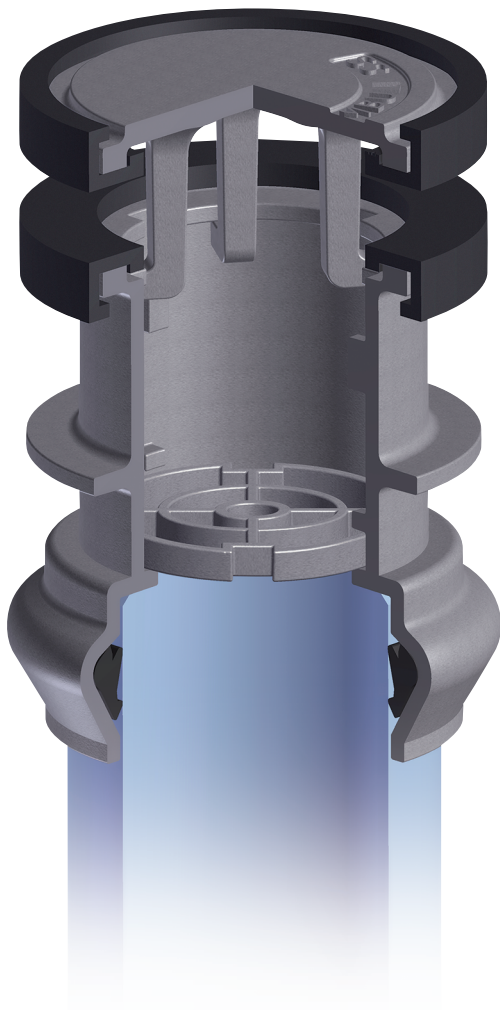


Trumbull Manufacturing

HYDROSTATIC TANK
PRESSURE RELIEF VALVES

FOR WATER AND WASTEWATER TREATMENT PLANTS



Trumbull Hydrostatic Tank Pressure Relief Valves are manufactured in ductile iron and cast stainless steel. Valves are offered in floor-type and wall-type, 4" and 6" sizes. On pages 8 and 9, we include details of our valves with comparisons to other designs. Additional information includes testing procedures.

ADVANTAGES OF TANK PRESSURE RELIEF VALVES

- QuadroSeal gasket design prevents iron lid and body from corroding together (see page 3).
- Strainer in wall valve is easier to maintain than a strainer in wall pipe, and insures a strainer will be installed (see page 11).
- C900 pipe gasket in bell of floor valve secures PVC pipe to valve (see pages 4, 5 & 8).
- Valves begin to open with less than 2" of head pressure (see page 10).
- Iron valves are ductile and coated with 2 part NSF 61 approved epoxy.
- Neoprene gaskets have good resistance to oils, sunlight and aging.



Floor-Type Valve

Wall-Type Valve



TRUMBULL

Trumbull Manufacturing

3850 Hendricks Road, Youngstown, Ohio 44515

Phone: 330.270.7888 | Toll Free: 877.504.1507 | Fax: 330.392.0756

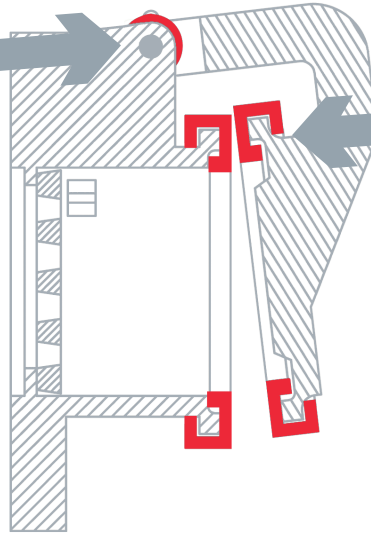
www.trumbull-mfg.com

NO METAL-TO-METAL CONTACT

Pressure Relief Valves



**UHMWPE
Isolating Washers**
prevent metal-to-metal contact
between lid and valve body on our
ductile iron wall-type valves.



Quadroseal Gaskets

Unique square design of Trumbull QuadroSeal Gasket surrounds casting on four sides to prevent separation.

QuadroSeal design also prevents metal-to-metal contact that can cause seating surfaces of iron valves to corrode into a "frozen shut" position.

Alternate Design Wall-Type Pressure Relief Valve (as removed from service)

Flap was "frozen shut" by
corrosion; the rim is caked
with debris that has hardened.

Valve after being
pried open.



RESULT:

Inoperable valves cannot relieve groundwater pressure, leading to structural damage to tanks.

**METAL-TO-METAL
CONTACT**

Trumbull Manufacturing™ Wall-Type Pressure Relief Valve



RESULT:

Metal-to-metal contact is not possible
between Trumbull seating surfaces!

It's because of our

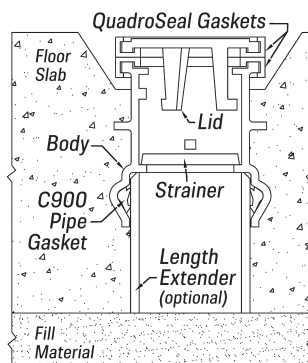
QUADROSEAL
gaskets

Floor-Type Hydrostatic Tank Pressure Relief Valves

QuadroSeal™ Gasket Design – Available in Ductile Iron and Type 316 Stainless Steel

Trumbull Floor-Type Tank Pressure Relief Valves are cast in the bottom of tanks in treatment plants to keep empty tanks from floating from an excess of groundwater beneath them. When this condition occurs, the hydrostatic pressure will open the cover of the valve allowing water to enter, thereby equalizing pressure inside and outside the tank and preventing it from floating. They will start to open at less than one foot of head. Lugs in the body prevent the cover or strainer from becoming separated from the body of the valve due to flow. Both can be removed when necessary, however, by turning to the right or left.

Both Floor-Type and Wall-Type Valves use two Neoprene seating surfaces so if particles of grit lodge on them, the head of liquid in the tank will force the valve closed. These valves are for low seating or unseating pressure applications only. Design uses C900 pipe gaskets in bell to securely retain PVC pipe to valve.



Floor-Type Pressure Relief Valves *

Size	Ductile Iron**		316 Stainless Steel	
	Domestic Item No	Non-Domestic Item No	Domestic Item No	Non-Domestic Item No
4"	1367-1558	367-1558	1367-1540	367-1540
6"	1367-1559	367-1559	1367-1544	367-1544

* For product weights, see drawing on Page G-36.

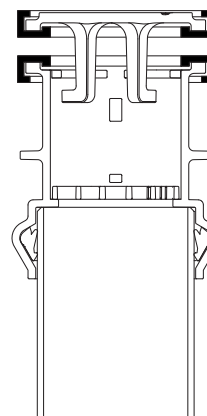
** Furnished with NSF-61, 2 part epoxy coating.

i Floor-Type valves are cast in 4" and 6" sizes, in overall lengths of approx. 7-3/4". The lengths can be extended by inserting C900 PVC pipe into the underside of the valve. The PVC extensions can be furnished and inserted by Trumbull, to customer's exact length requirements, or in the field with customer supplied PVC pipe.

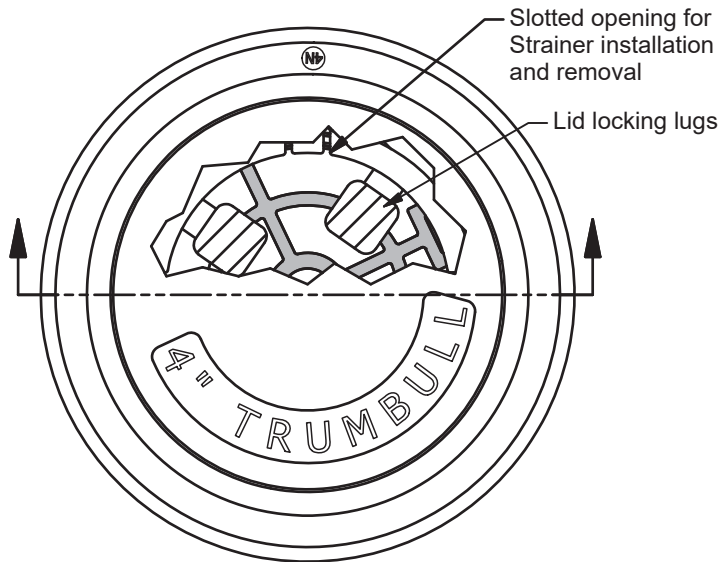
QUADROSEAL gaskets

Unique square design of QuadroSeal™ Gasket surrounds casting on four sides to prevent separation.

QuadroSeal™ design also prevents metal-to-metal contact that can cause seating surfaces of iron valves to corrode into a "frozen shut" position. See page G-39 for more information.



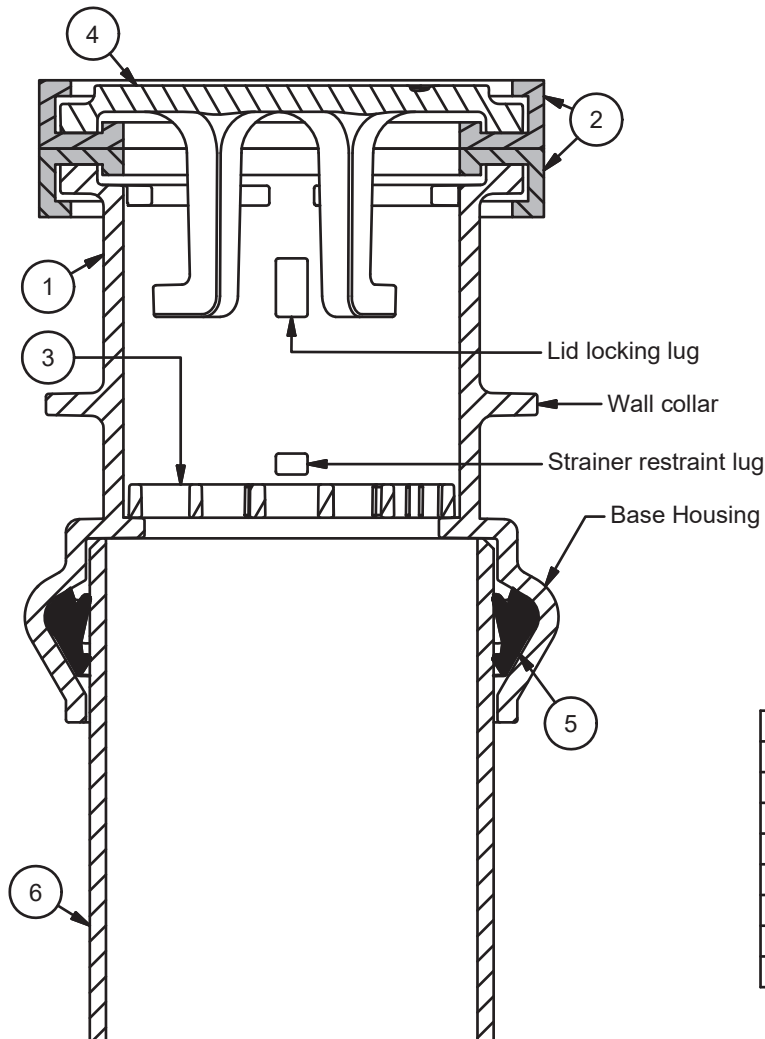
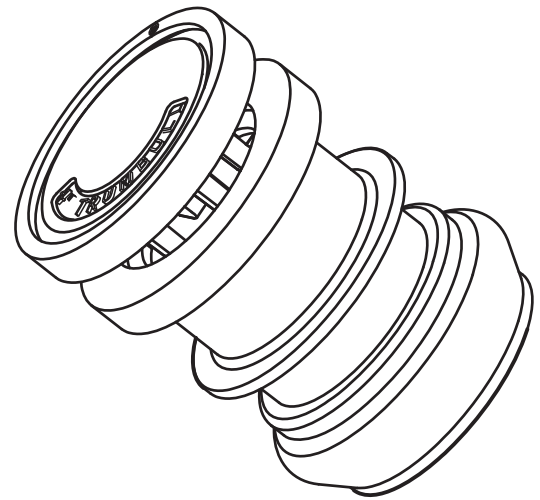
Wall-Type Pressure Relief Valves are shown on pages G-37 and G-38.



ITEM	DESCRIPTION	MATERIAL
1	Valve Body	Stainless Steel (T316) or Ductile Iron (65-45-12)
2	QuadroSeal Seat	Neoprene (40 durometer)
3	Strainer	Stainless Steel (T316) or Ductile Iron (65-45-12)
4	Lid	Stainless Steel (T316) or Ductile Iron (65-45-12)
5	Rieber Gasket	SBR
6	Length Extender	C900 PVC Pipe

Note:

Ductile Iron components are coated with Tnemec N140-1211 epoxy (complies with NSF 61).



Size	Material	Part Number	Weight
4"	DI	367-1556	13.2 lb
4"	SS	367-1540	14.5 lb
6"	DI	367-1578	23.1 lb
6"	SS	367-1544	22.3 lb

Valve size	4	6
Overall height - closed	7-5/8"	7-59/64"
Lid lift distance	1"	1"
Seat O.D.	6"	8"
Base Housing O.D.	6-11/32"	8-5/8"
Fits C900 pipe size	4"	6"
Wall collar O.D.	5-27/32"	8-1/8"
Body seat face to Collar CL	3"	2-7/8"
Strainer flow area	7.3 sq. in	18.9 sq. in

**TANK PRESSURE RELIEF VALVE
FLOOR TYPE**
Drawn to Scale

Drawn:
BJE
01/07/13

Original document

Trumbull Manufacturing
Youngstown, Ohio
www.trumbull-mfg.com

Wall-Type Hydrostatic Tank Pressure Relief Valves

QuadroSeal™ Gasket Design – Available in Ductile Iron and Type 316 Stainless Steel

Trumbull Wall-Type Tank Pressure Relief Valves are designed for installation in side walls of tanks of treatment plants. They are intended for low unseating pressure applications and will start to open at less than one foot of head to relieve groundwater pressure from the exterior of tank wall. For low seating applications, contact Trumbull.

Trumbull Relief Valves use two Neoprene seating surfaces so if particles of grit lodge on them, the head of liquid in the tank will force the valve closed.

The valve has a flanged body for use with a wall pipe. The flange drilling is according to ANSI 125# STD on both sizes. The Wall-Type valve uses a removable stainless steel hinge pin and two stainless cotter pins.



Wall-Type Pressure Relief Valves*

Size	Ductile Iron**		316 Stainless Steel	
	Domestic Item №	Non-Domestic Item №	Domestic Item №	Non-Domestic Item №
4"	1367-1572	367-1572	1367-1560	367-1560
6"	1367-1573	367-1573	1367-1564	367-1564

* For product weights, see drawing on Page G-38.

** Furnished with NSF-61, 2 part epoxy coating.

Wallpipes

Wallpipes are 18" long (overall) with a collar 6" from the face of the flange; they can be furnished cut-to-length to meet your requirements. The flange is tapped for studs to allow the flange on the Wallpipe to be set flush with the wall. No flange accessories will be furnished unless ordered separately. Wallpipe & Wall PRV sold separately. In order for the Wall-Type Valve to operate properly, it must be installed so that the bolt holes straddle the centerline.

Size	Ductile Iron		316 Stainless Steel
	Item №	Weight	When stainless valves are used, Wallpipes are furnished in ductile iron or fabricated from stainless pipe.
4"	367-1000	33.50 lbs.	
6"	367-1002	68.50 lbs.	

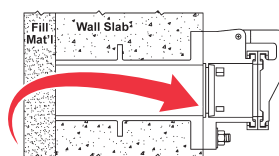
Floor-Type Pressure Relief Valves are shown on pages G-35 & G-36.

QUADROSEAL gaskets

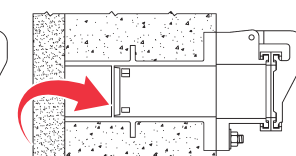
Unique square design of QuadroSeal™ Gasket surrounds casting on 4 sides to prevent separation.

QuadroSeal™ design also prevents metal-to-metal contact that can cause seating surfaces of iron valves to corrode into a "frozen shut" position. See page G-39 for more information.

Easy access to strainer helps prevent blockage of flow that could lead to structural tank damage. Wallpipes are frequently provided by ductile pipe suppliers and don't have strainers. The accumulation of debris on seating surfaces can lead to leakage from the tank. To prevent that condition ... specify a valve with an internal strainer.



Strainer in Trumbull valve is easily accessed for maintenance



Strainer installation of other designs

Pressure Relief Valve, Wall Type
Flange drilling per ANSI 125#

Size	Flange	Bolt Circle	Bolt Hole	Seat O.D.	Bore
4"	9" x 7/16"	7-1/2"	3/4"	6"	4"
6"	11" x 1/2"	9-1/2"	7/8"	8"	6"

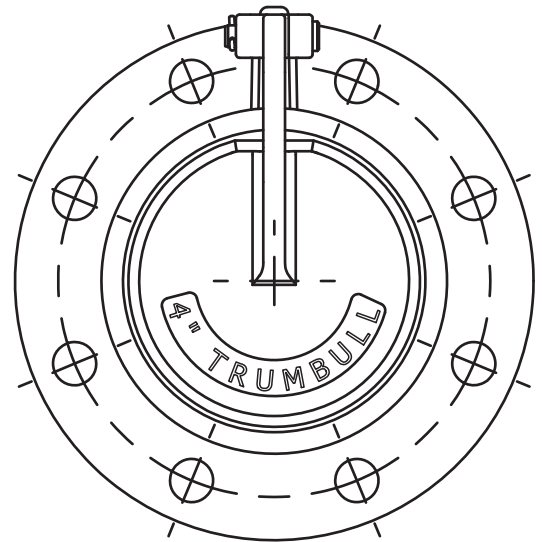
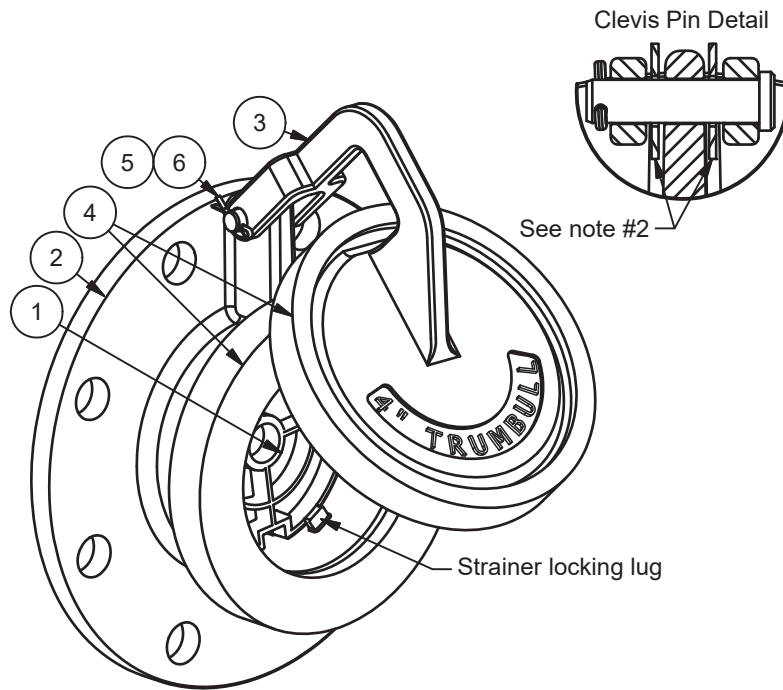
Item	Description	Material
1	Strainer	Stainless Steel (T316) or Ductile Iron (65-45-12)
2	Body	Stainless Steel (T316) or Ductile Iron (65-45-12)
3	Lid Flap	Stainless Steel (T316) or Ductile Iron (65-45-12)
4	QuadroSeal Seat	Neoprene (40 durometer)
5	Clevis Pin	Stainless Steel
6	Cotter Pin	Stainless Steel

Size	Material	Part Number	Weight
4"	DI	367-1550	14.25 lb
4"	SS	367-1560	14.65 lb
6"	DI	367-1570	21.45 lb
6"	SS	367-1564	22.05 lb

Note:

1.) Ductile Iron components are coated with Thnec N140-1211 epoxy (complies with NSF 61).

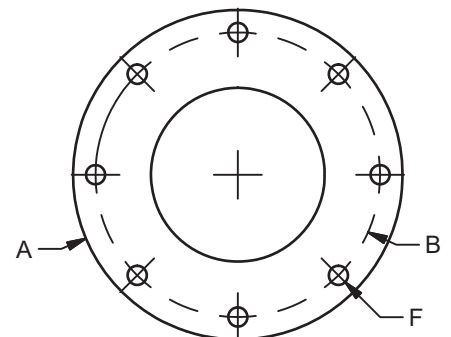
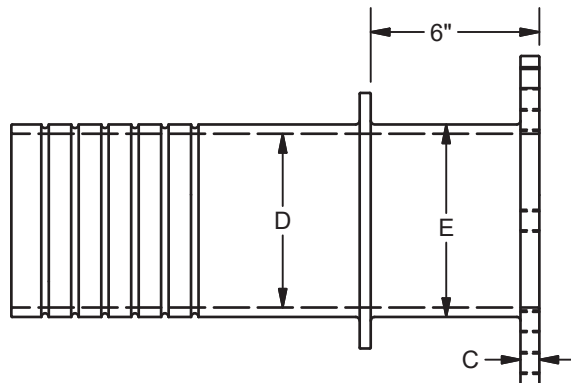
2.) Ductile Iron valves have Isolating washers made of UHMWPE installed on the Clevis pin between the lid and body, preventing metal to metal contact.



Size	Trumbull #	A	B	C	D	E	F	Weight
4"	367-1000	9"	7-1/2"	5/8"	4-3/16"	4.8"	5/8"-11 UNC	32 lbs
6"	367-1002	11"	9-1/2"	5/8"	6-5/16"	6-29/32"	3/4"-10 UNC	49 lbs

Wall Pipe

Flange drilling per ANSI 125#
Material: Ductile Iron (65-45-12)
Coating: Thnec N140-1211 epoxy



TANK PRESSURE RELIEF VALVE
WALL TYPE
Drawn to Scale

Drawn:
BJE
01/07/13

Revision:
BJE
B 05/13/19

Trumbull Manufacturing
Youngstown, Ohio
www.trumbull-mfg.com

Comparison: Seat Attachment Methods

TRUMBULL:

QuadroSeal gaskets surround lid and body castings on 4 sides to prevent separation.

OTHERS:

Screw and nylon washer retain gasket at center, but not at outer perimeter where seating takes place . . . lack of compression at outer diameter allows corrosion to build up underneath gasket, further reducing sealing ability.

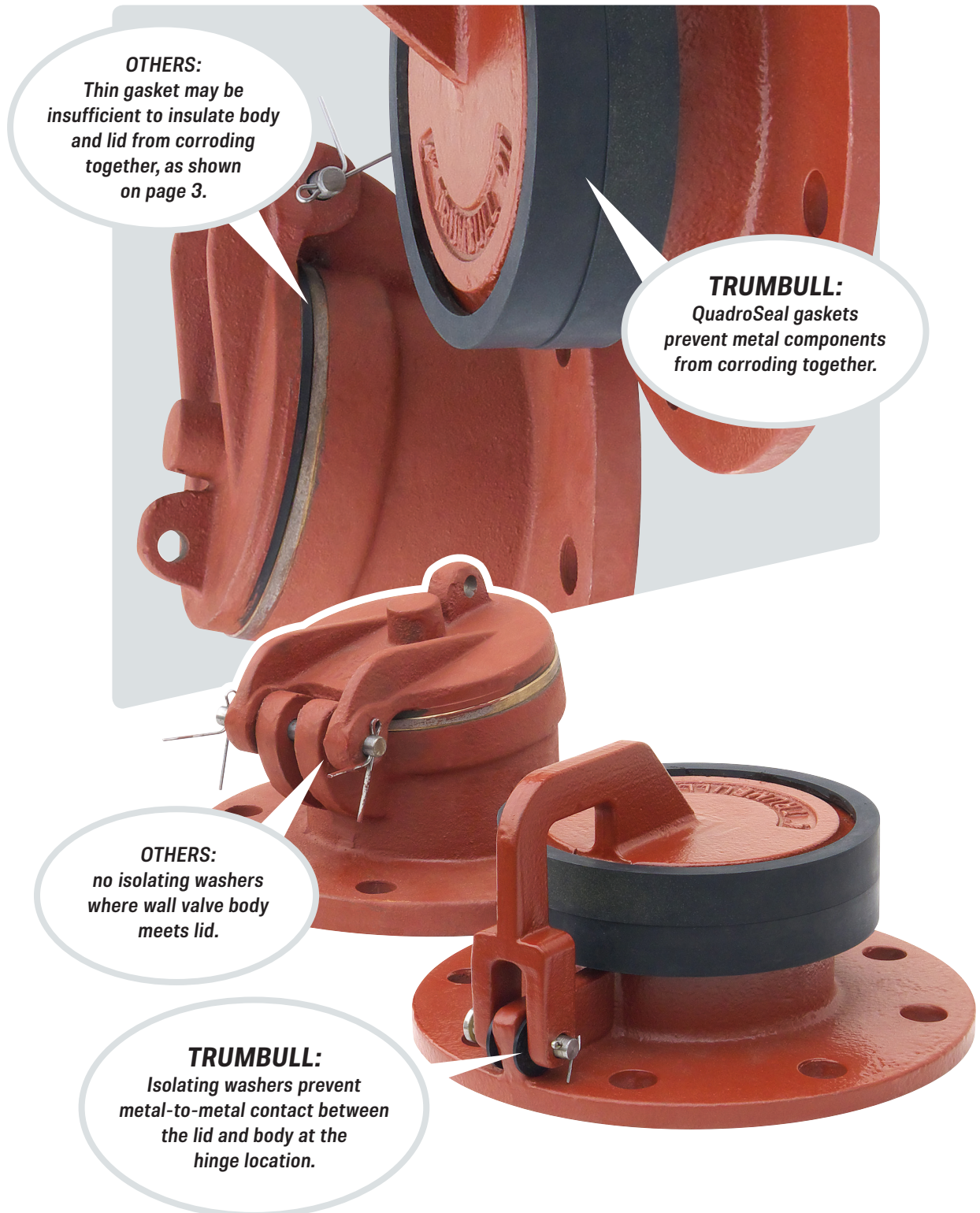
TRUMBULL:

C900 pipe gasket securely retains PVC pipe extensions and accommodates minimum and maximum tolerances of outside pipe diameter.

OTHERS:

Relies on O-ring to retain all pipe OD's.

Comparison: Seat Designs





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Testing of Trumbull Tank PRV's

Wall-type valve
in test fixture measures
head pressure required
to open valve.



At 5" head differential, valve flows to
prevent external pressure from increasing.

External head pressure required to make
valve drip.

Water level at bottom of valve bore.



Trumbull 4" wall-type valve
begins to open at less than 2" of head.

STRAINERS

In Trumbull Hydrostatic Tank PRVs

Hello!

I'M A STRAINER USED IN WALL AND FLOOR-TYPE TANK PRESSURE RELIEF VALVES. YOU MAY NOT THINK ABOUT ME VERY MUCH, BUT I AM **REALLY IMPORTANT!**

MY JOB IS TO KEEP ROCK OR GRAVEL FROM THE TANK EXTERIOR FROM INTERFERING WITH THE SEATING SURFACE. BUT YOU MUST **REMOVE AND CLEAN ME PERIODICALLY**. OTHERWISE, THE VALVE CAN GET PLUGGED UP AND THE GROUNDWATER WON'T BE ABLE TO FIND ITS WAY THROUGH THE VALVE INTO THE TANK. IF THAT HAPPENS, THE PRESSURE RELIEF VALVE CAN'T DO ITS JOB BY OPENING. THEN, THE HYDROSTATIC PRESSURE OF THE GROUNDWATER MIGHT DAMAGE THE TANK'S WALL OR CAUSE THE TANK TO FLOAT OUT OF ITS SETTING.

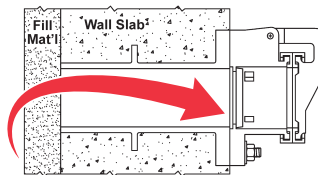
WHEN YOU INSTALL ME IN A WALL-TYPE VALVE, PLEASE PUT ME **IN THE VALVE**, NOT IN THE WALL PIPE. IF YOU PUT ME IN THE PIPE, SOMETIMES WORKERS CAN'T GET THEIR ARMS THROUGH THE VALVE AND HALFWAY INTO THE WALL PIPE. OCCASIONALLY, THEY HAVE TO REMOVE THE VALVE, JUST TO BE ABLE TO REACH ME!

I WISH THE ENGINEERS THAT DESIGNED **EVERY PLANT** WOULD USE VALVES THAT ARE EASIER TO MAINTAIN. I **REALLY LIKE** FIELD REPLACEABLE GASKETS THAT SURROUND THE BODY AND COVER, PREVENTING SEPARATION FROM THE VALVE. PLUS, THOSE SOFT RESILIENT GASKETS ALLOW A BETTER SHUTOFF ON SAND, SILT AND FINE GRAVEL, COMPARED TO IRON OR BRONZE SEATS.

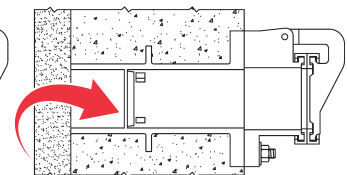


Easy access to strainer helps prevent blockage of flow that could lead to structural tank damage. Wallpipes are frequently provided by ductile pipe suppliers and don't have strainers.

The accumulation of debris on seating surfaces can lead to leakage from the tank. To prevent that condition ... specify a valve with an internal strainer!



Strainer in Trumbull valve is easily accessed for maintenance



Strainer installation of other designs

SPECIALTY PRODUCTS FOR THE WATERWORKS AND VALVE INDUSTRIES

Our product categories include waterworks tools, valve position indicators, polywrap, joint restraints products, meter pit lids and couplings, valve and curb box accessories, as well as valves and accessories for water/wastewater treatment plants.

We specialize in unique and customized accessories for the valve market. We have pioneered cast stainless valve accessories such as stainless chainwheels, floorstands, wall brackets and stem guides. Other innovations include our valve position indicators and cast stainless mud valves that have been thoughtfully designed to meet the highest expectations of Engineers and Operators. Trumbull Manufacturing is a leader in providing thermoplastic and composite lids for water meter changeout programs, as well as composite manhole frames and covers.

We stand behind our product with experienced Engineering, Quality Control and Field Service personnel. Our products are designed for long life, and are rigorously tested, in-house and at independent labs. Our inside sales staff is passionate about customer satisfaction, contact them today.



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