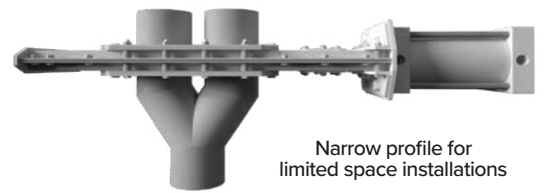




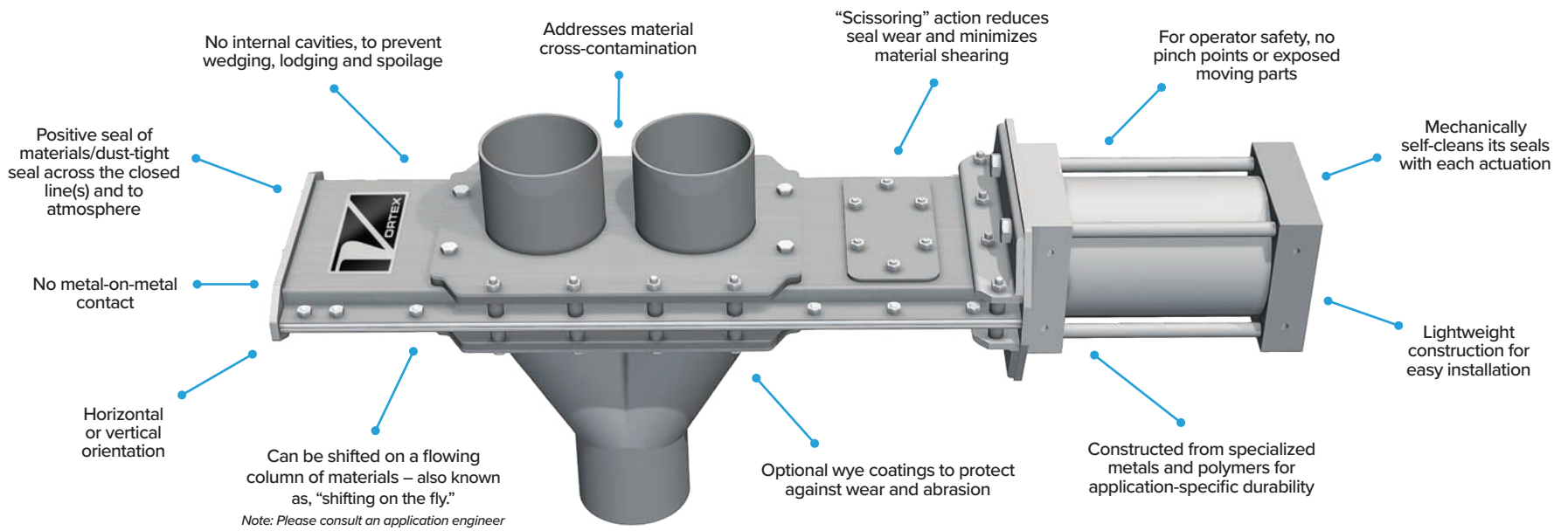
Model No. DRXX

# WYE LINE DIVERTER

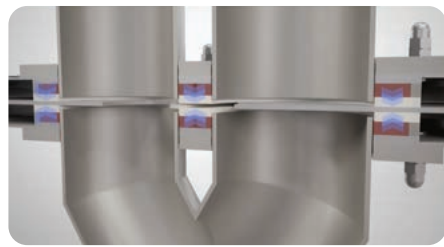
**Ideal application:** Diverting or converging dry bulk solid materials in high cycle applications. The Vortex® Wye Line Diverter™ is commonly used in storage fill and/or storage transfer applications. When applied in non-abrasive applications or as an air directional valve, Wye Line Diverters often record more than 10 million cycles over the course of their service life.



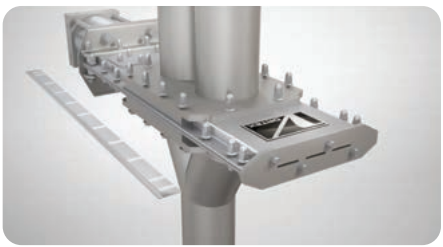
Narrow profile for limited space installations



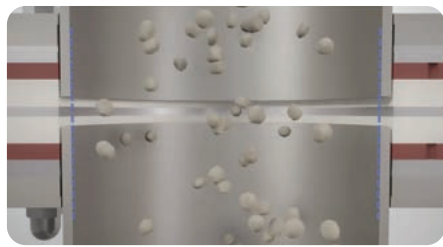
## KEY FEATURES



Live loaded, wear compensating hard polymer pressure plate seals



Shimming system for in-line maintenance



Machined, full-bore orifice for unobstructed material flow and to maintain convey line pressures

## TECHNICAL SPECIFICATIONS

<b>Conveyance Type</b>	Gravity flow and dilute phase pneumatic conveying applications. Can handle differential pressures up to 15 psig   1 barg   0.1 MPa, depending on gate size. Can be used in pressure or vacuum systems.
<b>Materials Handled</b>	Non-abrasive to moderately abrasive powders, pellets and granules. Modifications available for handling corrosive materials and/or for wash-down.
<b>Standard Sizes</b>	2 – 12 in   50 – 305 mm ID & OD diameters are available. Schedule pipe sizes are also available.
<b>Inlet &amp; Outlets</b>	Available in round sizes.
<b>Overall Height</b>	11 – 43 in   280 – 1,085 mm
<b>Weight</b>	20 – 450 lb   10 – 205 kg
<b>Outlet Angle Options</b>	30° or 45° from center Contact us for custom angles
<b>Connection Options</b>	Compression couplings, ANSI #125/150
<b>Material Temperatures</b>	180° F   80° C for standard gate, with modifications that allow up to 400° F   205° C
<b>Body/Frame Options</b>	Aluminum, 304 or 316L stainless steel, carbon steel
<b>Weldment Options</b>	Aluminum, 304 or 316L stainless steel, carbon steel
<b>Material Contact Options</b>	Aluminum, 304 or 316L stainless steel, carbon steel
<b>Pressure Plate Options</b>	Nylon, PET, UHMW, 25% glass-filled PTFE
<b>Load Seal Options</b>	Natural rubber and/or silicone rubber
<b>Drive/Actuation</b>	Double-acting air cylinder, hand wheel/crank, chain wheel, electric actuator (see pages 61 & 62)
<b>Position Confirmation</b>	Magnetic reed, proximity or mechanical limit switches, and/or clear bonnet cover for visual indication (see page 63)
<b>Other Options</b>	Ceramic backing, ceramic/epoxy coating, or reinforced inlet weldment (see page 68) Sealed body air purge (see page 64)
<b>Compliance</b>	ATEX Zone 20 (internal), ATEX Zone 21 (external), FDA



## THE POWER OF COMPARISON

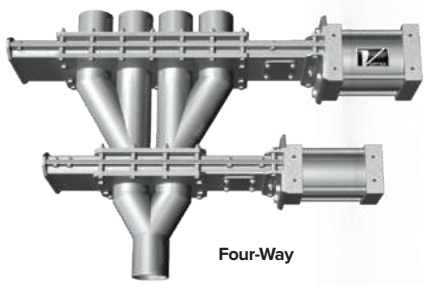
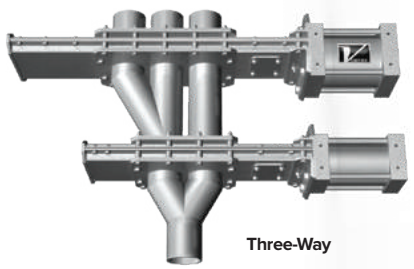
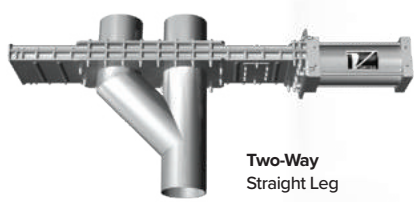
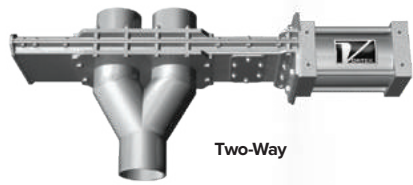
### Vortex Wye Line Diverter vs. Alternatives

- Many alternative pneumatic diverters rely on soft rubber seals which are directly exposed to the material flow stream. These seals rapidly erode or tear away in service, which allows materials and dusts to leak into the opposite line(s) and to atmosphere. Seal damage can also cause actuation issues and several other maintenance concerns. The Vortex® Wye Line Diverter™ addresses these issues by incorporating "live loaded" hard polymer pressure plate seals. Hard polymer provides greater wear resistance and longer service life than alternative sealing materials. The hard polymer seals are "live loaded" with compressed rubber backing to ensure even as the polymer experiences frictional wear from many actuations over time, the rubber load seals continuously force the polymer seals against the sliding blade. The seals are also shielded from the material flow stream, to protect them from abrasion. This design maintains the diverter's positive seal of materials/dust-tight seal with infrequent maintenance intervention.
- Plug diverters are prone to seizing and binding, as a result of material build-up in the clearance between the rotating plug and the diverter's housing. The Wye Line Diverter's sliding blade design mechanically self-cleans materials away from the sealing surfaces with each actuation. This prevents actuation issues from materials wedging in the seals, reduces seal wear, and ensures a positive seal of materials/dust-tight seal across the opposite line(s).
- Plug diverters are constructed primarily from bulky, heavy cast iron, making them costly to install or remove for maintenance. The Wye Line Diverter is lightweight and narrow profile, making it well-suited for difficult installations.
- In order to shift a plug diverter, the internal plug must be rotated approximately 150°. This is often a timely process. Before the internal plug can be rotated, the system's blower must be temporarily deactivated. Otherwise, the plug will create back pressure as it rotates. With an average shifting time of 2 – 6 seconds, the Wye Line Diverter can be shifted without shutting down the system's blower and without creating back pressure.
- Many alternative pneumatic diverters have blade(s) and seals which are directly exposed to the material flow stream. This 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, the Wye Line Diverter's sliding blade is machined with an unobstructed, full-bore orifice that maintains convey line pressure and allows unrestricted material movement.
- The Wye Line Diverter creates a naturally occurring high-pressure airfoil that deflects errant materials away from the closed line(s) and back into the material flow stream. Also, with each purge cycle, the Wye Line Diverter forces residual materials downstream. This design addresses material cross-contamination to the opposite line(s).
- Alternative pneumatic diverters can pack and grind materials against the seals. This causes seal wear, material degradation and damaged product quality. Materials may also wedge in the seals, causing the diverter to seize and bind. To address these issues, the Wye Line Diverter's "scissoring" action tapers off material flow as it shifts between lines. In keeping the pressure plate seals clear of materials, their service life is also extended.

For more information & technical resources, please visit:

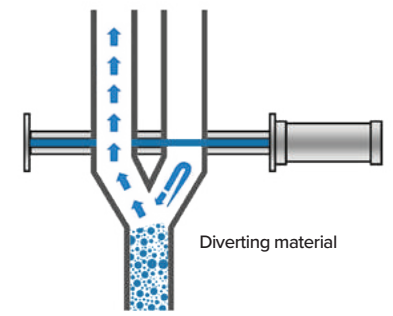
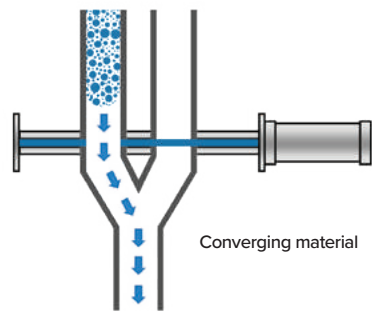
[www.vortexglobal.com](http://www.vortexglobal.com)

**CONFIGURATION OPTIONS**



*Please note: In Three- and Four-Way diverters, the addition of a second gate will add to overall height. Three- and Four-Way diverters are available in sizes up to 6 in | 150 mm*

**TWO-WAY MATERIAL FLOW**



**FOUR-WAY MATERIAL FLOW**

