Dorr-Oliver Eimco® Pumps

- Heavy Duty Performance
- Greater Efficiency
- Less Maintenance
Applications
Dorr-Oliver Eimco pumps are widely implemented in a variety of industries including:
- Water and wastewater treatment—sludge transfer handling, chemical feed, and transport of aqueous solutions containing a high percentage of impurities.
- Pulp and paper—The DOE Gorator® unit is used to defiberize broke, reduce knot rejects to fiber, and break up black liquor clumps.
- Mineral processing—thickener underflow and transport of most basic metals and mineral slurries.
- Chemical processing—transport of acids, alkalis, chlorine compounds, and a variety of other difficult to handle, severely corrosive, and abrasive materials.
- Food processing—movement of a variety of food products from coffee grounds to corn fiber.
- General industries—Dorr-Oliver Eimco pumps transport a variety of products and slurries which include plating solutions, foundry sands, pickle liquors, scrubber system sludges, dipping compounds and flocculants among numerous other applications.

Choose the Best Pump for Your Particular Application

- Sludge Applications
- Slurry Applications
- Filtrate Applications
- Fluid Applications

FLSmidth Minerals is a leading supplier of high performance liquid/solid separation equipment and process systems. One of these leading technologies is our Dorr-Oliver Eimco (DOE)pump product line which helps our customers transport liquid/solid slurries to their desired destination. Dorr-Oliver Eimco traces its history in pump manufacturing to 1915, when Edward L. Oliver developed a line of centrifugal pumps to support the filter business. Some of the original Dorrco™ pumps are still in operation today! FLSmidth Minerals continues to specialize in pumps that are rugged and durable, handling heavy slurries, extremely corrosive or abrasive materials, and can solve your specific pumping challenges in a unique way. Our dedicated pump production team manufactures DOE pumps to precise specifications and tolerances to meet your stringent requirements.
Pulse Transfer Thickening: the ODS® Pump
This air-operated diaphragm pump is superior to centrifugal and helical screw pumps for heavy-duty applications and better than mechanically or hydraulically operated pumps due to its simplicity of control and evenly distributed power transmission.

Principal Benefits
Designed and built for long-term, year-in-year out, heavy-duty performance, the ODS Pump delivers more process efficiency requiring minimal maintenance. It lasts longer and pumps slurries no other pump can handle.

- The ODS Pump can be automated to match capacity to process requirements for maximum process efficiency
- Its unique construction allows the pump to be operated dry, indefinitely. It cannot air bind, has no stator to burn out
- There are no seals, so contamination of process slurry or the environment from seal leaks is not possible.
- Pump capacity and discharge pressure can be adjusted during operation for maximum flexibility
- Rhythmic plunger-type action minimizes particle degradation of even the most delicate materials

Applications
The ODS pump can handle tough corrosives, abrasives and highly concentrated or unusually viscous slurries, extremely volatile slurries and delicate and unstable slurries. Temperature range is up to 200°F and solids content of slurries can be up to 75%. Flow ranges from 0.5 gpm to 180 gpm.

User experience shows the ODS Pump can be used in a variety of applications including chemical processing, wastewater treatment, general manufacturing, minerals processing and food processing. Combined with ODS Pump automatic controls, operators can automatically or remotely adjust air, stroke rate, and pump sequencing, and monitor moisture amounts.

Choose from several check valves and components to suit your particular application. The ODS Pump is available in three basic models and five sizes.

When equipped with the patented spring assist, the pump is self-priming and has suction lift up to 10 feet. Capacity increases by 50% due to faster filling action, and easily handles slurries with high solids concentration and viscosity.
The Gorator® Pump

Disintegrate, Macerate, Shred and Pump

The Gorator® Pump sizes, reduces, disperses, separates, delumps, grinds, chops, macerates and even pumps. Working on a simple inclined rotor principle, the Gorator pump is self-cleaning, non-clog, and operates trouble-free under the most difficult conditions.

An impeller, taking the form of a flat plate, is mounted at an oblique angle on the end of the pump shaft. Rotation of the impeller produces a centrifugal action which pumps the material and discharges it radially through the outlet. Notched teeth are located in peripheral stator bars to chop the material during passage through the pump.

Principal Benefits

The Gorator pump accomplishes three distinct functions in one unit, saving on equipment costs. Higher shear performance gives more intense dispersion than with conventional machines. The casing is made to open quickly so that it is easy to inspect, clean and to remove tramp materials. The Gorator Pump is constructed for heavy-duty applications providing for a long service life.

Applications

The Gorator Pump can be adapted to meet a wide variety of needs in an ever-increasing number of industries. It is easily fitted to meet individual reducing needs by spacing the liner bars to exactly the position required for various size particulates.

Wood chips, synthetic fibers, rags, rugs, plastics, raw sludges, slurries, slaughterhouse residue, high-viscosity materials, chemical residue, industrial waste and debris are but a few of the materials being successfully handled by the Gorator.

Applications serving the wastewater industry for more than thirty years have proven this rugged machine. Material is reduced to a slurry so that material handling of solids, and process equipment clogging, is eliminated.
**Positive Displacement Pumps**

Dorrco™ positive displacement double diaphragm pumps are constructed of extra heavy-duty materials for tough, long-lasting service in extreme environments. These pumps can be installed at liquid level in thickener applications to prevent flooding or start-up problems. The pump operates with a smooth action, which prevents agitation and keeps the slurry from degrading during transport. Dorrco pumps come in two series: Type W and VM.

**Principal Benefits**

The Dorrco pump enjoys many advantages over centrifugal pumps used in heavy-duty service. Because drive motion is at right angles to the diaphragm, you can expect the diaphragm to have a greater life. Anti-friction ball bearings also provide for a smooth pumping action which reduces friction and wear on moving parts. The Dorrco pump utilizes standard horizontal electric motors for lower power consumption. A stroke adjustment handwheel allows for easy adjustment of stroke length to vary discharge rate while the pump is operating. All components of the pump are above ground and easily accessed for maintenance.

**Applications**

Dorrco Pumps have been used successfully in metallurgical processes for over sixty years. The pump can be used with thickener and clarifier underflow, pulp mill liquors, slurries with heavy solids content, abrasive and corrosive alkaline or acid slurries. Flow ranges from 9 gpm (2 M3/H) to 600 gpm (136 M3/H) with multiple models are available for application selection. Protective rubber lining is also available for acidic/alkaline conditions.
Handle Corrosive and Abrasive Solids

Olivite™ centrifugal pumps are constructed of heavy metal, and are lined with 1/4-inch highly corrosion and abrasion-resistant liner materials (Kynar® impeller or Hypalon® liner). Olivite pumps are available in direct drive or V-belt design. With the ability to handle corrosive and abrasive solids, Olivite pumps are the superior solution for handling acids, alkalies and slurries.

Olivite™ OB-1 Pumps – Principal Benefits

The Olivite OB-1 pump can be operated under severe high temperature and high pressure conditions due to its proven design of lightweight Kynar impeller reinforced with fine glass or carbon. Can reach maximum temperatures of 250°F using Kynar lining or 215°F with Hypalon liner, unless restricted by the compound being pumped. The heavy-duty construction ensures that shape is retained, while its low weight and highly efficient vane geometry reduces shaft deflection, resulting in longer bearing life and improved pump performance.

Olivite™ ANSI Pumps – Principal Benefits

These pumps are designed to ANSI specifications with back pull out, and include solid Kynar impellers for pumping applications involving nearly all corrosive solutions, hot as well as cold. Our ANSI Pump is constructed with vulcanized lining material (Kynar or Hypalon) mechanically locked into the ductile iron metal casing so it won’t shake loose and enables longer service life. The impeller design is optimized for greater efficiency and very low Net Positive Suction Head (NPSH) and can be adjusted externally, requiring no seal readjustment or special tools, thus simplifying operation.

Olivite™ OB-1 Pumps – Applications

The pump is commonly used with acid, alkalies, and chlorine compounds at maximum pressure of 180 psi. Olivite OB-1 Pumps are available in three sizes.

Type L Pumps – Principal Benefits

Constructed of cast iron or 316 stainless steel, Type L pumps are long lasting and essentially maintenance free. They are designed for discharge heads up to 120 feet Total Dynamic Head (TDH) and handle flows up to 350 gpm. The impellers and casings have been designed for maximum NPSH advantage, as well as trouble-free operation and long life.

Type L Pumps – Applications

Primarily used for pumping filtrates, the Type L pump’s stainless steel construction is especially suited to food and chemical processing applications. Parts are interchangeable on 1-1/2” and 2” models minimizing parts stocking. Mechanical seals or packed boxes are available for greater flexibility. Choose from direct connected or optional V-belt drive assemblies.

Olivite™ ANSI Pumps – Applications

Built to strict ANSI standards and offering components that are more flexible and reliable than most competitive pumps, the Olivite ANSI Pump can be used in a wide variety of chemical applications. Olivite ANSI Pumps are available in two sizes.