUTE ZERO LEAKAGE



## OmniSeal® Double Block & Bleed Expanding Plug Valve

High integrity double block and bleed expanding plug valves for product isolation, blending, metering, custody transfer, fueling operations, terminal, storage and other land or offshore zero leakage applications.

- API 6D MONOGRAMMED
- HIGHEST QUALITY PLUG VALVES AT THE BEST POSSIBLE PRICE
- DELIVERED TO EXACTING CUSTOMER SPECIFICATIONS AND REQUIREMENTS
- ENGINEERED, ASSEMBLED AND TESTED FOR YEARS OF TROUBLE FREE SERVICE

# Global Energy Market Solutions

OmniSeal® DB&B expanding plug valves are ideally suited for product isolation, refining, fueling, metering, terminal and storage applications.



# OmniSeal® Introduction



OmniSeal® expanding plug valves are designed for applications where positive shut-off, verifiable zero leakage and double block and bleed (DB&B) and or double isolation and bleed (DIB) capabilities are required.

They are ideal for a variety of applications including leased automated custody transfer (LACT), product metering, aviation fueling, product isolation, blending, lockout/tagout (LOTO), multi-product manifolds, tank storage and other DB&B applications.

The OmniSeal® is a single valve solution that simultaneously blocks both the upstream and downstream flow while allowing the user to verify seal integrity using a manual or automatic body bleed system. It replaces older double block and bleed systems that use two valves with a spool and bleed valve in-between. OmniSeal® valves have exclusive features designed for better performance throughout the valve's lifetime.

All OmniSeal® DB&B expanding plug valves are manufactured and monogrammed per API 6D and ISO 9001, fire tested per API 607 and API 6FA and have specific certifications such as CE/PED, CRN (Canadian Registration), TA-Luft or similar design or regional certifications where appropriate.

OmniSeal® DB&B expanding plug valves have been determined to be a "Product of the USA " by the US Customs and Border Protection Agency (CBP). This applies to both commercial and US government or military procurement.

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# Applications

OmniSeal® expanding plug valves are ideal for applications that require positive shut-off, verifiable zero leakage and double block and bleed (DB&B) and or double isolation and bleed (DIB) capability. Some of the more common applications include:

**BLENDING UNITS:** Accurate blending of ethanol or other regional fuel grades requires valves with exceptionally high seal integrity to ensure accurate measurement of additives and blending stocks. The OmniSeal® DB&B is specifically designed for these type of applications.

**PRODUCT ISOLATION:** Secure isolation of biofuels or other process-sensitive fluids is critical for environmental and process safety. The OmniSeal® DB&B's verifiable zero leakage and positive shutoff capabilities make it an ideal solution for isolation and process-sensitive applications.

**MULTI-PRODUCT MANIFOLDS:** Pipeline, refinery and transfer manifolds need to flow multiple products (e.g. diesel, jet fuel, gasoline, blending stocks, etc.) reliably and without contamination. The OmniSeal® DB&B is an effective tool for preventing product cross-contamination.

**PROVER LOOPS:** Proper calibration of flow meters requires that every valve in the prover loop system must have a zero leak rate. Any leak could mean an error in calibration. OmniSeal® DB&B valves are used to ensure leak tight closure and accurate calibration.

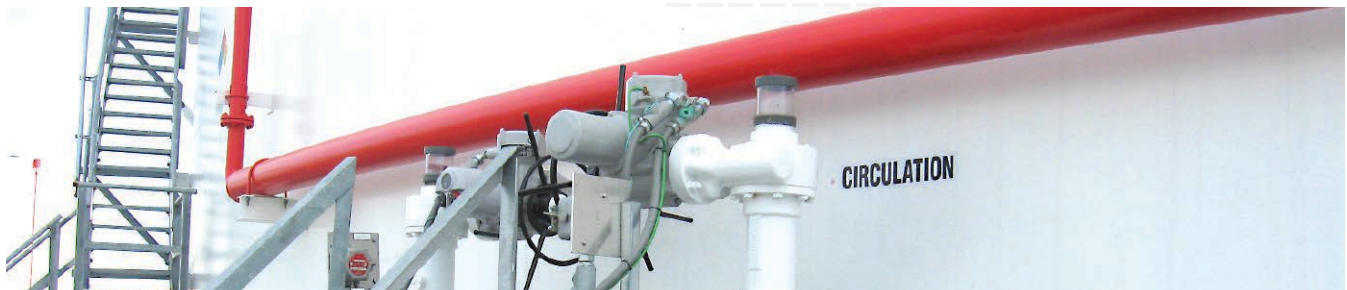
**CUSTODY TRANSFER UNITS:** Transfer of valuable media relies on accurate measurement of product transfer quantity. The OmniSeal® DB&B provides positive shutoff and zero leak rate, thereby ensuring the accuracy of transfer quantity calculations.

**OFFSHORE PLATFORMS:** Valve leakage on an offshore platform can result in damage to equipment and the environment. The OmniSeal® DB&B has excellent low pressure positive shutoff characteristics and is a great choice for use on offshore platforms.

**TERMINALS:** Terminals used for loading and unloading tankers require valves with positive sealing in order to prevent environmental damage due to spillage. The OmniSeal® DB&B provides positive sealing and zero leak rate in a reliable single valve solution.

**TANK FARMS (OIL DEPOTS):** Tank isolation valves, which are operated frequently, require zero leak rate and a high degree of reliability. The OmniSeal® DB&B valve provides a reliable, high integrity seal designed for frequent and long-term use.

**AVIATION FUELING SYSTEMS:** Airport fueling systems require valves that close quickly and have verifiable seal integrity. This allows for quick maintenance, repair, leak location and testing. The OmniSeal® DB&B valve's verifiable zero leak rate ensures that maintenance, repair, leak location and hydrant testing can be done safely and quickly. OmniSeal® DB&B expanding plug valves have been determined to be a "Product of the USA" by the US Customs and Border Protection Agency (CBP). This applies to both commercial and US government or military procurement.

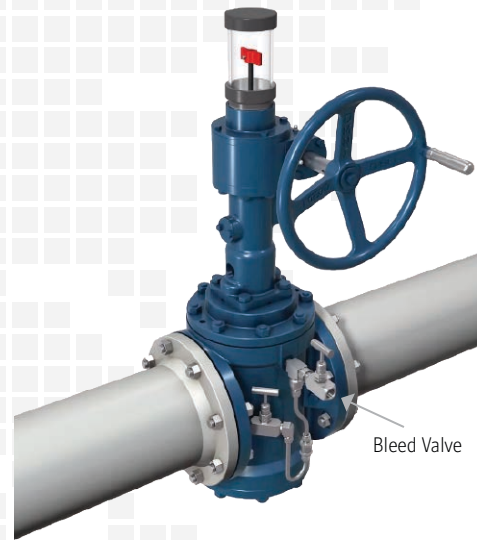
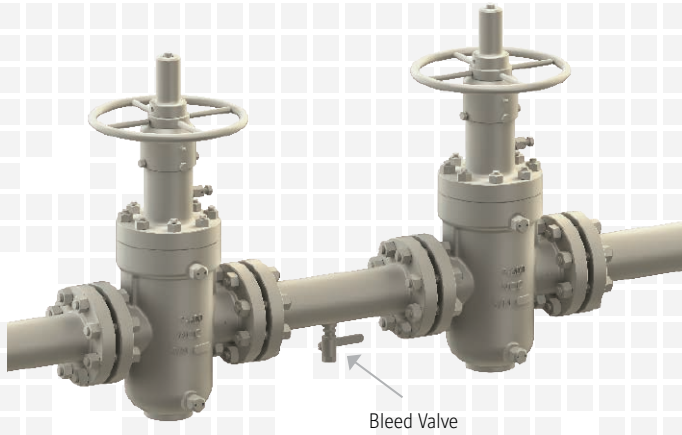


# Single Valve / Double Block & Bleed Solution



The OmniSeal® replaces antiquated two-valve systems with a single DB&B valve solution. The OmniSeal® has two seats (slips) and provides a bubble tight seal.

Older double block & bleed systems (as shown below) use two valves and a spool piece with a bleed valve used to drain the spool and verify seal integrity.

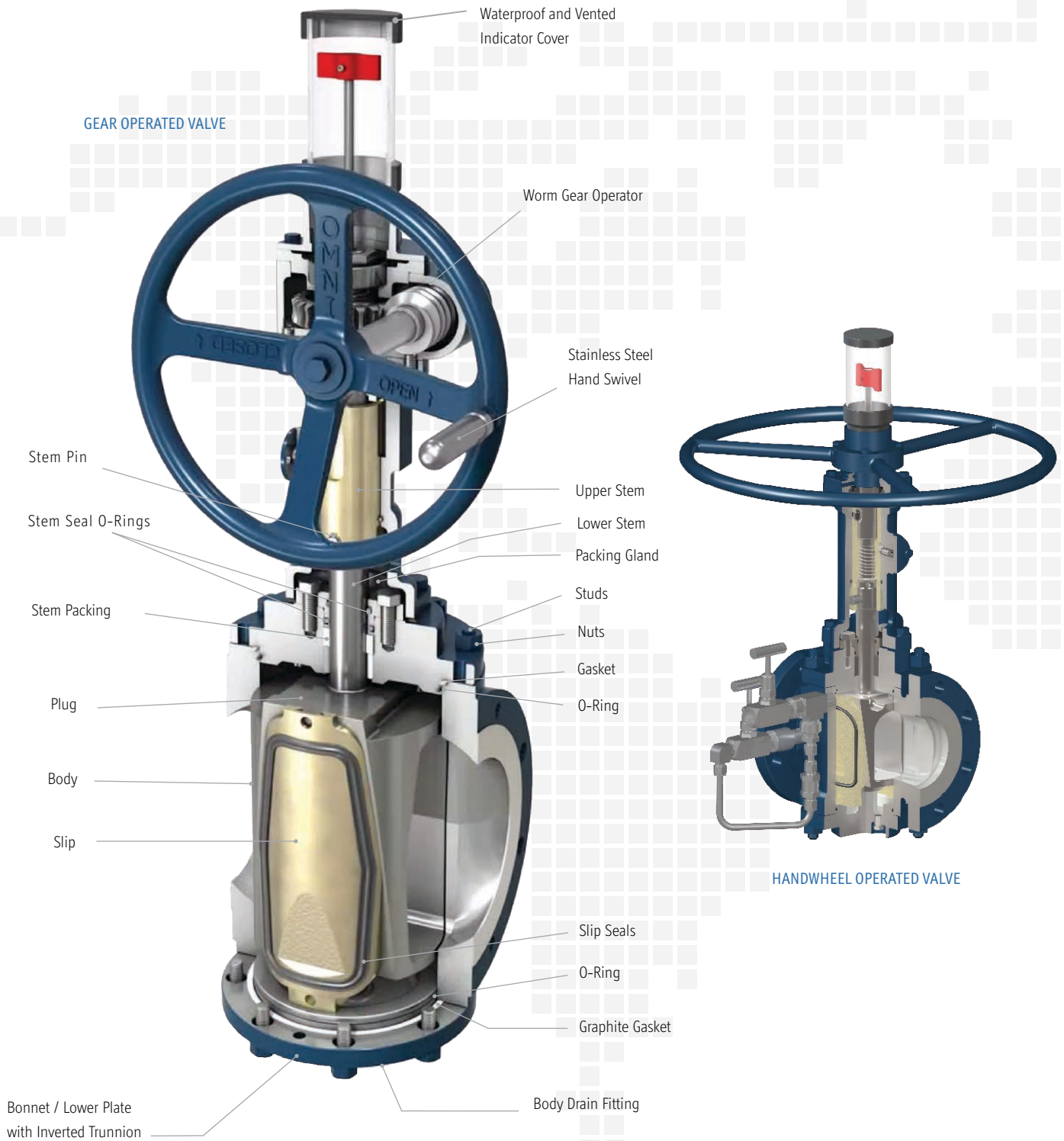


1. The OmniSeal® upstream and downstream slip seals provide the same function as the two block valves shown above.

2. The OmniSeal® body (serving as the spool piece shown above) bleeds to verify seal integrity.



# OmniSeal® Typical Valve Configuration



# Size Range & Materials of Construction



## AVAILABLE SIZES AND PRESSURES

| ANSI CLASS | Sizes (inches) |       |       |       |     |     |     |     |     |     |     |     |     |     |     |     |
|------------|----------------|-------|-------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            | 2              | 3     | 4     | 6     | 8   | 10  | 12  | 14  | 16  | 18  | 20  | 24  | 26  | 28  | 30  | 36  |
| 150        | HW/GO          | HW/GO | HW/GO | HW/GO | GO* | GO* | GO* | GO* | GO* | GO* | GO* | GO* | GO* | GO* | GO* | GO* |
| 300        | HW/GO          | HW/GO | HW/GO | GO*   | GO* | GO* | GO* | GO* | GO* | GO* | GO* | GO* | GO* | GO* | GO* | N/A |
| 600        | HW/GO          | HW/GO | GO    | GO*   | GO* | GO* | GO* | GO* | GO* | GO* | GO* | GO* | GO* | GO* | GO* | GO* |

HW = Available Only as Handwheel Operated

\* These sizes have lifting lugs

GO = Available Only as Gear Operated

HW/GO = Available as Handwheel or Gear Operated

## STANDARD MATERIALS OF CONSTRUCTION (ALTERNATIVE MATERIALS AVAILABLE UPON CUSTOMER REQUEST)

All OmniSeal® plug valves are constructed to meet requirements of NACE MR0175 / ISO 15156

| Component                  | Standard Temp. (-20° to 400° F) (-29° to 204° C) | Low Temp. (-40° to 400° F) (-40° to 204° C) <sup>(1)</sup> |
|----------------------------|--|--|
| Body                       | Cast ASTM A216 WCC <sup>(2)</sup>                | Cast ASTM A352 LCC <sup>(2)</sup>                          |
| Bonnet/ Lower Plate        | Cast ASTM A216 WCC / Forged ASTM A350 LF6 CL2    | Cast ASTM A352 LCC / Forged ASTM A350 LF6 CL2              |
| Plug and Stem              | Cast ASTM A216 WCC <sup>(3)</sup>                | Cast ASTM A352 LCC <sup>(3)</sup>                          |
| Slips                      | Cast Ductile Iron / Cast A395 GR 60-40-18        | Cast ASTM A352 LCC   |
| Packing Gland              | Forged ASTM A350 Gr. LF2                         | Forged ASTM A350 Gr. LF2                                   |
| Stem Packing               | Pre-Formed Flexible Graphite                     | Pre-Formed Flexible Graphite                               |
| Gasket                     | Pre-Formed Flexible Graphite                     | Pre-Formed Flexible Graphite                               |
| O-Rings & Slip Seals       | Viton B <sup>(4)</sup>                           | Viton GFLT <sup>(4)</sup>                                  |
| Bonnet to Body Studs       | ASTM A193 Gr. B7M                                | ASTM A320 Gr. L7M  |
| Bonnet Nuts                | ASTM A194 Gr. 2HM                                | ASTM A194 Gr. 2HM  |
| Relief System Tubing       | AISI 316 SS / AISI 304 SS                        | AISI 316 SS / AISI 304 SS                                  |
| Relief System Needle Valve | AISI 316 SS                                      | AISI 316 SS  |
| Relief System Check Valve  | AISI 316 SS                                      | AISI 316 SS  |

**Notes:** (1) -40°F is the minimum temperature rating using our standard materials of construction however lower temperature ratings are available to meet customer requirements.

(2) Electroless Nickel Plated - Entire Internal Surface

(3) Electroless Nickel Plated - Entire Component

(4) All OmniSeal® valves in class 300 & 600 are supplied with double reinforced Viton seals.

## OPTIONAL MATERIALS OF CONSTRUCTION & OTHER CUSTOMIZED FEATURES

OmniSeal® DB&B Expanding Plug Valves are available in a variety of configurations and material of construction depending on customer preferences, specifications, severe temp ranges and / or service conditions.

Common valve options include:

- Flanges drilled to DIN or other regional standards, or constructed with face to face dimensions specific to particular projects
- Subjected to more rigorous customer-specified extended testing regimes
- Special coating applications based on customer specifications, service conditions or cosmetic preferences
- Constructed to withstand extreme high or low temperatures - Please consult factory
- Customer specified limit switches or other accessories
- Special Automatic Body Bleed Valve (ABBV) or customer specific relief systems

# Valve Operation

## FULL OPEN POSITION



In the fully open position, the resilient seals are positioned out of the flow path and protected within the body of the valve itself.



## PARTIALLY CLOSED POSITION



As the valve is cycled from the fully open to closed position, the plug begins a 90 degree rotation. During the entire rotation of the plug the resilient seals located on both slips are retracted away from the body. This ensures no rubbing or scraping action during rotation of the plug from the open to the closed position.

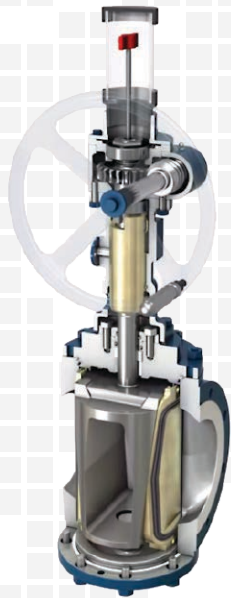




# Valve Operation



CLOSED POSITION PRIOR TO SEALING

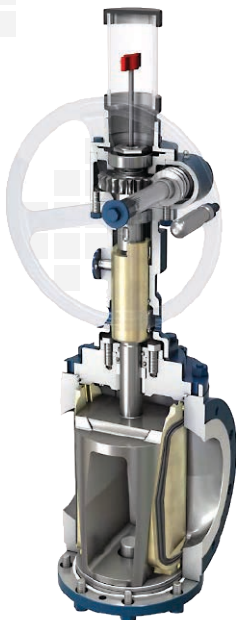


After the plug has been rotated 90 degrees from the fully open to fully closed position, the resilient seals on both slips have not yet been forced outward and into the seating position. This expansion only occurs with continued rotation of the handwheel or actuator.



With continued rotation of the handwheel, this small gap between the slip seal and the valve body is closed by the slip moving in the outward direction. Once the slip seal is firmly seated against the valve body sealing surface, the valve achieves a positive, zero-leakage seal.

FULLY CLOSED (SEALED) POSITION

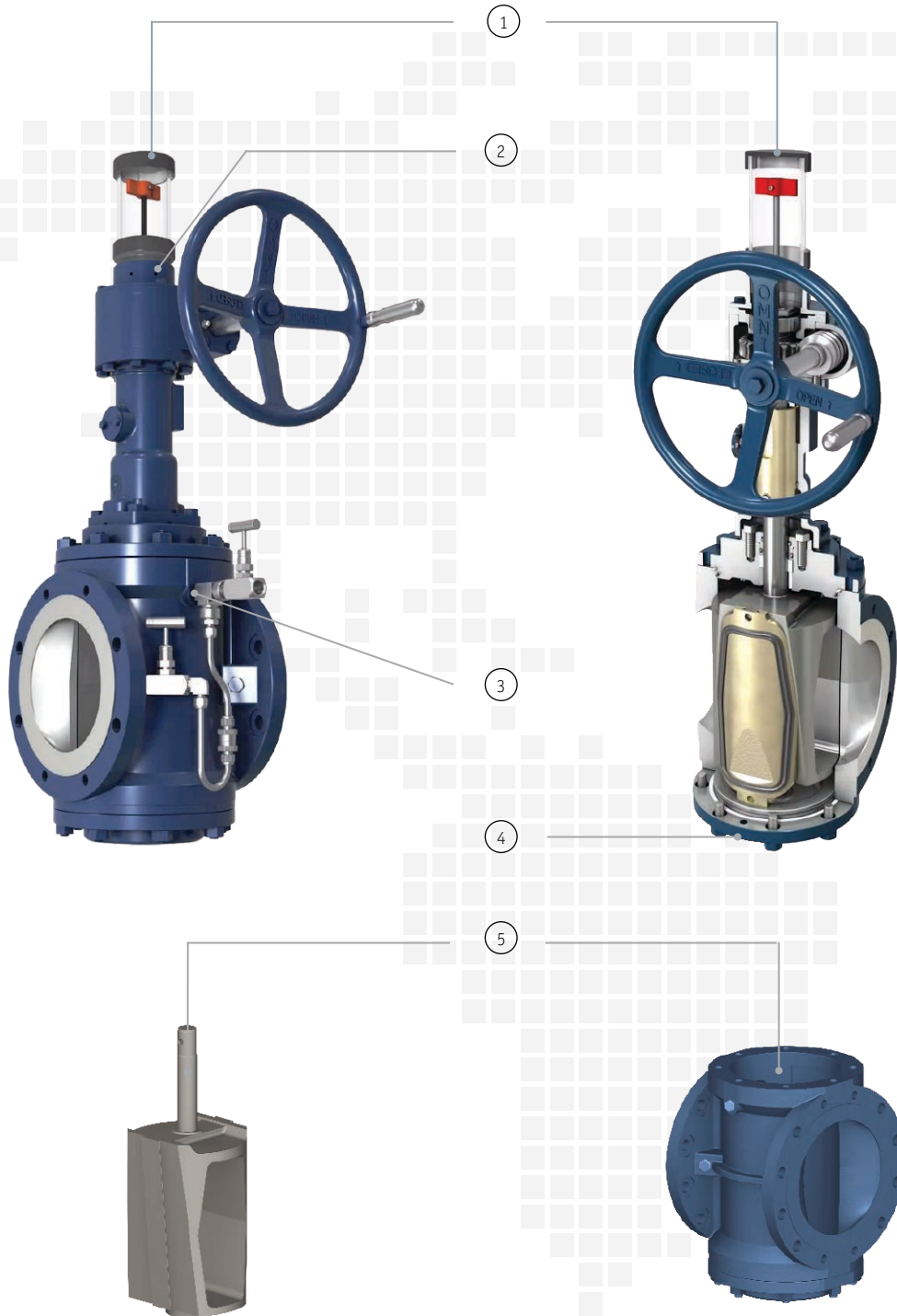


To fully close the valve and provide positive shut-off, the slips are expanded outward with continued rotation of the handwheel or actuator. This outward expansion is achieved by the tapered plug moving downward which causes the slip seals to seal against the valve body.



Positive, Zero-Leakage Seal

# Design Features



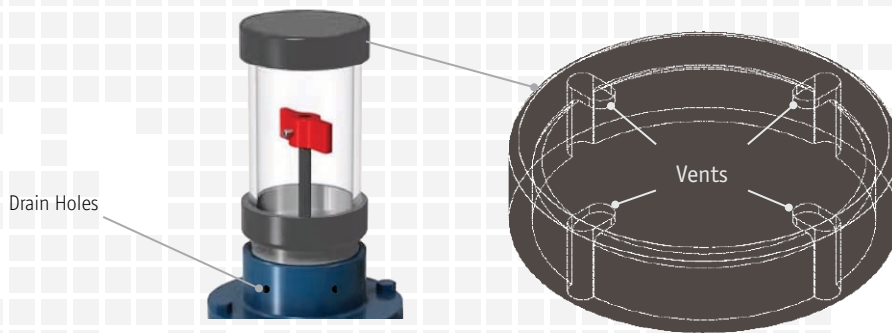
# Design Features



OmniSeal® DB&B expanding plug valve exclusive design features:

## 1. POLYCARBONATE PROTECTOR CAP

OmniSeal® DB&B expanding plug valve has a robust polycarbonate indicator flag protector. This keeps moisture and debris from infiltrating the operator housing. The top of the indicator cap (shown below) is vented to ensure that air flow will quickly evaporate any condensation that appears inside the clear housing.



## 2. DRAIN HOLES

The upper adapter is blanked off underneath the protector cap. It features one penetration sealed with an o-ring for the indicator shaft. This prevents moisture ingress into the gearbox in the event that the indicator protector is removed or damaged. Drain holes in the adapter allow evacuation of any moisture/ condensation that may be in the area.

## 3. LOCATION OF RELIEF SYSTEM PORT

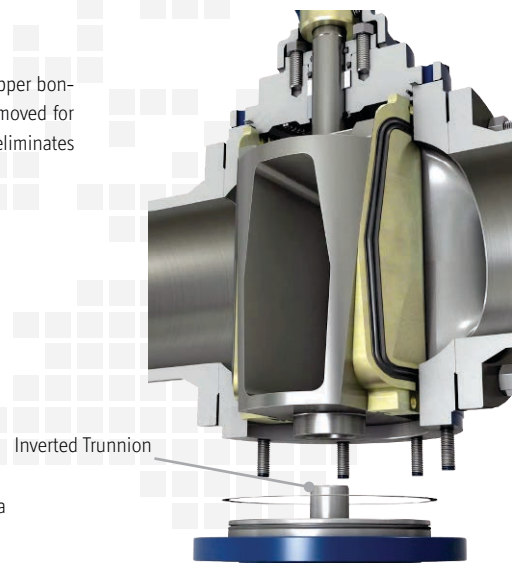
Some competitive DB&B plug valve offerings have the top port for the relief system located on the upper bonnet. Therefore, the relief system must be disconnected whenever the upper bonnet needs to be removed for maintenance or repair. The OmniSeal® port is located on the upper section of the valve body. This eliminates any need to disassemble the relief system in order to remove the valve bonnet.

## 4. LOWER TRUNNION DESIGN

The lower trunnion of the OmniSeal® valve is an integral part of the lower bonnet and is **NOT** part of the plug. There is no cavity present in the bottom of the valve body to collect dirt, scale, ice or other debris that could make the valve hard to turn or otherwise interfere with valve function.

## 5. SURFACE TREATMENT OF BODY CAVITY AND PLUG

The interior cavity of the valve body and the entire plug are plated with electroless nickel to ensure a corrosion-free sealing surface for slip seals.



# Relief Systems

Excess pressure is normally the result of thermal expansion of the fluid and gases trapped inside the valve body. The trapped media is relieved to the upstream side when the pressure inside the valve body is 25 psi (in a standard check valve) greater than the pressure in the upstream piping. The 25 psi spring can be changed in the check valve. Available pressures range from 1 psi to 100 psi.

OmniSeal® valves have a 100% zero verifiable leakage guarantee. This means that any leaks that get past the upstream slip seal will be indicated through the bleed to atmosphere valve before they are able to leak past the downstream slip seal. This prevents any costly contamination to other products caused by undetected leakage.

In order for the automatic relief system to function properly, the valve that controls the upstream relief must be kept open and the valve that controls the manual bleed to atmosphere must be kept closed. Unless otherwise specified by the customer all systems include an upstream isolation valve to allow servicing of the DTR without draining the upstream line. This isolation valve also aides in troubleshooting the plug valve and its relief system.



## MANUAL BLEED WITH THERMAL RELIEF TO UPSTREAM - (STANDARD)

The standard relief system offered on the OmniSeal® valve is designed to relieve excess pressure in the valve cavity due to thermal expansion when the valve is in the closed position. The system also features a manual bleed to atmosphere.



## MANUAL BLEED WITH THERMAL RELIEF TO UPSTREAM - WITH GAUGE

This system functions the same as the standard system with the addition of a pressure gauge piped into the body cavity. This allows a visual indication of pressure present in the valve body without exposing the body cavity to the atmosphere. The figure also shows an additional plugged NPT port as specified by the customer. The additional port can be added to any DTR configuration as requested by the customer.



### COLD CLIMATE

This configuration is similar to the standard DTR configuration. The only difference is that the piping and check valve are in an orientation that prevents fluids from settling in the piping. This is done to prevent moisture from accumulating in the DTR system and freezing which would cause damage to the system. The orientation shown is the most effective method when the valve is installed in the upright position. The customer must specify in which orientation the valve will be installed so that the piping can be configured to function properly.



### MANUAL RELIEF TO ATMOSPHERE, THERMAL RELIEF FROM DOWNSTREAM AND BODY TO UPSTREAM

This configuration contains automatic bleed to upstream with a manual bleed to atmosphere. In addition to the body bleed to upstream there is an automatic bleed from the downstream side of valve to the upstream side of valve. This keeps the pressure created by thermal expansion in the downstream piping to a minimum. There are isolation valves on the upstream side and the downstream side of the valve to enable servicing of the DTR system without removing the entire valve from service.



### UPSTREAM VENT FULL ISOLATION

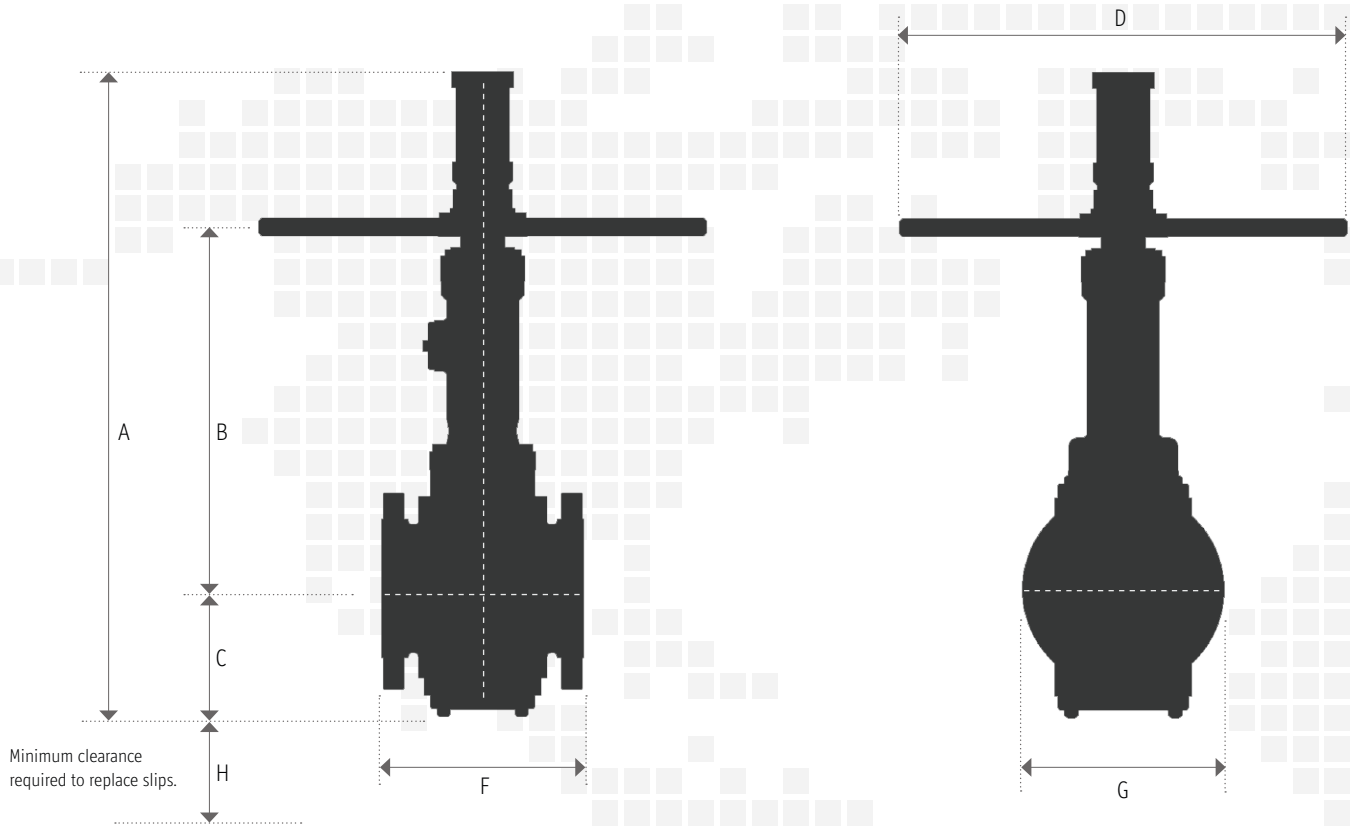
This ADTR system contains automatic bleed to upstream with a manual bleed to atmosphere. There is an isolation valve on the upstream side of the valve as well as on the body side of the valve to enable servicing of the ADTR system without removing the entire valve from service. Additionally there is a bleed to atmosphere located on the upstream side of the valve that allows the operator to vent the pressure from the upstream side of the valve without opening the valve.



### CUSTOMER-SPECIFIED RELIEF SYSTEMS

All ADTR systems can be configured with customer specified components and designs. The one shown in the figure is built using locking ball valves, however any valve design and manufacture can be used including, but not limited to, ball valves, needle valves, and gate valves. [Please contact Omni Valve for more details.](#)

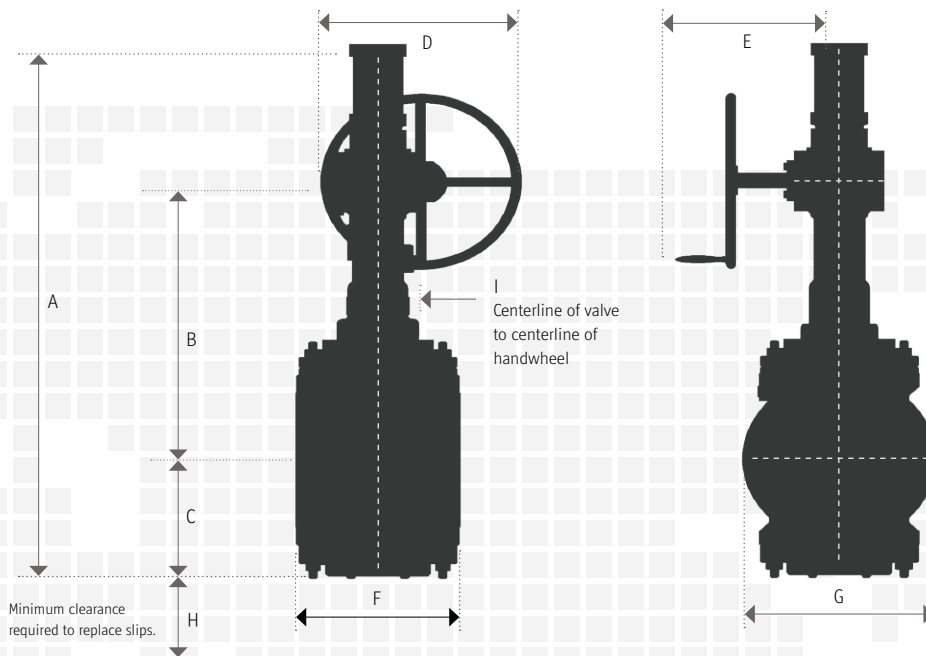
# Dimension Tables



| Class | Size | Oper. | A    |     | B    |     | C   |     | D   |     | F    |     | G    |     | H   |     | Weight |     | (Number) & Size Tapped Holes Each Flange |
|-------|------|-------|------|-----|------|-----|-----|-----|-----|-----|------|-----|------|-----|-----|-----|--------|-----|--|
|       |      |       | in.  | mm  | in.  | mm  | in. | mm  | in. | mm  | in.  | mm  | in.  | mm  | in. | mm  | lbs    | kgs |  |
| 150   | 2    | 37H   | 18.0 | 457 | 10.6 | 269 | 4.0 | 102 | 10  | 254 | 7    | 178 | 6    | 152 | 3   | 76  | 46     | 21  | none                                     |
|       | 3    | 37H   | 18.0 | 457 | 10.6 | 269 | 4.0 | 102 | 10  | 254 | 8    | 203 | 7.5  | 191 | 3   | 76  | 59     | 27  | none                                     |
|       | 4    | 50H   | 27.5 | 699 | 16.0 | 406 | 6.0 | 152 | 20  | 508 | 9    | 229 | 9    | 229 | 4.5 | 114 | 132    | 60  | none                                     |
|       | 6    | 50H   | 32.6 | 828 | 18.0 | 457 | 7.5 | 191 | 20  | 508 | 10.5 | 267 | 11   | 279 | 8   | 203 | 196    | 89  | (4) 3/4"-10 UNC                          |
| 300   | 2    | 37H   | 18.0 | 457 | 10.6 | 269 | 4.0 | 102 | 10  | 254 | 8.5  | 216 | 6.5  | 165 | 3   | 76  | 52     | 24  | none                                     |
|       | 3    | 37H   | 18.0 | 457 | 10.6 | 269 | 4.0 | 102 | 10  | 254 | 11.1 | 282 | 8.25 | 210 | 3   | 76  | 73     | 33  | none                                     |
|       | 4    | 50H   | 28.3 | 719 | 16.0 | 406 | 5.5 | 140 | 20  | 508 | 12   | 305 | 10   | 254 | 5   | 127 | 158    | 72  | none                                     |
| 600   | 2    | 50H   | 26.0 | 660 | 15.5 | 394 | 4.0 | 102 | 20  | 508 | 11.5 | 292 | 6.5  | 165 | 2.5 | 64  | 100    | 45  | none                                     |
|       | 3    | 50H   | 26.0 | 660 | 16.0 | 406 | 5.0 | 127 | 20  | 508 | 14   | 356 | 8.3  | 211 | 3.5 | 89  | 142    | 64  | none                                     |

\* Contact factory for CV data

# Dimension Tables

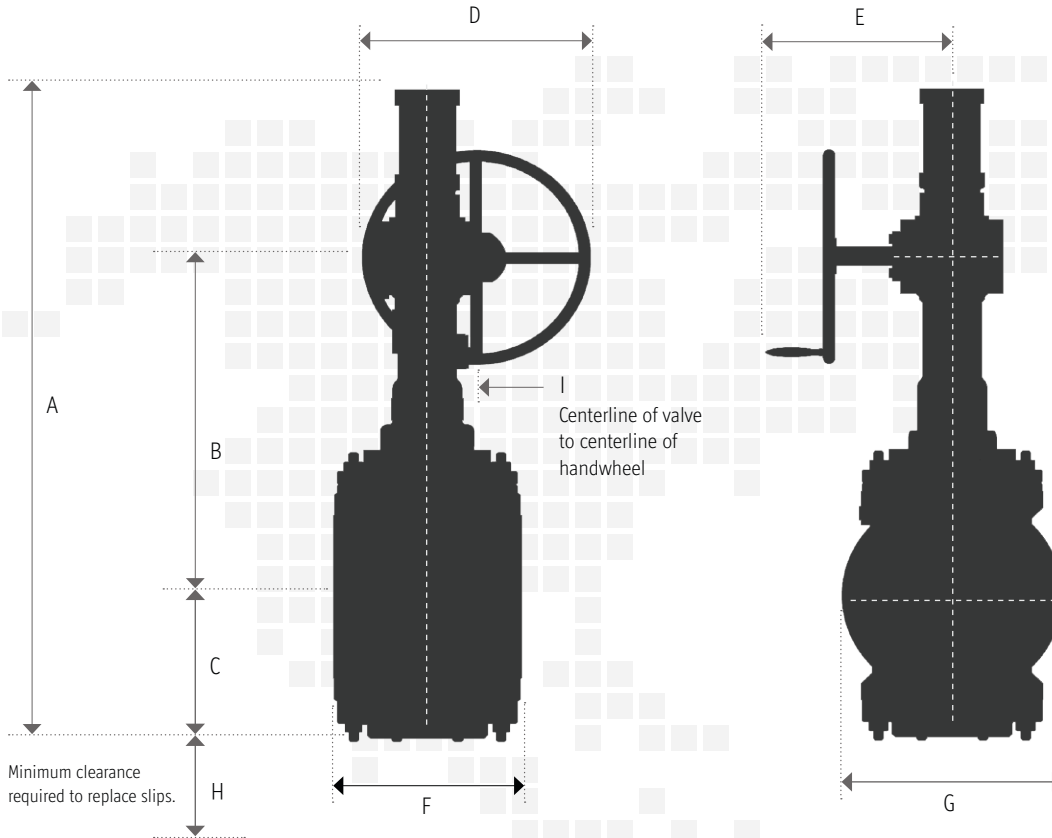


| Class | Size | Oper. | A     |      | B     |      | C    |     | D   |     | E    |     | F    |      | G    |      | H    |      | I   |     | Weight |       | (Number) & Size Tapped Holes Each Flange |
|-------|------|-------|-------|------|-------|------|------|-----|-----|-----|------|-----|------|------|------|------|------|------|-----|-----|--------|-------|--|
|       |      |       | in.   | mm   | in.   | mm   | in.  | mm  | in. | mm  | in.  | mm  | in.  | mm   | in.  | mm   | in.  | mm   | in. | mm  | lbs    | kgs   |  |
| 150   | 2    | 37G   | 22.8  | 579  | 11.9  | 302  | 4.0  | 102 | 10  | 254 | 12.4 | 315 | 7    | 178  | 6    | 152  | 3    | 76   | 1.8 | 44  | 69     | 31    | none                                     |
|       | 3    | 37G   | 22.8  | 579  | 11.9  | 302  | 4.0  | 102 | 10  | 254 | 12.4 | 315 | 8    | 203  | 7.5  | 191  | 3    | 76   | 1.8 | 44  | 78     | 35    | none                                     |
|       | 4    | 55G   | 30.0  | 762  | 16.1  | 409  | 6.0  | 152 | 10  | 254 | 14.7 | 373 | 9    | 229  | 9    | 229  | 4.5  | 114  | 2.4 | 61  | 118    | 54    | none                                     |
|       | 4F   | 55G   | 33.9  | 861  | 17.3  | 440  | 6.7  | 170 | 10  | 254 | 14.7 | 373 | 17   | 432  | 9    | 229  | 11   | 279  | 2.4 | 61  | 328    | 149   | none                                     |
|       | 6    | 55G   | 34.6  | 879  | 18.3  | 465  | 7.5  | 191 | 10  | 254 | 14.4 | 366 | 10.5 | 267  | 11   | 279  | 10   | 254  | 2.4 | 61  | 180    | 82    | (4) 3/4" -10 UNC                         |
|       | 6F   | 62G   | 41    | 1043 | 21    | 528  | 8.7  | 220 | 14  | 356 | 14.7 | 373 | 21.5 | 546  | 11   | 279  | 13.9 | 353  | 3   | 76  | 568    | 258   | none                                     |
|       | 8    | 62G   | 42.5  | 1080 | 22.0  | 559  | 9.2  | 234 | 14  | 356 | 14.7 | 373 | 11.5 | 292  | 13.5 | 343  | 14   | 356  | 3   | 76  | 314    | 143   | (4) 3/4" -10 UNC                         |
|       | 10   | 62G   | 46.0  | 1168 | 24.0  | 610  | 11.0 | 279 | 14  | 356 | 14.7 | 373 | 13   | 330  | 16   | 406  | 16   | 406  | 3   | 76  | 483    | 220   | (4) 7/8" - 9 UNC                         |
|       | 12F  | 12G   | 60    | 1518 | 46.45 | 1190 | 13.3 | 338 | 20  | 508 | 17.5 | 445 | 30   | 762  | 19   | 483  | 22   | 554  | 5   | 127 | 2027   | 921   | (4) 7/8" - 9 UNC                         |
|       | 12   | 75G   | 55.0  | 1397 | 31.0  | 787  | 12.5 | 318 | 20  | 508 | 14.7 | 373 | 14   | 356  | 19   | 483  | 26   | 660  | 3.5 | 89  | 719    | 327   | (4) 7/8" - 9 UNC                         |
|       | 14   | 75G   | 58.0  | 1473 | 32.5  | 826  | 14.3 | 363 | 20  | 508 | 14.7 | 373 | 15   | 381  | 21   | 533  | 28   | 711  | 3.5 | 89  | 938    | 426   | (4) 1.0" - 8 UNC                         |
|       | 16   | 12G   | 65.0  | 1651 | 39.0  | 991  | 16.0 | 406 | 20  | 508 | 17.5 | 445 | 16   | 406  | 23.5 | 597  | 30   | 762  | 5   | 127 | 1225   | 557   | (8) 1.0" - 8 UNC                         |
|       | 16V  | 75G   | 58.0  | 1473 | 32.5  | 826  | 14.3 | 363 | 20  | 508 | 14.7 | 373 | 16   | 406  | 23.5 | 597  | 28   | 711  | 3.5 | 89  | 1110   | 503   | (8) 1.0" - 8 UNC                         |
|       | 16F  | 12G   | 64    | 1619 | 49    | 1232 | 15.2 | 387 | 20  | 508 | 17.5 | 445 | 35   | 889  | 23.5 | 597  | 25.8 | 654  | 5   | 127 | 3055   | 1389  | (8) 1.0" - 8 UNC                         |
|       | 18   | 12G   | 60.0  | 1524 | 36.0  | 914  | 14.0 | 356 | 20  | 508 | 17.5 | 445 | 34   | 864  | 25   | 635  | 30   | 762  | 5   | 127 | 2658   | 1206  | none                                     |
|       | 18F  | 12G   | 74.3  | 1888 | 43.4  | 1103 | 19.6 | 499 | 20  | 508 | 17.5 | 445 | 42   | 1067 | 25   | 635  | 31.7 | 804  | 5   | 127 | 5060   | 2300  | none                                     |
|       | 18V  | 12G   | 64.9  | 1648 | 38.7  | 983  | 16.0 | 406 | 20  | 508 | 17.5 | 445 | 17   | 432  | 25   | 635  | 30   | 762  | 5   | 127 | 1319   | 600   | (8) 1 1/8" - 8 UNC                       |
|       | 20   | 12G   | 63.0  | 1600 | 37.0  | 940  | 15.3 | 389 | 20  | 508 | 17.5 | 445 | 40   | 1016 | 27.5 | 699  | 27   | 686  | 5   | 127 | 3306   | 1500  | none                                     |
|       | 20V  | 12G   | 69.5  | 1765 | 40.3  | 1024 | 18.6 | 472 | 20  | 508 | 17.5 | 445 | 32   | 813  | 27.5 | 699  | 32   | 813  | 5   | 127 | 2780   | 1264  | (4) 1 1/8" - 8 UNC                       |
|       | 20F  | 14G   | 84.4  | 2142 | 63.9  | 1623 | 20.5 | 519 | 32  | 813 | 26   | 660 | 48   | 1219 | 27.5 | 699  | 33.7 | 855  | 9   | 229 | 6722   | 3055  | none                                     |
|       | 24   | 12G   | 75.0  | 1905 | 44.0  | 1118 | 21.0 | 533 | 20  | 508 | 17.5 | 445 | 48   | 1219 | 32   | 813  | 32   | 813  | 5   | 127 | 6264   | 2841  | none                                     |
|       | 24V  | 12G   | 77.9  | 1979 | 45.6  | 1158 | 21.8 | 554 | 20  | 508 | 17.5 | 445 | 36   | 914  | 32   | 813  | 37   | 940  | 5   | 127 | 4682   | 2128  | (8) 1 1/4" - 8 UNC                       |
|       | 24F  | 14G   | 112.9 | 2869 | 87.4  | 2249 | 25.6 | 650 | 32  | 813 | 26   | 660 | 60   | 1524 | 32   | 813  | 41.9 | 1064 | 9   | 229 | 11522  | 5237  | none                                     |
|       | 26   | 14G   | 99.0  | 2515 | 56.7  | 1441 | 29.5 | 748 | 32  | 813 | 26   | 660 | 42   | 1067 | 34.3 | 870  | 38   | 965  | 9   | 229 | 8736   | 3971  | (16) 1 1/4" - 8 UNC                      |
|       | 28   | 14G   | 99.0  | 2515 | 56.7  | 1441 | 29.5 | 748 | 32  | 813 | 26   | 660 | 42   | 1067 | 36.4 | 925  | 38   | 965  | 9   | 229 | 9049   | 4113  | (12) 1 1/4" - 8 UNC                      |
|       | 30   | 15G   | 97.3  | 2471 | 75.2  | 1910 | 27.4 | 696 | 32  | 813 | 26   | 660 | 60   | 1524 | 38.8 | 986  | 41   | 1041 | 9   | 229 | 15568  | 7076  | (12) 1 1/4" - 8 UNC                      |
|       | 30F  | 15G   | 124.9 | 3172 | 93.7  | 2380 | 31.2 | 792 | 32  | 813 | 26   | 660 | 78   | 1981 | 38.8 | 984  | 53   | 1345 | 9   | 229 | 23689  | 10768 | none                                     |
|       | 36   | 15G   | 119.2 | 3028 | 76.0  | 1930 | 30.0 | 762 | 32  | 813 | 26   | 660 | 78   | 1981 | 46   | 1168 | 41   | 1041 | 9   | 229 | 22008  | 10004 | none                                     |
|       | 36F  | 15G   | 130   | 3301 | 95.9  | 2437 | 33.8 | 857 | 32  | 813 | 26   | 660 | 82   | 2083 | 46   | 1168 | 57.3 | 1454 | 9   | 229 | 27830  | 12650 | none                                     |

V = Designates a valve with a reduced weight design  
 F = Full bore sizes

\* Contact factory for CV data

# Dimension Tables



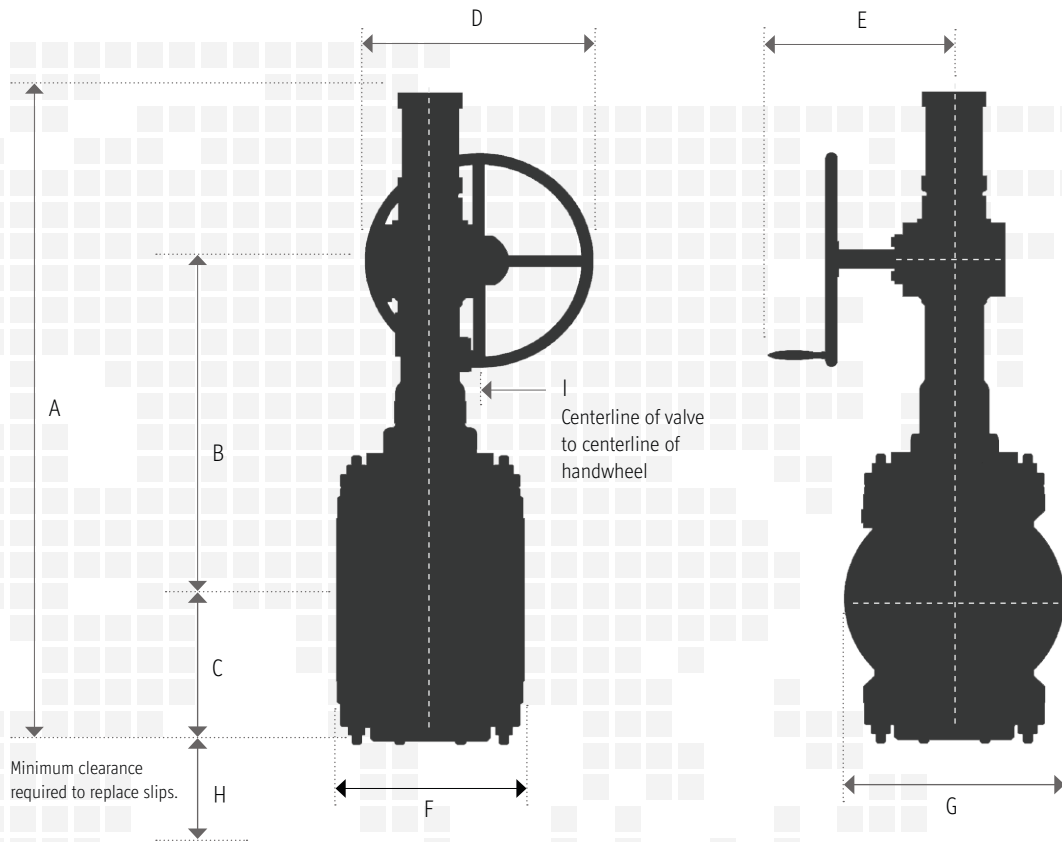
| Class | Size | Oper. | A     |      | B    |      | C    |     | D   |     | E    |     | F    |      | G    |      | H    |      | I   |      | Weight |      | (Number) & Size Tapped Holes Each Flange |
|-------|------|-------|-------|------|------|------|------|-----|-----|-----|------|-----|------|------|------|------|------|------|-----|------|--------|------|--|
|       |      |       | in.   | mm   | in.  | mm   | in.  | mm  | in. | mm  | in.  | mm  | in.  | mm   | in.  | mm   | in.  | mm   | in. | mm   | Lbs    | Kgs  |  |
| 300   | 2    | 37G   | 22.8  | 579  | 11.9 | 302  | 4.0  | 102 | 10  | 254 | 12.4 | 315 | 8.5  | 216  | 6.5  | 165  | 3    | 76   | 1.8 | 46   | 74     | 34   | none                                     |
|       | 3    | 37G   | 22.8  | 579  | 11.9 | 302  | 4.0  | 102 | 10  | 254 | 12.4 | 315 | 11.1 | 282  | 8.3  | 211  | 3    | 76   | 1.8 | 46   | 90     | 41   | none                                     |
|       | 4    | 55G   | 30.0  | 762  | 16.2 | 411  | 5.5  | 140 | 10  | 254 | 14.7 | 373 | 12   | 305  | 10   | 254  | 5    | 127  | 2.4 | 61   | 142    | 65   | none                                     |
|       | 6    | 62G   | 39.0  | 991  | 20.5 | 521  | 7.7  | 196 | 14  | 356 | 14.7 | 373 | 15.9 | 404  | 12.5 | 318  | 10   | 254  | 3   | 76   | 209    | 95   | none                                     |
|       | 6F   | 62G   | 41.2  | 1057 | 20.8 | 528  | 9.1  | 232 | 14  | 356 | 14.7 | 373 | 22   | 559  | 12.5 | 318  | 14.3 | 364  | 3   | 76.2 | 680    | 309  | none                                     |
|       | 8    | 75G   | 49.0  | 1245 | 28.0 | 711  | 9.5  | 241 | 20  | 508 | 14.7 | 373 | 16.5 | 419  | 15   | 381  | 14   | 356  | 3.5 | 89   | 571    | 260  | (4) 7/8" -9 UNC                          |
|       | 10   | 75G   | 51.8  | 1316 | 29.0 | 737  | 11.0 | 279 | 20  | 508 | 14.7 | 373 | 18   | 457  | 17.5 | 445  | 16   | 406  | 3.5 | 89   | 700    | 318  | (4) 1.0" -8 UNC                          |
|       | 12   | 12G   | 61.0  | 1549 | 36.5 | 927  | 14.0 | 356 | 20  | 508 | 17.5 | 445 | 19.8 | 503  | 20.5 | 521  | 26   | 660  | 5   | 127  | 1383   | 629  | (8) 1-1/8" -8 UNC                        |
|       | 14   | 12G   | 60.9  | 1547 | 36.8 | 935  | 13.7 | 348 | 20  | 508 | 17.5 | 445 | 30   | 762  | 23   | 584  | 26   | 660  | 5   | 127  | 1470   | 668  | none                                     |
|       | 16   | 12G   | 60.3  | 1532 | 36.5 | 927  | 13.5 | 343 | 20  | 508 | 17.5 | 445 | 33   | 838  | 25.5 | 648  | 23   | 584  | 5   | 127  | 2651   | 1205 | none                                     |
|       | 16F  | 14G   | 81.4  | 2066 | 49.6 | 1260 | 18.9 | 481 | 32  | 813 | 26   | 660 | 35   | 889  | 25.5 | 648  | 27   | 686  | 9   | 229  | 5521   | 2504 | (8) 1-1/4" -8 UNC                        |
|       | 18   | 12G   | 71.0  | 1803 | 40.5 | 1029 | 17.0 | 432 | 20  | 508 | 17.5 | 445 | 36   | 914  | 28   | 711  | 26   | 660  | 5   | 127  | 3984   | 1811 | (12) 1-1/4" -8 UNC                       |
|       | 20   | 14G   | 81.4  | 2068 | 48.0 | 1219 | 20.0 | 508 | 32  | 813 | 26   | 660 | 39   | 991  | 30.5 | 775  | 29   | 737  | 9   | 229  | 5802   | 2637 | (12) 1-1/4" -8 UNC                       |
|       | 24   | 14G   | 91.3  | 2319 | 54.1 | 1373 | 24.5 | 621 | 32  | 813 | 26   | 660 | 45   | 1143 | 36   | 914  | 38   | 965  | 9   | 229  | 7883   | 3583 | none                                     |
|       | 30   | 15G   | 120.0 | 3048 | 71.0 | 1803 | 32.5 | 826 | 32  | 813 | 26   | 660 | 65   | 1651 | 43   | 1092 | 41   | 1041 | 9   | 229  | 21000  | 9545 | none                                     |

F = Full bore sizes

\* Contact factory for CV data



# Dimension Tables



| Class | Size | Oper. | A    |      | B    |      | C    |     | D   |     | E    |     | F    |      | G    |     | H   |     | I   |       | Weight |                  | (Number) & Size Tapped Holes Each Flange |
|-------|------|-------|------|------|------|------|------|-----|-----|-----|------|-----|------|------|------|-----|-----|-----|-----|-------|--------|------------------|--|
|       |      |       | in.  | mm   | in.  | mm   | in.  | mm  | in. | mm  | in.  | mm  | in.  | mm   | in.  | mm  | in. | mm  | in. | mm    | Lbs    | Kgs              |  |
| 600   | 2    | 55G   | 28.0 | 711  | 15.5 | 394  | 4.0  | 102 | 10  | 254 | 14.5 | 368 | 11.5 | 292  | 6.5  | 165 | 2.5 | 64  | 2.4 | 61    | 116    | 23               | none                                     |
|       | 3    | 55G   | 29.0 | 737  | 16.0 | 406  | 5.0  | 127 | 10  | 254 | 14.5 | 368 | 14   | 356  | 8.3  | 211 | 3.5 | 89  | 2.4 | 61    | 129    | 59               | none                                     |
|       | 4    | 62G   | 36.0 | 914  | 19.0 | 483  | 6.2  | 157 | 14  | 356 | 14.7 | 373 | 17   | 432  | 10.8 | 274 | 3.5 | 89  | 3   | 76    | 195    | 89               | none                                     |
|       | 6    | 75G   | 45.6 | 1158 | 26.0 | 660  | 8.0  | 203 | 20  | 508 | 14.7 | 373 | 22   | 559  | 14   | 356 | 10  | 254 | 3.5 | 89    | 453    | 206              | none                                     |
|       | 8    | 75G   | 48.2 | 1224 | 27.0 | 686  | 10.0 | 254 | 20  | 508 | 14.7 | 373 | 26   | 660  | 16.5 | 419 | 12  | 305 | 3.5 | 89    | 906    | 412              | none                                     |
|       | 10   | 12G   | 58.4 | 1483 | 36.5 | 927  | 11.5 | 292 | 20  | 508 | 17.5 | 445 | 31   | 787  | 20   | 508 | 14  | 356 | 5   | 127   | 1647   | 749              | none                                     |
|       | 12   | 12G   | 61.0 | 1549 | 37.5 | 953  | 13.1 | 333 | 20  | 508 | 17.5 | 445 | 33   | 838  | 22   | 559 | 22  | 559 | 5   | 127   | 1744   | 793              | none                                     |
|       | 14   | 14G   | 75.9 | 1928 | 47.0 | 1194 | 16.0 | 406 | 32  | 813 | 26   | 660 | 35   | 889  | 23.8 | 605 | 25  | 635 | 9   | 229   | 4316   | 1962             | (4) 1-3/8"-8 UNC                         |
|       | 16   | 14G   | 75.7 | 1923 | 47.0 | 1194 | 15.8 | 401 | 32  | 813 | 26   | 660 | 39   | 991  | 27   | 686 | 25  | 635 | 9   | 229   | 4728   | 2149             | (8) 1-1/2"-8 UNC                         |
|       | 18   | 14G   | 79.5 | 2019 | 48.8 | 1240 | 18.1 | 461 | 32  | 813 | 26   | 660 | 43   | 1092 | 29.3 | 743 | 25  | 635 | 9   | 229   | 6429   | 2922             | (8) 1-3/8"-8 UNC                         |
|       | 20   | 15G   | 99.4 | 2525 | 69.5 | 1765 | 20.5 | 521 | 32  | 813 | 26   | 660 | 47   | 1194 | 32   | 813 | 25  | 635 | 9   | 229   | 10039  | 4563             | none                                     |
| 24    | 15G  | 107.8 | 2738 | 71.5 | 1816 | 23.5 | 597  | 32  | 813 | 26  | 660  | 55  | 1397 | 37   | 940  | 25  | 635 | 9   | 229 | 15000 | 6804   | (8) 1-7/8"-8 UNC |  |

\* Contact factory for CV data

# Torque & Turns Chart

Class 150

| Size | Model | Torque (ft-lbs) | Turns |
|------|-------|-----------------|-------|
| 2    | 37H   | 114             | 1.4   |
| 2    | 37G   | 5               | 18    |
| 3    | 37H   | 114             | 1.5   |
| 3    | 37G   | 5               | 18    |
| 4    | 50H   | 123             | 2     |
| 4    | 55G   | 7               | 27    |
| 4F   | 55G   | 16              | 20    |
| 6    | 50H   | 163             | 2.9   |
| 6    | 55G   | 19              | 21    |
| 6F   | 62G   | 39              | 21    |
| 8    | 62G   | 41              | 20    |
| 10   | 62G   | 52              | 18    |
| 12   | 75G   | 69              | 26    |
| 12F  | 12G   | 106             | 40    |
| 14   | 75G   | 91              | 28    |
| 16   | 12G   | 104             | 48    |
| 16V  | 75G   | 104             | 28    |
| 16F  | 12G   | 158             | 54    |
| 18   | 12G   | 125             | 45    |
| 18V  | 12G   | 125             | 48    |
| 18F  | 12G   | 178             | 56    |
| 20   | 12G   | 158             | 45    |
| 20V  | 12G   | 158             | 45    |
| 20F  | 14G   | 222             | 41    |
| 24   | 12G   | 167             | 57    |
| 24V  | 12G   | 167             | 60    |
| 24F  | 14G   | 229             | 61    |
| 26   | 14G   | 207             | 62    |
| 28   | 14G   | 207             | 45    |
| 30   | 15G   | 214             | 56    |
| 30F  | 15G   | 355             | 57    |
| 36   | 15G   | 310             | 63    |
| 36F  | 15G   | *               | *     |

Class 300

| Size | Model | Torque (ft-lbs) | Turns |
|------|-------|-----------------|-------|
| 2    | 37H   | 148             | 1.8   |
| 2    | 37G   | 5               | 18    |
| 3    | 37H   | 148             | 1.8   |
| 3    | 37G   | 7               | 18    |
| 4    | 50H   | 175             | 2.3   |
| 4    | 55G   | 18              | 16    |
| 6    | 62G   | 49              | 20    |
| 6F   | 62G   | 95              | 21    |
| 8    | 75G   | 105             | 26    |
| 10   | 75G   | 138             | 26    |
| 12   | 12G   | 184             | 47    |
| 14   | 12G   | 209             | 47    |
| 16   | 12G   | 250             | 42    |
| 18   | 12G   | 252             | 57    |
| 20   | 14G   | 255             | 51    |
| 24   | 14G   | 411             | 49    |
| 30   | 15G   | 540             | 56    |

Class 600

| Size | Model | Torque (ft-lbs) | Turns |
|------|-------|-----------------|-------|
| 2    | 50H   | 161             | 1.5   |
| 2    | 55G   | 18              | 13    |
| 3    | 50H   | 161             | 1.5   |
| 3    | 55G   | 28              | 14    |
| 4    | 62G   | 38              | 17    |
| 6    | 75G   | 117             | 30    |
| 8    | 75G   | 128             | 31    |
| 10   | 12G   | 184             | 54    |
| 12   | 12G   | 214             | 56    |
| 14   | 14G   | 323             | 51    |
| 16   | 14G   | 323             | 51    |
| 18   | 14G   | 476             | 52    |
| 20   | 15G   | 561             | 55    |
| 24   | 15G   | 1235            | 62    |

- Notes:**
- (1) Torque values shown are to unseat valve at maximum  $\Delta P$ . Operator torques can be set up to 10% over this figure. **Electric actuators should be sized using a torque value that is 25% greater than the values listed above.**
  - (2) Turns may vary due to manufacturing tolerances and will affect operating times. Please allow +/-10% for operating times when choosing actuator gear ratio.
  - (3) Published torque values are for valves with Viton B elastomers. Please consult factory for required torque when valves contain alternative elastomers.

- H = Handwheel
- G = Gear Operated
- F = Full bore sizes
- V = Designates a valve with a reduced weight design
- \* = Contact factory for data

## AUTOMATION

OmniSeal® expanding plug valves are available with Motor Adapter Kits (MAK's) designed to accept most commercially available electric actuators. We can install, set-up and test the actuators prior to shipment of the valves from our facility. Omni Valve also offers a complete range of hydraulic actuators. Please contact Omni sales for more information or a hydraulic actuator brochure.

When OmniSeal® expanding plug valves are automated, it is necessary to employ a body cavity pressure relief system. This is due to thermal expansion. In addition to the ADTR systems shown on pages 12 and 13 there is an Automatic Body Bleed Valve (ABBV) relief system available. Its intended purpose is to alleviate the need for an operator to manually vent the body to atmosphere. This system utilizes a mechanical relief valve that is opened by the closure of the plug valve. When this relief valve is opened it is vented to the atmosphere or to a customer supplied catch basin.

If a relief system is not employed, the valve could be difficult to operate or could become stuck in the closed position.

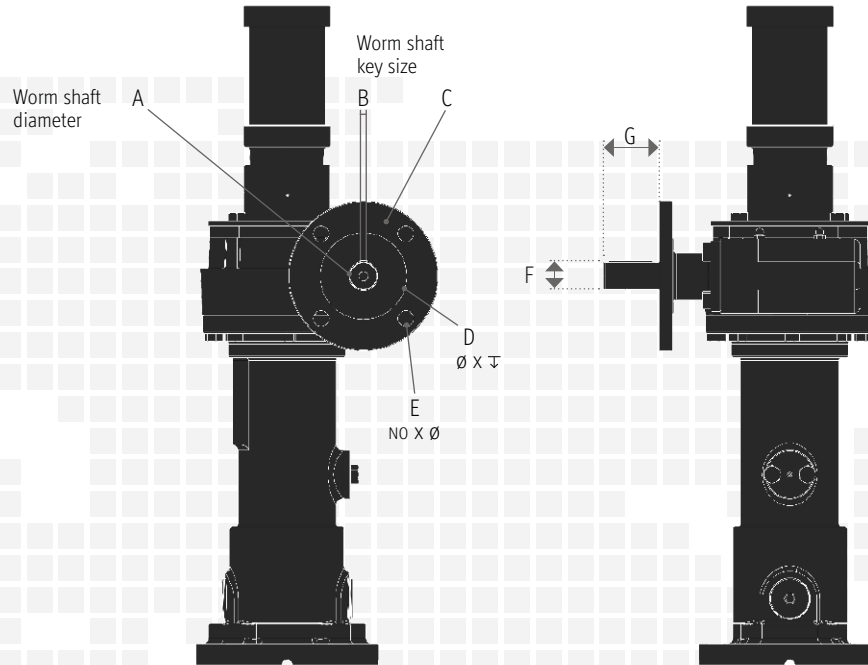
## ACTUATOR SIZING

Valve choice and actuator sizing depend on factors which include:

- Service Conditions (Media Type, Temperature and Pressure)
- Required Operating Speed
- Access to the Handwheel
- Available Power Source



# Motor Adapter Kits



| Operator | MAK Size | A             | B      | C       | D              | E         | F      | G     | Max Torque |
|----------|----------|---------------|--------|---------|----------------|-----------|--------|-------|------------|
| 37G      | F10      | .865"-.870"   | 0.313" | Ø4.02"  | Ø2.795" x .20" | 4 x Ø.44" | .979"  | 1.54" | 23         |
|          | F14      | .865"-.870"   | 0.313" | Ø5.51"  | Ø3.976" x .20" | 4 x Ø.72" | .979"  | 1.54" | 23         |
| 55G      | F10      | 1.00"-1.002"  | 0.250" | Ø4.02"  | Ø2.795" x .20" | 4 x Ø.44" | 1.109" | 2.60" | 75         |
|          | F14      | 1.00"-1.002"  | 0.250" | Ø5.51"  | Ø3.976" x .20" | 4 x Ø.72" | 1.109" | 2.60" | 75         |
| 62G/75G  | F10      | 1.245"-1.247" | 0.313" | Ø4.02"  | Ø2.795" x .20" | 4 x Ø.44" | 1.35"  | 2.60" | 113/225    |
|          | F14      | 1.245"-1.247" | 0.313" | Ø5.51"  | Ø3.976" x .20" | 4 x Ø.72" | 1.35"  | 2.60" | 113/225    |
|          | F16      | 1.245"-1.247" | 0.313" |         |                |           | 1.35"  |       | 113/225    |
| 12G      | F10      | 1.245"-1.247" | 0.313" | Ø4.02"  | Ø2.795" x .20" | 4 x Ø.44" | 1.35"  | 2.53" | 338        |
|          | F14      | 1.245"-1.247" | 0.313" | Ø5.51"  | Ø3.976" x .20" | 4 x Ø.72" | 1.35"  | 3.66" | 338        |
|          | F16      | 1.245"-1.247" | 0.313" | Ø6.50"  | Ø5.17" x .24"  | 4 x Ø.88" | 1.35"  | 3.66" | 338        |
|          | F25      | 1.245"-1.247" | 0.313" | Ø10.00" | Ø7.94 x .24"   | 8 x Ø.75" | 1.35"  | 3.41" | 338        |
| 14G/15G  | F14      | 1.618"-1.622" | 0.375" | Ø5.51"  | Ø3.976" x .20" | 4 x Ø.72" | 1.820" | 3.14" | 404/703    |
|          | F16      | 1.618"-1.622" | 0.375" | Ø6.50"  | Ø5.17" x .24"  | 4 x Ø.88" | 1.820" | 3.14" | 404/703    |
|          | F25      | 1.618"-1.622" | 0.375" | Ø10.00" | Ø7.94 x .24"   | 8 x Ø.75" | 1.820" | 3.14" | 404/703    |

- Notes:**
- (1) Column A dimensions are of the worm shaft diameter itself. Drive Bushing bores should have between .004" and .006" clearance over the shaft dimension.
  - (2) Kits contain stainless steel hardware to attach actuators. Customer must specify if actuators utilize Metric or US/Imperial hardware.

# Standard Operator / DTR Configurations

OmniSeal® expanding plug valves with or without MAK's (motor adapter kits) can be configured with a variety of gear operator orientations to allow convenient operation of the hand wheel / actuator. This will allow the user to customize the location of the hand wheel or electric actuator control panel in relation to the personnel work platform. By altering the orientation of the gear operator and the left / right port of the DTR, the valve can be installed and operated without compromise. The orientations in 90° increments are shown below. The face of the valve that features the ADTR ports is considered the front of the valve. All orientations are in relation to the front of the valve as shown.

- Model 37G/ 55G can be rotated in 90° increments
- Model 62G/75G/12G can be rotated in 45° increments
- Model 14G/15G can be rotated in 30° increments

ORIENTATION "A"  
LEFT



ADTR Left "L"

ORIENTATION "A"  
LEFT



ADTR Right "R"

ORIENTATION "E"  
RIGHT



ADTR Left "L"

ORIENTATION "E"  
RIGHT



ADTR Right "R"

# Standard Operator / DTR Configurations



ORIENTATION "C"  
BACK



ADTR Left "L"

ORIENTATION "C"  
BACK



ADTR Right "R"

ORIENTATION "G"  
FRONT (STANDARD)



ADTR Left "L"

ORIENTATION "G"  
FRONT (STANDARD)



ADTR Right "R"

# Limit Switch Assemblies

Omni Valve can provide limit switch assemblies to meet most customer's specifications. We offer assemblies that utilize a clear protective cover between the flag and the limit switch as shown in Figure A. This configuration eliminates any external moving parts on the assembly.

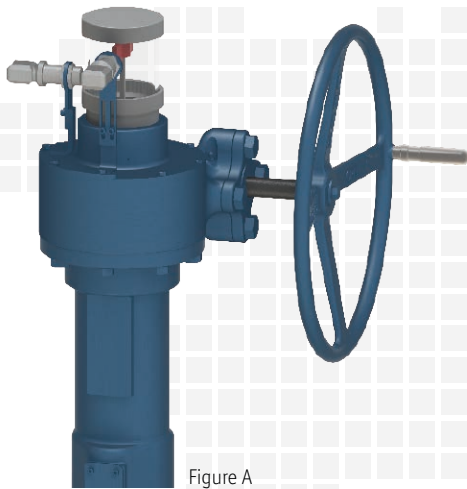


Figure A

The standard switch for this configuration is NAMUR style with a PBT thermoplastic housing that has a 10mm sensing range and utilizes a terminal compartment for wiring connections. Available approvals for this switch are listed below.

- A1. UL General Purpose
- A2. CSA General Purpose
- A3. ATEX EEx ia IIC/IIB-EEx ib IIC/IIB

An alternative configuration, without the protective cover, is available and is shown in Figure B. This configuration allows a much larger selection of limit switches to be used because there are no sensing range constraints.

The standard switch has a 300 series stainless steel housing and a 1/2" NPT conduit connection. The standard wiring is 18 gauge and is available in 3 ft, 6 ft, and 12 ft lengths. Contact Omni for custom wire lengths and other wiring and cabling options. The approvals for switches compatible with this configuration are listed below.

- B1. UL CI I Div 1 & 2 Groups A-D; CI II Div 1 & 2, Groups E-G
- B2. CSA CI I Div 1 Groups A-D; CI II Div 1, Groups E-G; CI III
- B3. CSA CI I, Div 2 Groups A-D; CI II, Div 2 Groups E-G; CI III
- B4. CSA General Purpose
- B5. UL General Purpose
- B6. ATEX/IEC Ex Zone 1 Ex d IIC; Ex tD; A21; IP66 T85C (-20° C to +50° C)
- B7. ATEX/IEC Ex Zone 1 Ex d IIC; Ex tD; A21; IP66 T85C (-20° C to +50° C) (Hermetically Sealed) (Model 73 & 7G-1 only) (Wiring H for HiTemp to +150° C)
- B8. ATEX/IEC Ex Zone 0Ex ia IIC T6 Ga Ex iD IIIC T85C Da (Tamb = -20° C to +50° C)
- B9. ATEX/IEC Ex Zone 0, Ex ia IIC T4 Ga, Ex iD IIIC T135C Da (-20° C to +100° C)
- B10. ATEX/IEC Ex Zone 0, Ex ia IIC T3 Ga (-20° C to +150° C) (Hermetically Sealed)
- B11. INMETRO BR-Ex d Gb, BR-Ex tD A21 T85C (-20° C to +50° C)
- B12. INMETRO BR-Ex d Gb, BR-Ex tD A21 T850C (-20° C to +50° C)
- B13. NEPSI Ex d IIC T3/T6

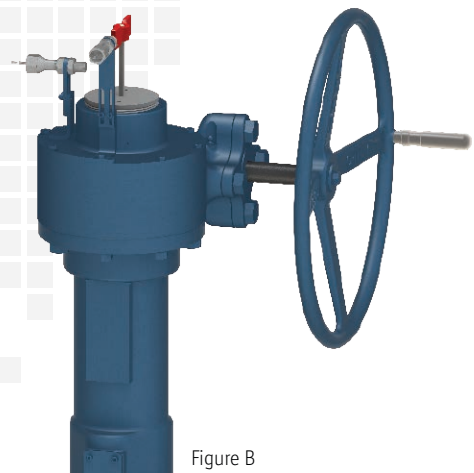


Figure B

# Position Indicators and Locking Mechanisms



Omni Valve can provide a wide range of custom solutions to meet customer's specifications.

The beacon unit shown in Figure C provides an intrinsically safe enclosure that houses sensing switches and a visual valve position indicator. It can be configured with a wide variety of internal sensors including: Go switches, mechanical switches, inductive sensors, and proximity switches to meet each customer's specifications. The housing is capable of containing a variety of bus network boards to facilitate valve interface and communications. The enclosure is available in aluminum, resin, or stainless steel and can be ordered with standard or metric conduit entries. These assemblies can be certified with global agency approvals including, but not limited to: IECEx, ATEX, CE, UL, and CAS. Contact Omni for more information on beacon assemblies for specific applications.

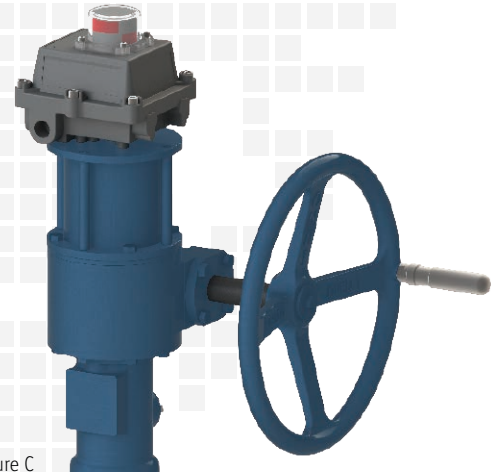


Figure C



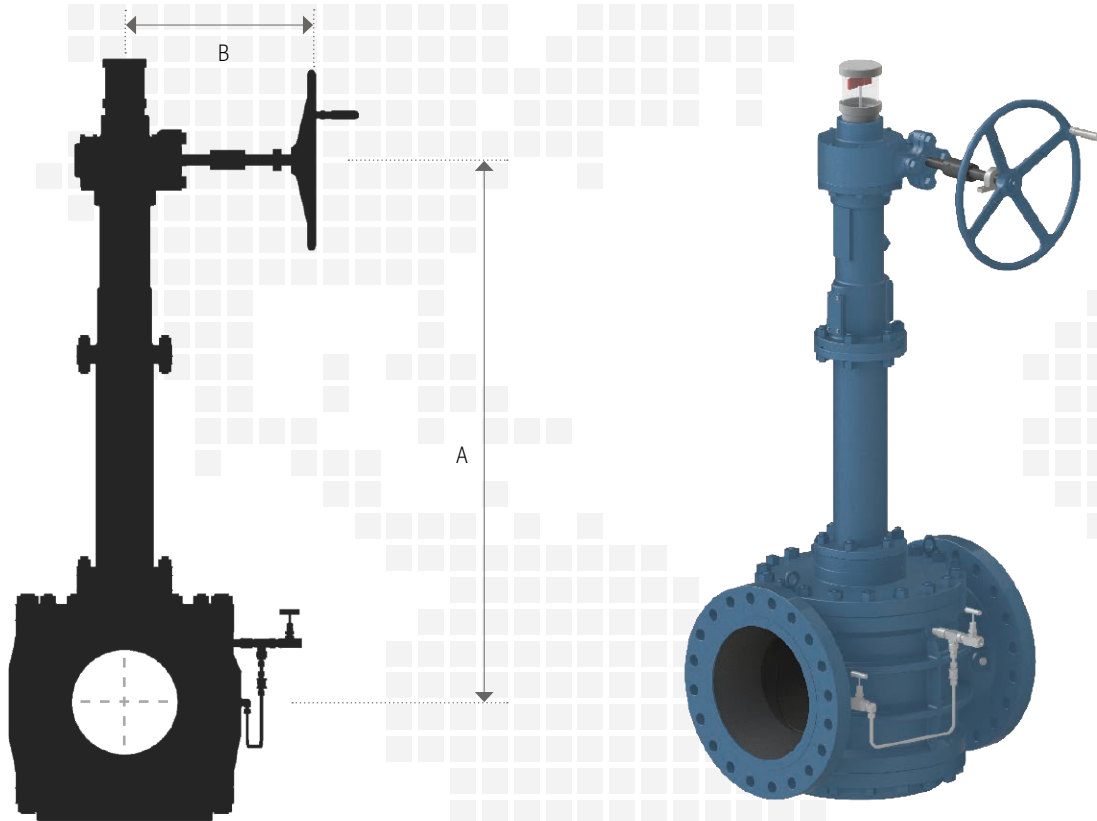
Figure D

Handwheel locking devices, as shown in Figure D, are available for the entire product line of OmniSeal® expanding plug valves to discourage tampering. These locking devices are secured using a padlock or similar mechanism and lock the valve in either the fully open or fully closed position.

# Stem Extensions

OmniSeal® DB&B expanding plug valves are offered with a variety of extension options. Gear box / operator extensions move the operator station farther away from the flow bore of the valve. These types of extensions function the same for actuated or hand wheel operated valves. They are useful when the valve is located below grade or below a catwalk.

Hand wheel extensions move the hand wheel farther from the center line of the operator. These may be necessary when the valve is located too far from existing operator platforms.



Valve depicted is an OmniSeal® 16" Class 300

## OPERATOR TYPES

**TYPE 1 – OPERATOR EXTENSION** Suitable for underground burial. Specify dimension A when ordering.

**TYPE 2 – OPERATOR EXTENSION** Exposed and not suitable for burial. Specify dimension A when ordering.

**TYPE 3 – HAND WHEEL EXTENSION** It is advisable to support all hand wheel extensions. A bearing block will be supplied with all extensions for additional support by mounting to customer supplied structure. Specify dimension B when ordering.



# Replacement Parts and Rebuild Kits



## SPARE PARTS

Omni Valve stocks a complete line of replacement parts for the OmniSeal® DB&B expanding plug valve.

Please contact an Omni Valve sales representative for more information.

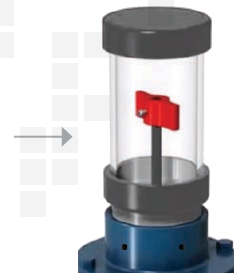


### SLIPS

Slips for each plug valve size in standard Viton B trim are available off the shelf. Alternative seal materials are available upon request.

### INDICATOR PROTECTOR CAPS

Indicator protector caps and shipping caps are available for all sizes.



### RELIEF SYSTEMS AND COMPONENTS

Standard relief systems and components for each valve size are available off the shelf. Custom relief systems available upon request.

Omni Valve stocks various rebuild kits for the OmniSeal® DB&B expanding plug valve as follows.

Please contact an Omni Valve sales representative for more information.

## KITS

### CLOSURE KIT (CK)

- (1) Body O-Ring and (1) Fire Seal Body Gasket.  
A closure kit is required for each of the upper and lower bonnets.

### STEM KIT (SK)

- (1) Stem Packing Set, (1) Stem Seal ID O-Ring and (1) Stem Seal OD O-Ring.

### REBUILD KIT (RK)

- (2) Closure Kits and (1) Stem Kit.

### MOTOR ADAPTER KITS (MAK)

- (1) Actuator Mounting Flange and (1) Stem Spacer Sleeve and hardware.

### OPERATOR GASKET KITS

- All gaskets associated with operator.

### Notes:

- (1) Stem packing is pre-formed flexible graphite.
- (2) O-Rings are 75D Viton B unless otherwise specified.
- (3) Gaskets are flexible graphite unless otherwise specified.

# Figure Numbers

OmniSeal® figure numbers provide an easy way to specify the valve you need and communicate with Omni Valve or its distributors.

Please use the following format to determine the appropriate figure number for valve sizes or configurations:

**CLASS – SIZE / OPER / MAK** (optional)

## CLASS

These digits refer to the ANSI class of the valve.

150 = ANSI Class 150, 300 = ANSI Class 300, 600 = ANSI Class 600

## SIZE

These digits refer to the valve size.

2 = ANSI 2", 3,4,6,8,10,12,14,16,18,20,24,28,30,36, etc.

## OPERATOR

These digits refer to the valve operator.

**Handwheel Operators**

37H, 50H

**Gear Operators**

37G, 55G, 62G, 75G, 12G, 14G, 15G

## OPERATOR ORIENTATION (See pages 20–21)

A = Left C=Back E=Right G=Front

## ADTR

L = Left R=Right

## MAK

These letters are only used if a MAK (Motor Adapter Kit) is required for the valve to be automated.

### EXAMPLE:

A) 8" ANSI 300 Gear Operated, with MAK

- 1) CLASS – 300
- 2) SIZE – Dash 8
- 3) OPERATOR – Slash 75G
- 4) OPERATOR ORIENTATION – Slash G
- 5) ADTR – Slash L
- 6) MAK if required – Slash MAK

Figure number for above: **300-8/75G/G/L/MAK**

B) 10" ANSI 150, Gear Operated: **150-10/62G/E/L**

**Note:** If specifying a reduced face-to-face pattern valve (for 16,18, 20 and 24" Class 150 valves only)  
The figure number is the same except a "V" added to the number in the class section

Figure number: **V150-18/12G/A/R**

If MAK if required: **V150-18/12G/A/R/MAK**

# Manufacturing, Trademarks & Product Warranty



## EXCLUSIVE MANUFACTURER FOR OMNISEAL® DB&B EXPANDING PLUG VALVES

ALL OmniSeal® DB&B expanding plug valves are manufactured by Omni Valve's trusted business partner Ghatge Patil Industries LTD (GPI) in India. GPI has an ownership position in Omni Valve and it's engineering, procurement and quality systems are seamlessly integrated with those of Omni Valve.

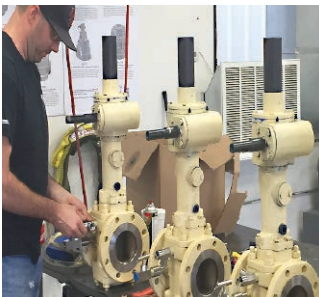
Omni Valve and GPI recognize that in todays competitive global marketplace, delivery time frame and/or logistical concerns play a key role in the success of many projects. Therefore all OmniSeal® DB&B expanding plug valve orders can delivered from either Omni Valve's USA location or GPI's location in India depending on project requirements or customer preference. Since Omni Valve and GPI are so tightly integrated, customers can be sure that all valves have been subjected to identical quality control measures.



## TRADEMARKS

OmniSeal® is a registered trademark of Omni Valve. The OmniSeal® brochure contains references to other registered trademarks that are not owned by Omni Valve.

| Trademarks |                                      |
|------------|--------------------------------------|
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| Go Switch  | Emerson Process Management           |



OmniSeal® Expanding Plug Valves



Global Energy Market Solutions



ABSOLUTE ZERO LEAKAGE



## OmniSeal® Double Block & Bleed Expanding Plug Valve

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- 🌐 [omnivalve.com](http://omnivalve.com)

### Product Warranty

All products quoted are subject to omni valve's limited product warranty available at: [omnivalve.com/warranty.php](http://omnivalve.com/warranty.php)

### OmniSeal® Engineering, Quality, Service and Distribution

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