



YTS

Air Powered Double Diaphragm Pump General Characteristics



YTS® Pump Engineering

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AODD Pump General Characteristics

Portable

Air Powered Double Diaphragm Pumps are Compact, Lightweight and Fully Portable and can be operated in almost any work site or environment.

Simple Installation & Operation

Just connect an Air Supply and Liquid Lines. It is not necessary to mount or fix the pump in place. Start & stop the pump with either an Air Valve or Air Regulator or even a Liquid Valve.

Powered by Compressed Air & are Intrinsically Safe

AODD Pumps use Compressed Air to operate and do not require any other Electrical Source and can be fully earthed. They can be used safely to pump all types Flammable liquids or used in Explosive Environments.

Self-Prime & Lift Liquids From Below

During startup a Diaphragm Pump generates its own Suction Pressure and is able to Self-Prime without the use of special mechanisms equipment or special startup procedures. They are also able to achieve a high level of both Wet and or Dry Suction Lift.

Do not require Lubrication and are Non-polluting

YTS Diaphragm Pumps do not require Air Line Oil Lubrication and do not require Pre-Packed Grease. The Pumps are clean and easy to service and do not generate exhaust Pollutants into the Local Atmosphere or into the liquid process.

High Start-Stop Efficiency

Compared to similar sized electrical type pumps, when used in constant start stop applications a diaphragm pumps actually offers a high level of pumping efficiency.

Pump a Huge Variety of Chemicals

Diaphragm pumps can transfer a huge range of Chemicals including most types of acids alkali's solvents petrochemicals or even just water.

Variable Flow Rates & Discharge Pressures

By adjusting either the air inlet pressure or opening or closing the discharge valve it is possible to operate the pump anywhere between 0.1 liters per minute to full capacity. Discharge Pressure is also changed according to air pressure (Air Pressure = Fluid Discharge Pressure)

No Mechanical Seals

This eliminates the majority of leaks and costly maintenance associated with other kinds of Pumps.



Run Even When Dry

Because there are no close fitting, turning or sliding parts, a Diaphragm Pump can Run Dry without damage for extended periods of time.

Run at Dead Head and Pressure Relief is not required

The Discharge Line may be closed fully at any time and repeatedly without damage or wear to the pump. There will be no Power consumed and no Temperature increase. The Pump will simply stop. Discharge Pressure cannot exceed Air Pressure so there is no need for a Pressure Relief System.

Pumping Efficiency Remains Relatively Constant

Diaphragm pumps do not have any close fitting parts, Rotors, Gears, or Vanes exposed to the liquid and so do not wear out over time which normally leads to a gradual decline in Pumping Performance.

Cannot Overheat

Diaphragm Pumps do not have electric motors and are cooled naturally during operation by the supply of Compressed Air.

Leak Free Operation

AODD Pumps do not use bearings or mechanical seals and the liquid process is completely separated from all moving parts. YTS Diaphragm pumps are all fully bolted with spring washers or lock nuts. They are torqued and hold their torque over long periods. All liquid matting surfaces are machined with high tolerances and use static O-rings in all critical areas. Plastic pumps are glass filled to help keep the structural integrity even when used in variable temperate applications.

Extremely Shear Sensitive

Due to the gentle Nature of Operation, Diaphragm Pumps are one of the best choices for Shear Sensitive Fluids like Wine or Milk. Also they are a perfect choice for pumping reactive fluids such as detergents, shampoo or UV Ink.

Pump Liquids Containing Highly Abrasive Particles or Liquid Slurries

There are no internal seals, rubbing or rotating surfaces so abrasive liquids such as Inks, Paints, Polish or Caulking compounds can be pumped with ease. Moreover large sized solids such as small stones or slurries etc. will pass just through the pump.

Can Pump Viscous Fluids

Diaphragm Pumps produce a relatively high Discharge Pressure and are able to move Viscous Fluids like Oils, Syrups, liquid Resins, Inks and liquid Glues.



Can Pump Certain Powders

With some modifications a Diaphragm Pump can also transfer many types of Powder.

A Clean Process Pump

A Diaphragm pump can be installed into most Food, Drink and Pharmaceutical applications and can even be used in the manufacture of Clean-Room Semiconductors. Moreover due to their cheap price and solids handling ability, they are often the perfect choice for all liquid waste applications.

Can Develop Relatively High Discharge Pressures

Diaphragm Pumps are often used in Filter Presses applications and can even be modified to achieve a discharge pressure up to 200Psi.

Can Achieve a High Discharge Head

Standard Diaphragm Pumps are able to lift liquids up to 70 meters (225 feet) and are often used in liquid transfer applications and underground sumps.

Submersible

Diaphragm Pumps can be fully submersed in the liquid being pumped as long as the Pump is chemically compatible. Note; an extra Hose must be attached to the Exhaust Port.

Simple Maintenance

Diaphragm Pumps are small portable and have very few moving parts. They have no special Seals or Gears and can be easily dismantled in any location. YTS pumps are fully bolted and only require a few simple tools to disassemble or reassemble. All critical high wear parts are fully independent and fully replaceable. Many parts are common to different pumps and are available separately. The air motor is externally accessible within a couple of minutes without the need to remove the pump from service.

High Temperature Resilience

Compared to similar performance pumps AODDs can handle liquid or atmospheric temperatures from zero to 80 degrees C. With some modifications and care an AODD Pump can also operate in environments below zero and depending on the materials of manufacture can pump liquids up to 150 degrees C.

Relatively Inexpensive

Compared to other similar performance pumps, AODDs are often cheaper to purchase and are easy and inexpensive to operate and maintain. Using an AODD pump can cut down on the "Cost of Owning a Pump". This feature alone is a major reason to choose an AODD over many another kinds of Pumps.

For more information about Diaphragm Pumps please contact; sales@yts-pump.com