



OmniSeal® DBB expanding plug valves in service



OmniSeal® DBB expanding plug valves during installation



OmniSeal® DBB expanding plug valves are ideally suited for product blending & refining applications

OmniSeal® expanding plug valves are designed for applications where positive shut-off, verifiable zero leakage and double block and bleed (DBB) 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 DBB 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. It also has significant design advantages when compared with some other single DBB valve designs.

All OmniSeal® DBB expanding plug valves are manufactured and monogrammed per API 6D and ISO 9001, fire tested per API 607 and API 6FA and have specific design certifications such as CE/PED and/or TA-Luft where appropriate.

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Applications

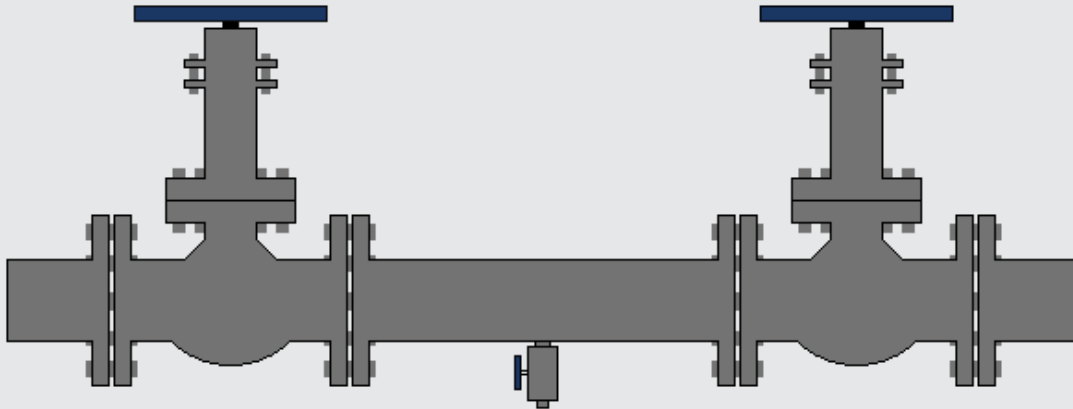
OmniSeal® expanding plug valves are ideal for applications that require positive shut-off, verifiable zero leakage and double block and bleed (DBB) capability. Some of the more common applications include:

- **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® DBB is specifically designed for applications of this type.
- **PRODUCT ISOLATION:** Secure isolation of Biofuels or other process-sensitive fluids is critical for environmental and process safety. The OmniSeal® DBB'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® DBB 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® DBB 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® DBB provides positive shutoff and zero leak rate, thereby ensuring accurate calculation of transfer quantity.
- **OFFSHORE PLATFORMS:** Valve leakage on an offshore platform can result in damage to equipment and the environment. The OmniSeal® DBB 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® DBB 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® DBB 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® DBB valve's verifiable zero leak rate ensures that maintenance, repair, leak location and hydrant testing can be done safely and quickly.

Single Valve DBB Solution

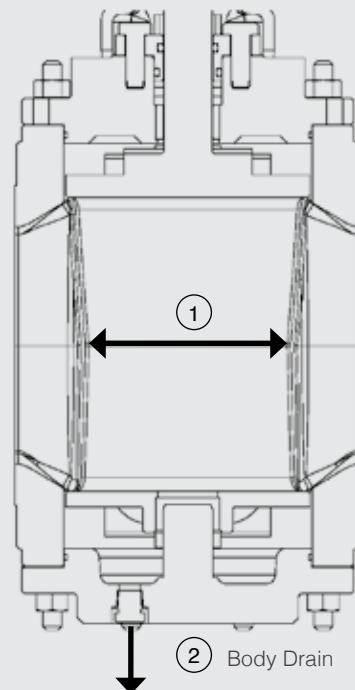


The OmniSeal® replaces antiquated two-valve systems with a single DBB valve solution. The OmniSeal® has two seats (slips) and provides a bubble tight seal.



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

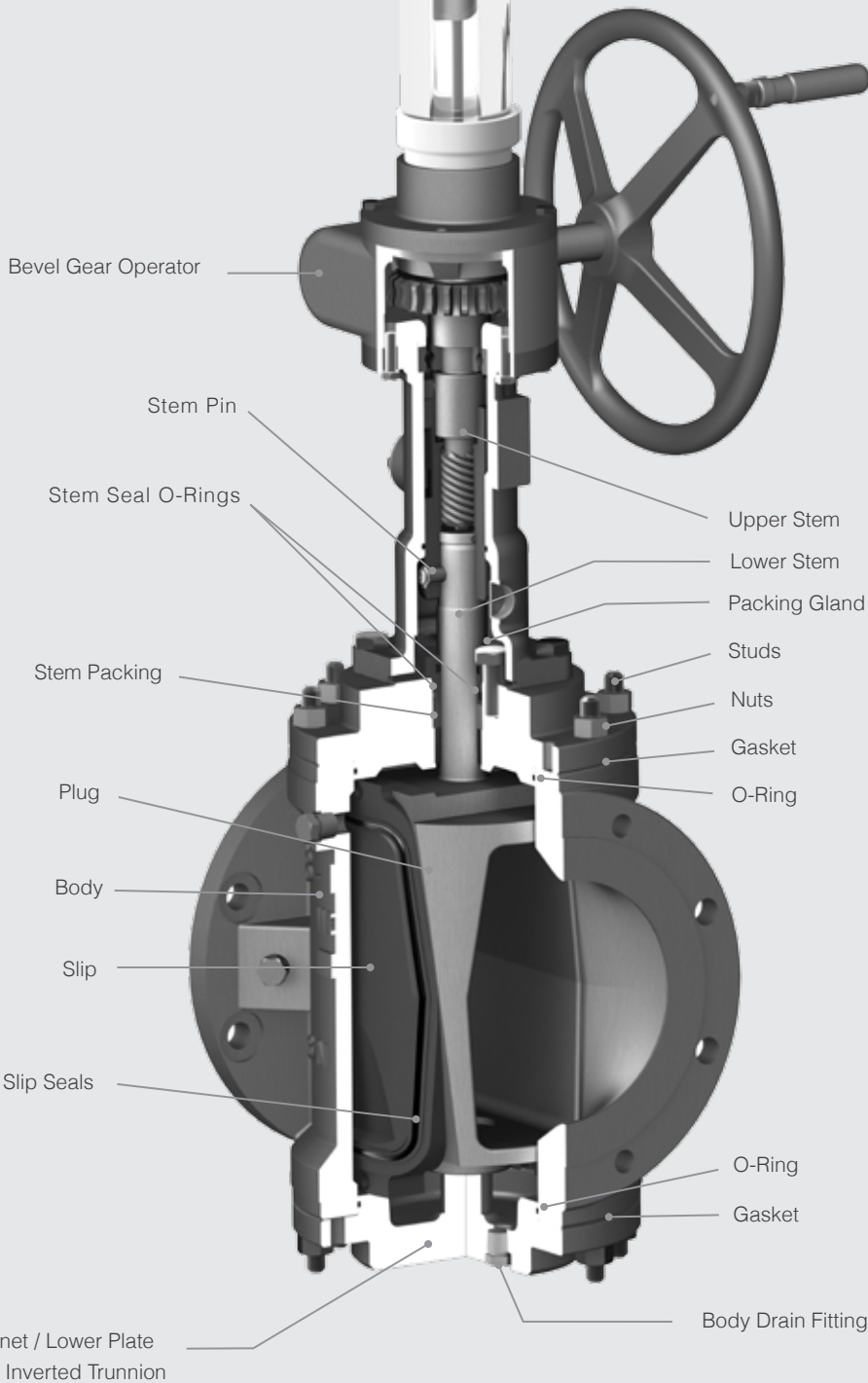
1. The upstream and downstream slip seals provide the same function as the two block valves shown above.
2. The OmniSeal® body (serving as the spool piece shown above) bleeds to verify seal integrity.



Typical Valve Configuration

GEAR OPERATED VALVE

Waterproof and Vented Indicator Cover



HANDWHEEL OPERATED VALVE



Size Range & Materials of Construction

AVAILABLE SIZES AND PRESSURES

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

HW = Available Only as Handwheel Operated

GO = Available Only as Gear Operated

HW/GO = Available as Handwheel or Gear Operated

* These sizes have lifting lugs

STANDARD MATERIALS OF CONSTRUCTION

COMPONENT	MATERIAL
BODY	Cast Carbon Steel - ASTM A216 WCC (Electroless Nickel Plated - Entire Internal Surface)
BONNET/LOWERPLATE	Cast Carbon Steel - ASTM A216 WCC
PLUG & STEM	Cast Carbon Steel - ASTM A216 WCC (Electroless Nickel Plated - Entire Component)
SLIPS	Cast Ductile Iron ASTM A395 Gr. 60-40-18 - Manganese Phosphate Coated
PACKING GLAND	ASTM A487 CA6NM or A36 Plate
STEM PACKING	Flexible Graphite
GASKETS	Flexible Graphite
O-RINGS & SLIP SEALS	Viton B
STUDS & NUTS	ASTM A193 Gr. B7 / A194 Gr. 2H
RELIEF SYSTEM TUBING	AISI 316 SS / AISI 304 SS
RELIEF SYSTEM NEEDLE VALVES	AISI 316 SS
RELIEF SYSTEM CHECK VALVE	AISI 316 SS

OPTIONAL MATERIALS OF CONSTRUCTION & OTHER CUSTOMIZED FEATURES

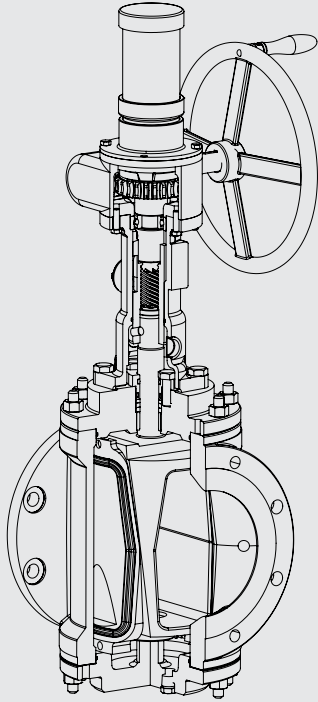
OmniSeal® DBB Expanding Plug Valves are also available in a variety of alternate configurations or materials of construction depending on customer preferences, specifications, severe temp ranges and / or service conditions.

Some common alternatives include valves:

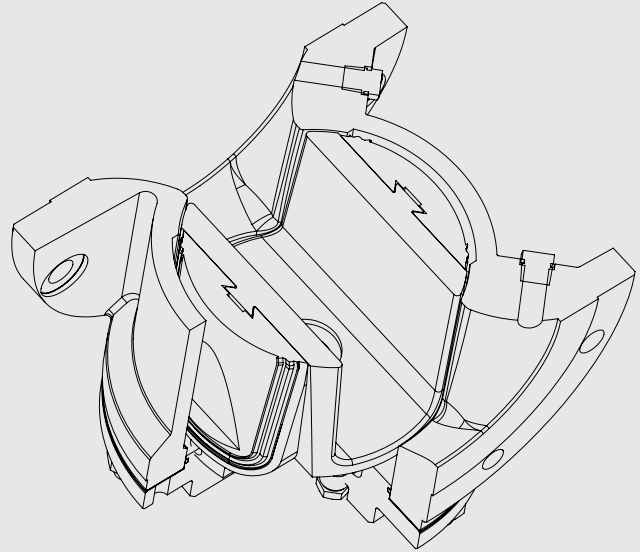
- Constructed to meet requirements of NACE MR0175 / ISO 15156
- With flanges drilled to DIN standard
- Subjected to more rigorous customer-specified extended testing regimes
- With application of special coatings based on customer specifications, service conditions or cosmetic preferences
- Constructed to withstand extreme high or low temperatures - *Please consult factory*
- With customer specified limit switches or other accessories

Valve Operation

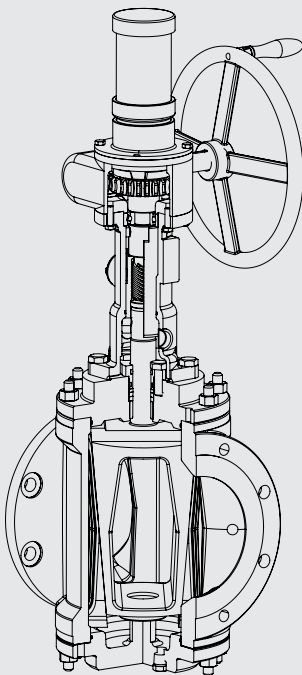
FULL OPEN POSITION



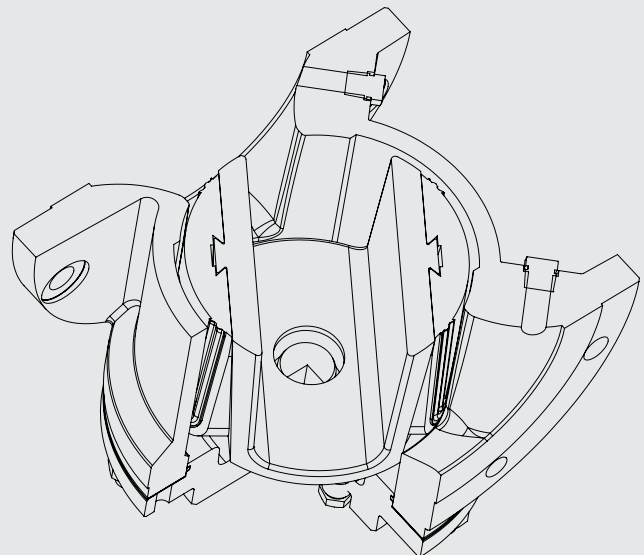
In the fully open position, the resilient seals are positioned out of the flow path and protected within the body of the valve itself.



PARTIALLY CLOSED POSITION

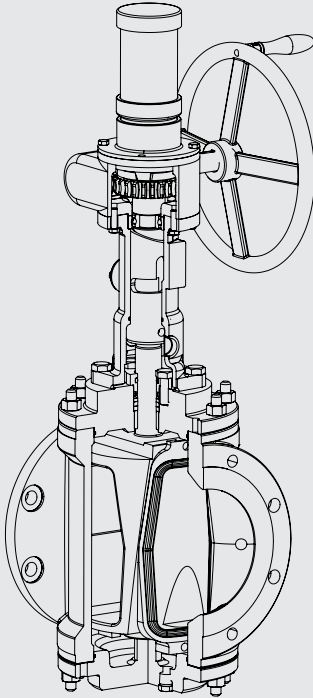


As the valve is cycled from the fully open to closed position, the plug begins a 90 degree rotation. During the entire rotation of the plug the resilient seals located on both slips are retracted away from the body. This ensures that there is no rubbing or scraping action on these resilient seals during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

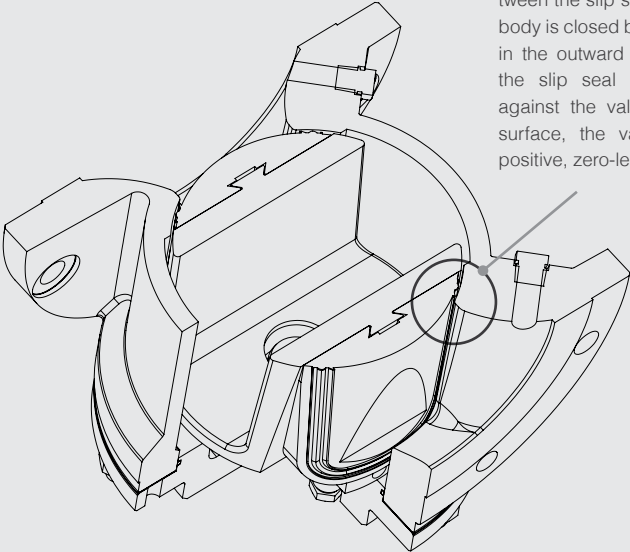


Valve Operation

CLOSED POSITION PRIOR TO SEALING

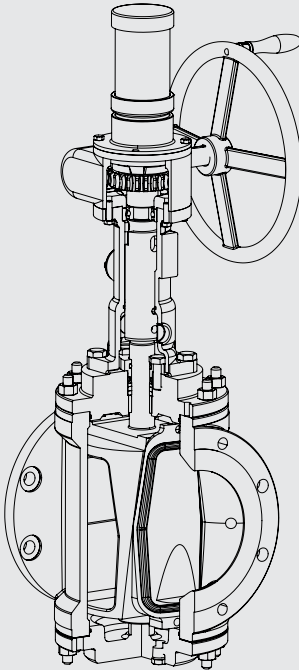


After the plug has been rotated 90 degrees from the fully open to fully closed position, the resilient seals on both slips have not yet been forced outward and into the seating position. This expansion only occurs with continued rotation of the hand-wheel or actuator.

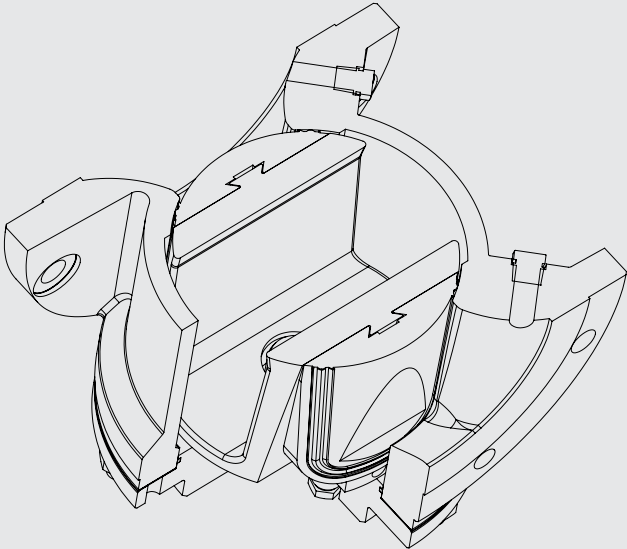


With continued rotation of the handwheel, this small gap between the slip seal and the valve body is closed by the slip moving in the outward direction. Once the slip seal is firmly seated against the valve body sealing surface, the valve achieves a positive, zero-leakage seal.

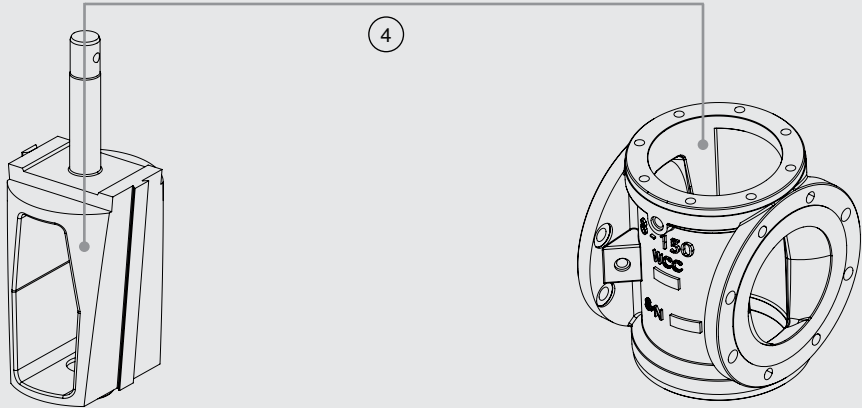
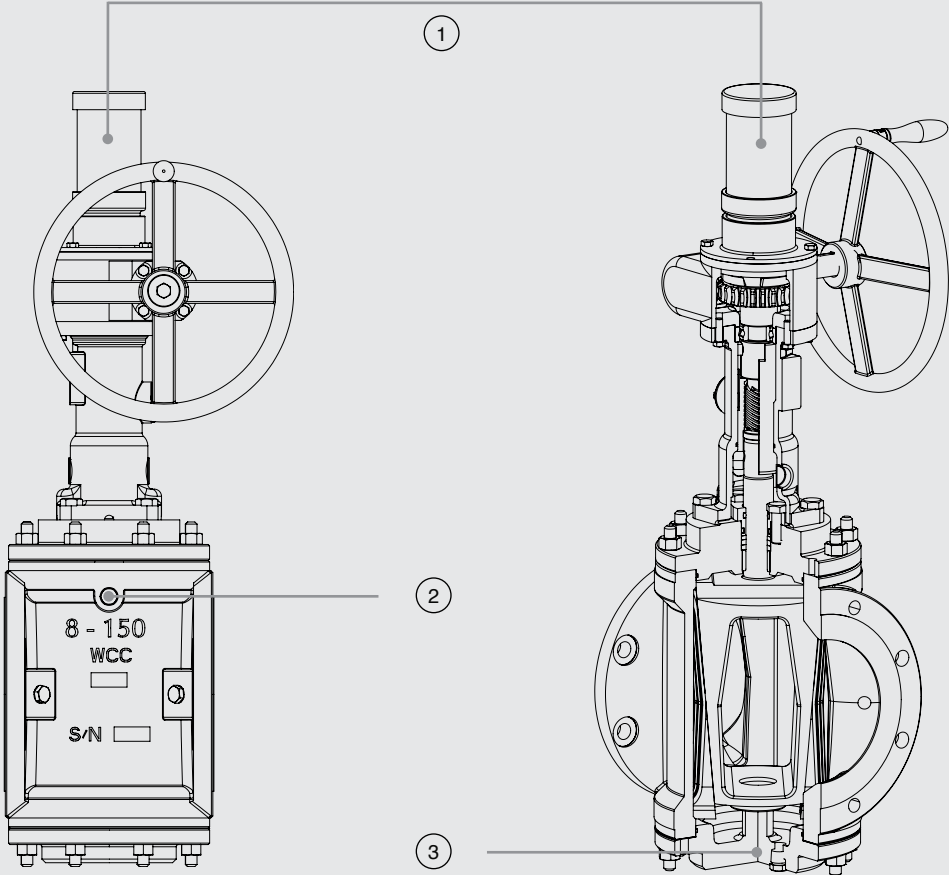
FULLY CLOSED (SEALED) POSITION



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 resilient seals on the slips to seal against the valve body.



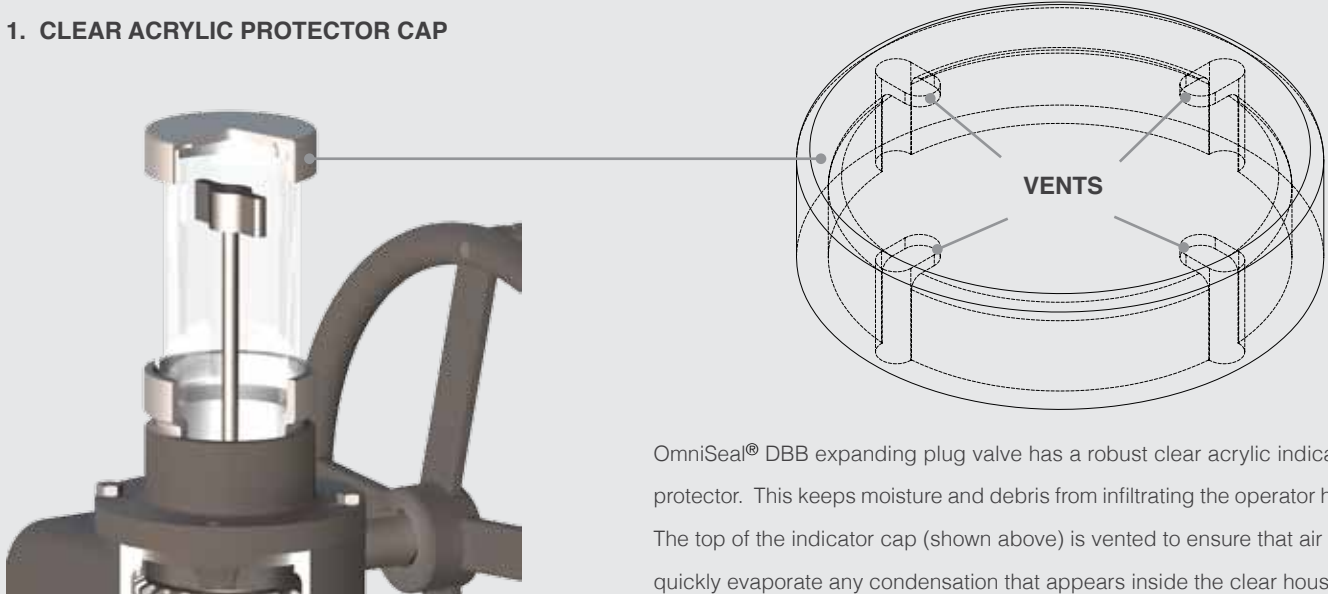
Design Features



Design Features

OmniSeal® DBB expanding plug valves have a number of design features that set it apart from competitive offerings.

1. CLEAR ACRYLIC PROTECTOR CAP



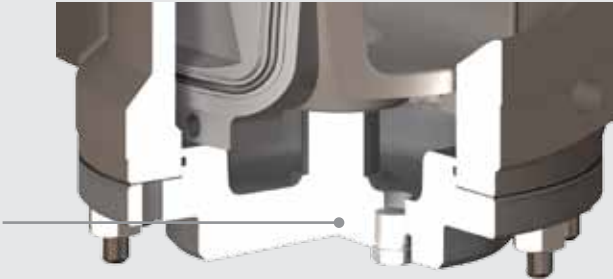
OmniSeal® DBB expanding plug valve has a robust clear acrylic indicator flag protector. This keeps moisture and debris from infiltrating the operator housing. The top of the indicator cap (shown above) is vented to ensure that air flow will quickly evaporate any condensation that appears inside the clear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

2. LOCATION OF RELIEF SYSTEM PORT

Some competitive DBB 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. On the OmniSeal®, this 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.

3. LOWER TRUNNION DESIGN

The lower trunnion of the OmniSeal® DBB valve is an integral part of the lower bonnet and is not part of the plug. This design feature means that 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.

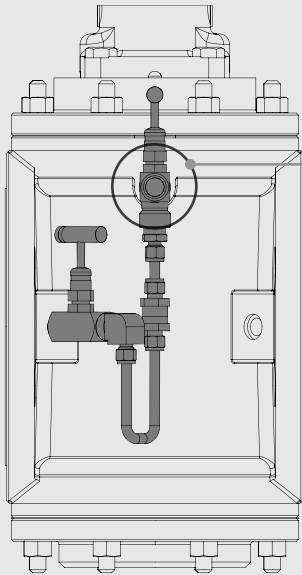


4. SURFACE TREATMENT OF BODY CAVITY AND PLUG

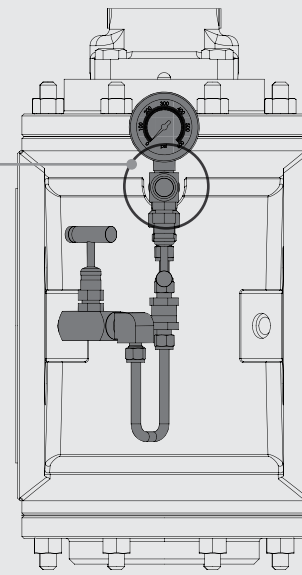
The interior cavity of the valve body and the entire plug are plated with electroless nickel to ensure a corrosion-free sealing surface for slip seals.

Relief Systems

MANUAL BLEED WITH THERMAL RELIEF TO UPSTREAM

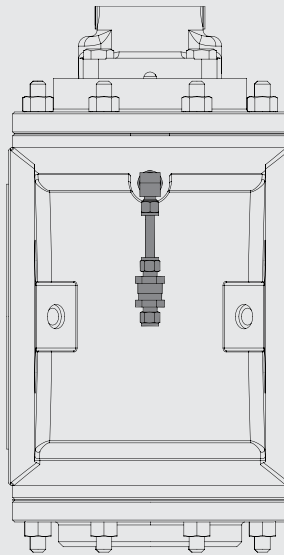


MANUAL BLEED WITH THERMAL RELIEF TO UPSTREAM - WITH GAUGE

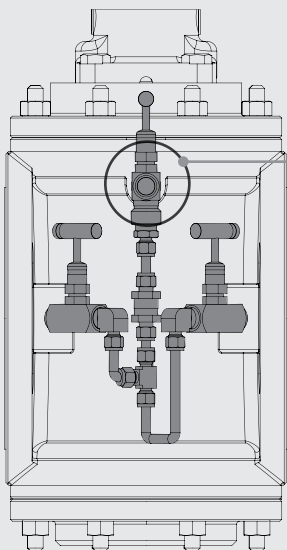


Manual Relief Valve

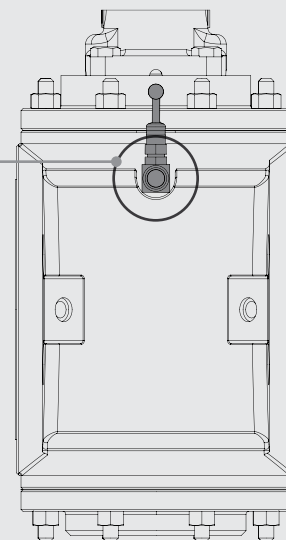
THERMAL RELIEF TO ATMOSPHERE



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



MANUAL BLEED TO ATMOSPHERE



Manual Relief Valve

The OmniSeal® DBB expanding plug valve can be delivered with a variety of relief systems. Some of the more common relief systems are:

STANDARD : MANUAL BLEED WITH THERMAL RELIEF TO UPSTREAM

This is the standard relief systems offered on the OmniSeal® DBB valve. It is designed to relieve excess pressure in the valve cavity due to thermal expansion when the valve is in the closed position. It is similar to a thermal relief to atmosphere system; however, it has a manual valve that provides both manual and automatic relief capabilities. The thermal relief system will relieve pressure to the upstream if differential pressure exceeds 25 psi.

IMPORTANT: 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.

MANUAL BLEED WITH THERMAL RELIEF TO UPSTREAM - WITH GAUGE

This relief system is designed to relieve excess pressure in the valve cavity due to thermal expansion. It is similar to a thermal relief to upstream system; however, it uses a gauge to measure the valve seal integrity. Using this system a positive seal can be verified at all times without dispersing any line media. The thermal relief system will relieve to upstream when differential pressure exceeds 25 psi.

THERMAL RELIEF TO ATMOSPHERE

This relief system is designed to relieve excess pressure in the valve cavity due to thermal expansion when the valve is in the closed position. This is an automatic system that relieves to the upstream when differential pressure exceeds 25 psi (can be set at 50 psi upon request).

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

This system is designed to relieve excess pressure in the valve cavity and downstream components due to thermal expansion when the valve is in the closed position. This system operates in the same manner as the standard relief system; however it also has a thermal relief from downstream to upstream. The thermal relief system will relieve to upstream if differential pressure exceeds 25 psi. The upstream and downstream relief systems operate independently.

IMPORTANT: In order for the automatic relief system to function properly, the valves that control the upstream and downstream relief must be kept open and the valve that controls the manual bleed to atmosphere must be kept closed.

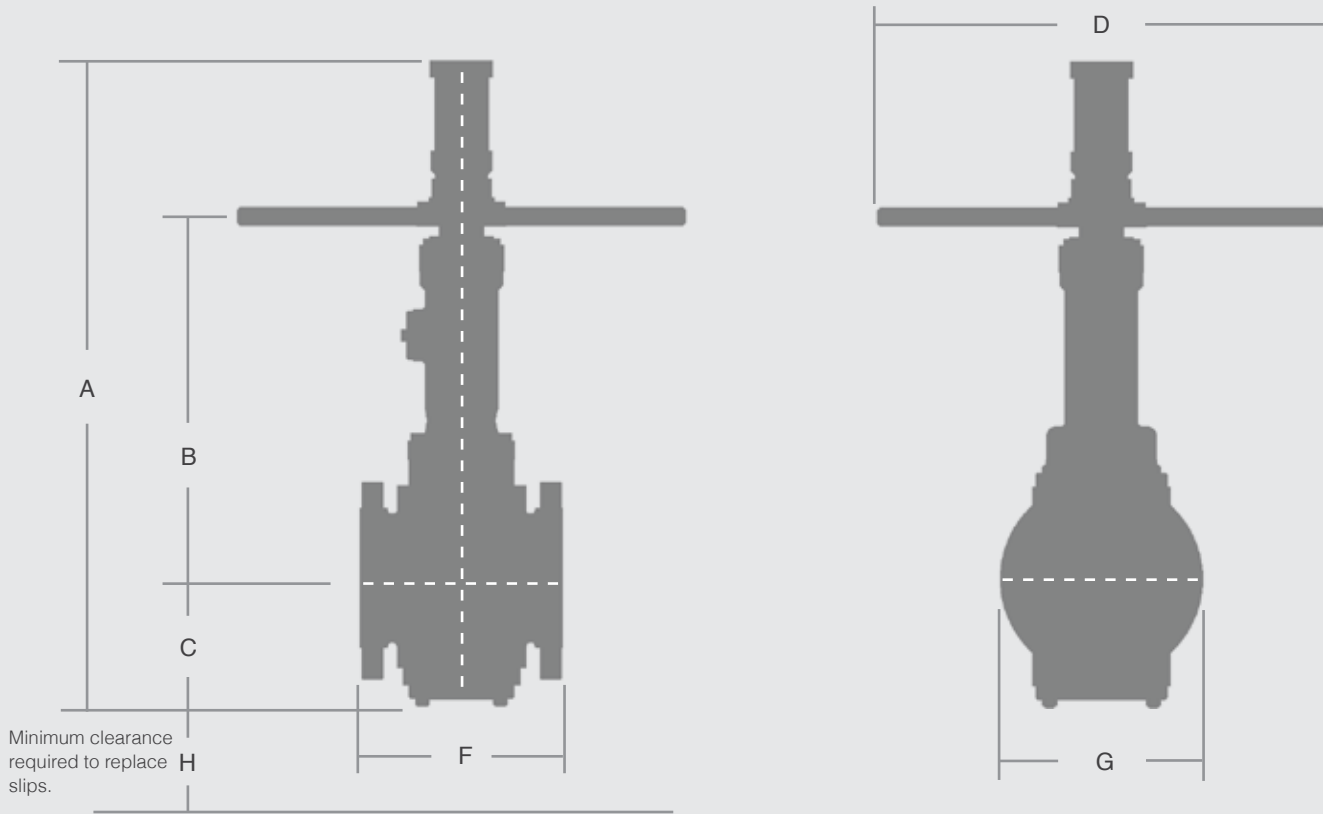
MANUAL BLEED TO ATMOSPHERE

This system is operated manually. When the valve is in the closed position, the manual bleed valve can be opened to confirm seal integrity. The manual bleed valve should be closed before opening the valve bore.

CUSTOMER-SPECIFIED RELIEF SYSTEMS

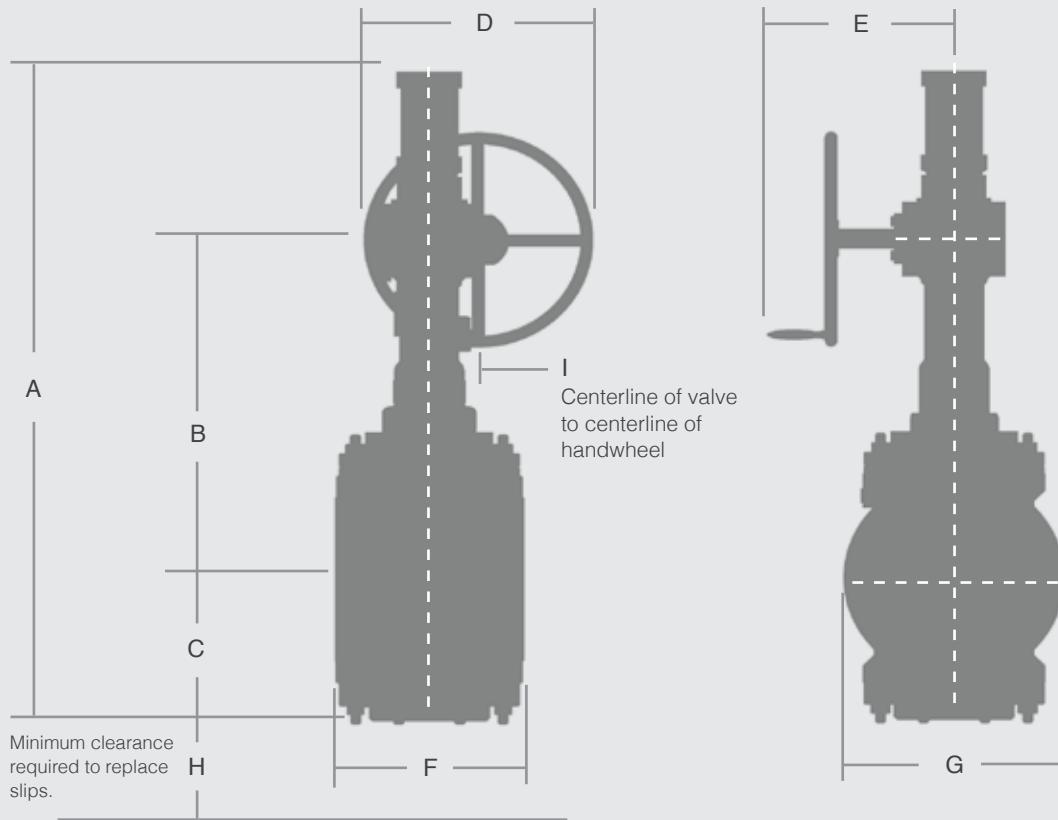
The OmniSeal® DBB valve is also available with welded or other customized relief systems. Please contact Omni Valve for more details.

Dimension Tables



CLASS	SIZE	OPER.	A		B		C		D		F		G		H		WEIGHT		(NUMBER) & SIZE TAPPED HOLES EACH FLANGE	CV (GPM)
			in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs	kgs		
ANSI 150	2	37H	18	457	10.6	269	4	102	10	254	7	179	6	152	3	76	46	21	none	202
	3	37H	18	457	10.6	269	4	102	10	254	8	203	7.5	191	3	76	59	27	none	208
	4	50H	27.5	699	16	406	6	152	20	508	9	229	8.8	224	4.5	114	132	60	none	594
	6	50H	31.5	800	18	457	7.5	191	20	508	10.5	267	11	279	8	203	196	89	(4) 3/4"-10 UNC	1438
ANSI 300	2	37H	18	457	10.6	269	4	102	10	254	8.5	216	6.5	165	3	76	52	24	none	212
	3	37H	18	457	10.6	269	4	102	10	254	11.1	282	8.25	210	3	76	73	33	none	223
	4	50H	27.5	699	16	406	5.5	140	20	508	12	305	10	254	5	127	158	72	none	624
ANSI 600	2	50H	24.5	622	15.5	394	5.5	140	20	508	11.5	292	6.5	165	2.5	64	100	45	none	288
	3	50H	26	660	16	406	6	152	20	508	14	356	8.3	211	3.5	89	142	64	none	300

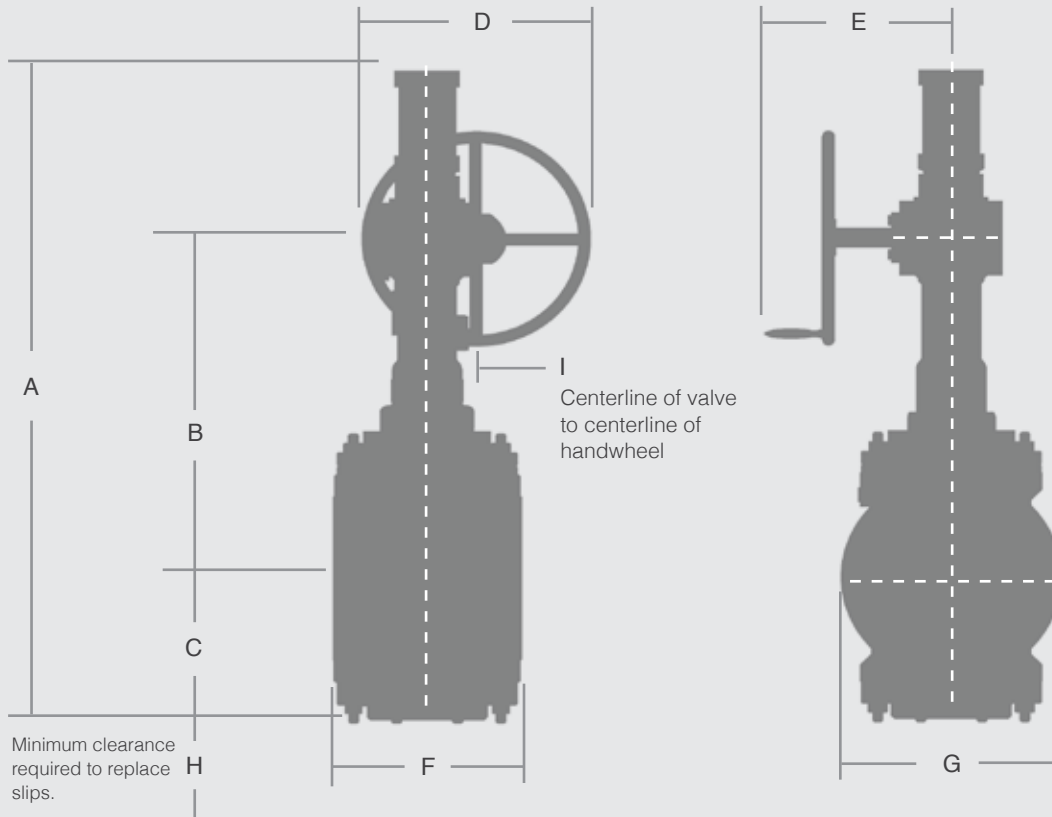
Dimension Tables



CLASS	SIZE	OPER.	A		B		C		D		E		F		G		H		I		WEIGHT		(NUMBER) & SIZE TAPPED HOLES EACH FLANGE	CV (GPM)
			in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs	kgs		
ANSI 150	4	55G	30	763	16.1	409	6	152	10	254	10.5	267	9	229	8.8	224	4.5	114	1.8	45	148	67	none	594
	6	55G	31	787	17.5	445	8.5	216	10	254	10.5	267	10.5	267	11	279	8	203	1.8	45	214	97	(4) 3/4"-10 UNC	1438
	8	62G	42.5	1080	22	559	9.2	235	14	356	12.5	318	11.5	292	13.5	343	11	279	3	76	428	195	(4) 3/4"-10 UNC	2428
	10	62G	46	1168	24	610	11	279	14	356	14.5	368	13	330	16	406	14	356	3	76	522	237	(4) 7/8"-9 UNC	3588
	12	75G	55	1397	31	787	12.5	318	20	508	14.5	368	14	356	19	483	16	406	3.5	89	832	378	(4) 7/8"-9 UNC	4012
	14	75G	58	1473	32.5	826	14.3	363	20	508	14.5	368	15	381	21	533	19	483	3.5	89	1074	487	(4) 1.0"-8 UNC	5500
	16	12G	65	1651	39	991	16	406	20	508	17.5	445	16	406	23.5	597	21	533	5	127	1472	669	(8) 1.0"-8 UNC	7016
	18	12G	60	1524	36	914	14	356	20	508	18	457	34	864	25	635	14	356	5	127	2658	1206	none	10900
	18V	12G	64.3	1632	38	965	16.3	413	20	508	18	457	17	432	25	635	23	584	5	127	1407	638	(8) 1 1/8"-8 UNC	7000
	20	12G	63	1600	37	940	15.3	389	20	508	18	457	40	1016	27.5	704	17	432	5	127	3306	1503	none	15730
	20V	12G	68	1727	39.3	1010	16.3	413	20	508	18	457	32	813	27.5	699	26	660	5	127	2860	1297	(8) 1 1/4"-8 UNC	15700
	24	12G	75	1905	44	1118	21	533	20	508	18	457	48	1219	32	813	20	508	5	127	6264	2841	none	24000
	24V	12G	72.8	1848	41.3	1054	21.5	546	20	508	18	457	36	914	32	813	28	711	5	127	3830	1737	(8) 1 3/8"-8 UNC	24000
	30	14G	97.3	2471	59	1499	25.5	648	32	813	26	660	60	1524	38.8	986	30	762	9	229	13900	6305	(6) 1 1/4"-8 UNC	33000
	36	15G	119.2	3028	76	1930	30	762	32	813	26	660	78	1981	46	1168	30	762	9	229	20600	9344	none	48000

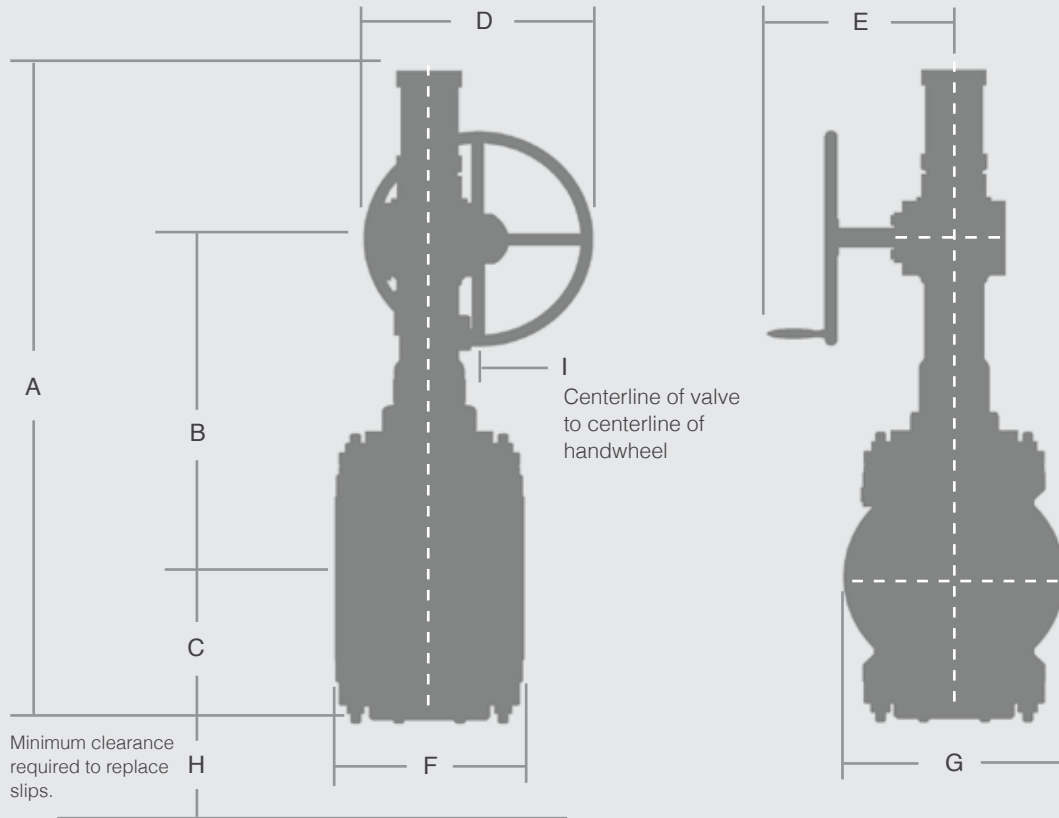
(V) Designates a valve with a reduced face-to-face dimension versus the Omni standard pattern

Dimension Tables



CLASS	SIZE	OPER.	A		B		C		D		E		F		G		H		I		WEIGHT		(NUMBER) & SIZE TAPPED HOLES EACH FLANGE	CV (GPM)
			in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm		
ANSI 300	4	55G	30	763	15.5	394	5.5	140	10	254	10.5	267	12	305	10	254	5	127	1.8	45	171	78	none	624
	6	62G	39	991	20.5	521	7.7	196	14	356	12.5	318	15.9	403	12.5	318	8	203	3	76	342	156	none	1776
	8	75G	49	1245	28	711	9.5	241	20	508	14.5	368	16.5	419	15	381	11	279	3.5	89	658	299	(4) 7/8" -9 UNC	3008
	10	75G	51.8	1316	29	737	11	279	20	508	14.5	368	18	457	17.5	445	13	330	3.5	89	878	399	(4) 1.0"-8 UNC	3550
	12	12G	61	1549	36.5	927	14	356	20	508	18	457	19.8	502	20.5	521	16	406	5	127	1402	637	(8) 1 1/8"-8 UNC	4712
	14	12G	58.5	1486	34.5	876	14.5	368	20	508	18	457	30	762	23	584	15	381	5	127	1990	903	none	6000
	16	12G	60.3	1532	36.5	927	13.5	343	20	508	18	457	33	838	25.5	648	19	483	5	127	2662	1207	none	9400
	18	12G	71	1803	40.5	1029	17	432	20	508	18	457	36	914	28	711	13	330	5	127	3550	1610	none	11500
	20	14G	81.4	2068	48	1219	20	508	32	813	26	660	39	991	30.5	775	14	356	9	229	4155	1885	none	16300
	24	14G	92	2337	50.5	1283	25.5	648	32	813	26	660	52	1321	36	914	17	432	9	229	8150	3697	none	27000
30	15G	120	3048	71	1803	32.5	826	32	813	26	660	65	1651	43	1092	28	711	9	229	15300	6940	none	33500	

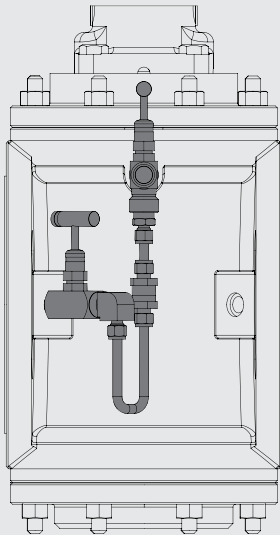
Dimension Tables



CLASS	SIZE	OPER.	A		B		C		D		E		F		G		H		I		WEIGHT		(NUMBER) & SIZE TAPPED HOLES EACH FLANGE	CV (GPM)
			in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs	kg		
ANSI 600	2	55G	27	686	15.5	394	5.5	140	10	254	10.5	267	11.5	292	6.5	165	2.5	64	1.8	46	108	49	none	288
	3	55G	29	737	16	406	6	152	10	254	10.5	267	14	356	8.3	211	3.5	89	1.8	46	151	68	none	300
	4	62G	33	838	19	483	5.7	145	14	356	14.5	368	17	432	10.8	274	3.5	89	3	76	275	125	none	850
	6	75G	45.6	1158	26	660	8	203	20	508	14.5	368	22	559	14	356	10	254	3.5	89	700	318	none	2265
	8	75G	48.8	1229	27	686	10	254	20	508	14.5	368	26	660	16.5	419	12	305	5	127	1100	499	none	3600
	10	12G	58.4	1483	36.5	927	11.5	292	20	508	18	457	31	787	20	508	8	203	5	127	1975	896	none	5100
	12	12G	61.6	1565	38	965	13.7	348	20	508	18	457	33	838	22	559	10	254	5	127	2532	1148	none	9300
	14	14G	75.9	1928	47	1194	16	406	32	813	26	660	35	889	23.8	724	10	254	9	229	4100	1860	(4) 1 ³ / ₈ "-8 UNC	9500
	16	14G	75.7	1923	47	1194	15.8	401	32	813	26	660	39	991	27	686	14	356	9	229	4300	1950	none	11000
	20	15G	99.4	2525	69.5	1765	20.5	521	32	813	26	660	47	1194	32	813	14	356	9	229	9500	4318	none	16500
24	15G	107.8	2738	71.5	1816	23.5	597	32	813	26	660	55	1397	37	940	12	305	9	229	15000	6804	(8) 1 ⁷ / ₈ "-8 UNC	27500	

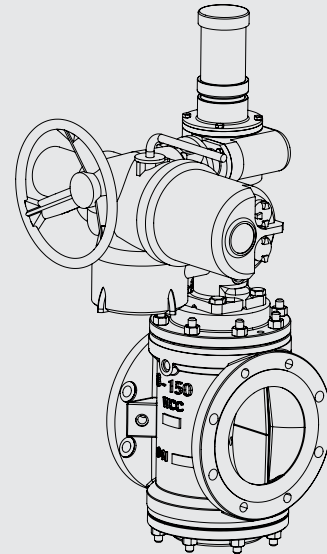
Automation

OmniSeal® DBB expanding plug valves are available with Motor Adapter Kits (MAK's) designed to accept most commercially available electric actuators.



When OmniSeal® DBB valves are automated, it is necessary to employ some type of body cavity pressure relief system.

This is due to thermal expansion (**see pages 12 and 13**). If a relief system is not employed the valve could be difficult to operate or could become stuck in the closed position.



ACTUATOR SIZING

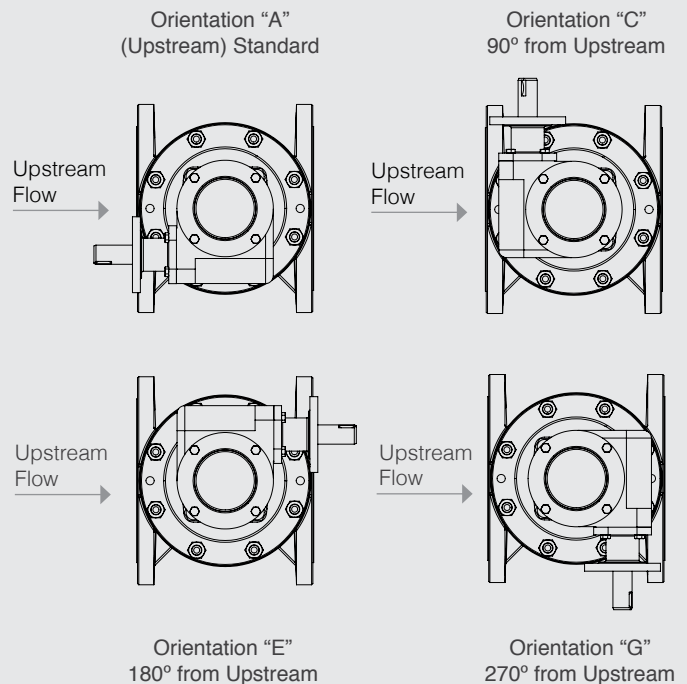
Valve choice and actuator sizing depend on a number of factors:

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

Selection of the proper valve and electric actuator can be a highly specialized task and is the responsibility of the end-user.

STANDARD MOUNTING CONFIGURATIONS

OmniSeal® DBB valves with MAK's can be delivered in a variety of mounting configurations. Some of the standard configurations are:



Torque and Turns Chart



HANDWHEEL

GEAR OPERATOR

CLASS ANSI 150

SIZE	MODEL	TORQUE (FT-LBS)	TURNS
2	37H	46	1.8
3	37H	114	2
4	50H	123	2.7
6	50H	163	3
8	N/A		
10			
12			
14			
16			
18			
18V			
20			
20V			
24			
24V			
30			
36			

MODEL	TORQUE (FT-LBS)	MAST (4)	TURNS	WORMSHAFT DIA. (in.) *	KEY SIZE (in.)	WORMSHAFT EXT. (in.)
N/A						
55G	7	9	20	1.000 / 1.002	.25 X .25	5.000
55G	19	24	17	1.000 / 1.002	.25 X .25	5.000
62G	41	51	20	1.245 / 1.247	.3125 X .25	5.000
62G	52	65	25	1.245 / 1.247	.3125 X .25	5.000
75G	70	88	28	1.245 / 1.247	.3125 X .25	5.000
75G	92	115	28	1.245 / 1.247	.3125 X .25	5.000
12G	104	130	45	1.245 / 1.247	.3125 X .25	5.000
12G	125	156	40	1.245 / 1.247	.3125 X .25	5.000
12G	104	130	46	1.245 / 1.247	.3125 X .25	5.000
12G	158	198	45	1.245 / 1.247	.3125 X .25	5.000
12G	150	188	45	1.245 / 1.247	.3125 X .25	5.000
12G	167	209	53	1.245 / 1.247	.3125 X .25	5.000
12G	161	201	56	1.245 / 1.249	.3125 X .25	5.000
14G	207	259	62	1.618 / 1.622	.3125 X .25	9.640
15G	Consult Factory					

CLASS ANSI 300

SIZE	MODEL	TORQUE (FT-LBS)	TURNS
2	37H	120	1.8
3	37H	148	2
4	50H	175	2.7
6	N/A		
8			
10			
12			
14			
16			
18			
20			
24			
30			

MODEL	TORQUE (FT-LBS)	MAST (4)	TURNS	WORMSHAFT DIA. (in.) *	KEY SIZE (in.)	WORMSHAFT EXT. (in.)
N/A						
55G	19	24	20	1.000 / 1.002	.25 X .25	5.000
62G	49	61	17	1.245 / 1.247	.3125 X .25	5.000
75G	105	131	21	1.245 / 1.247	.3125 X .25	5.000
75G	138	173	25	1.245 / 1.247	.3125 X .25	5.000
12G	184	230	41	1.245 / 1.247	.3125 X .25	5.000
12G	209	261	43	1.245 / 1.247	.3125 X .25	5.000
12G	250	313	45	1.245 / 1.247	.3125 X .25	5.000
12G	252	315	54	1.245 / 1.247	.3125 X .25	5.000
14G	255	319	56	1.618 / 1.622	.3125 X .25	9.640
14G	Consult Factory					
15G						

CLASS ANSI 600

SIZE	MODEL	TORQUE (FT-LBS)	TURNS
2	50H	161	1.8
3	50H	173	2
4	N/A		
6			
8			
10			
12			
14			
16			
18			
20			

MODEL	TORQUE (FT-LBS)	MAST (4)	TURNS	WORMSHAFT DIA. (in.) *	KEY SIZE (in.)	WORMSHAFT EXT. (in.)
55G	19	24	13	1.000 / 1.002	.25 X .25	5.000
55G	28	35	16	1.000 / 1.002	.25 X .25	5.000
62G	38	48	18	1.245 / 1.247	.3125 X .25	5.000
75G	117	146	29	1.245 / 1.247	.3125 X .25	5.000
75G	129	161	29	1.245 / 1.247	.3125 X .25	5.000
12G	185	231	46	1.245 / 1.247	.3125 X .25	5.000
12G	219	274	46	1.245 / 1.247	.3125 X .25	5.000
12G	244	305	43	1.245 / 1.247	.3125 X .25	5.000
14G	323	404	55	1.618 / 1.622	.3125 X .25	9.640
15G	Consult Factory					
15G						

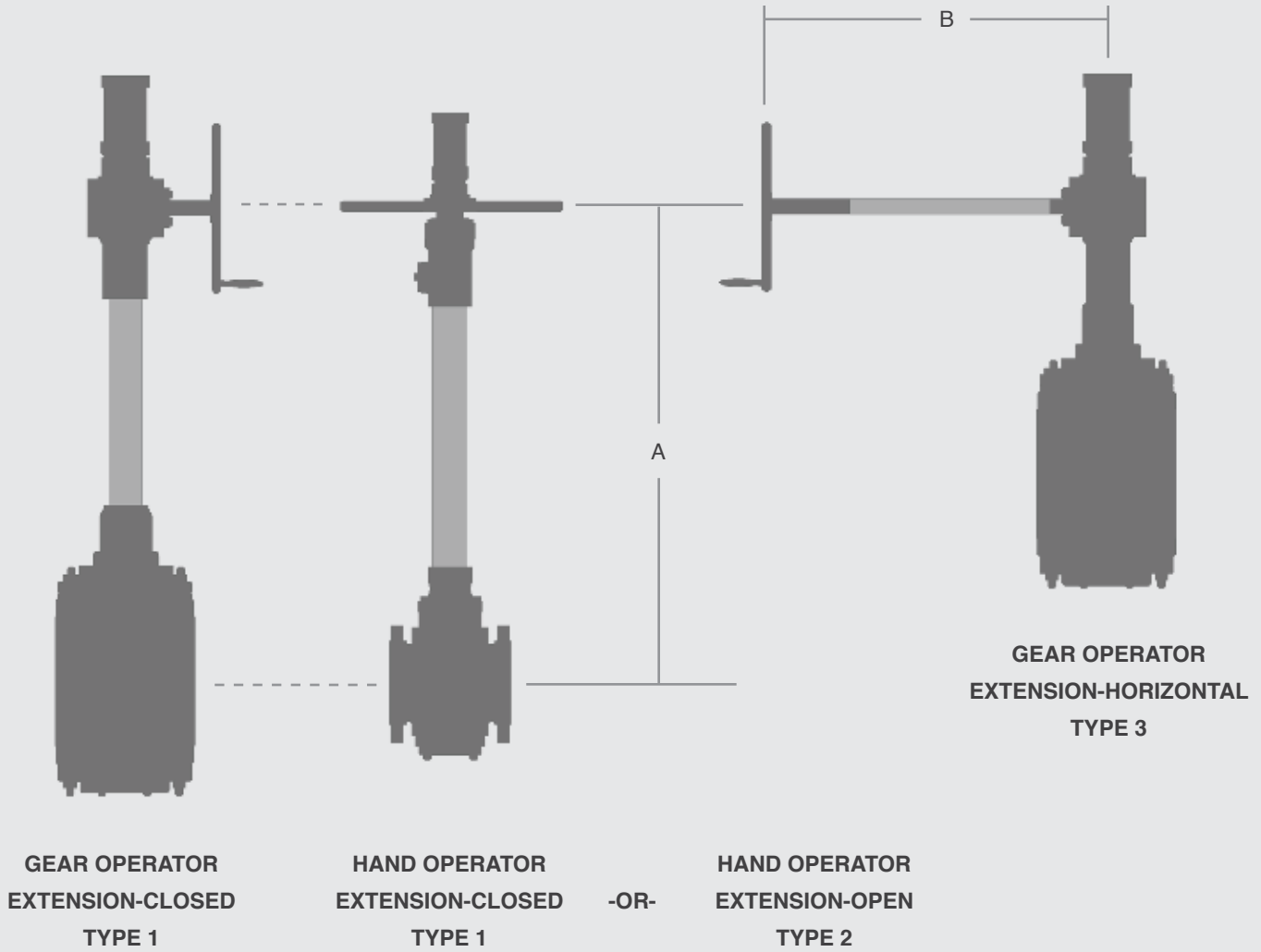
* These are the dimensions of the worm shaft diameter itself.
Drive bushing bore should have between .004 and .006 clearance over shaft dimension.

NOTES

(1) Torque value to unseat valve at maximum Δ P. There is no safety factor built in by Omni. (2) Omni gear operator rotation: Model 14G can be rotated 30 Degrees. Model 55G can be rotated 90 Degrees. Model 12G, 62G & 75G can be rotated 45 degrees (3) The OmniSeal DBB is a "lift & turn" valve. The components that allow the plug valve to operate by lifting the stem before it rotates are built into the gear box. It will not function with other gear operators. (4) The MAST (Maximum Allowable Stem Torque) is reported at 125% of break torque for each valve size at maximum operating pressure. Actuators should be set not to exceed this torque value when used in conjunction with specified valve sizes. Absolute MAST values for each operator are the largest reported value for any given operator; however, Omni urges users to operate within the parameters given for each valve size in order to minimize possibility of damage to the operator or valve due to over-torque.

Stem Extensions

OmniSeal® DBB expanding plug valves can be supplied with vertical or horizontal stem extensions (or a combination of both). It is important to specify Dimension A when ordering vertical extensions and Dimension B when ordering horizontal extensions.



NOTES

Type 1 extensions are suitable for underground burial

Type 2 extensions are exposed and not suitable for burial.

Type 3 extensions should be supported if dimension **B** is 36 inches (900 mm) or greater.

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 any one of our 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.

OPER

These digits refer to the valve operator.

Handwheel Operators

37H, 50H

Gear Operators

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

MAK

These digits 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
- 4) MAK Needed – Slash MAK

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

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

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

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

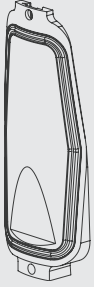
If MAK needed: **V150-18/12G/MAK**

Replacement Parts and Rebuild Kits

SPARE PARTS

Omni Valve stocks a complete line of replacement parts for the OmniSeal® DBB Expanding Plug Valve.

Please contact our exclusive global distributor for more information.

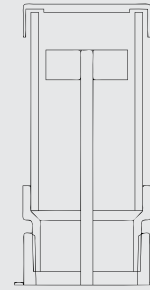


SLIPS

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

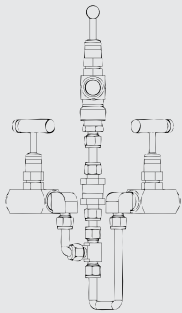
CLEAR ACRYLIC PROTECTOR CAPS

Clear acrylic protector caps and shipping caps 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.



KITS

Omni Valve stocks various rebuild kits for the OmniSeal® DBB Expanding Plug Valve as follows.

Please contact our exclusive global distributor for more information.

CLOSURE KIT (CK)

(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 ADAPTOR KIT (MAK)

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

NOTES

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

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