

ABSOLUTE "ZERO" LEAKAGE



## OmniSeal DBB/DIB Expanding Plug Valves

High Integrity, Retracting Slip Valves for Product Isolation, Blending, Metering, Custody Transfer, Fueling, Terminal, Storage, and other Land or Offshore Zero-Leakage applications.

- API 6D Monogrammed
- Highest Quality
- Delivered to Exact Customer Specifications
- Engineered for Years of Trouble Free Service



OmniSeal

# Surface Safety & Isolation Valve 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.



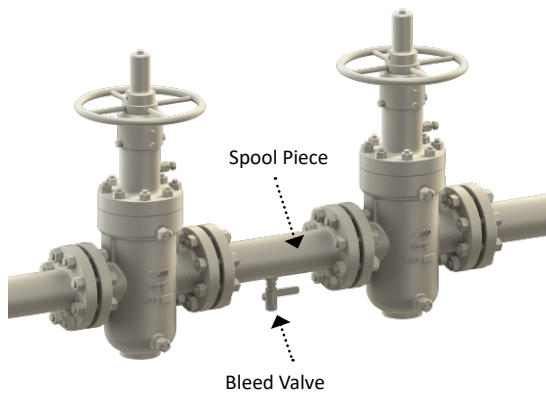
# Single Valve / Double Block & Bleed Solution



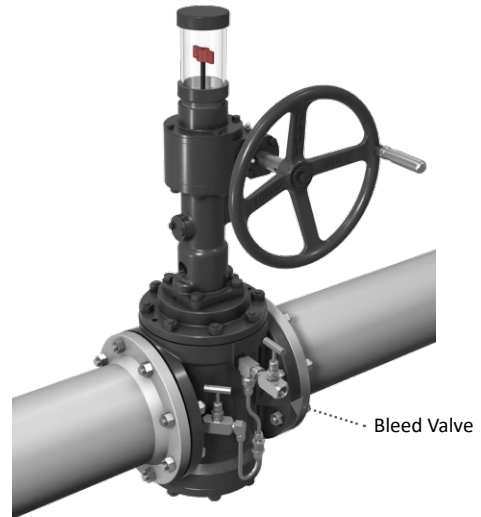
The OmniSeal replaces antiquated two-valve systems with a single DB&B valve solution. The OmniSeal has two seats (slips) and provides a bubble tight seal.



Older double block & bleed systems use two valves and a spool with a bleed valve used to drain and verify seal integrity.



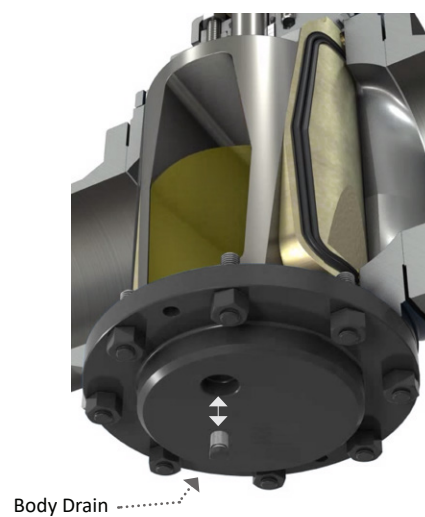
Solution... The OmniSeal Plug Valve



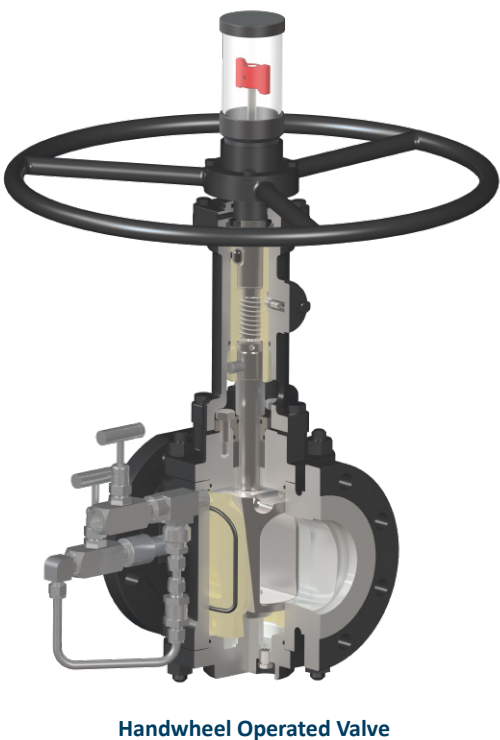
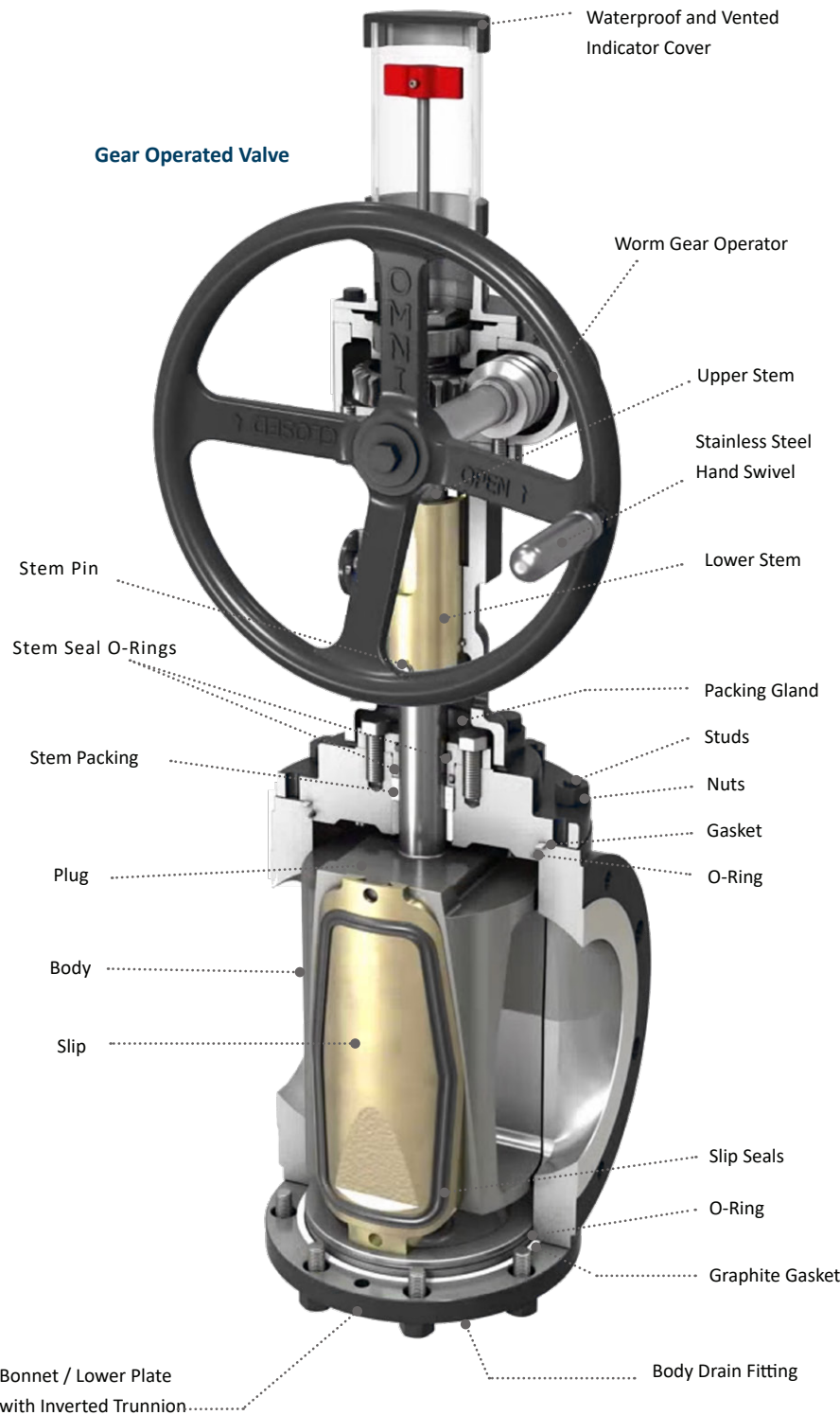
The OmniSeal upstream and downstream slip seals provide the same function as the two block valves shown above.



The OmniSeal body (serving as the spool piece shown top left) bleeds to verify seal integrity.



# OmniSeal Typical Valve Configuration



# Size Range & Materials of Construction



## Available Sizes and ANSI Classes

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

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 (For Alternative Materials, Please Consult Omni)

All OmniSeal plug valves with standard materials of construction meet the requirements of NACE MR0175 / ISO 15156

| Component                  | Standard Temp. (-20° to 400° F) (-29° to 204° C) | Low Temp. (-49° to 400° F) (-45° 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) -49°F (-45°C) is the minimum temperature rating using our standard materials of construction

(2) Electroless Nickel Plating – Slip Sealing and Body-to-Bonnet Sealing Surfaces Only

(3) Electroless Nickel Plated - Entire Component

(4) All OmniSeal valves in class 300, 600 & 900 are supplied with double reinforced Viton seals

## Customization

OmniSeal DB&B Expanding Plug Valves are routinely manufactured, modified or accessorized to meet customer or project specific requirements.

Common customizations include:

- Valves manufactured with flanges drilled to DIN or other regional standards
- Valves manufactured with non-standard face to face dimensions
- Customer specified functional and/or hydrostatic testing procedures
- Customer specified exterior coating for particular locations, service conditions or cosmetic preferences
- Customer specified slip seal and body/bonnet sealing elastomer material
- Customer specified position indicators, locking devices or other accessories
- Customer specified thermal relief or automatic body bleed (ABBV) systems

# Valve Operation

## Fully Open Position

F  
U  
L  
L  
Y  
  
O  
P  
E  
N



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.

P  
A  
R  
T  
I  
A  
L  
L  
Y  
  
C  
L  
O  
S  
E  
D



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.

B  
E  
F  
O  
R  
E  
  
C  
L  
O  
S  
I  
N  
G

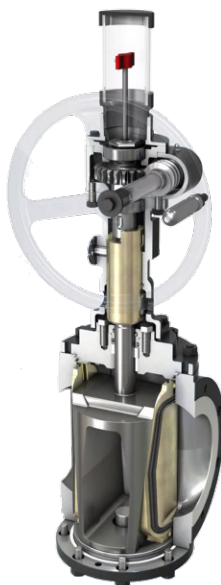


With continued rotation of the handwheel, this small gap between the slip seal and the valve body is closed by the slip moving in the outward direction. Once the slip seal is firmly seated against the valve body sealing surface, the valve achieves a positive, zero-leakage seal.

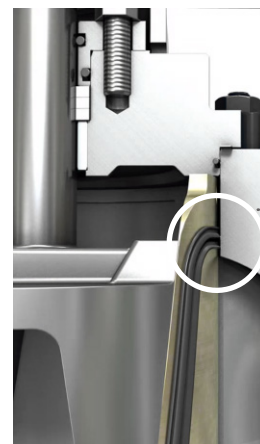


## Fully Closed (Sealed) Position

F  
U  
L  
L  
Y  
  
C  
L  
O  
S  
E  
D

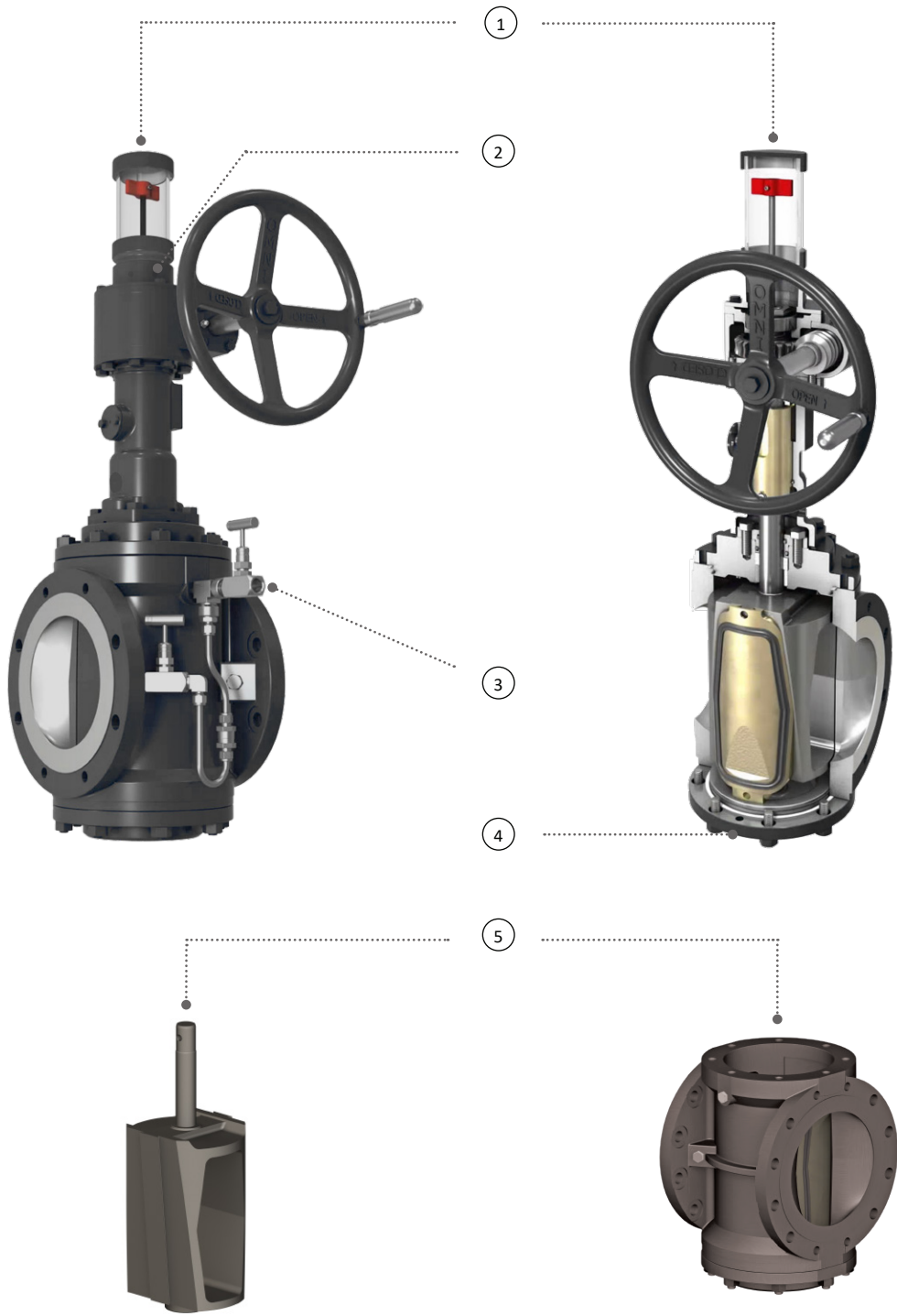


To fully close the valve and provide positive shut-off, the slips are expanded outward with continued rotation of the handwheel or actuator. This outward expansion is achieved by the tapered plug moving downward which causes the slip seals to seal against the valve body.



Positive, Zero-Leakage Seal

# Design Features

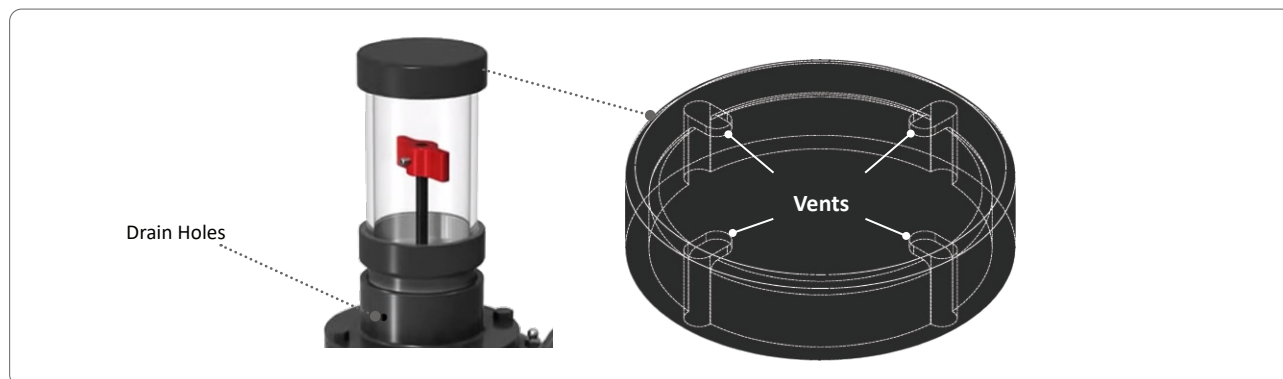


Call out information on corresponding page ->

## OmniSeal DB&B Expanding Plug Valve Exclusive Design Features

### 1. Polycarbonate Protector Cap

The 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

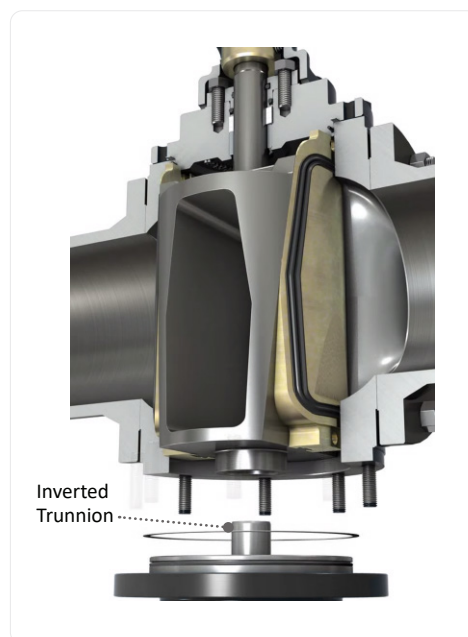
Some competitive DB&B plug valve offerings have the top port for the relief system located on the upper bonnet. Therefore, the relief system must be disconnected whenever the upper bonnet needs to be removed for maintenance or repair. The OmniSeal port is located on the upper section of the valve body.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

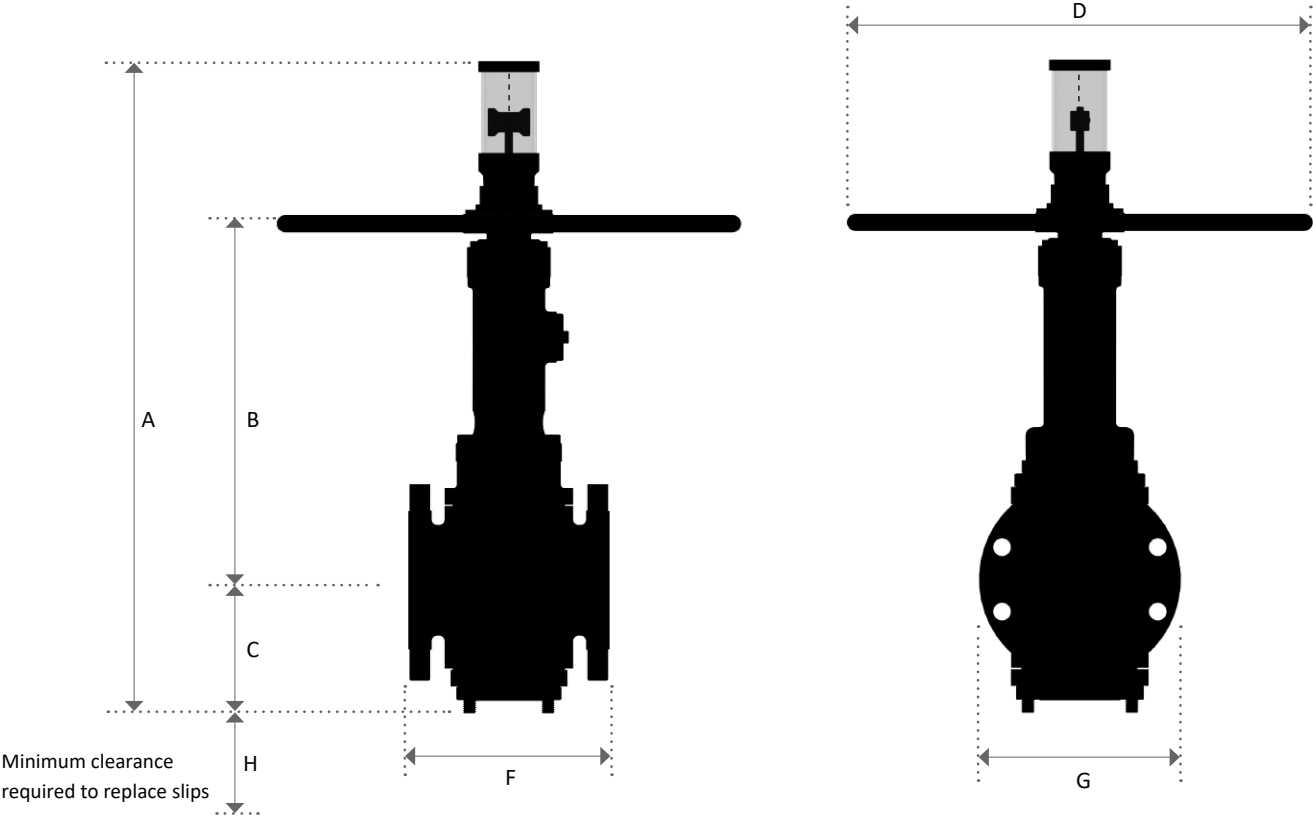


## **Customer-Specified Relief Systems**

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.](#)

# Dimensions

Reduced Port / HW Operated / Class 150-300-600

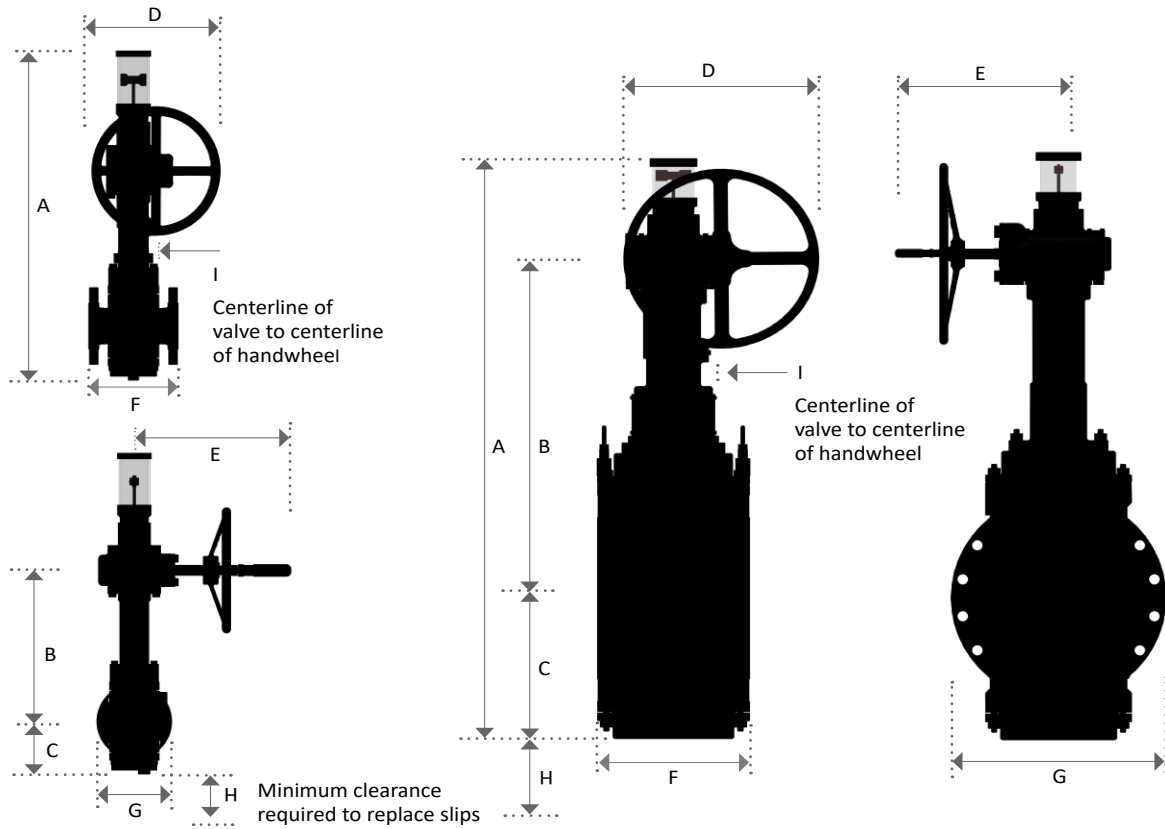


| Class | Size | Oper. | A    |     | B    |     | C   |     | D   |     | F    |     | G    |     | H   |     | Weight |     | (Number) & Size<br>Tapped Holes<br>Each Flange |
|-------|------|-------|------|-----|------|-----|-----|-----|-----|-----|------|-----|------|-----|-----|-----|--------|-----|------------------------------------------------|
|       |      |       | 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  | 55     | 25  | none                                           |
|       | 3    | 37H   | 18.0 | 457 | 10.6 | 269 | 4.0 | 102 | 10  | 254 | 8    | 203 | 7.5  | 191 | 3   | 76  | 68     | 31  | none                                           |
|       | 4    | 50H   | 27.5 | 699 | 16.0 | 406 | 6.0 | 152 | 20  | 508 | 9    | 229 | 9    | 229 | 4.5 | 114 | 142    | 64  | none                                           |
|       | 6    | 50H   | 32.6 | 828 | 18.0 | 457 | 7.5 | 191 | 20  | 508 | 10.5 | 267 | 11   | 279 | 8   | 203 | 224    | 102 | (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  | 60     | 27  | none                                           |
|       | 3    | 37H   | 18.0 | 457 | 10.6 | 269 | 4.0 | 102 | 10  | 254 | 11.1 | 282 | 8.25 | 210 | 3   | 76  | 62     | 28  | none                                           |
|       | 4    | 50H   | 28.3 | 719 | 16.0 | 406 | 5.5 | 140 | 20  | 508 | 12   | 305 | 10   | 254 | 5   | 127 | 166    | 75  | none                                           |
| 600   | 2    | 50H   | 26.0 | 660 | 15.5 | 394 | 4.0 | 102 | 20  | 508 | 11.5 | 292 | 6.5  | 165 | 2.5 | 64  | 113    | 51  | none                                           |
|       | 3    | 50H   | 26.0 | 660 | 16.0 | 406 | 5.0 | 127 | 20  | 508 | 14   | 356 | 8.3  | 211 | 3.5 | 89  | 120    | 54  | none                                           |

\* Contact factory for CV data

# Dimensions

## Reduced Port / Gear Operated / Class 150



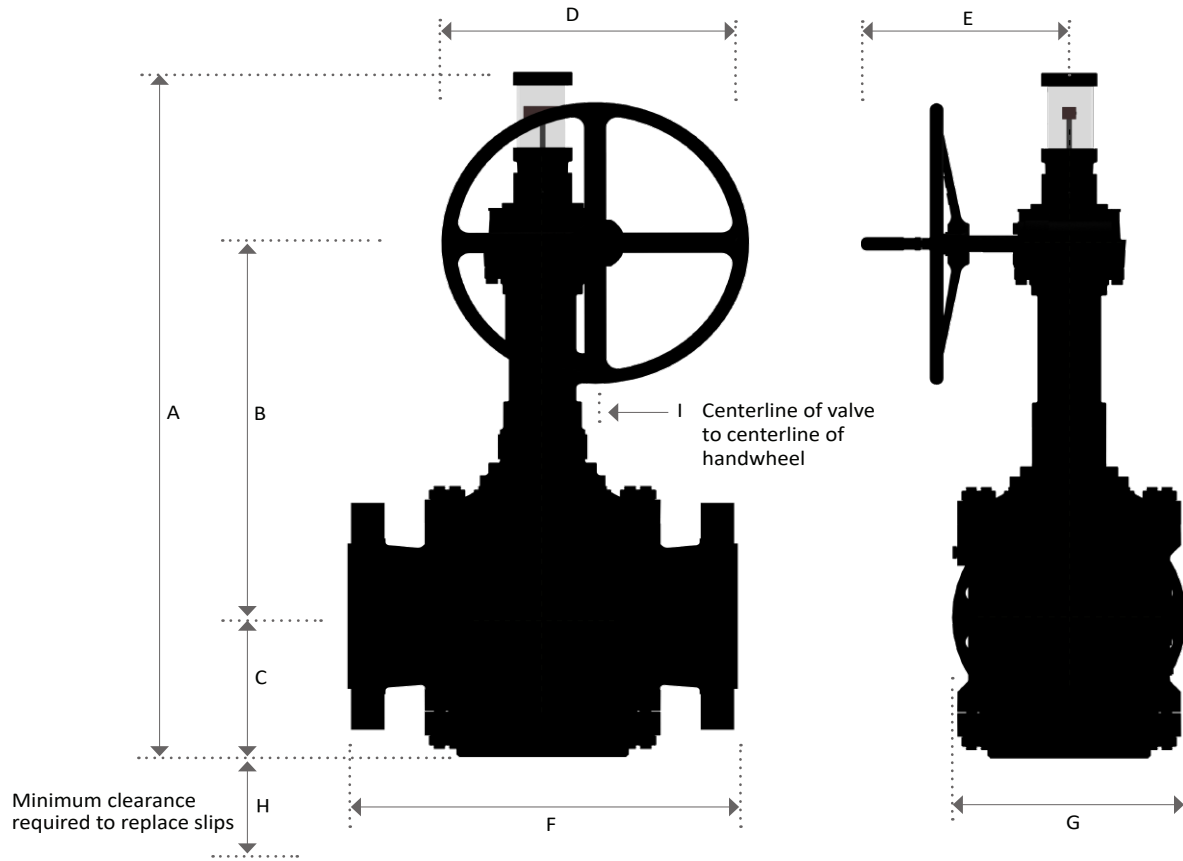
| Class | Size | Oper. | A     |      | B    |      | C    |     | D   |     | E    |     | F    |      | G    |      | H   |      | I   |     | Weight | (Number) & Size Tapped Holes Each Flange |                     |
|-------|------|-------|-------|------|------|------|------|-----|-----|-----|------|-----|------|------|------|------|-----|------|-----|-----|--------|------------------------------------------|---------------------|
|       |      |       | 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  | 78     | 35                                       | 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  | 93     | 42                                       | 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  | 168    | 76                                       | none                |
| 150   | 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  | 249    | 113                                      | (4) 3/4" -10 UNC    |
|       | 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  | 452    | 205                                      | (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  | 605    | 274                                      | (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  | 858    | 389                                      | (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  | 1098   | 498                                      | (4) 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  | 1150   | 522                                      | (8) 1.0" - 8 UNC    |
|       | 18V  | 12G   | 64.9  | 1648 | 38.7 | 983  | 16.0 | 406 | 20  | 508 | 17.5 | 445 | 17   | 432  | 25   | 635  | 30  | 762  | 5   | 127 | 1601   | 726                                      | (8) 1 1/8" - 8 UNC  |
|       | 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 | 3150   | 1429                                     | (4) 1 1/8" - 8 UNC  |
|       | 24V  | 12G   | 77.9  | 1979 | 45.6 | 1158 | 21.8 | 554 | 20  | 508 | 17.5 | 445 | 36   | 914  | 32   | 813  | 37  | 940  | 5   | 127 | 6250   | 2835                                     | (8) 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 | 9535   | 4325                                     | (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 | 16450  | 7462                                     | (12) 1 1/4" - 8 UNC |
|       | 36   | 15G   | 119.2 | 3028 | 76.0 | 1930 | 30.0 | 762 | 32  | 813 | 26   | 660 | 78   | 1981 | 46   | 1168 | 41  | 1041 | 9   | 229 | 23088  | 10473                                    | none                |

V = Designates a valve with a reduced weight design

\* Contact factory for CV data

# Dimensions

## Reduced Port / Gear Operated / Class 300

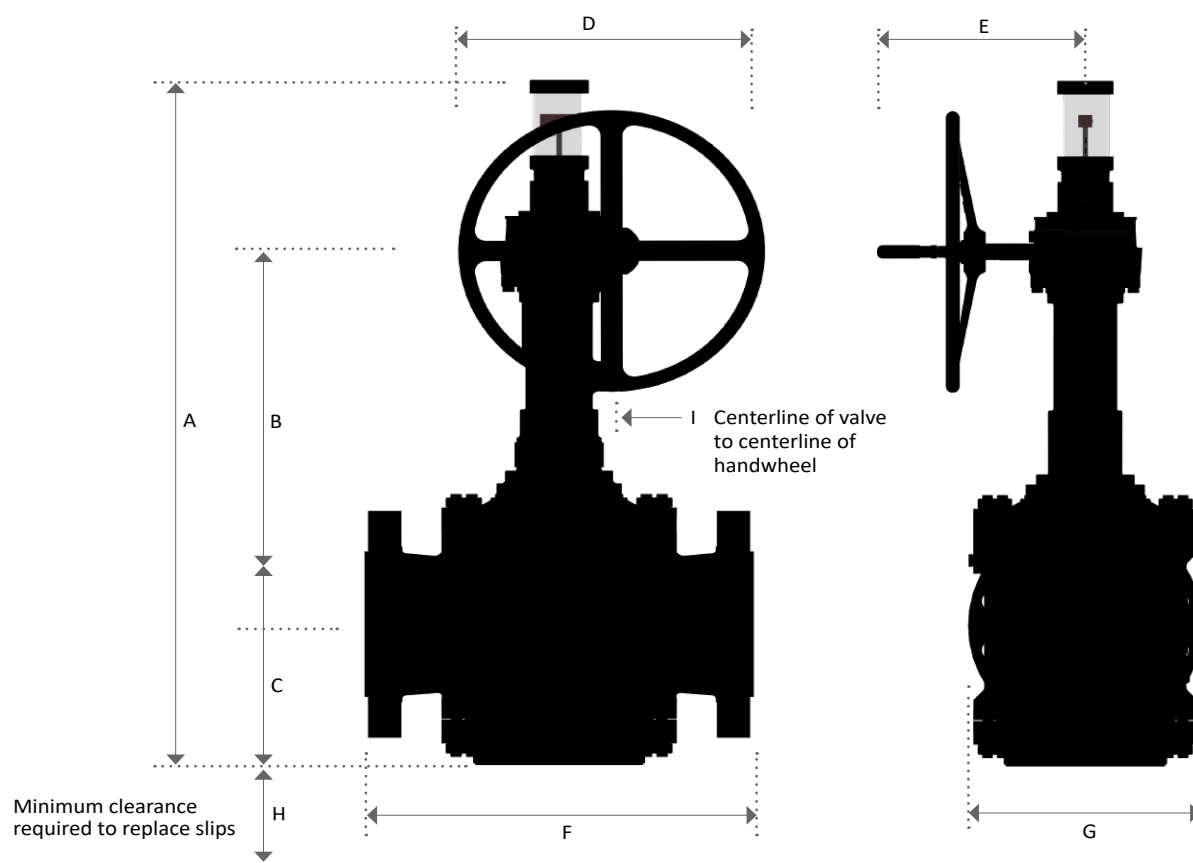


| Class | Size | Oper. | A     |      | B    |      | C    |     | D   |     | E    |     | F    |      | G    |      | H   |      | I   |     | Weight |      | (Number) & Size Tapped Holes Each Flange |
|-------|------|-------|-------|------|------|------|------|-----|-----|-----|------|-----|------|------|------|------|-----|------|-----|-----|--------|------|------------------------------------------|
|       |      |       | 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  | 80     | 36   | 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  | 100    | 45   | 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  | 194    | 88   | 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  | 371    | 168  | 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  | 662    | 300  | (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  | 889    | 403  | (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 | 1451   | 658  | (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 | 1644   | 746  | 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 | 2777   | 1260 | none                                     |
|       | 18   | 12G   | 71.0  | 1803 | 40.5 | 1029 | 17.0 | 432 | 20  | 508 | 17.5 | 445 | 36   | 914  | 28   | 711  | 26  | 660  | 5   | 127 | 4704   | 2134 | (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 | 6203   | 2814 | (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 | 8426   | 3822 | none                                     |
|       | 30   | 15G   | 120.0 | 3048 | 71.0 | 1803 | 32.5 | 826 | 32  | 813 | 26   | 660 | 65   | 1651 | 43   | 1092 | 41  | 1041 | 9   | 229 | 21766  | 9873 | none                                     |

\* Contact factory for CV data

# Dimensions

## Reduced Port / Gear Operated / Class 600

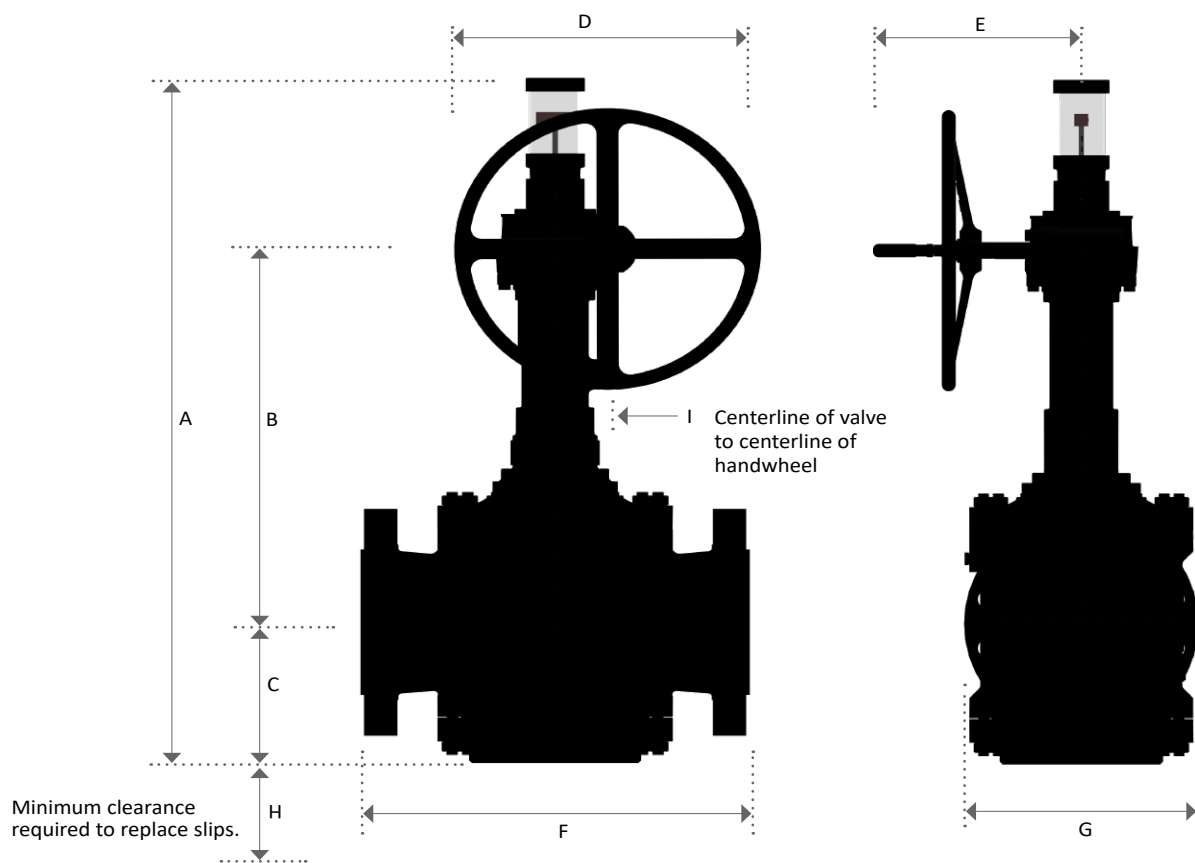


|       |      |       | A     |      | B    |      | C    |     | D   |     | E    |     | F    |      | G    |     | H   |     | I   |     | Weight |      | (Number) & Size             |
|-------|------|-------|-------|------|------|------|------|-----|-----|-----|------|-----|------|------|------|-----|-----|-----|-----|-----|--------|------|-----------------------------|
| Class | Size | Oper. | in.   | mm   | in.  | mm   | in.  | mm  | in. | mm  | in.  | mm  | in.  | mm   | in.  | mm  | in. | mm  | in. | mm  | Lbs    | Kgs  | Tapped Holes<br>Each Flange |
| 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  | 141    | 64   | 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  | 178    | 81   | 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  | 282    | 128  | 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  | 704    | 319  | 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  | 1086   | 493  | 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 | 2027   | 919  | 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 | 2726   | 1236 | 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 | 4715   | 2139 | (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 | 5007   | 2271 | (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 | 6762   | 3067 | (8) 1-5/8"-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 | 10964  | 4973 | none                        |
|       | 24   | 15G   | 107.8 | 2738 | 71.5 | 1816 | 23.5 | 597 | 32  | 813 | 26   | 660 | 55   | 1397 | 37   | 940 | 25  | 635 | 9   | 229 | 14915  | 6765 | (8) 1-7/8"-8 UNC            |

\* Contact factory for CV data

# Dimensions

## Reduced Port / Gear Operated / Class 900



| 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    | kg   |                                          |
| 900   | 3    | 62G   | 35.7   | 907  | 18.4  | 467    | 5.5   | 139.7 | 14  | 356 | 14.6 | 371 | 15   | 381   | 9.8   | 249   | 5   | 178 | 3   | 76  | 308    | 140  | none                                     |
|       | 4    | 75G   | 46.47  | 1180 | 25.06 | 636    | 9.05  | 230   | 20  | 508 | 14.7 | 373 | 18   | 457.2 | 11.5  | 292.1 | 12  | 305 | 3.5 | 89  | 689    | 313  | (4) 1-1/8" -8 UNC                        |
|       | 6    | 75G   | 47.7   | 1212 | 26.2  | 665    | 9.2   | 234   | 20  | 508 | 15.4 | 391 | 24   | 610   | 15    | 381   | 6   | 152 | 4   | 102 | 1486   | 674  | none                                     |
|       | 8    | 12G   | 58.31  | 1481 | 35.18 | 893.48 | 11.76 | 299   | 20  | 508 | 17.5 | 445 | 29   | 736.6 | 18.5  | 470   | 15  | 381 | 5   | 127 | 1815   | 823  | none                                     |
|       | 14   | 14G   | 82.7   | 2100 | 49.9  | 1267   | 19.6  | 498   | 32  | 813 | 23.3 | 592 | 40   | 1016  | 25.3  | 643   | 10  | 254 | 9   | 229 | 7275   | 3300 | none                                     |
|       | 16   | 14G   | 108.97 | 2768 | 71.08 | 1806   | 23.58 | 599   | 32  | 813 | 26   | 660 | 44.5 | 1130  | 27.75 | 705   | 29  | 737 | 9   | 229 | 12125  | 5500 | (12) 1-1/2" -8 UNC                       |

# Torque & Turns Chart

| Class | Size | Model | Torque (ft-lbs) | Turns |
|-------|------|-------|-----------------|-------|
| 150   | 2    | 37H   | 29              | 2     |
|       | 2    | 37G   | 5               | 18    |
|       | 3    | 37H   | 37              | 2     |
|       | 3    | 37G   | 5               | 18    |
|       | 4    | 50H   | 44              | 3     |
|       | 4    | 55G   | 8               | 17    |
|       | 6    | 50H   | 59              | 3     |
|       | 6    | 55G   | 19              | 20    |
|       | 8    | 62G   | 41              | 21    |
|       | 10   | 62G   | 52              | 20    |
|       | 12   | 75G   | 69              | 26    |
|       | 14   | 75G   | 91              | 26    |
|       | 16V  | 75G   | 104             | 28    |
|       | 18V  | 12G   | 125             | 50    |
|       | 20V  | 12G   | 158             | 50    |
|       | 24V  | 12G   | 167             | 62    |
|       | 28   | 14G   | 207             | 45    |
|       | 30   | 15G   | 214             | 56    |
|       | 36   | 15G   | 314             | 57    |

| Class | Size | Model | Torque (ft-lbs) | Turns |
|-------|------|-------|-----------------|-------|
| 300   | 2    | 37H   | 37              | 2     |
|       | 2    | 37G   | 5               | 20    |
|       | 3    | 37H   | 44              | 2     |
|       | 3    | 37G   | 7               | 20    |
|       | 4    | 50H   | 74              | 3     |
|       | 4    | 55G   | 15              | 18    |
|       | 6    | 62G   | 45              | 21    |
|       | 8    | 75G   | 97              | 26    |
|       | 10   | 75G   | 118             | 26    |
|       | 12   | 12G   | 155             | 51    |
|       | 14   | 12G   | 209             | 51    |
|       | 16   | 12G   | 250             | 42    |
|       | 18   | 12G   | 252             | 57    |
|       | 20   | 14G   | 255             | 51    |
|       | 24   | 14G   | 411             | 50    |
|       | 30   | 15G   | 540             | 56    |

| Class | Size | Model | Torque (ft-lbs) | Turns |
|-------|------|-------|-----------------|-------|
| 600   | 2    | 50H   | 89              | 2     |
|       | 2    | 55G   | 18              | 13    |
|       | 3    | 50H   | 161             | 2     |
|       | 3    | 55G   | 28              | 14    |
|       | 4    | 62G   | 38              | 17    |
|       | 6    | 75G   | 97              | 31    |
|       | 8    | 75G   | 123             | 31    |
|       | 10   | 12G   | 184             | 54    |
|       | 12   | 12G   | 188             | 57    |
|       | 14   | 14G   | 323             | 51    |
|       | 16   | 14G   | 296             | 51    |
|       | 18   | 14G   | 476             | 52    |
|       | 20   | 15G   | 562             | 55    |
|       | 24   | 15G   | 898             | 62    |

H = Handwheel      G = Gear Operated  
V = Designates a valve with a reduced weight design

| Class | Size | Model | Torque (ft-lbs) | Turns |
|-------|------|-------|-----------------|-------|
| 900   | 3    | 62G   | 42              | 20    |
|       | 4    | 75G   | 66              | 22    |
|       | 6    | 75G   | 119             | 22    |
|       | 8    | 12G   | 143             | 40    |
|       | 14   | 14G   | 331             | 48    |
|       | 16   | 15G   | 575             | 54    |

## 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.

## Actuator Sizing

Valve choice and actuator sizing depend on factors which include:

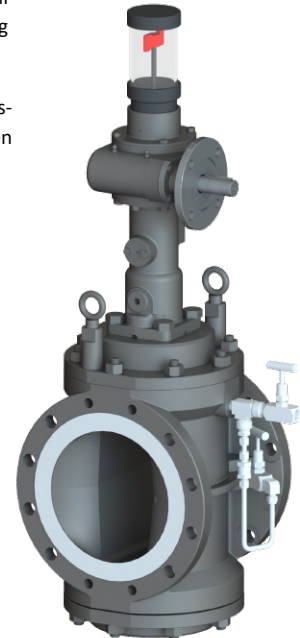
- Service Conditions (Media Type, Temperature and Pressure)
- Access to the Handwheel
- Required Operating Speed
- Available Power Source

## Automation

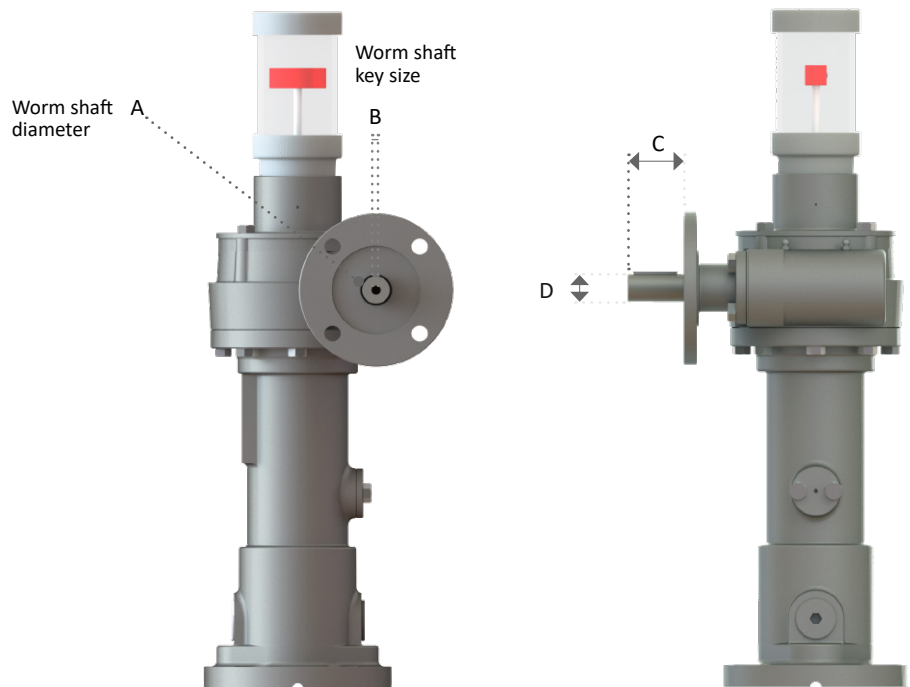
OmniSeal expanding plug valves are available with Motor Adaptation Kits (MAK's) designed to accept most commercially available electric actuators. We can install, set-up and test the actuators prior to shipment of the valves from our facility.

Most ADTR systems for the OmniSeal expanding plug valves incorporate a manually operated vent to atmosphere port as a means to monitor for leakage with the valve in the closed position. For further explanation see pages 12 and 13. Automatic Body Bleed (ABBV) systems can be used in place of the differential thermal relief systems when the Omniseal EPV's are automated. Their intended purpose is to alleviate the need for an operator to manually vent the body to atmosphere when verifying seal integrity. This system utilizes a mechanical relief valve that is opened by the closure of the plug valve.

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



# Motor Adaptation Kits



| Operator | A             | B      | C          | D     | MAST |
|----------|---------------|--------|------------|-------|------|
| 37G      | .865" - .870" | 0.313" | 1.54"      | .98"  | 23   |
| 55G      | 1.00"-1.002"  | 0.250" | 2.60"      | 1.11" | 75   |
| 62G      | 1.245"-1.247" | 0.313" | 2.60"      | 1.35" | 113  |
| 75G      | 1.245"-1.247" | 0.313" | 2.60"      | 1.35" | 225  |
| 85G      | 1.245"-1.247" | 0.313" | 2.60"      | 1.35" | 225  |
| 12G      | 1.245"-1.247" | 0.313" | SEE NOTE 1 | 1.35" | 338  |
| 14G      | 1.618"-1.622" | 0.375" | 3.14"      | 1.82" | 750  |
| 15G      | 1.618"-1.622" | 0.375" | 3.14"      | 1.82" | 1541 |

## Notes:

- (1) Dimension C for 12G operators is 2.50" for F10/FA10 and is 3.50" for F14/FA14 MAKs and above
- (2) Column A dimensions are of the worm shaft diameter itself. Drive Bushing bores should have between .004" and .006" clearance over the shaft dimension.
- (3) Kits contain stainless steel hardware to attach actuators. Customer must specify if actuators utilize Metric or US/Imperial hardware.
- (4) Drive shafts are dual keyed for either handwheel or actuated. Valves are supplied with appropriate key.
- (5) Dimension D is measurement over key.
- (6) MAST is Maximum allowable stem torque in ftlbs.

## Maximum Allowable Torque Values

| Flange Type ISO-5210 | Torque (ft-lbs) | Flange Type MSS SP-102 | Torque (ft-lbs) |
|----------------------|-----------------|------------------------|-----------------|
| F07                  | 30              | FA07                   | 30              |
| F10                  | 73              | FA10                   | 100             |
| F12                  | 184             |                        |                 |
| F14                  | 295             | FA14                   | 400             |
| F16                  | 516             | FA16                   | 800             |
| F25                  | 885             | FA25                   | 1200            |
| F30                  | 1843            | FA30                   | 2000            |
| F35                  | 3688            | FA35                   | 4500            |

# Operator Orientation Options

OmniSeal expanding plug valves with or without MAK's (motor adaptation 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. The available orientation options for each gear operator model are shown in the chart below.

## Available Orientation Positions

| Operator              | A  | 1     | B   | 2     | C   | 3      | D    | 4      | E    | 5      | F    | 6      | G    | 7      | H    | 8      |
|-----------------------|----|-------|-----|-------|-----|--------|------|--------|------|--------|------|--------|------|--------|------|--------|
|                       | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° | 247.5° | 270° | 292.5° | 315° | 337.5° |
| 37G                   | Y  | --    | --  | --    | Y   | --     | --   | --     | Y    | --     | --   | --     | Y    | --     | --   | --     |
| 55G / 62G / 75G / 12G | Y  | --    | Y   | --    | Y   | --     | Y    | --     | Y    | --     | Y    | --     | Y    | --     | Y    | --     |
| 14G / 15G             | Y  | Y     | Y   | Y     | Y   | Y      | Y    | Y      | Y    | Y      | Y    | Y      | Y    | Y      | Y    | Y      |

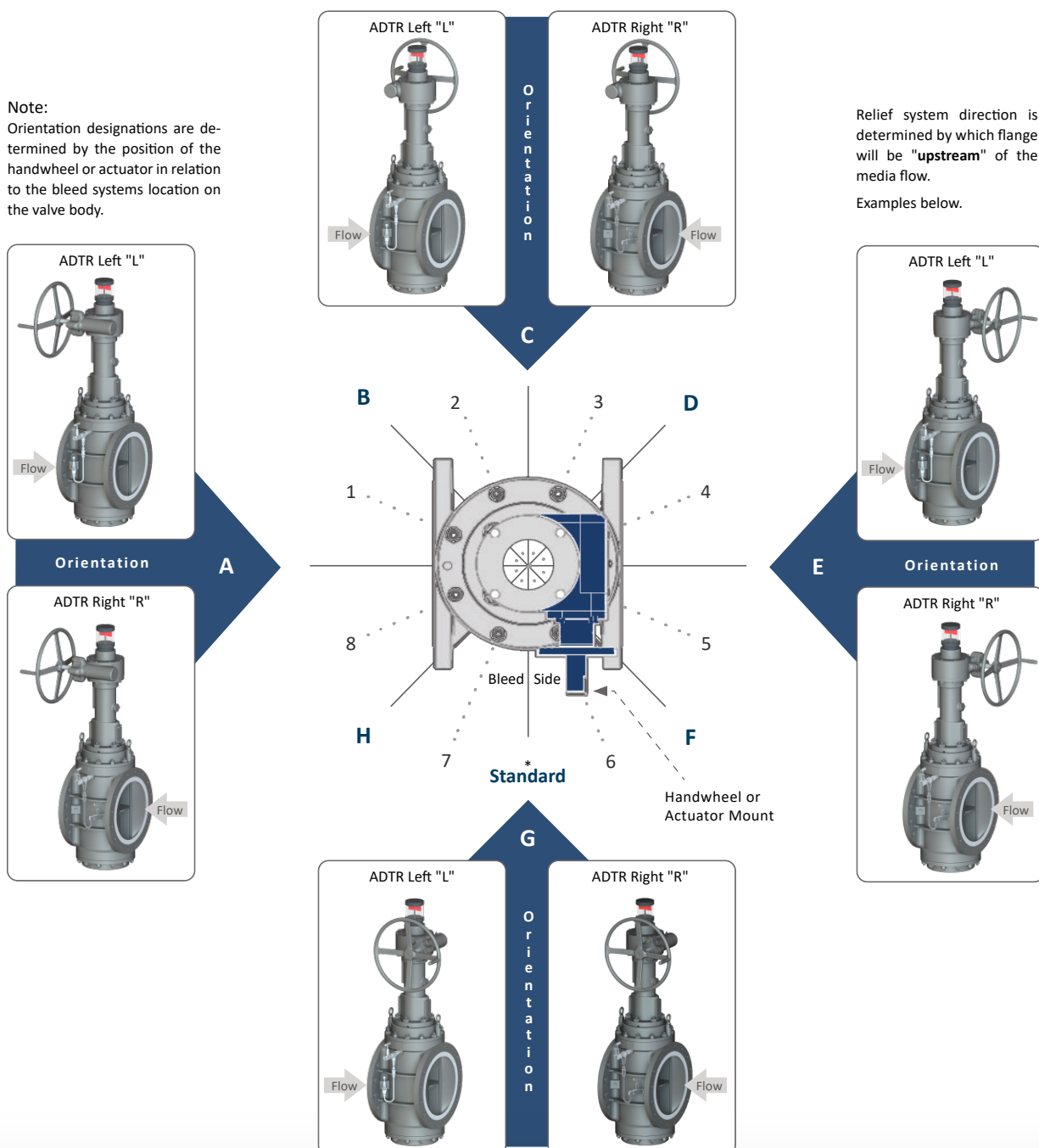
\*STD

### Note:

Orientation designations are determined by the position of the handwheel or actuator in relation to the bleed systems location on the valve body.

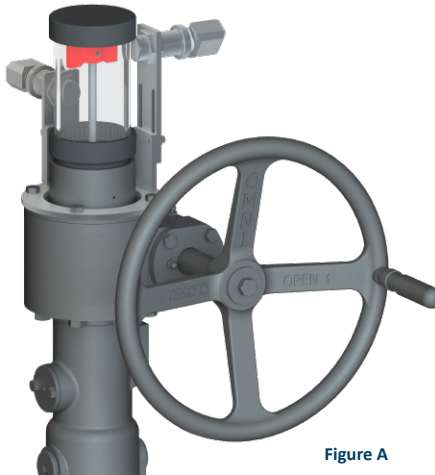
Relief system direction is determined by which flange will be "upstream" of the media flow.

Examples below.



# 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.

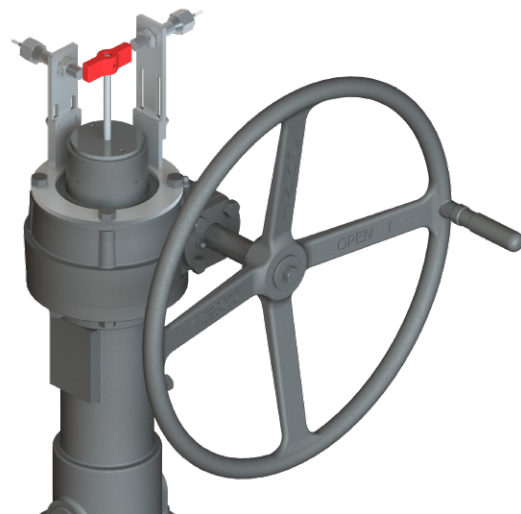
- A1.** UL General Purpose
- A2.** CSA General Purpose
- A3.** ATEX EEx ia IIC/IIB-EEx ib IIC/IIB

An alternative configuration, without the protective cover, is available as shown in **Figure B**. This configuration allows a much larger selection of limit switches to be used. The assembly can be configured with a single "Open" switch or a single "Closed" switch or with both "Open" and "Closed" switches as depicted in the Figure.

The standard switch utilizes a 316 stainless steel housing with a ½" 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 indicating flag is 17-4 PH stainless.

Available hazardous area classifications are as follows.

- B1.** UL General Purpose
- B2.** CSA/cUL General Purpose
- B3.** UL Class 1 Divisions 1 or 2
- B4.** CSA/cUL Class 1 Divisions 1 or 2
- B5.** ATEX/IECEx Zone 1 Exdb or Exde
- B6.** ATEX/IECEx Zone 0 Exia, T3, T4, or T6
- B7.** Hi-Temp to 400°F



**Figure B**

# Position Indicators & 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 customers' 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



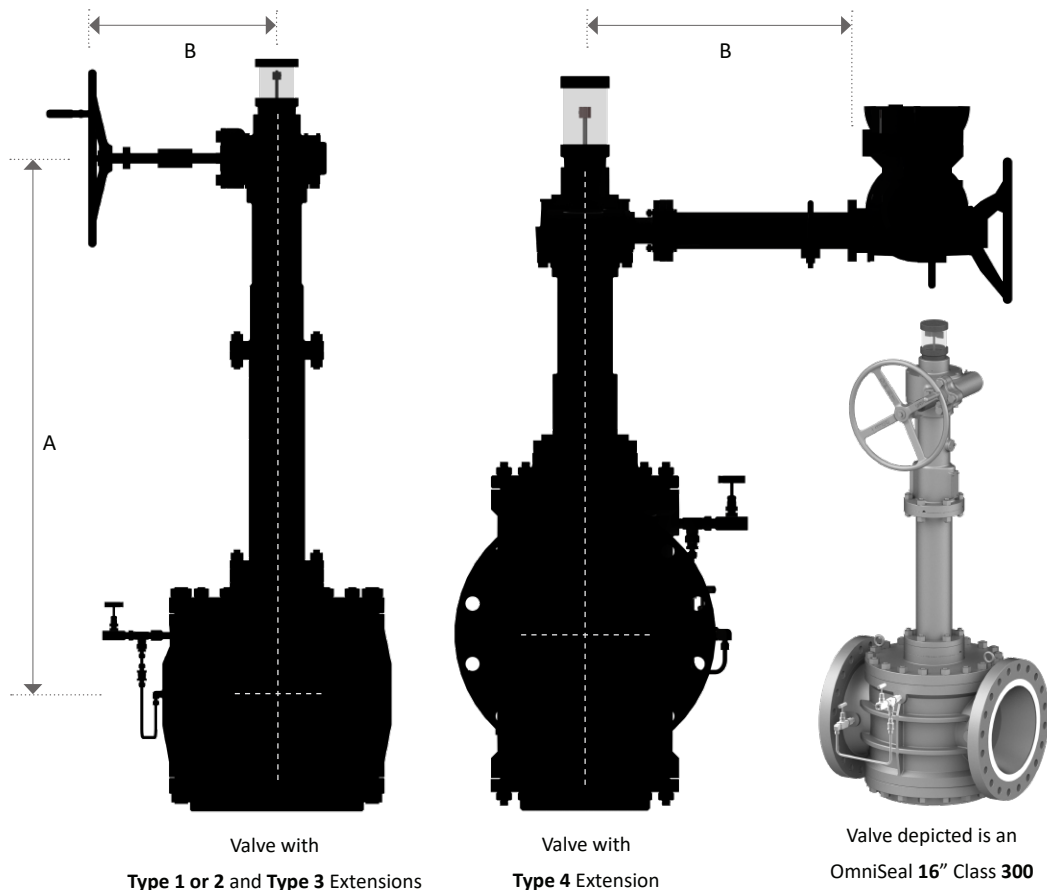
Figure D

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.

# Operator & Stem Extensions

OmniSeal DB&B expanding plug valves are offered with optional stem extensions (**Type 1 or 2**), handwheel extensions (**Type 3**) and/or actuator extensions (**Type 4**).

- **Type 1 and 2** extensions move the operator gearbox away from the flow bore of the valve.
- **Type 3 and 4** extensions move the handwheel or actuator away from the vertical centerline of the valve.
- **Type 1 and 2** extensions are useful when the valve flow bore is located below grade or below a catwalk.
- **Type 3 and 4** extensions are useful when the valve is located a distance away from a catwalk.



## Operator Types

|                                      |                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Type 1</b> – Operator Extension   | Suitable for underground burial. Specify Dimension A when ordering.                                                                                                                                                                                                                                                                         |
| <b>Type 2</b> – Operator Extension   | Not Suitable for underground burial. Specify Dimension A when ordering.                                                                                                                                                                                                                                                                     |
| <b>Type 3</b> – 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 B dimension when ordering.                                                                                                                            |
| <b>Type 4</b> – Actuator Extension   | Due to the weight of the actuator it is advisable to support all actuator extensions. A mounting bracket will be supplied with all extensions for mounting to customer supplied structure. Specify dimension B when ordering and supply either the ISO mounting flange size for the actuator, or supply the actuator make and model number. |

# Replacement Parts & 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)**

Class 150 / 300

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

Class 600 & Above

- (1) Body O-Ring, (1) Backup 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 Adaptation Kits **(MAK)**

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

### 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:

| ANSI Class | Port Type | Valve Size | Operator Model | Materials Temperature | Operator Orientation | ADTR Style | ADTR Direction | MAK Size |
|------------|-----------|------------|----------------|-----------------------|----------------------|------------|----------------|----------|
| Note 1     | Note 2    | Note 3     | Note 4         | Note 5                | Note 6               | Note 7     | Note 8         | Note 9   |
| 150        | R         | 2          | 37H            | ST                    | NA                   | OMNI       | L              | FA07     |
| 300        | F         | 3          | 50H            | LT                    |                      | CUST       | R              | FA10     |
| 600        |           | 4          | 62H            |                       | A                    |            |                | FA12     |
| 900        |           | 6          |                |                       | B                    |            |                | FA14     |
|            |           | 8          | 37G            |                       | C                    |            |                | FA16     |
|            |           | 10         | 55G            |                       | D                    |            |                | FA25     |
|            |           | 12         | 62G            |                       | E                    |            |                | FA30     |
|            |           | 14         | 75G            |                       | F                    |            |                |          |
|            |           | 16         | 12G            |                       | G                    |            |                | F07      |
|            |           | 18         | 14G            |                       | H                    |            |                | F10      |
|            |           | 20         | 15G            |                       |                      |            |                | F12      |
|            |           | 24         |                |                       | 1                    |            |                | F14      |
|            |           | 28         |                |                       | 2                    |            |                | F16      |
|            |           | 30         |                |                       | 3                    |            |                | F25      |
|            |           | 36         |                |                       | 4                    |            |                | F30      |
|            |           |            |                |                       | 5                    |            |                |          |
|            |           |            |                |                       | 6                    |            |                |          |
|            |           |            |                |                       | 7                    |            |                |          |
|            |           |            |                |                       | 8                    |            |                |          |

## Example 1

Figure #

|                                                                                                                        |   |   |   |   |   |     |   |    |   |   |   |      |   |   |   |  |   |                                       |
|------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|-----|---|----|---|---|---|------|---|---|---|--|---|---------------------------------------|
| 150                                                                                                                    | / | R | / | 8 | / | 62G | / | ST | / | G | / | Omni | / | L | / |  | = | 150 / R / 8 / 62G / ST / G / OMNI / L |
| 8" 150, Reduced Port, 62G Gear Operated, WCC Body/Bonnet, G Orientation, Omni ADTR Option, ADTR to Left Flange, No MAK |   |   |   |   |   |     |   |    |   |   |   |      |   |   |   |  |   |                                       |

## Example 2

Figure #

|                                                                                                                         |   |   |   |   |   |     |   |    |   |    |   |      |   |   |   |  |   |                                        |
|-------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|-----|---|----|---|----|---|------|---|---|---|--|---|----------------------------------------|
| 150                                                                                                                     | / | R | / | 4 | / | 50H | / | ST | / | NA | / | Omni | / | L | / |  | = | 150 / R / 4 / 50H / ST / NA / OMNI / L |
| 4" 150, Reduced port, 50H Handwheel Operated, WCC Body/Bonnet, Orientation is NA, Omni ADTR option, ADTR to Left Flange |   |   |   |   |   |     |   |    |   |    |   |      |   |   |   |  |   |                                        |

## Example 3

Figure #

|                                                                                                                                |   |   |   |    |   |     |   |    |   |   |   |      |   |   |   |      |   |                                               |
|--------------------------------------------------------------------------------------------------------------------------------|---|---|---|----|---|-----|---|----|---|---|---|------|---|---|---|------|---|-----------------------------------------------|
| 150                                                                                                                            | / | R | / | 12 | / | 75G | / | LT | / | C | / | Omni | / | L | / | FA10 | = | 150 / R / 12 / 75G / LT / C / OMNI / L / FA10 |
| 12" 150, Reduced Port, 75G Gear Operated, LCC Body/Bonnet, C Orientation, Omni ADTR Option, ADTR to Left Flange, with FA10 MAK |   |   |   |    |   |     |   |    |   |   |   |      |   |   |   |      |   |                                               |

## Example 4

Figure #

|                                                                                                                                   |   |   |   |   |   |     |   |    |   |   |   |      |   |   |   |      |   |                                              |
|-----------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|-----|---|----|---|---|---|------|---|---|---|------|---|----------------------------------------------|
| 300                                                                                                                               | / | F | / | 6 | / | 62G | / | LT | / | G | / | Cust | / | L | / | FA10 | = | 300 / F / 6 / 62G / LT / G / CUST / L / FA14 |
| 6" 300, Full Port, 62G Gear Operated, LCC Body/Bonnet, G Orientation, Customer Specified ADTR, ADTR to Left Flange, with FA14 MAK |   |   |   |   |   |     |   |    |   |   |   |      |   |   |   |      |   |                                              |

## Notes:

- (1) This is the ANSI class rating for the valve flanges.
- (2) This is the port type for the valve. "R" is reduced port (Standard). "F" is full port (Piggable).
- (3) This is the bore size in inches.
- (4) This is the Omni operator model. "H" refers to direct drive handwheels. "G" refers to gear operators.
- (5) This is the materials of construction temperature configuration of the valve. "ST" is for standard temp. "LT" is for low temp. See page 7 for more detail.
- (6) This is the gear operator orientation relative to the face of the valve with the ADTR. See page 21 for orientation options available for each operator model. For handwheel operated valves use "NA".
- (7) This is the ADTR style for the valve. "Omni" refers to one of the standard Omni ADTR options. "Cust" refers to a customer specified ADTR design.
- (8) This is the ADTR direction toward the upstream side of the valve. See page 21 for additional detail.
- (9) This is the ISO size designation for the motor adapter kit (MAK), if applicable. "FA" sizes are imperial (standard) sizes, "F" sizes are metric.

## Exclusive Manufacturer for OmniSeal DBB/DIB Expanding Plug Valves

ALL OmniSeal DB&B expanding plug valves are exclusively manufactured by Omni Valve's trusted business partner Ghatge Patil Industries LTD (GPI), in its facility in India. GPI manufactures, tests and monograms the valves in a base configuration before they are accessorized, additionally tested, coated, or otherwise "finished" to customer or project specifications.

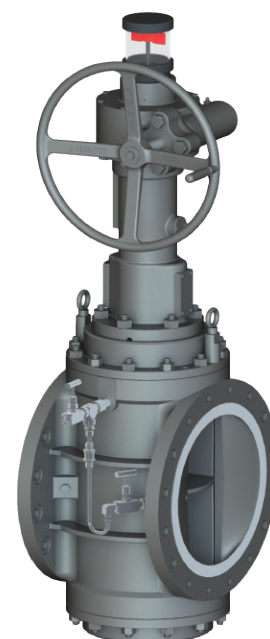
Most OmniSeal DBB valves are shipped to Omni Valve in the USA and finished at its facility before being delivered to customers. However, GPI also has the capability to finish valves at its facility and can do so if it is appropriate based on circumstances and project parameters.

GPI has an ownership position in Omni Valve and our teams regularly collaborate to ensure consistency in engineering, planning, procurement, quality, and delivery. Customers can therefore be sure that all OmniSeal DBB valves are of the highest quality, regardless of whether they are finished and shipped from Omni Valve or GPI.



## Trademarks

|           |                                      |
|-----------|--------------------------------------|
| Viton     | DuPont Performance Elastomers L.L.C. |
| Go Switch | Emerson Process Management           |



OmniSeal Expanding Plug Valves



ABSOLUTE "ZERO" LEAKAGE

## OmniSeal Expanding Plug Valves

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REQUEST FOR QUOTE [omnivalve.com/rfq.php](https://omnivalve.com/rfq.php)

### Product Warranty

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