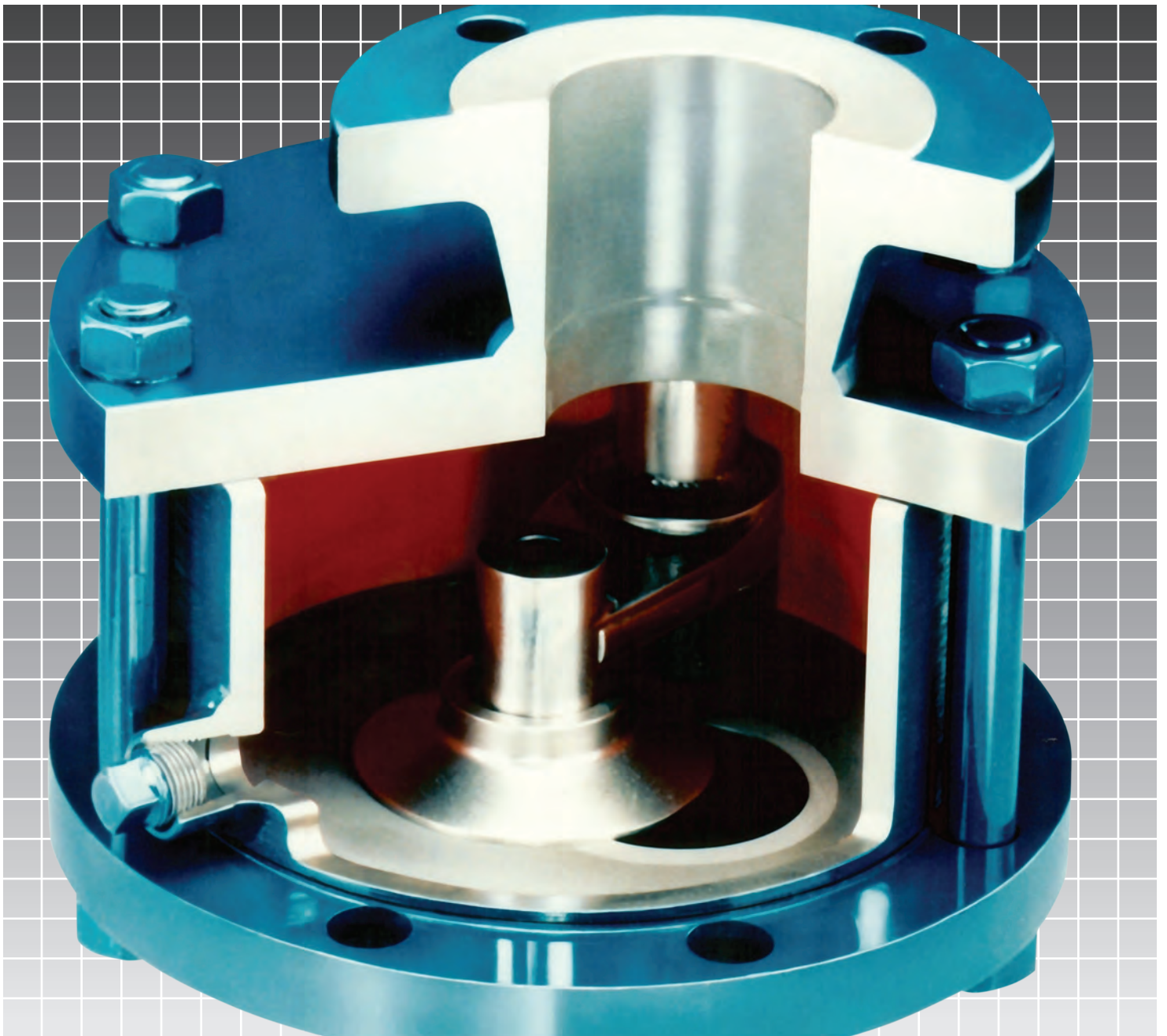


## *ROTATING DISC VALVES*

- *Temperatures to 1500+°F • Pressures to 10,000 psig • Abrasives • Corrosives • Coking • Slurries*
- *High Cycling • Bi-Directional • Intrinsically Fire Safe*



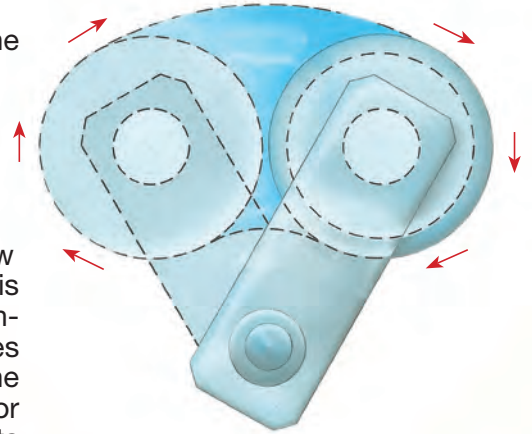
# OVER 100 YEARS OF FIELD PROVEN SERVICE – WITH APPLICATIONS WORLDWIDE.

**PROVEN CONCEPT** Starting in 1904 the unique rotating shearing disc concept was the standard for steam locomotive boiler blowdown. Following this the packaged boiler industry has also accepted the Everlasting quick opening valve where our reputation remains unchallenged. The valve handles boiler blowdown, scale, chemicals, high pressures, temperatures, and flashing condensate, they have an average life of 16 years.

Our slurry valves are installed throughout the world in processes that are abrasive, corrosive or fouling and that have high pressure, temperature or cycling. The unique self lapping metal to metal seat design provides repeated tight shutoff

in severe service, while sealing improves with use.

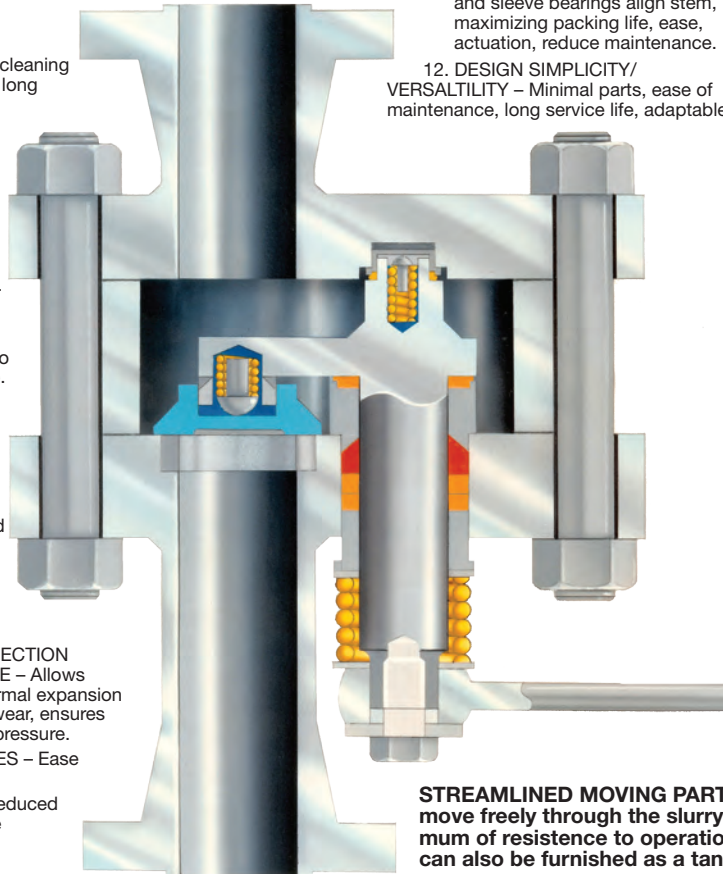
**PRINCIPAL OF OPERATION** The actuator moves the stem and lever arm a quarter turn which drives the disc. The entire sealing surface of the disc is constantly in contact with the seat or pad through force exerted by coiled springs. These springs allow the disc to move vertically. This compensates for thermal expansion and contraction of the valves components also overcoming the effect of any back pressure for which it was designed and prevents particles from lodging between the sealing surfaces. Differences in tangential disc to seat friction forces cause the disc to rotate on its seat



as the valve cycles, thereby shearing and wiping away any process material that may accumulate. No other valve is similar.

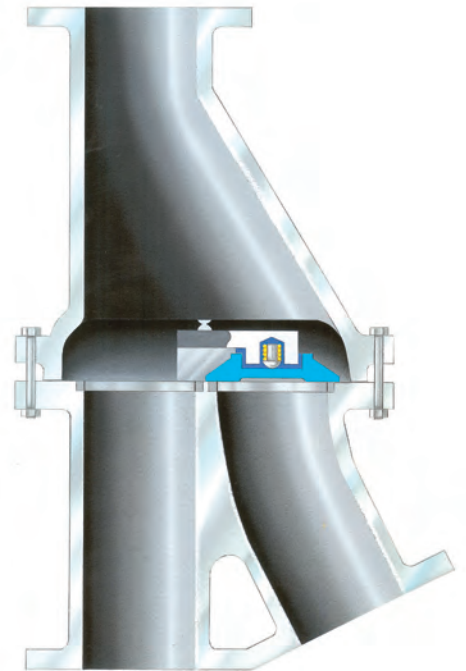
## FEATURES AND BENEFITS

1. UNIQUE ROTATING/SHEARING DISC – Self lapping disc, enhance seat cleaning action, cuts through solids, long lasting tight shut-off
2. METAL TO METAL SEATING – abrasion resistance, wide temperature range.
3. WIDE BAND SEATING – High pressure capability, better sealing than industry standards, force distributed over larger area, less trim wear.
4. FULL PORT – abrasion resistance, no obstruction to flow, minimal pressure drop.
5. ROTATING STEM – Increased packing life, wide selection of actuators.
6. SELF DRAINING BODY – Reduced chance of jamming due to material entrainment, stagnation and degradation.
7. BODY PURGE CONNECTIONS – Ability to flush valve cavity and internals while in operation.
8. SPRING LOADED CONNECTION BETWEEN DISC AND DRIVE – Allows disc to compensate for thermal expansion or contraction, adjusts for wear, ensures tight shut-off, resists back pressure.
9. FLAT SEATING SURFACES – Ease of maintenance.
10. REPAIRABLE SEAT – Reduced inventory, less maintenance expense.



11. STEM BEARINGS – Trunion and sleeve bearings align stem, maximizing packing life, ease, actuation, reduce maintenance.

12. DESIGN SIMPLICITY/VERSALILITY – Minimal parts, ease of maintenance, long service life, adaptable



**THREE WAY, DIVERTING, OR CONVERGING.** This valve is shown in cast configuration suitable to 300 psig. Fabricated version is available for higher pressures and temperatures

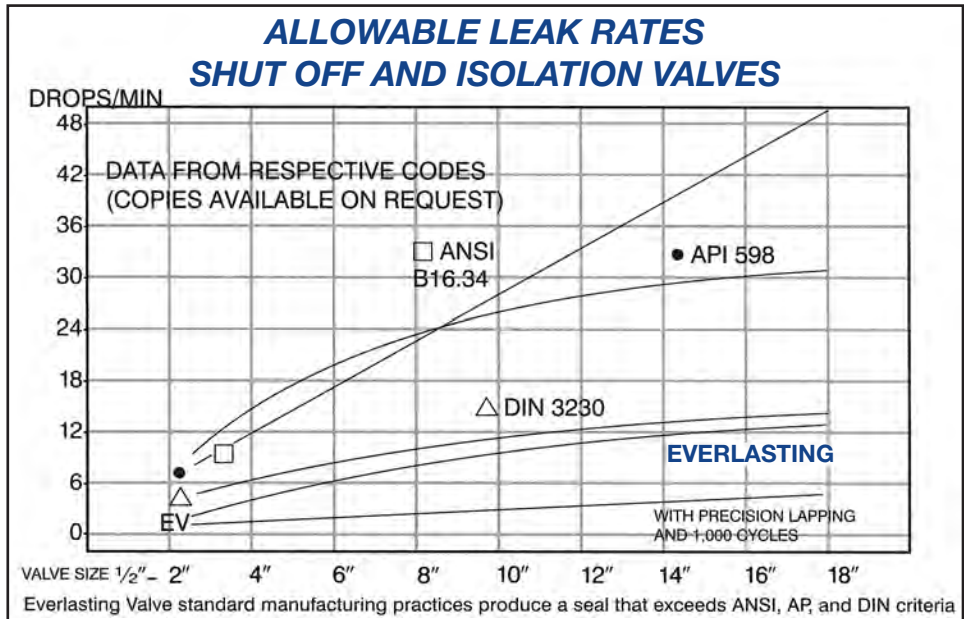
**STREAMLINED MOVING PARTS** are made to move freely through the slurry with a minimum of resistance to operation. This design can also be furnished as a tank bottom valve.

# DURABILITY AND PERFORMANCE FOR SHUT OFF AND ISOLATION APPLICATIONS

## SELF LAPPING, WEARS IN-NOT OUT

Rotation of the disc produces an action that in the process medium renews and polishes the metal seating surfaces with each operation. This concept is unique causing the Everlasting valve to wear in with use while all other valves are busy wearing out.

**TIGHT SEAL ASSURED** The wide seat and disc surfaces are routinely machine lapped during manufacture within several light bands of flatness. This produces a seal that is better than industry standards for SHUT OFF and ISOLATION valves. (Refer to graph). Precision lapping and factory cycling of the valve can reduce leak rates further.



## CONSTRUCTION

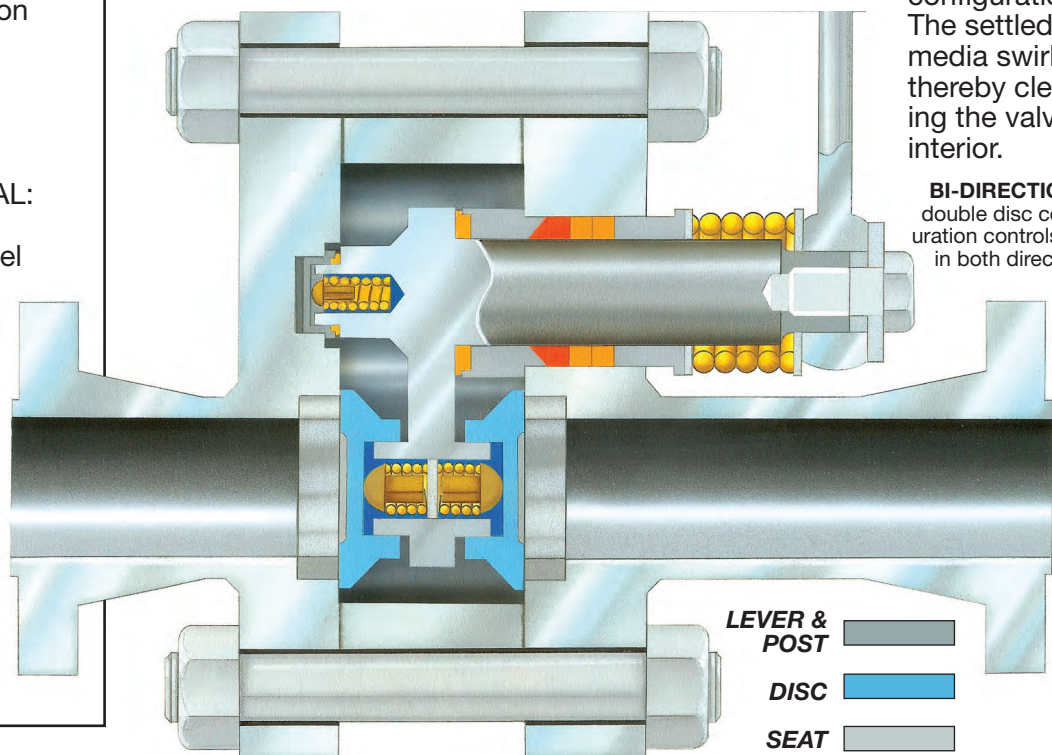
- SIZES 1/2" to 18"
- END CONNECTIONS:
  - Screwed, flanged, socket and butt weld
- BODY MATERIAL:
  - Cast Iron/Ductile Iron
  - Carbon Steel
  - Stainless Steel
  - Weldable Alloys
  - Packing Seals
  - Grafoil or PTFE
- DISC/SEAT MATERIAL:
  - Stellite #6
  - 440C Stainless Steel
- BASIS OF DESIGN:
  - Vacuum to 10,000 PSIG
  - ANSI Classes 150, 300, 600, 900, 1500, 2500
- TEMPERATURES:
  - 350°F to 1500+°F
- ACTUATORS:
  - Manual Lever
  - Manual Wheel
  - Pneumatic
  - Hydraulic
  - Electric

**SELF CLEANING** The valve body openness provides space for the product to be freely displaced by the lever arm and disc with each cycle. Fines can not compact in small open

areas and possibly jam components as is the case with other valve concepts. Each time the valve opens to discharge product, a vortex is caused by the eccentric body to port

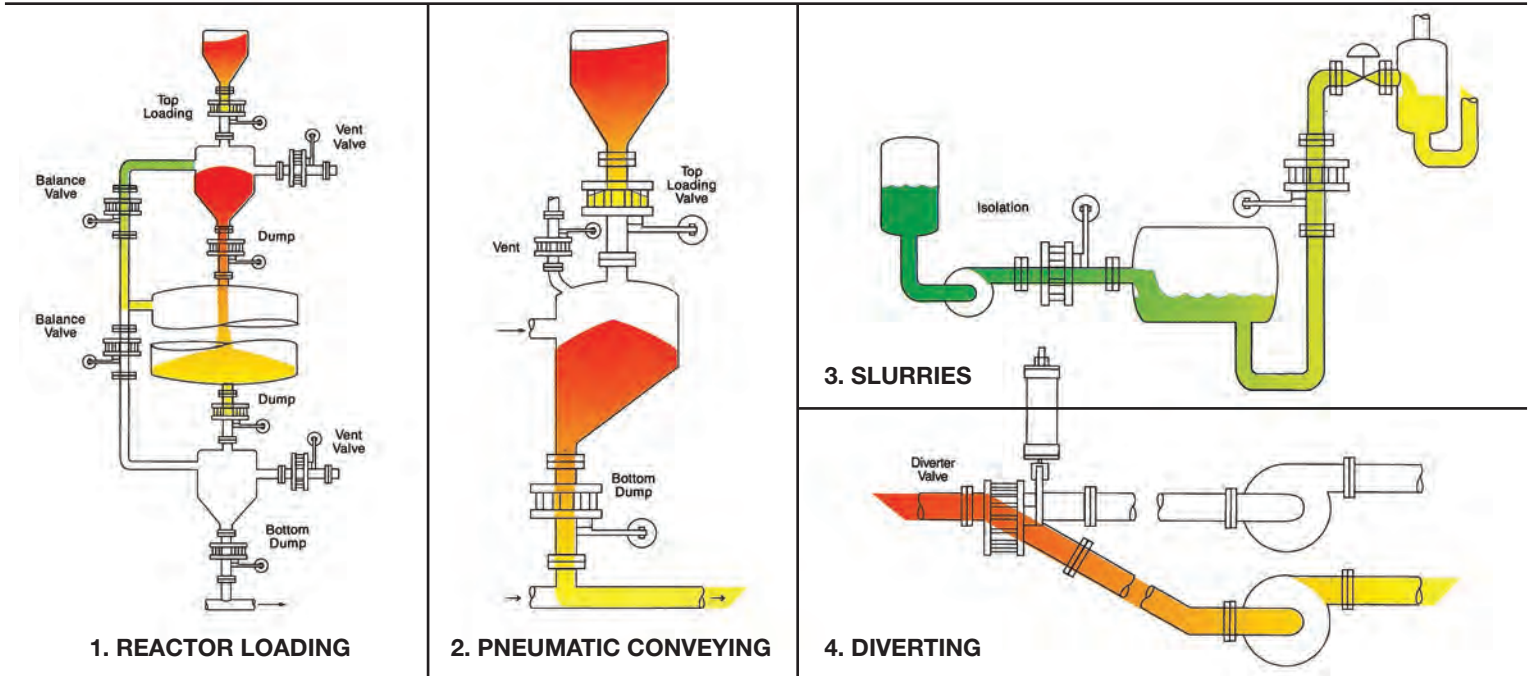
configuration. The settled media swirls; thereby cleaning the valve's interior.

**BI-DIRECTIONAL** double disc configuration controls flow in both directions.



# Everlasting Abrasive Service Valves

Everlasting PROCESS and BULK MATERIAL VALVES are used where existing valves or rotary feeders are repaired or replaced more than once a year. Sizes range from 1/2" to 18", vacuum to class 2500, temperatures +1500° F.



Their open body concept is self cleaning and incorporates precision flat lapped hard metal seals and discs that move in non-wedging, non-binding fashion through abrasive materials whether they are dry powders or in a slurry. Differences in tangential disc to seat friction cause the disc to rotate a few degrees with each cycle. This rotation polishes the mating surfaces improving the valve's seal with each operation. HERE ARE SOME APPLICATIONS

## 1. REACTOR LOADING

Everlasting valves are used to replace other valves or rotary feeders for reactors that can begin its process with positive pressure then drop to a negative pressure. Pressure Equalizing valves balance the loading or let-down hoppers so the reactor valves may cycle with zero differential. They also may cycle with a full differential. Pressure Equalizing valves are opened to either allow media to enter the loading hopper or the let-down hopper.

## 2. PNEUMATIC CONVEYING

Usually there are trains of two or more vessels that alternate continually to transport media. The vessel valves duty cycle

are often less than once a minute. The vent valve being smaller is exposed to higher than system velocities, it must resist erosion from the particulate laden atmosphere being discharged between vessel cycles. Everlasting's unique totaling disc valves are being bought for more of these systems with each day.

## 3. SLURRIES

Everlasting's eccentric body configuration tends to swirl the flowing media. This design was developed over 100 years ago to handle solids specifically. Other types of valves allow the media to accumulate in small clearances around the seats or between its sealing member and body causing them to jam.

In this real situation the vessel volume is 16,000 cubic feet maintained above 500 psig including mine tailings dissolved in acid that exceeds 400°F. The isolation valves are normally open and cycle closed after several months operation for change out of a modulating flash let-down valve without losing system pressure. When the isolation valves fail to seal it takes nearly a day to bleed the system and half a week to start-up. Production loss is worth a small

fortune, literally and so are yours. Space age metals and ceramics used alone could not overcome the attacks of corrosion, erosion, and agglomerating media. The Everlasting Process valves combined the latest materials and its unique design to solve this problem.

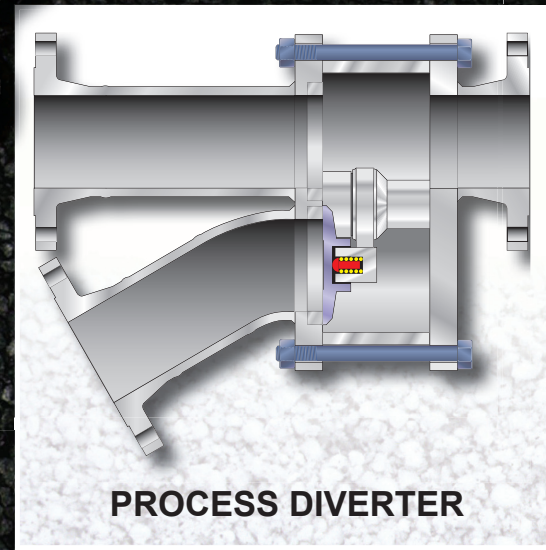
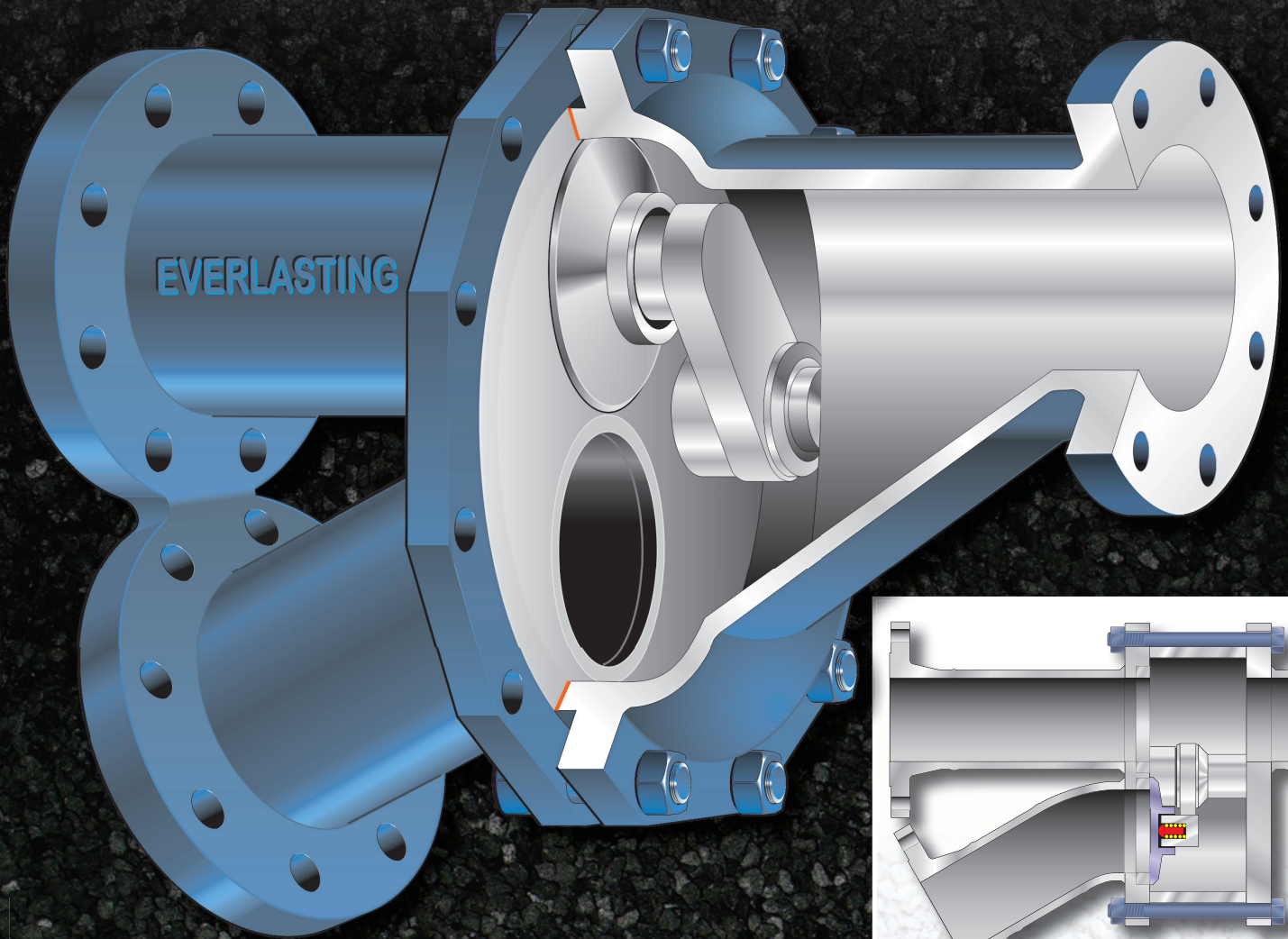
## 4. DIVERTING

The rotating disc concept is ideal for diverting flow to storage bins or silos and to isolate pumps for maintenance. Everlasting diverters remain operating for years in 65% coal and sludge slurries. Turn them around and they converge the process from separate sources into a single stream. There are no small spaces where fines can compact to jam its components. After the customer tested a dozen other manufacturer's products in a simulated system, the Everlasting Diverter design was selected for use in processing abrasive, corrosive, chemical waste.

Whether your applications require carbon, stainless steel or space age materials, you can give your abrasives handling problem to the Everlasting 100 year old workaholic.



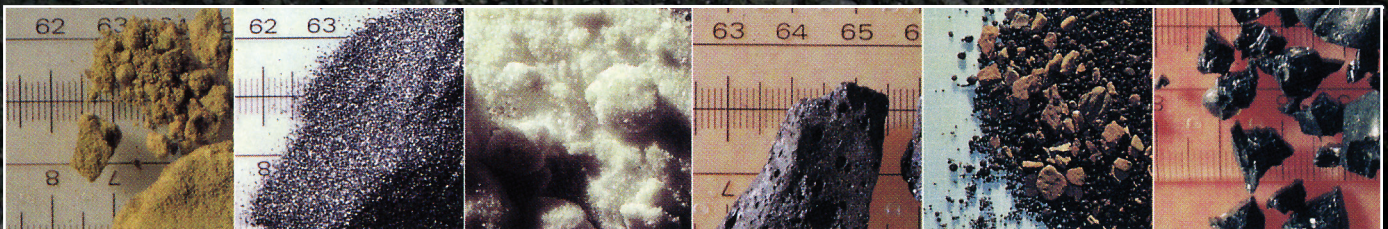
© 2020 Everlasting Valve Company, Inc. All Rights Reserved



## **DIVERTER VALVES**

**Switch on the fly, Dependably**

**For applications of erosive slurries or whenever abrasive solids are conveyed**



**Everlasting Valve Company, Inc.**

108 Somogyi Court, South Plainfield, NJ 07080

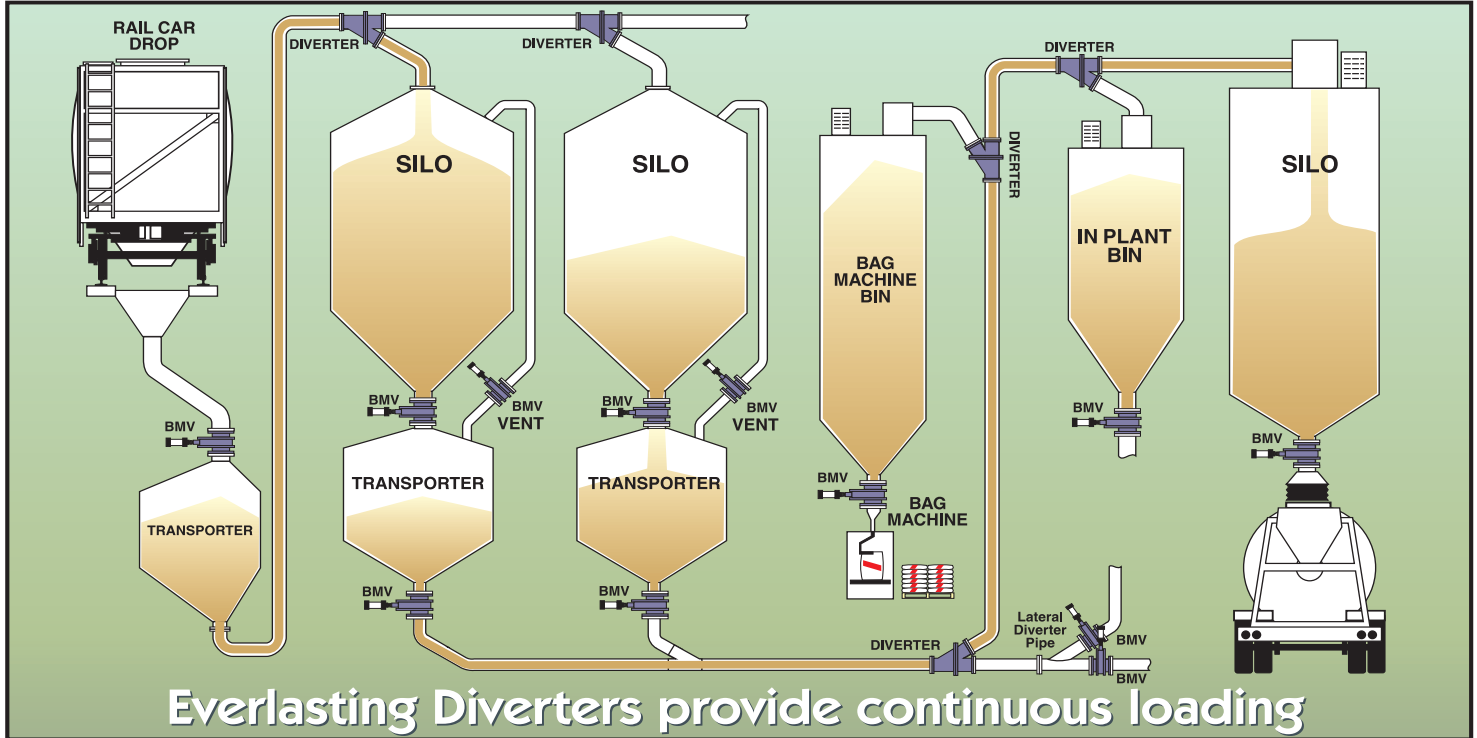
908-769-0700 Fax: 908-769-8697 Visit our website: [www.everlastingvalveusa.com](http://www.everlastingvalveusa.com)

# The Everlasting Diverter that's built

## Switch lines on-the-fly

A major cement company produced 55 ton/hour, but to switch lines they had to stop the compressor then take 15 minutes to come back to pressure. Each time the lines were switched 13.75 tons of product was not conveyed. With Everlasting Diverters there is no time

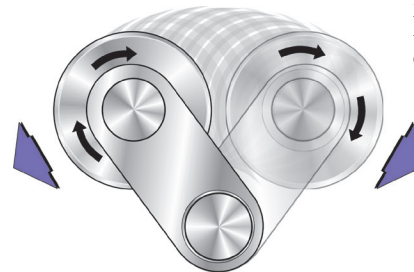
lost. Are your down stream lines plugging, is the fringe bin full, do you have an off quality silo? How much are you losing with your present non-switch on the fly diverters? How much are your installed diverters costing you in parts, labor and lost production?



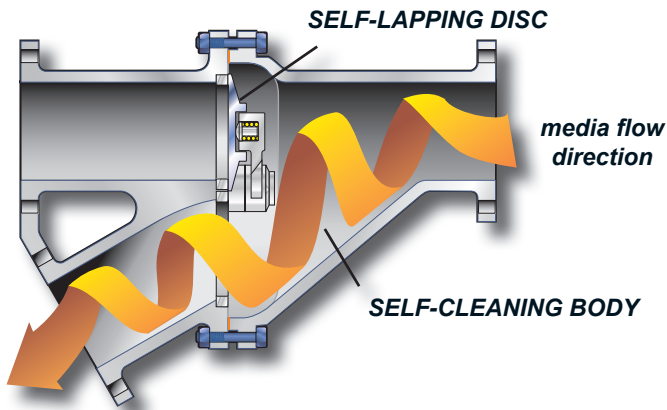
### Everlasting Diverters are Self-Cleaning, Self-Lapping and Long-Lasting

**SELF-CLEANING** Everlasting valves are designed with an open valve body that provides ample room for free flowing media to be displaced by the small volume disc and lever arm. The eccentric body to pipe connections cause the media to swirl in the open body. With the lateral piped to a vertical line media drops by gravity then is discharged through the straight leg with the next cycle. The closed port seat and disc surfaces are always shielded from harsh media.

away as the disc moves from one port to the other. This feature is unique to Everlasting Valve. No other valve is similar.

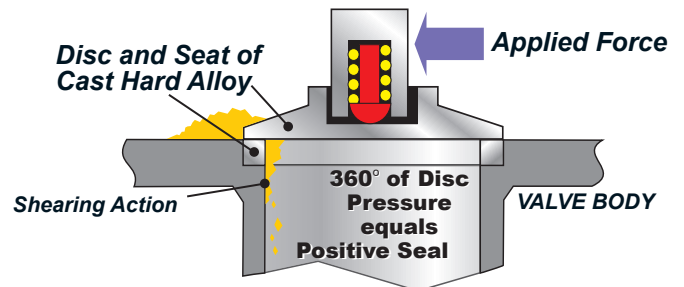


**Self-lapping  
Wears in  
Not out!**



**SELF-LAPPING SEALING SURFACES** With each cycle the flat disc freely rotates around a spring loaded rivet internal to the disc drive. Disc rotation occurs as the center of friction under the disc seeks alignment with applied force. Scratches that may develop in the wide sealing surfaces are polished

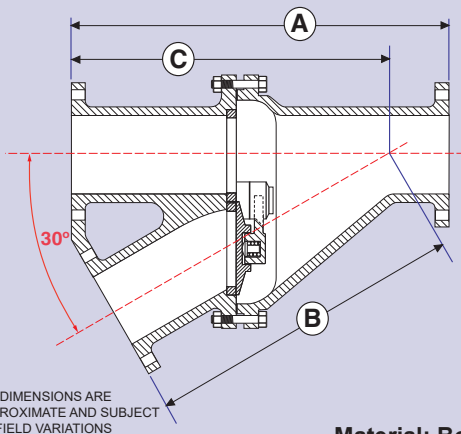
**POSITIVE SHUT-OFF** Machine lapping of the sealing surfaces at the factory assures tight shut off. Leak rates are less than industry standard ANSI B.16.34; MSS-SP61 for metal seated valves. Each valve is tested to assure seat and body integrity. The spring loaded disc is held firmly against the path that it travels. Having sharp edges the seat and disc shear away any deposits from their sealing surfaces. Valve may be used for Converging applications.



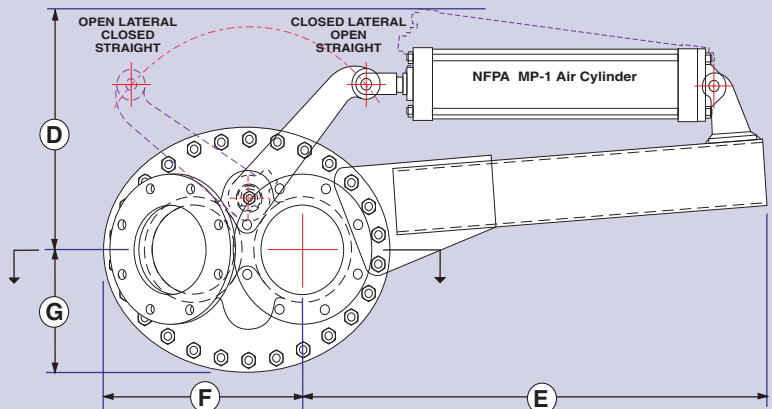
# to handle your most abrasive media

## Diverter dimensions specifications and options

Cast diverting valve cross section



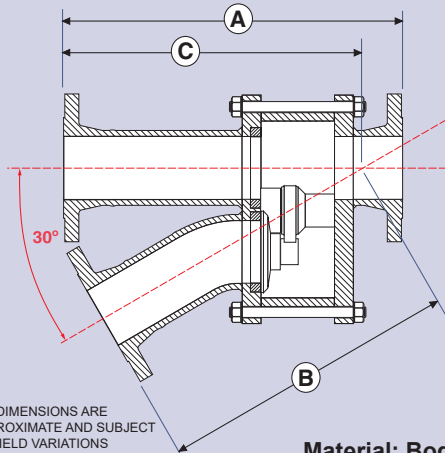
Cast diverting valve end view



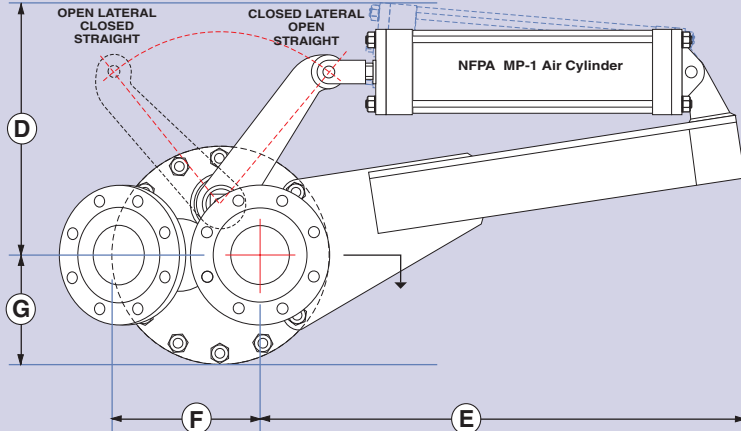
Material: Body cast Iron, class 125 flanges, disc & seats hardened alloy 38RC to 59RC

Valve (mm)	A	B	C	D	E	F	G	Press/Temp Rating
4" (100)	22"	23 1/8"	23 1/8"	16 7/8"	31 1/8"	9 5/8"	6 1/8"	100 psi / 7 bar 450° F / 232° C
5" (125)	21 3/4"	19 3/8"	19 3/8"	17 1/2"	32 1/4"	12 7/8"	7 1/2"	
6" (150)	29"	23 1/8"	23 1/8"	21 1/4"	44"	12 7/8"	7 1/2"	
8" (200)	29 1/2"	25 1/4"	25 1/4"	20 1/2"	43 7/8"	19 1/8"	10 7/8"	
10" (250)	35 1/2"	30 3/8"	30 3/8"	23 1/8"	42 7/8"	21"	11 3/8"	
12" (300)	40"	35 3/8"	35 3/8"	23 7/8"	45 1/8"	22 1/4"	11 3/8"	

Process diverting valve cross section

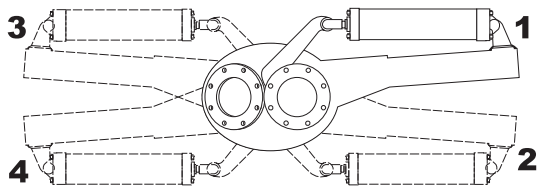


Process diverting valve end view



Material: Body Carbon steel / alloy ANSI, DIN flanges, disc & seats hardened alloy 38RC to 59RC

Valve (mm)	A	B	C	D	E	F	G	Press/Temp Rating
2" (50)	16 1/2"	12"	12"	10 7/8"	24 1/8"	6 3/8"	4 3/8"	ANSI B 16.34 CLASS 150.
3" (75)	19 1/2"	15 1/4"	15 1/4"	16 1/8"	33"	9 5/8"	6 1/2"	
4" (100)	21"	18 1/2"	18 3/8"	16 1/8"	31 1/2"	9 5/8"	7"	
6" (150)	22 1/2"	23"	23 1/8"	21"	44 1/4"	13 3/8"	9 5/8"	
8" (200)	26 1/2"	26 3/4"	26 1/2"	21 3/4"	41 5/8"	17"	12"	
10" (250)	30"	31 5/8"	31 1/2"	24 1/4"	47 7/8"	20 1/8"	14 1/4"	



Actuator mounting positions code

**ACTUATION**

Lever, manual  
Wheel, manual  
Pneumatic cylinder  
Electric

standard  
standard  
standard  
optional

**OPTIONS**

Solenoid valve  
Limit switches  
Fail Safe

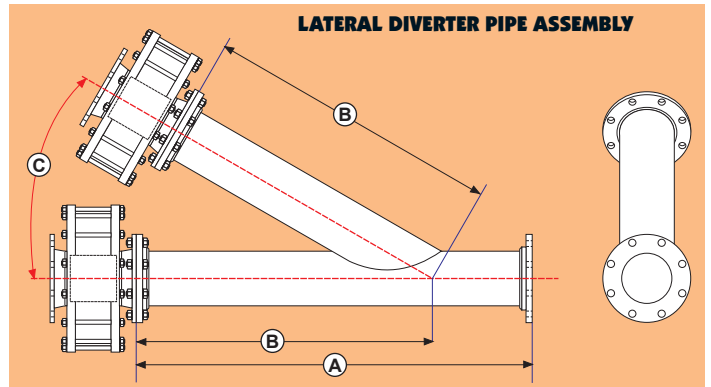
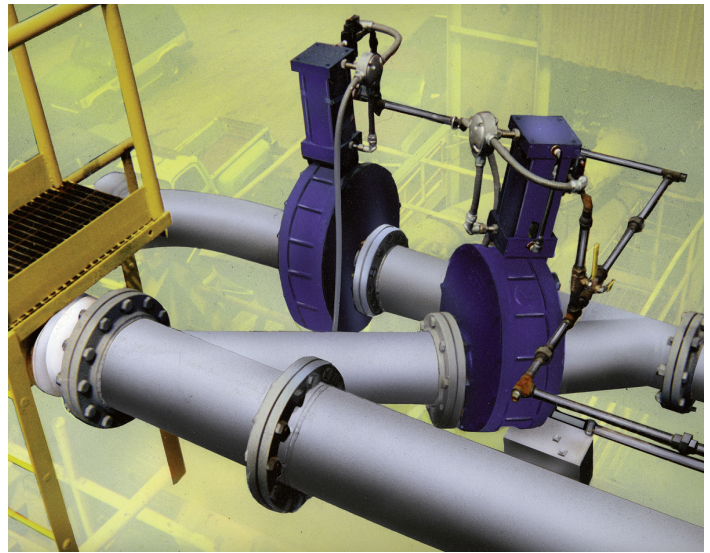
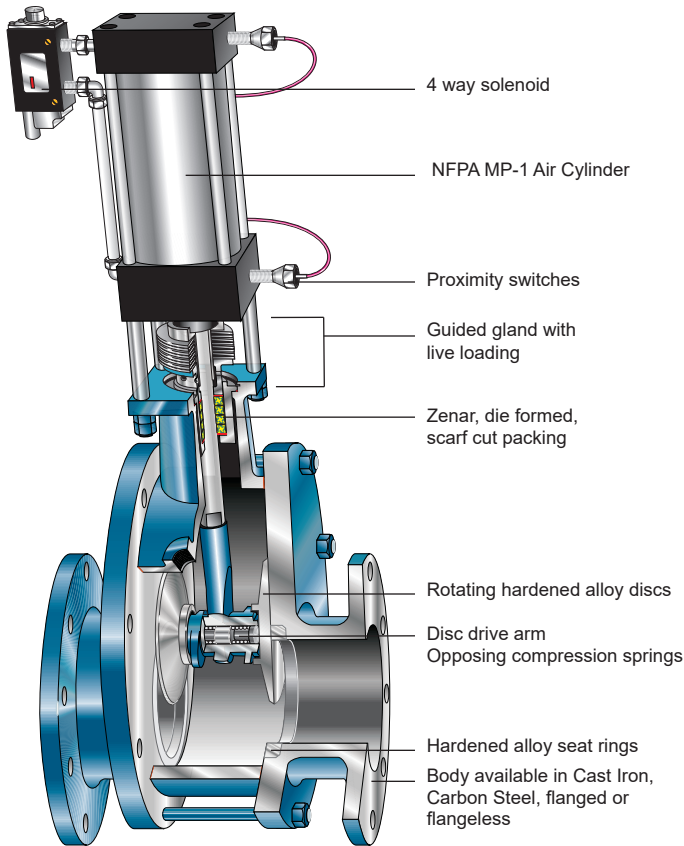
4-way  
Proximity or mechanical  
Air reservoir type or SR

Process Diverter standard materials of construction are carbon steel or stainless steel, other alloys are selected to suit your application. Disc and seats are solid hardened alloys in the 38RC to 59RC range for long life in abrasive media. Diverters are designed to ANSI codes and Everlasting will fabricate the valve to meet your process conditions. Various end connection configurations are available including DIN flanges. Please refer to [www.everlastingvalveusa.com](http://www.everlastingvalveusa.com) to download a Request For Quote form (RFQ). Start saving time and money today.

**EVERLASTING VALVE COMPANY, 908-769-0700**  
[www.everlastingvalveusa.com](http://www.everlastingvalveusa.com)

# Everlasting BMV series valves used in diverting lines

Everlasting Valve produces a complete line of Bulk Material Valves that when used in tandem with a fabricated lateral "Y" connection becomes a Diverter that can be used to divert, mix, or completely stop any media flow. The Everlasting BMV series uses the same proven and patented rotating disc and seat design that Everlasting is known for. Dynamic spring loaded stuffing box can be re-packed with valve in place.



Size-inch / (mm)	(C) Angle	(A) Straight	(B) Lateral / Intersect
3"- (75)	30°	30"	24"
	45°	21"	15"
4"- (100)	30°	34"	28"
	45°	24"	18"
5"- (125)	30°	44"	32"
	45°	30"	20"
6"- (150)	30°	48"	36"
	45°	40"	24"
8"- (200)	30°	60"	46"
	45°	48"	30"
10"- (250)	30°	72"	54"
	45°	54"	36"
12"- (300)	30°	84"	66"
	45°	62"	42"

## Everlasting Bulk Material Valve

The Everlasting Diverter and BMV are excellent in fly ash, Portland cement, kiln dust, alumina hydrate, alumina silica, calcined kaolin, sugar, titanium dioxide, ilmenite and rutile ores, pet coke, coal, catalyst and many other abrasives. Please request our booklet on the Everlasting Bulk Material Valves. Dimensions in this booklet are approximate and are used for estimating.

**Call us today 1-908-769-0700 or go to our Website [www.everlastingvalveusa.com](http://www.everlastingvalveusa.com)**

Valve Manufacturers Since 1906

- Boiler Blowoff Valves
- Bulk Material Valves
- Process Valves
- Diverter Valves



Represented by:



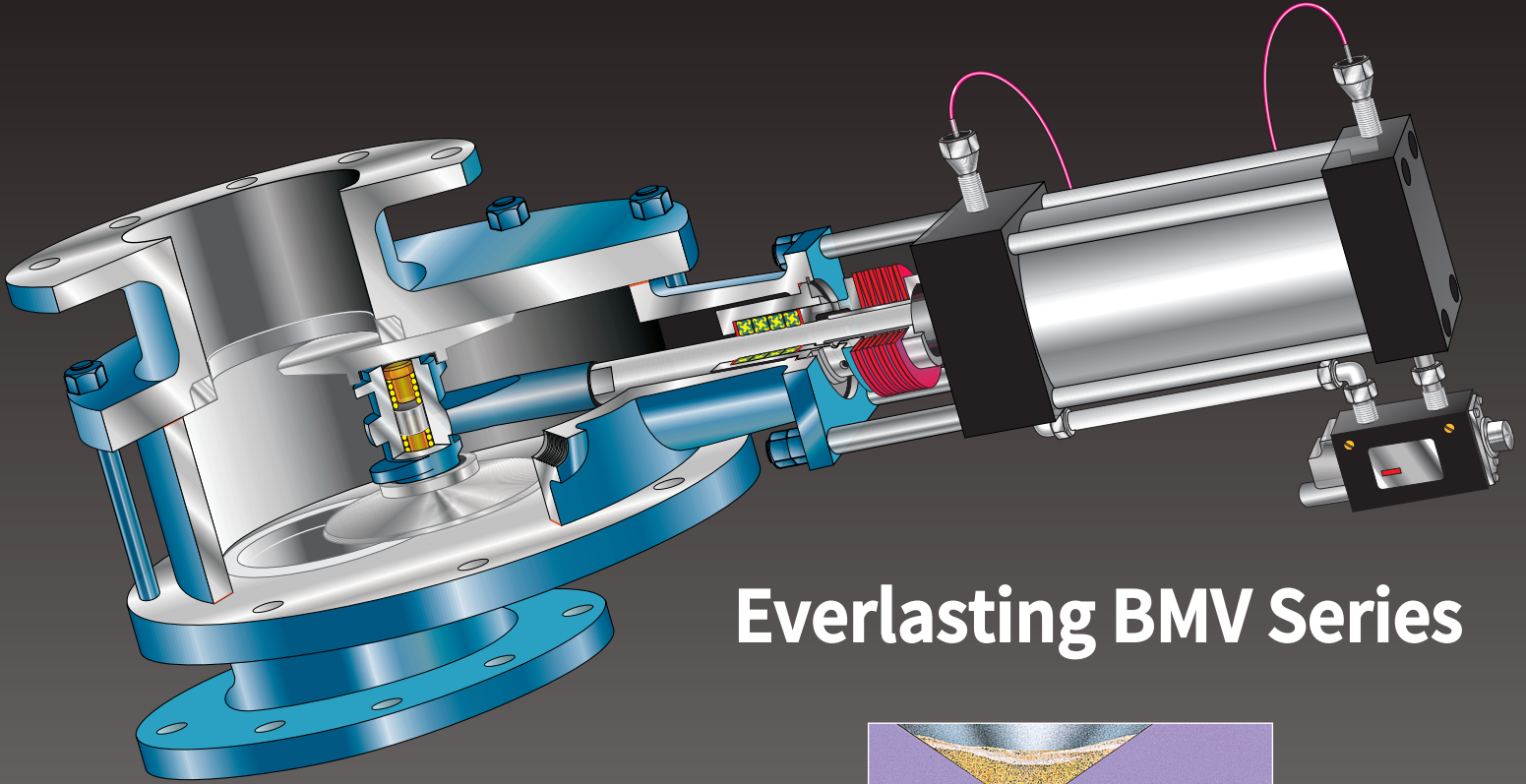
108 Somogyi Court, South Plainfield, NJ 07080  
908-769-0700 Fax: 908-769-8697



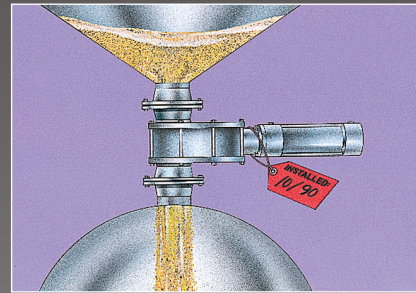
# EVERLASTING VALVE COMPANY

WEARS IN, NOT OUT®

COMPANY WITH  
QUALITY SYSTEM  
CERTIFIED BY DNV GL  
= ISO 9001 =

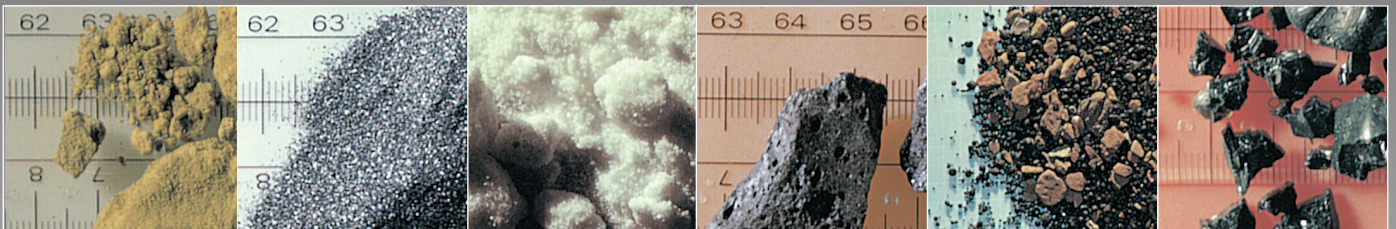


## Everlasting BMV Series



Sizes 2" to 14"; vacuum to 100 PSIG;  
Temperature to 750 °F.

For applications where abrasive solids are handled



108 Somogyi Court, South Plainfield, NJ 07080 • Phone: 908-769-0700 • Fax: 908-769-8697  
Visit our website: [www.everlastingvalveusa.com](http://www.everlastingvalveusa.com) • E-mail: [info@everlastingvalveusa.com](mailto:info@everlastingvalveusa.com)

© 2020 Everlasting Valve Company, Inc. All rights reserved.

# The bulk material valve that's built to take

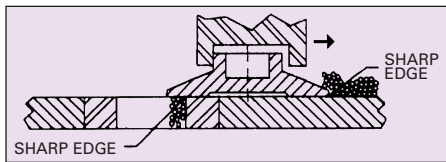
## Everlasting

### Self Cleaning Internals

Its open body configuration allows fines to move about freely preventing accumulation that causes binding of moving parts or damage to seats in other traditional designs. Media has room to be displaced by the discs with each cycle and the eccentric body to port design promotes settled product to swirl each time the valve opens, thereby cleaning it's interior.

### Sealing Surfaces Protected

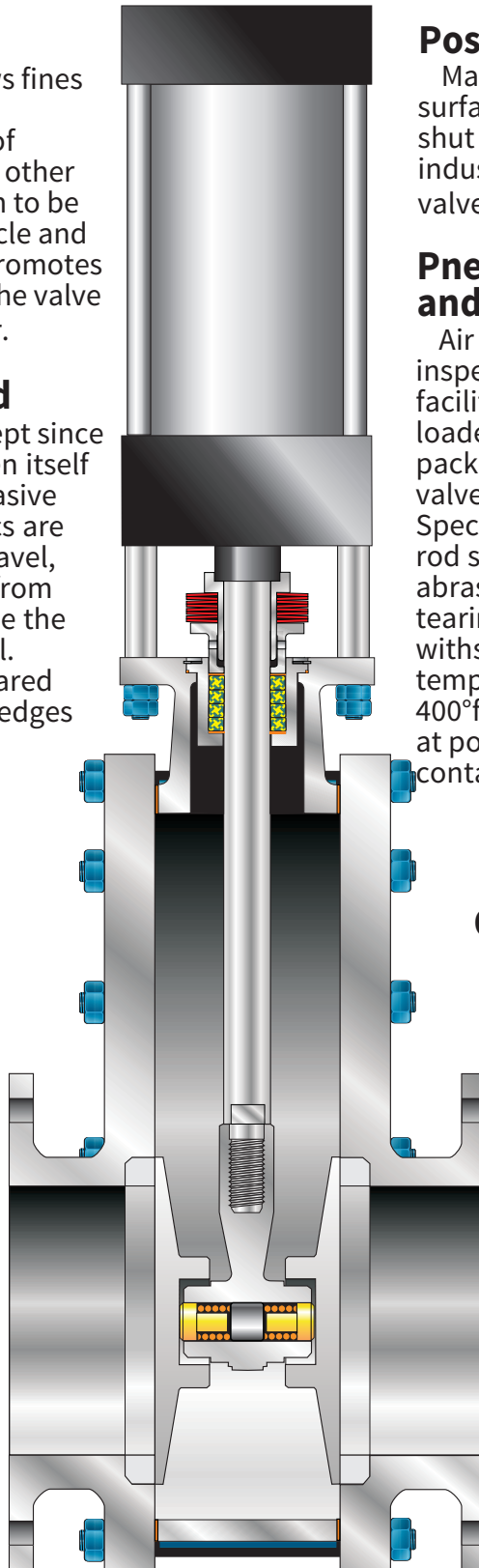
The Rotating Shearing Disc concept since being introduced in 1904 has proven itself in applications where media is abrasive and erosive. The spring loaded discs are held firmly against the path they travel, then shields their sealing surfaces from exposure to any harsh process while the valve is open. Valve is bi-directional. Deposits that may form will be sheared from the sealing surfaces by sharp edges of the seat rings and rotating discs.



*Shearing action clears disc face and it's path of particulate.*

### Self Lapping Discs

They rotate as the center of the applied force and the centroid of friction force move toward alignment. High cycling is beneficial. Scratches that develop on the wide sealing surfaces are polished away as the valve is opened and closed, there is no similar valve.



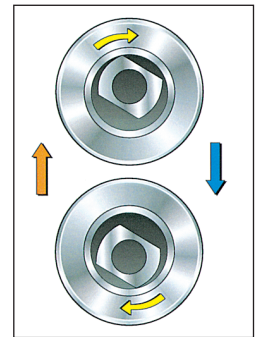
U.S. PATENT 5,396,919

### Positive Shut Off

Machine lapping of the sealing surfaces at the factory assures tight shut off. Leak rates are less than industry standards for metal seated valves: ANSI B16.34; MSS-SP61.

### Pneumatic Actuator and Valve Are Separated

Air cylinder standoff allows easy inspection of sealing means and facilitates field packing. Dynamically loaded stuffing box can be field packed without removing the valve from line. Special cylinder rod seal resists abrasion and tearing, and withstands temperatures to 400°f (+204°c) at point of contact.



*Self lapping discs.*

### Options

Air cylinder mounted proximity limit switches on single rod cylinder; or mechanical style with double ended cylinder. Electric solenoid or manually operated cylinder air valve. All NEMA classifications can be furnished to meet your specifications.

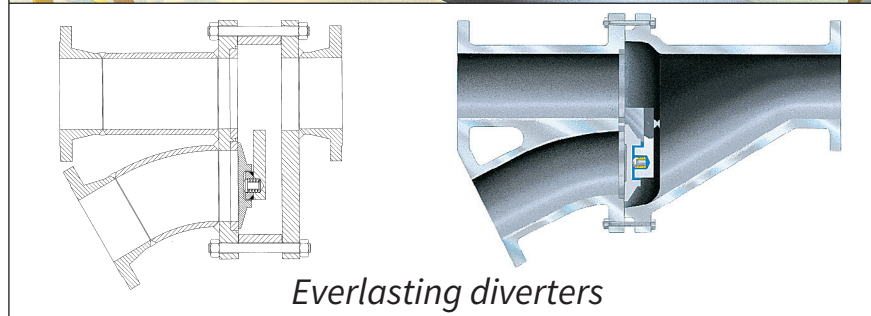
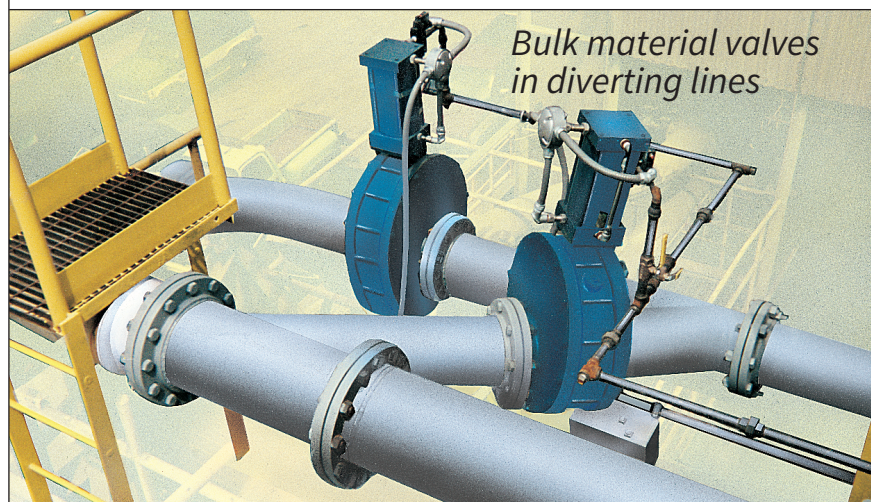
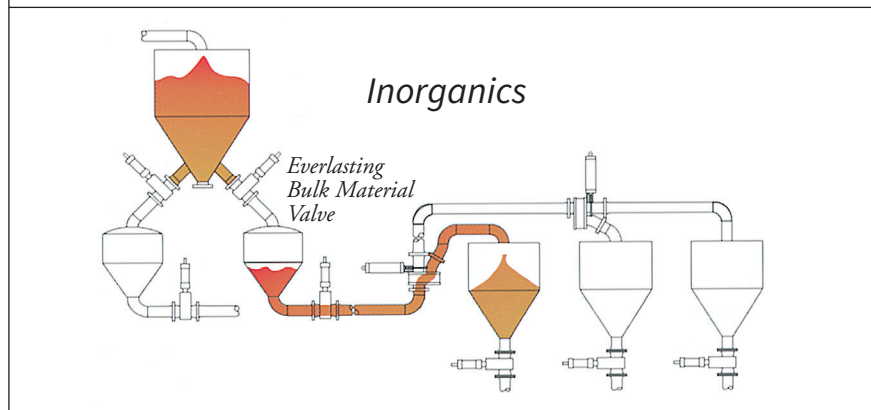
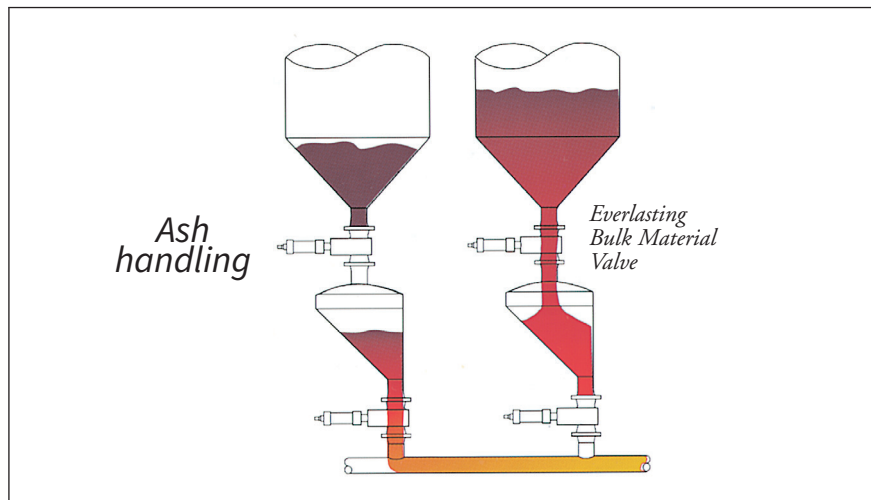
Plant air or electric loss fail safe protection using an electro-pneumatic air reservoir system is available. Special bracketing of the air cylinder increases valve temperature rating to 750°f.

## The Everlasting bulk material valve.

A compact valve that performs where others require repairing or replacement more than once a year.

# the most abrasive situations year after year

Ideally suited for dense phase pneumatic conveying and line isolation in dry powder systems.



## Everlasting solves plant problems.

### Ash Handling

**Problem:** Sealing members would erode and have to be replaced on a weekly basis.

**Solution:** Flapper style valves cycling once a minute wouldn't always close against large chunks of 600°f vitrified coal ash trapped between its sealing members. Their disc would erode needing replacement on a weekly basis. The **Everlasting BMV** (bulk material valve) was installed providing trouble free service in this high temperature (see options), high cycling application.

### Inorganics

**Problem:** Production is moving granular abrasives with a bulk density of over 100 lbs/ft<sup>3</sup>.

**Solution: Everlasting Valves** replaced transporter feed knife gate valves that developed internal and external leakage. Transporter outlets, now fitted with **Everlasting Valves**, replaced ball valves that suffered packing leaks. Our diverter valves have eliminated endless hours of maintenance in the finished product area that were previously spent repairing pinch valves. In each location the users enjoyed a fast pay back on their investment.

### Diverter Valves

The **Everlasting Diverter Valves** can be switched on the fly, and no lubrication is required. The designs of each style are based on the open body Rotating Disc technology proven since 1904 in our two-way valves. The disc and seats are solid hardened alloys in the 38RC to 59RC range this provides exceptionally long life in abrasive media. These valves have performed in titanium dioxide, fly ash, Portland cement, Alumina silica and calcified Kaolin, sugar, coal and other erosive particulate. Actuators include lever, handwheel, pneumatic cylinder, the valves are flanged, and pressure and temperature ranges vary with design type.

# Everlasting BMV series specifications

## Standard Design:

**Press Range:** Vacuum to 100 psig (7 bar)

**Temp Range:** Cast Iron 450°F (+232°C)

Carbon Steel 550°F (+287°C)

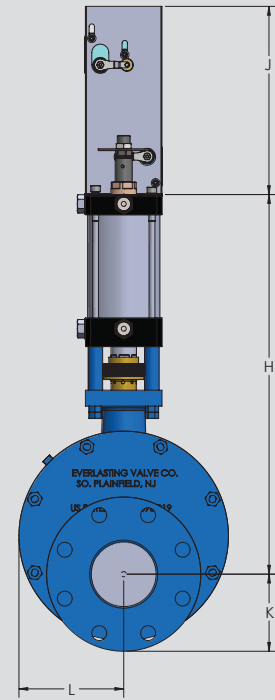
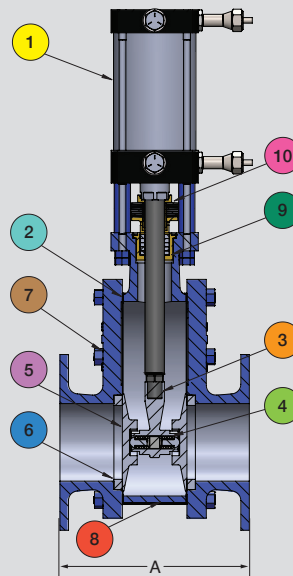
**Ends:** Flat Faced – 125# Drill

**Operator:** Air Cylinder, Linear

U.S. Patent  
#5,396,919

## Options:

- Limit or Proximity Switches
  - \* Field mounted Limit Switches or Visual Indication require Double Ended Air Cylinder
- Solenoid Valve
- Fail-Safe Air Reservoir
- 750°F (+400°C) Design



Item No.	Nomenclature	Construction	Size in. (mm)	A	H	J	K	L	Weight lb. (kg)	
									Iron	Steel
1	Air Cylinder	Aluminum Body								
2	Gaskets	Synthetic Fiber - Nitrile Binder								
3	Disc Drive	Hardened Steel Alloy								
4	Disc Springs	17-7 Stainless Steel								
5	Discs	440 Stainless Steel								
6	Seats	440 Stainless Steel								
7	Body	Cast Iron or Carbon Steel								
8	Distance Ring	Cast Iron or Carbon Steel								
9	Stuffing Box	Brass - Packing								
10	Gland Springs	Electroless Nickel Plated								
			2	7	17.31	9	3	3.75	50	60
			(50)	(178)	(440)	(229)	(76)	(95)	(23)	(27)
			2.5	8.25	19.25	11	3.5	5	75	65
			(65)	(210)	(489)	(279)	(89)	(127)	(34)	(30)
			3	8.25	19.50	11	3.75	5	85	70
			(80)	(210)	(495)	(279)	(95)	(127)	(39)	(32)
			4	9.75	22.25	11	4.5	6.125	120	110
			(100)	(248)	(565)	(279)	(114)	(156)	(55)	(50)
			5	10.5	26	13	5	7.75	200	180
			(125)	(267)	(660)	(330)	(127)	(197)	(91)	(82)
			6	10.5	28.56	13	5.63	8.875	250	225
			(150)	(267)	(725)	(330)	(143)	(225)	(114)	(102)
			8	13.5	35.44	15.5	7.06	11.5	460	350
			(200)	(343)	(900)	(394)	(179)	(292)	(209)	(159)
			10	15	41.06	17	8.13	13.5	Not Available	700
			(250)	(381)	(1043)	(432)	(207)	(343)	Available	(318)
			12	15	50.63	19	9	15.5	Not Available	1,050
			(300)	(381)	(1286)	(483)	(229)	(394)	Available	(477)

Inquire for other sizes. Dimensions are approximate, use for estimating. Consult factory for construction drawings.

## How to order Bulk Material Valve: Figure number example: 6" BAO-SVGO

Six inch; Bulk Material Valve, cast iron construction, outside stuffing box, solenoid valve, GO proximity limit switches. Materials of construction stated above are standard. Mechanical and field mounted limit switches require double-ended air cylinders.

Series	Body	Options	
B - BMV	AO - Cast Iron CO - Carbon Steel	SV - Solenoid Valve GO - GO Switches EX - Mechanical Switches FS - Fail Safe Air Reservoir System	HT - High Temperature (750° F) XP - Explosion Proof DN - PN 10/16 Flanges SP - Special Accessories or Design



COMPANY WITH  
QUALITY SYSTEM  
CERTIFIED BY DNV GL  
= ISO 9001 =

Represented by:

108 Somogyi Court, South Plainfield, NJ 07080  
Phone: 908-769-0700 • Fax: 908-769-8697  
Visit our website: [www.everlastingvalveusa.com](http://www.everlastingvalveusa.com) • E-mail: [info@everlastingvalveusa.com](mailto:info@everlastingvalveusa.com)

© 2020 Everlasting Valve Company, Inc. All rights reserved.

KGC1017DC

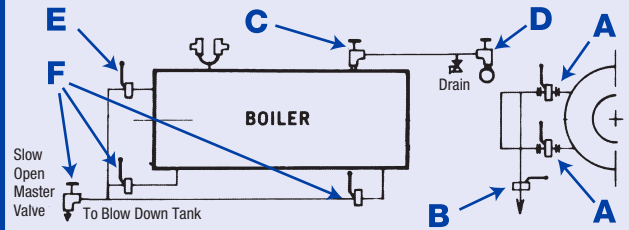
**ASME/ANSI REQUIREMENTS  
ASME BOILER & PRESSURE VESSEL CODE  
Section 1 – Power Boilers (2013 Addenda) and  
ANSI B31.1 – Power Piping Code  
(2014 Addenda)  
(SEE NOTE 1)**

Index and Service	Reference	Comments
<b>A</b> Water Column Shut-Off Valves	BPV-1 PG 60.3.4 BPV-1 PG 60.3.7	Piping between water column and boiler to be 1 in. minimum size. Shut-off valves must be through-flow type. Must indicate whether the valve is open or closed. Must be locked or sealed open.
<b>B</b> Water Column Drain	BPV-1 PG 60.2.3	Minimum pipe size 3/4 in., to install a valved drain to a safe point of discharge.
<b>C</b> Stop Valves	ANSI B31.1 PARA. 122.1.7 (A) (A.1)	Each boiler discharge outlet (except safety valve or reheater connections), must be fitted with a stop valve. Valves OS & Y rising stem type are preferred.
<b>D</b> Stop Valves at Common Header	ANSI B31.1 PARA. 122.1.7 (A.3) "STOP - CHECK"	When two or more boilers are connected to a common header, or when a single boiler is connected to a header having another steam source, the connection from each boiler having a manhole opening shall be fitted with two stop valves having an ample free-blow drain between them. The preferred arrangement consists of one stop-check valve (located closest to the boiler) and one valve of the style and design described in (A.1). Alternatively, both valves may be of the style and design described in (A.1).
<b>E</b> Surface Blow-Off	BPV-1 PG 59.3.2	Surface blow-off shall not exceed 2 1/2 in. pipe size.
<b>F</b> Blow-Off Valves	BPV-1 PG 59.3.5  ANSI B31.1 PARA. 122.1.7 (C.1) (C.4)  (C.5)  (C.9)  (C.10)	The minimum size of blow-off pipe and fittings shall be 1 in. The maximum size shall be 2 1/2 in. (See code of exceptions on miniature boilers and electric boilers).  On boilers with 100 square feet or less of heating surface, 3/4 in. pipe and fittings may be used.  Ordinary globe valves, and other valves with dams or pockets where sediment can collect, shall not be used on blow-off connections.  Except for electric steam boilers having a normal water content of 100 Gal, traction-purpose, and portable boilers with allowable working pressure over 100PSIG, each bottom blow-off requires two slow-opening valves, or one quick opening valve at the boiler nozzle followed by a slow-opening valve.  When the value of P required by para.122.1.4 (A.1) does not exceed 250 psig [1725 kPa (gage)], the valves or cocks shall be bronze, cast iron, ductile iron, or steel. The valves or cocks, if of cast iron, shall not exceed NPS 2 1/2 and shall meet the requirements of the applicable ASME standard for Class 250, as given in Table 126.1, and if of bronze, steel, or ductile iron construction, shall meet the requirements of the applicable standards as given in Table 126.1 or para. 124.6.  Boilers with multiple blow-off pipes may have single master valve on common header with single blow-off valve on each individual pipe. either master or individual blow-off valves shall be slow opening.  Two independent slow opening valves, or a slow opening and a quick opening valve, may be combined in one body provided it is the equivalent of two separate valves and that the failure of one cannot affect the other.

NOTE 1: These guide lines are based on ASME and ANSI codes at time of printing and are intended to assist you in valve selection. However, they are subject to changes in the codes as they may occur. The actual codes should always be consulted for full details and requirements.

**BOILER VALVE MOUNTINGS**

Refer to the following table for proper Valve to use at each location designed by index letter.



**OPTIONAL BOILER VALVE MOUNTINGS**



# BOILER VALVE selector guide

**TO MEET ASME/ANSI REQUIREMENTS  
ISO 9001 CERTIFIED COMPANY**



**LATEST APPLICABLE CODES**

- ASME SECT. 1 - 2013 POWER BOILERS**
- ANSI B31.1 - 2014 POWER PIPING**
- ANSI B16.1 - 2010 CAST IRON FLANGES & FITTINGS**
- ANSI B16.5 - 2013 PIPE FLANGES & FLANGED FITTINGS**
- ANSI B16.34 - 2013 VALVES – FLANGED, THREADED & W.E.**

# EVERLASTING® QUICK OPENING VALVES MEET ASME/ANSI CODE (INDEX B, E, F)

PRESSURE RATING PSIG			Figure No.	End Type	Body Matl.	Available Sizes - Chart shows suggested Operating Pressure limits for easy operation with standard lever and Geared lever. Longer levers are available for higher pressure upon request.				
Primary Service Rating	Max. Blow-Off Service †	Suitable for Use with Index Letter				1"	1 1/4"	1 1/2"	2"	2 1/2"
250	200	B,F	4000-A	SCR	Iron	250	250	200	200	100
			4001-A	FLG	Iron	250	250	200	200	100
			4010-A	SCR	Iron	—	—	250	215	150
			4011-A	FLG	Iron	—	—	250	215	150
300	485	B,F	4000-S (57)	SCR	Steel	400	300	200	200	100
			4001-S (57)	FLG	Steel	400	300	200	200	100
			4010-S (57)	SCR	Steel	—	—	300	215	150
			4011-S (57)	FLG	Steel	—	—	300	215	150
600	910	B,F	4000-S (58)	SCR	Steel	550	450	270	200	100
			4001-S (58)	FLG	Steel	550	450	270	200	100
			4010-S (58)	SCR	Steel	—	—	300	215	150
			4311-S (58)	FLG	Steel	—	—	300	215	150

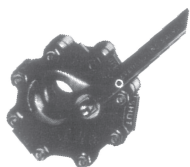


Fig. 4000 Series Lever Operated

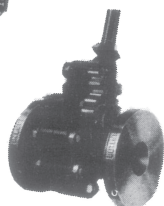


Fig. 4001 Series Lever Operated

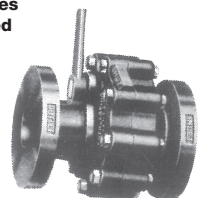


Fig. 4011, 4311 Series Lever & Gear Operated  
4010 Series Not Illustrated

### Features

- Straight-through flow
- Leak proof seal disc has self lapping action, actually improves with use.
- Self wiping action of disc – cannot hang-up on boiler scale

### How figure 4000 Series operates

Line pressure and heavy spring hold disc firmly against the body seat, sealing off the flow. When operated, the disc slides across the body seat pushing harmful boiler scale away, and wiping clean the precision lapped surface.

Hand adjustment of the post packing is eliminated. Post packing is **self-adjusted** by a spring and line pressure. This prevents destructive erosion and leakage of stuffing box.

## MATERIAL DATA

Figure No.	Body	Post	Disc	Seat Bushing	Lever Arm	Post Packing	Springs	Body Gasket	Operating Wrench
4000-A 4001-A	Cast Iron	Forged Bronze	Cast Iron	—	Ductile Iron	V-Ring Packing	17-7PH	Corrugated Stainless Steel	Forged Steel
4000-S (57) 4001-S (57)	Steel	Forged Bronze	Hard Stainless	Hard Stainless	Ductile Iron	V-Ring Packing	17-7PH	Corrugated Stainless Steel	Forged Steel
4010-A 4011-A	Cast Iron	Forged Bronze	Cast Iron	—	Ductile Iron	V-Ring Packing	17-7PH	Corrugated Stainless Steel	Ductile Iron
4010-S (57) 4011-S (57)	Steel	Forged Bronze	Hard Stainless	Hard Stainless	Ductile Iron	V-Ring Packing	17-7PH	Corrugated Stainless Steel	Ductile Iron
4000/4001-S (58) 4010/4311-S (58)	Steel	17-4 PH Stainless	Hard Stainless	Hard Stainless	Ductile Iron	Non-Asbestos	17-7PH	Corrugated Stainless Steel	Ductile Iron

## DIMENSIONAL DATA

Rating	Figure No.	Dimension Letter	Size					2 1/2"	
			1"	1 1/4"	1 1/2"	2"	2 1/2"	(57)	(58)
250	4000-A	F	3 5/8	3 5/8	4 1/2	4 5/8	5 1/4		
300/600	4000-S (57)(58)	++F	5	5 1/4	6	6 1/4		13 3/8	13 3/8
300/600	4002-S (57)(58)	++F	6 1/8	6 3/8	6 7/8	7 7/8		14 3/4	14 3/4
250	4001-A	B	7 1/2	7 1/2	8 3/8	9	10 3/8		
300	4001-S (57)	B	7 5/8	7 7/8	8 7/8	9	12		
600	4001-S (58)	B	8 1/2	9	10 1/2	11 7/8	15		
250/300	J	J	4	4 3/4	5 1/4	5 1/4	6 1/4		
		L	9	9	15 1/4	15 1/4	23		
600	O	O	18 5/8	18 5/8	15 1/4	15 1/4	23		
		S	5°	55°	55°	60°	60°		
		S	1 5/8	1 3/4	2 1/8	2 1/16	2 3/4		

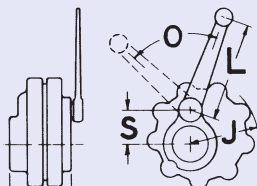


Fig. 4000 Series

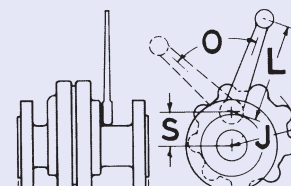


Fig. 4001 Series

Rating	Figure No.	Dimension Letter	Size			Rating	Figure No.	Dmsn Letter	Size			2 1/2"	
			1 1/2"	2"	2 1/2"				1 1/2"	2"	2 1/2"	(57)	(58)
250	4010-A	F	4 1/2	4 5/8	5 1/4	300/600	4010-S (57)(58)	++F	6	6 1/4		13 3/8	13 3/8
250	4011-A	B	8 3/8	9	10 3/8	300/600	4012-S (57)(58)	++F	6 7/8	7 7/8		14 3/4	14 3/4
	J	J	5 3/4	6 1/4	7 3/4	300	4011-S (57)	B	8 3/4	9	12		
	L	L	18 1/4	18 3/8	23	600	4011-S (58)	B	10 1/2	11 7/8	15"		
	L <sup>S</sup>	L <sup>S</sup>	12 1/2	12 1/2	15 1/2		J	J	5 1/4	5 1/4	6 1/4		
	O	O	130°	130°	120°		L	L	18 1/4	18 3/8	23		
	S	S	5	5 1/4	6 3/4		L <sup>S</sup>	L <sup>S</sup>	12 1/2	12 1/2	15 1/2		
							O	O	130°	130°	120°		
							S	S	4 1/2	4 1/2	6 3/4		

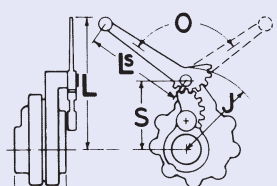


Fig. 4010 Series

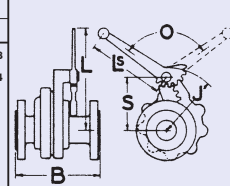


Fig. 4011 Series

**TO SPECIFY** — Everlasting Quick Opening Blow-Off Valve(s): figure number(s) \_\_\_\_\_, size \_\_\_\_\_, lever operated, sliding disc packless seating, bolted split body, for \_\_\_\_\_ lbs. meeting ASME/ANSI code.

**TO ORDER** — Use figure number(s), state size, body material, type connection, for \_\_\_\_\_ lbs.

†Pressures shown are maximum allowed by ASME Code.

++New F to F for 2 1/2" valves.

# EVERLASTING® SLOW OPENING VALVES MEET ASME/ANSI CODE (INDEX B, C, D, E, F)

PRESSURE RATING PSIG			Figure No.	End Type	Body Matl.	Available Sizes - Chart shows suggested Operating Pressure limits for easy operation with standard lever and Geared lever. Longer levers are available for higher pressure upon request.				
Primary Service Rating	Max. Blow-Off Service †	Suitable for Use with Index Letter				1"	1 1/4"	1 1/2"	2"	2 1/2"
250	200	B,F	4060-A	SCR	Iron	250	250	250	250	250
			4061-A	FLG	Iron	—	—	250	250	250
			B-6561	FLG	Iron	—	—	250	250	250
			B-6571	FLG	Iron	—	—	250	250	250
300	485	B,F	4060-S (57)	SCR	Steel	605	605	605	605	605
			4061-S (57)	FLG	Steel	605	605	605	605	605
			B-6661	FLG	Steel	—	—	605	605	605
			B-6671	FLG	Steel	—	—	605	605	605
600	910	B,F	4060-S (58)	SCR	Steel	935	935	935	935	935
			4061-S (58)	FLG	Steel	935	935	935	935	935
			B-6761	FLG	Steel	—	—	935	935	935
			B-6771	FLG	Steel	—	—	935	935	935

## Features

- Valve can be installed with hand wheel in any position.
- Straight-through-flow.
- Leak proof seal-disc has self lapping action, actually improves with use.
- Seal-disc has self wiping action; cannot hang-up on boiler scale.
- No retightening after cool down; seal not affected by temperature change.
- Real slow opening.
- Hard seat resists erosion.

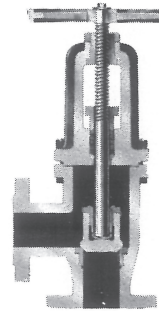
## How figure 4060 and 4061 Series operate



Line pressure and heavy spring hold disc firmly against the body seat, sealing off the flow. When operated, the disc slides across the body seat pushing harmful boiler scale away, and wiping clean the precision lapped surfaces.

Hand adjustment of the post packing is eliminated. Post packing is **self-adjusted** by a spring and line pressure. This prevents destructive erosion or leakage of stuffing box.

## Sectional View of Angle and "Y" Valve



## How figure 6000 Series operates

These valves are of the outside Screw and Yoke type. The seat and disc are capable of withstanding the severe erosive flow of blow-down service. While quick opening Valve holds boiler water, the seat and disc can be easily removed for repair without removing the Valve from line.

## MATERIAL DATA

Figure No.	Body	Post	Disc	Seat Bushing	Lever Arm	Post Packing	Springs	Body Gasket	Clevis Nut	Handwheel	Lever	Screw Shaft
4060-A 4061-A	Cast Iron	Forged Bronze	Cast Iron	Hard Stainless	Ductile Iron	V-Ring Packing	17-7PH	Corrugated Stainless Steel	Iron	Iron	Ductile Iron	Steel
4060-4061S (57) 4060-4061S (58)	Carbon Steel	Forged Bronze 17-4PH	Hard Stainless	Hard Stainless	Ductile Iron	V-Ring Packing Non-Asb.	17-7PH	Corrugated Stainless Steel	Iron	Iron	Ductile Iron	Steel

Figure No.	Body	Yoke	Disc	Seat	Stem	Yoke Nut	Yoke Lock Nut	Yoke Bushing	Gland	Packing	Seat Gaskets	Body Gasket
B6561 B6571	Cast Iron	Cast Iron	Hard Stainless	Stainless	Stainless Steel	Bronze	Bronze	Bronze	Ductile Iron	Comp. Fiber	Grafoil	Grafoil
B6661 B6671	Cast Steel	Cast Steel	Hard Stainless	Stainless	Stainless Steel	Bronze	Bronze	Bronze	Ductile Iron	Comp. Fiber	Grafoil	Grafoil
B6761 B6771	Cast Steel	Cast Steel	Hard Stainless	Stainless	Stainless Steel	Bronze	Bronze	Bronze	Ductile Iron	Comp. Fiber	Grafoil	Grafoil

## DIMENSIONAL DATA

Rating	Figure No.	Dimension Letter	Size				
			1"	1 1/4"	1 1/2"	2"	2 1/2"
250	4060-A	F	3 5/8	3 5/8	4 1/2	4 5/8	5 1/4
	4061-A	B	—	—	8 3/8	9	10 3/8
600	4060-S (57) 4061-S (58)	H	8	8	10	10 1/2	10 1/2
		J	13	13	14	14	15 1/2
		N	9	9 1/2	12	12 1/2	13 1/2
		S	5	5	5 1/2	5 1/2	5 1/2
		W	9	9	9	9	9
		—	—	—	—	—	—

Rating	Figure No.	Dimension Letter	Size		
			1 1/2"	2"	2 1/2"
250/300	B6561/B6661	E	4 1/4	5	6
		G	5	5 1/2	5 3/4
		H-Shut	14 1/2	15 3/8	16 3/8
600	B6761	H-Open	16 1/2	17 7/8	19 3/8
		E	4 5/8	5 1/4	6 1/4
		G	5 3/8	6	6 1/4
		H-Shut	14 1/2	15 3/8	15 7/8
		H-Open	16 1/2	17 7/8	18 7/8

Rating	Figure No.	Dimension Letter	Size				
			1"	1 1/4"	1 1/2"	2"	2 1/2"
300/600	4060-S (57)(58) 4062-S (57)(58)	++F	5	5 1/4	6	6 1/4	13 3/8 13 3/8
		++F	6 1/8	6 3/8	6 7/8	7 7/8	14 3/4 14 3/4
600	4061-S (57) 4061-S (58)	B	7 5/8	7 7/8	8 3/4	9	12
		B	8 1/2	9	10 1/2	11 7/8	15
		H	7 1/4	7 1/4	7 1/4	7 1/4	9 1/2
		J	11 1/2	12	12	12 1/2	16
		N	11	10	10 1/2	13	13
		S	4 3/4	4 3/4	5 1/8	5 1/8	6 1/2
		W	9	9	9	9	12
		—	—	—	—	—	—
		—	—	—	—	—	—
		—	—	—	—	—	—

Rating	Figure No.	Dimension Letter	Size		
			1 1/2"	2"	2 1/2"
250/300	B6571/B6671	B	12 1/4	12 3/4	14 1/4
		H-Open	15 3/4	17 1/4	18 1/2
		X-Open	6 5/8	7 3/8	7 5/8
600	B6771	B	12 7/8	13 1/2	15
		H-Open	16 1/8	17 3/4	19 1/8
		X-Open	6 1/2	7 3/8	7 7/8

TO SPECIFY — Everlasting Slow Opening Blow-Off Valve(s):  
figure number(s) \_\_\_\_\_, size \_\_\_\_\_, wheel operated,  
sliding disc packless seating, for \_\_\_\_\_ lbs. meeting  
ASME/ANSI code.

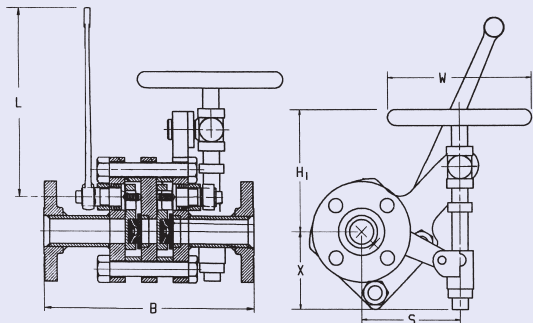
TO SPECIFY — Everlasting Slow Opening Blow-Off Valve(s):  
figure number(s) \_\_\_\_\_, size \_\_\_\_\_, wheel operated,  
rising stem, packless seating disc type, for \_\_\_\_\_ lbs.  
meeting ASME/ANSI code.

†Pressures shown are maximum allowed by ASME Code.  
++New F to F for 2 1/2" valves.

TO ORDER — Use figure number(s), state size, body material, type connection, for \_\_\_\_\_ lbs.

# DUPLEX & UNITANDEM VALVES MEET ASME/ANSI CODE (INDEX "F")

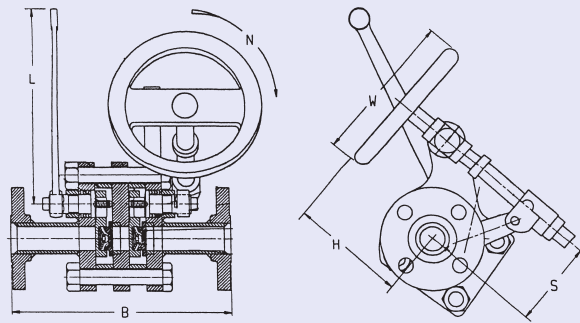
STANDARD BOILER VALVE Q/SL FLANGED END 5061L



RATING 300 LB

Fig. 5061L	DIMENSION					
	B	H <sub>1</sub>	L	S	W	X
1 1/2	12 1/2	8 1/2	12 1/5	5	9	4 1/8
2	12	8 1/2	18	5	9	4 1/8

STANDARD BOILER VALVE Q/SL FLANGED END 5061R



RATING 300 LB

Fig. 5061R	DIMENSION					
	B	H	L	N	S	W
1 1/2	11 1/2	6 1/2	12 1/2	10 1/2	5	9
2	12	7	18	13	5	9

## How figure 5000 series operate

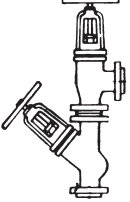
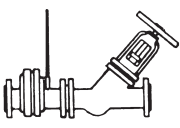
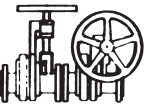
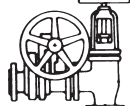
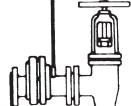
A combination of quick and slow opening Valves in one body operates the same as figure 4000 series described on pages 2 and 3. The lever operated section is used as the sealing Valve and the handwheel operated section is the blowing Valve. The blowing Valve can be removed for repair while the sealing Valve remains in service (Fire Banked).

All Valve bodies are made of carbon steel and are easy to operate at maximum blow-off pressure.

TO SPECIFY—Enter figure number(s) \_\_\_\_\_, size \_\_\_\_\_, and \_\_\_\_\_ lbs.

TO ORDER—Use figure number(s), state size, body material, type connection, for \_\_\_\_\_ lbs.

## DUPLEX VALVES

 <p><b>Two Slow Opening</b> 250 LB. B6571/B6561 300 LB. B6671/B6661 600 LB. B6771/6761</p>	<p><b>One Quick — One Slow Opening</b> 250 LB. 4000A/4060A 4001A/4061A 4010A/4060A 4011A/4061A 300/600 LB. 4000S (57)/(58) / 4060S (57)/(58) 4001S (57)/(58) / 4061S (57)/(58) 4010S (57)/(58) / 4060S (57)/(58) 300 LB. 4011S (57) / 4061S (57) 600 LB. 4311S (58) / 4061S (58)</p>	 <p><b>One Quick — One Slow Opening</b> 250 LB. 4001A / B6571 4011A / B6571 300 LB. 4001S (57) / B6671 4011S (57) / B6671 600 LB. 4001S (58) / B6771 4311S (58) / B6771</p>
 <p><b>Two Slow Opening</b> 250 LB. 4060A / 4060A 4061A / 4061A 300 LB. 4060S (57)/4060S (57) 4061S (57)/4061S (57) 600 LB. 4060S (58)/4060S (58) 4061S (58)/4061S (58)</p>	 <p>4061A / B6561 4061S (57) / B6661 4061S (58) / B6761</p>	 <p><b>One Quick — One Slow Opening</b> 250 LB. 4001A / B6561 4011A / B6561 300 LB. 4001S (57) / B6661 4011S (57) / B6661 600 LB. 4001S (58) / B6761 4311S (58) / B6761</p>

For detailed ratings and operating pressures see figure number of Valve on pages 2 and 3. TO SPECIFY—See data on pages 2 and 3.

TO ORDER—Use figure number combination shown above, state size, body material, type connection, for \_\_\_\_\_ lbs.

## DISTRIBUTED BY