



# TPV Gate

OVERVIEW

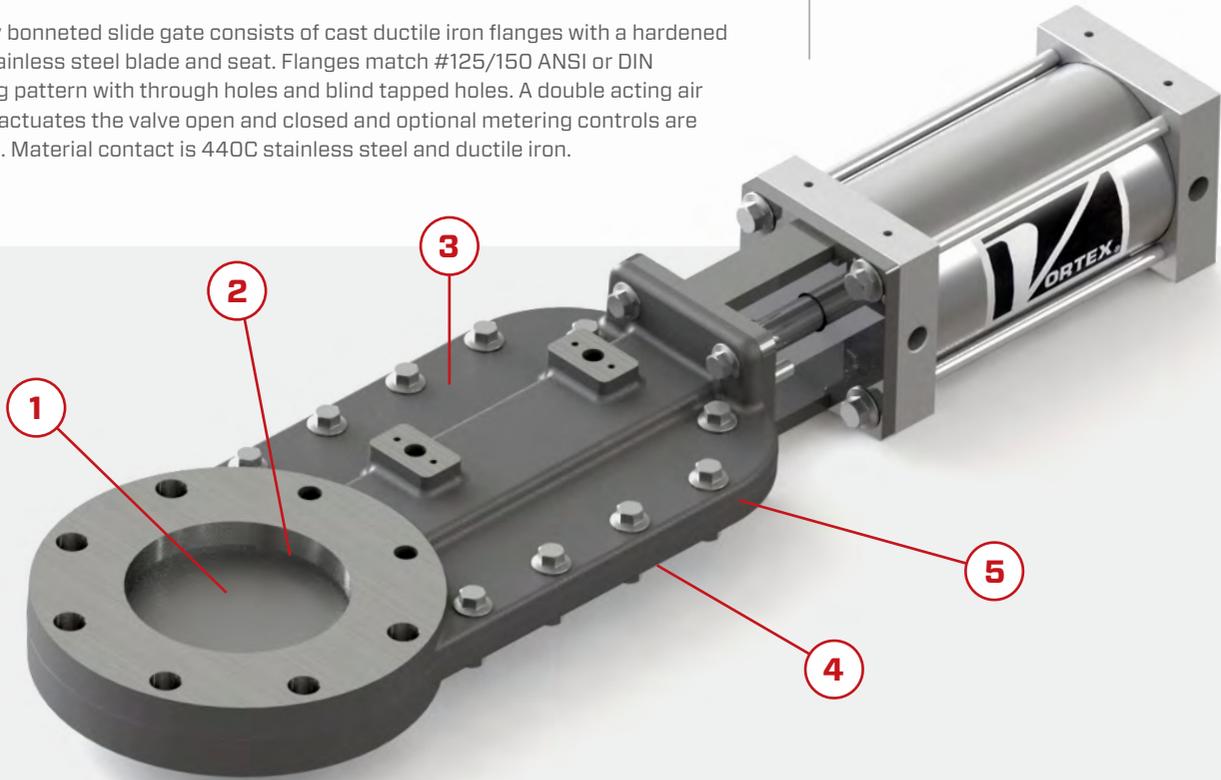
The Titan Pressure Valve is designed to address higher-pressure applications up to 100 psig (6.8 barg) and higher temperatures up to 660° F (350° C). The TPV Gate is engineered for highly abrasive applications and requires minimal maintenance over the life of the valve. Featuring Vortex's patented rising-blade technology ensures an optimal seal and positive material shutoff with the use of lifting lugs. This prevents the blade from jamming or packing material upon closure, which can cause serious downtime. Unlike most knife gates, the Vortex TPV contains a replaceable seat that can significantly increase the life of the valve.

This fully bonneted slide gate consists of cast ductile iron flanges with a hardened 440C stainless steel blade and seat. Flanges match #125/150 ANSI or DIN mounting pattern with through holes and blind tapped holes. A double acting air cylinder actuates the valve open and closed and optional metering controls are available. Material contact is 440C stainless steel and ductile iron.

### Conveying Types :

- GRAVITY FLOW
- DILUTE PHASE PNEUMATIC CONVEYING
- DENSE PHASE PNEUMATIC CONVEYING

DIAGRAM



FEATURES

### 1 Rising Blade Design

The rising blade and lifting lug design ensures optimal seal by keeping the blade in contact with the seat reducing packing

### 2 Replaceable Parts

The stainless steel seat in addition to the blade can be replaced increasing the service life of the valve

### 3 Blade Guides

Spring loaded blade guides keep the blade in contact with the seat in contact creating a positive seal

### 4 Air Purge Port

Used to pressurize the bonnet and keep material in the flow stream, the air purge is essential for higher pressure applications

### 5 High Temp Design

The construction materials allow for use in higher temperature applications

### + Available Sizes

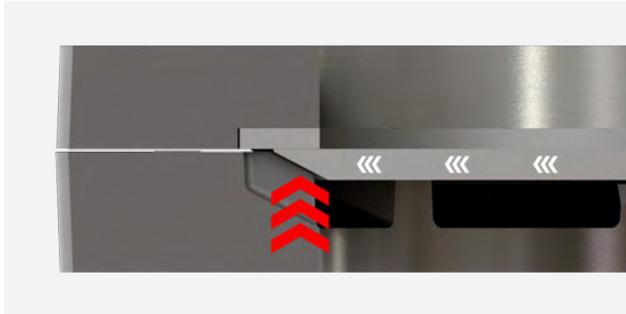
Standard sizes range from: 2" - 10" (50mm - 250mm)  
Contact us for custom sizes

### + Materials Handled

Designed to handle highly abrasive materials: minerals, frac sand, fly ash

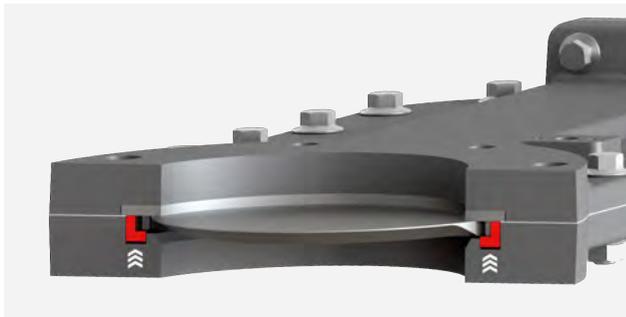


For a complete list of specifications, dimensional drawings and measurements, visit  
[WWW.VORTEXVALVES.COM](http://WWW.VORTEXVALVES.COM)



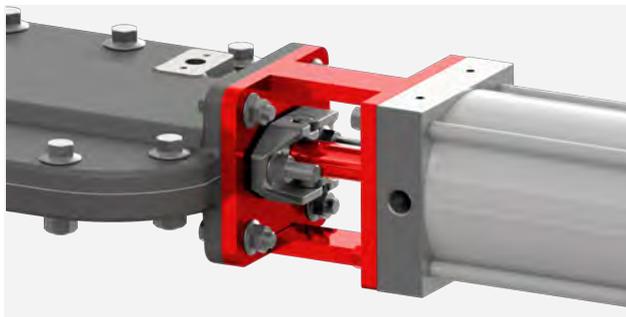
### ***Patented Rising Blade Design***

The beveled leading edge of the blade closes into a matching beveled lower flange to force the blade into the seat. A matching bevel on the clevis forces the blade into the seat on the opposite end of the blade. The bevel on the leading edge of the blade ends before it reaches the blade guide. This forces material forward and back into the convey line.



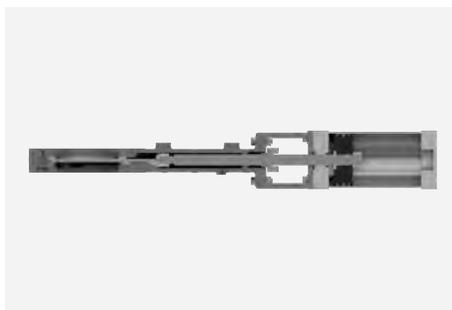
### ***Spring Loaded Blade Guides***

The blade is kept in contact with the seat throughout the stroke of the air cylinder with the aid of blade guides. These guides are supported by multiple wave springs on both sides of the blade that apply constant upward pressure helping to seal the valve. This feature extends the service life of the valve and makes it ideal for higher pressure applications.



### ***High Temperature Design***

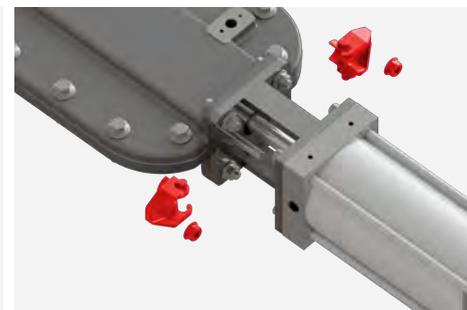
From the ductile iron housing to the precision metal-to-metal seal, the TPV contains no polymers or elastomers that can become problematic at high temperatures. The combination of a stainless steel piston rod and the air gap between the body and the air cylinder help reduce the transfer of heat to the air cylinder making it ideal for higher temperature applications.



The Compact Design makes removal easy if maintenance needs to be performed



The Replaceable Seat, Blade and Blade Guides significantly increase valve life



The Packing Gland is removeable while in-line for easy packing replacement