

Peerless Pump

Enclosed Line Shaft Threaded Column

The Peerless Pump ELS vertical turbine pump provides a wide range of hydraulic and mechanical coverage. Peerless Pump offers many different material and design configurations; these numerous configuration options allow for custom-engineered construction tailored to suit your requirements. Maximum value, high efficiency and economical long-term pump performance are assured in each application.

Applications

ELS pumps can be lubricated either with oil or a clean water flush. Corrosion-resistant materials are available for many industrial uses. Applications vary from small, single pump commercial applications to large, multi-pump **municipal water supply systems**. ELS pumps are appropriate for both **raw water transfer** and **finished water** projects. They are also widely used in **mining** and **agriculture**. In addition, Peerless ELS vertical lineshaft pumps are the best choice for **deep-set wells** (up to 1500 feet).

Features

Peerless Pump's standard cast iron discharge head can handle pressures **up to 400 psi**. Discharge heads are standardized to accommodate the maximum number of NEMA motor sizes, and a variety of options such as fabricated steel construction or underground discharge are available.

Enclosed-type **bronze impellers** are standard. Peerless impellers cover a wide range of flow and head conditions. Each impeller is balanced for **smooth operation**.

Peerless standard ELS bowls are cast with integral vanes to guide the flow to the next stage with **minimum losses** and **maximum efficiency**. Bypass ports cast in the top bowl equalize the internal tube pressure and prevent the pumped liquid from entering the lubrication line and bearings. In addition, all bowls are porcelain-lined for protection and efficiency.

Peerless Pump pioneered and patented the "double seal" feature in bowls. The two sealing surfaces **prevent efficiency-robbing recirculation** within the bowl. Minimal radial clearances between the impeller skirt and the bowl create a dynamic sealing surface. The static sealing surface is the lateral ring, installed into the bowl below the impeller skirt. This lateral ring is constructed of a rigid metallic core surrounded by heavy-duty resilient rubber. Lateral rings protect bowl surfaces, provide protection for the impellers in case of catastrophic failures, and enable prolonged pumping efficiency.

Threaded column is available for pumps up to 16 inches in diameter. Straight-threaded column is an economical yet durable choice, particularly in the municipal market.

Quality Engineering

Peerless Pump designs tough, versatile products to meet your pumping needs. Peerless vertical turbine pumps deliver **variety, durability, standardized options and configurations** unequalled in the industry. Please contact your local Peerless Pump sales office to find out more about vertical turbine pump options and prices.

Specifications

Capacities: Up to 100,000 gpm (2,273 m³/hr)

Head: Up to 2,300 feet (760 meters)

Pressure: Fit to the application

Horsepower: Up to 5,000 hp (3,730 kW)

Temperature: Up to 180 °F (82 °C)

Drives: Vertical electric motors, engines with right angle gears, combination gear drives, or vertical motors with variable speed drives

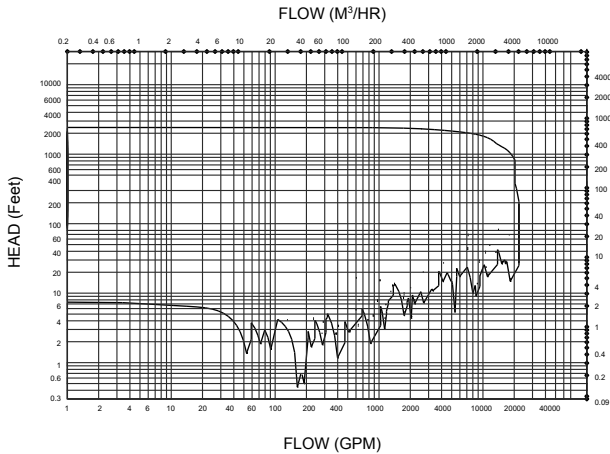
Liquids: Water or abrasive liquids

Materials: Cast iron/bronze-fitted standard; alternate materials available to suit the application.

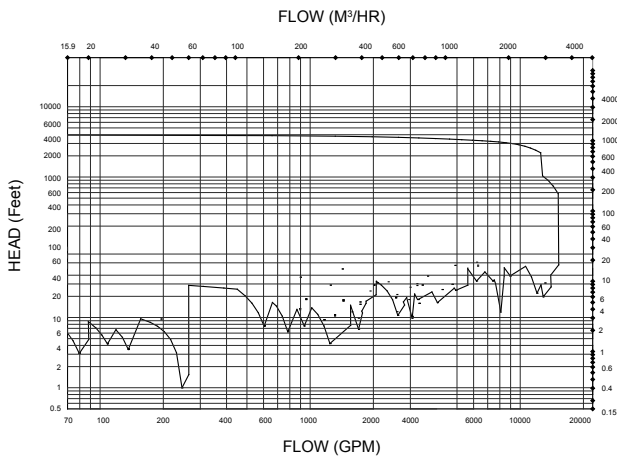


Vertical Lineshaft Turbine Pumps

ELS Vertical Turbine Range Chart - 1180 RPM



ELS Vertical Turbine Range Chart - 1750 RPM



Adjusting Nut

Quickly and easily adjusts shaft to correctly position impellers for maximum sustained efficiency

Top Drive Coupling
NRR is Standard

Tube Nut Assembly

Provides a simple, tamper-proof method of placing a proper tension on the lubrication line. It also prevents entry of the pumped liquid into the enclosing tube with an optional water or oil flush connection

Shaft Support

Oil lubricated sleeve-type bronze bearing provides additional shaft support.

Stabilizing "Spiders"

Installed at intervals along the enclosing tube, serving to stabilize the tube within the column pipe

Lineshaft

Water lubricated, 416 SS as standard. Optional lineshaft materials also available

Top Bowl

Designed with extra long bronze bearings to provide optimal support

Shaft Couplings

Machined from heavy-duty alloys. "Weep" hole in the center of each coupling permits air and excess thread compound to escape, so the shaft sections butt together smoothly

Enclosing Tube

Heavy-duty steel, provides rigid and vibration-free support for the shaft. Each tube is precision made for correct alignment and impermeable sealing

Lateral Seal Wear Rings

Constructed of rubber-coated steel, provide additional sealing and protection

Impellers

Enclosed-type, cast bronze as standard. All vanes and guide passages are hand-finished

Taper-Lock Bushing

Securely fastens impellers to the shaft; some pump sizes use a standard

Suction Manifold

"Bell" design available in a threaded design for use with suction pipe or a cone strainer for well application; a "threaded" design is also available

Suction Manifold Bearing

Grease-lubricated for long trouble-free life



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