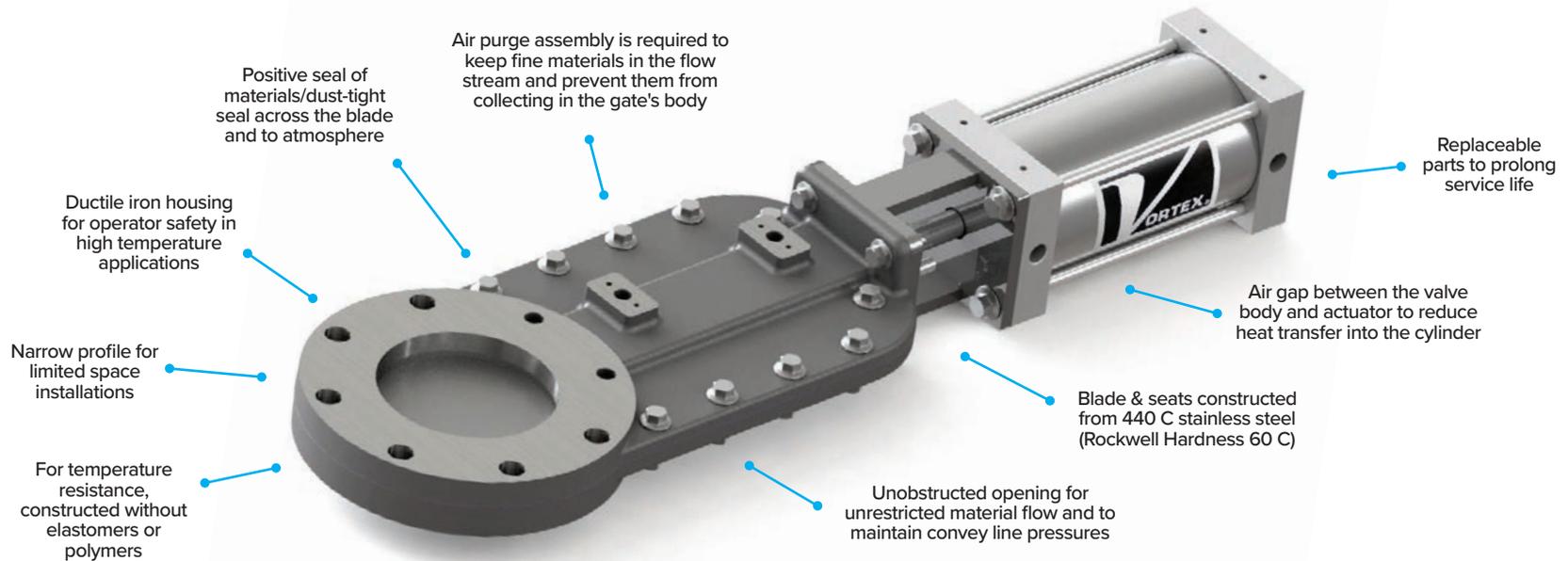


Model No. TPVXX

TITAN PRESSURE VALVE

Ideal application: Higher-temperature and/or higher-pressure applications handling highly abrasive dry bulk solid materials. The Vortex® Titan Pressure Valve™ often replaces deficient slide gates and butterfly valves used in such environments.

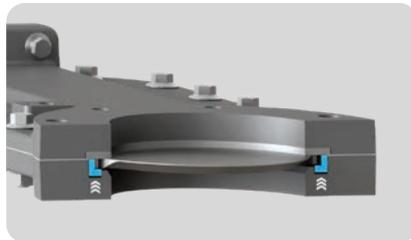
Purpose: The Titan Pressure Valve's unique "rising blade" is designed to close into an end seat. This provides an optimal seal of high pressures and a positive material shut-off.



KEY FEATURES



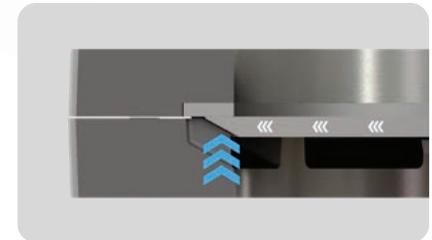
Replaceable packing gland for in-line maintenance



Spring-loaded blade guides for positive gate closure



Air gap between the valve body and actuator to reduce heat transfer into the cylinder



Beveled blade prevents material packing into the end seat

TECHNICAL SPECIFICATIONS

Conveyance Type	Gravity flow, dilute phase and dense phase pneumatic conveying applications. Can handle differential pressures up to 100 psig 6.8 barg 0.69 MPa, depending on gate size. Can be used in pressure or vacuum systems.
Materials Handled	Heavy-duty and/or abrasive dry bulk solid materials
Standard Sizes	2 – 12 in 50 – 305 mm Contact us for custom sizes
Opening	Available in round sizes
Overall Height	2 – 3 in 50 – 75 mm
Weight	45 – 250 lb 20 – 115 kg
Flange Options	ANSI #125/150, DIN PN10
Material Temperatures	Up to 660° F 350° C
Body/Frame Construction	Cast ductile iron
Material Contact Construction	440C stainless steel (Rockwell Hardness 60 C) & ductile iron
Seat Construction	440C stainless steel (Rockwell Hardness 60 C)
Drive/Actuation	Double-acting air cylinder (see pages 61 & 62)
Position Confirmation	Magnetic reed, proximity or mechanical limit switches (see page 63)
Material Flow Controls	AVP (see pages 65 & 66)
Required Accessories	Sealed body air purge (see page 64)
Compliance	ATEX Zone 20 (internal), ATEX Zone 21 (external)



THE POWER OF COMPARISON

Vortex Titan Pressure Valve vs. Alternatives

- Many alternative slide gates and butterfly valves rely on seals which are directly exposed to the material flow stream. These seals rapidly erode or tear away in service. This deficiency promotes leakage of materials and dusts past the gate and to atmosphere, in addition to actuation issues and several other maintenance concerns. To address these issues, the Vortex® Titan Pressure Valve™ is designed without polymer or elastomer seals. This ensures the gate's seal is not compromised by extreme pressure, temperature or abrasion. This design maintains the gate's positive seal with infrequent maintenance intervention.
- Many alternative slide gates pack materials into an end seal, preventing positive closure. This promotes material leakage through the valve, can cause blade damage, and can cause other actuation issues. Upon gate closure, the Titan Pressure Valve's sliding blade "rises" upward into a seat, rather than a true end seal, so that materials remaining at the leading edge of the blade can fall away into the process line below, rather than packing into an end seal. This design provides a better seal of materials and dusts in high pressure applications.
- A butterfly valve's rotating disc is directly exposed to the material flow steam, which creates wear to the disc itself. The exposed disc also disrupts convey line pressures and obstructs material flow as they pass through the valve, which can cause line plugs and other maintenance concerns. To resolve these issues, when the Titan Pressure Valve is open, its sliding blade is recessed to create an unobstructed opening that maintains convey line pressure and allows unrestricted material movement.
- The Titan Pressure Valve features spring-loaded blade guides along the full stroke of the gate to ensure the blade is kept in constant contact with the seals throughout each actuation. The blade guides also assist in "lifting" the blade into its end seat. This design ensures the gate's positive seal of materials and dusts over time. The Titan Pressure Valve also features an additional spring-loaded blade guide that runs perpendicular to the sliding blade. This strengthens the center of the blade to further ensure the gate's positive seal.
- In high pressure applications, the Titan Pressure Valve's required air purge assembly is essential to keeping fine materials in the flow stream and out of the body of the valve.

INSTALLATION REQUIREMENTS

The Vortex® Titan Pressure Valve™ must be installed so that the actuator is parallel to the horizontal plane.



For more information & technical resources, please visit:

www.vortexglobal.com