

Series "D" Diverters – White Paper

Lorenz Series D Diverter Valves are suitable for Pressure or Vacuum dilute phase pneumatic conveying systems (maximum recommended line pressure of 15 psi). The Diverter valves are available with various options and configurations to suit specific applications.

First consideration should be for the material being conveyed. This will help determine the suitability of the Series D Diverter Valve and help determine the materials used in the construction of the valve. Please specify the type, particle size and volume of material. Also specify if the material is abrasive, damp or wet, at a high temperature as these factors will influence the selection of various options.

Lorenz Series D diverter valves are suitable for most general applications. However there are specific applications where certain options will ensure the performance of the valve.

If the material being conveyed is a powder, the Air Purge option should be added to the valve. Air Purge, pressurizes the internal cavities of the valve to a pressure slightly higher than the conveying line pressure. This prevents material from migrating past the internal seals and accumulating in the valve body.

If the conveyed material is mineral base, the internal Nylon components can be replaced with Molybdenum disulfide (MoS₂) impregnated Nylon to reduce friction and wear caused by abrasive minerals.

If the diverter valve is being used in a general food grade application, the Nylon internal components can be replaced with Ultra High Molecular Weight Polyethylene (UHMW) components. For food grade applications with sugary or sticky materials, Polyethylene Terephthalate (PET) can be used to help prevent the valve from sticking or jamming.

Lorenz Valves are designed for dry materials only. Using Lorenz valves with damp or wet material is not recommended.

If the material is abrasive, then components which contact the material will can be made from Carbon Steel or Stainless Steel (rather than aluminum) and of a heavier gauge, in order to provide better wear resistance. The standard internal components of Lorenz Series D diverter valves are rated to a maximum temperature of 180°F. If a higher temperature resistance is required, then a high temperature kit may be optioned as follows:

HT1	250°F max. – Replaces standard rubber and foam internal components with Silicone components
HT2	400°F max. – Replaces standard rubber and foam internal components with Silicone components. Replaces Nylon internal components with Teflon components