4” Double Diaphragm Pump
4D-DHST-EOV-1B30

Diaphragm pumps are ideally suited for construction, municipal and industrial applications. The 4D-DHST-EOV-1B30 is perfect for pumping muddy water, sludge or any liquid with a high percentage of solids. One of its best features is the ability to run dry indefinitely without damage.

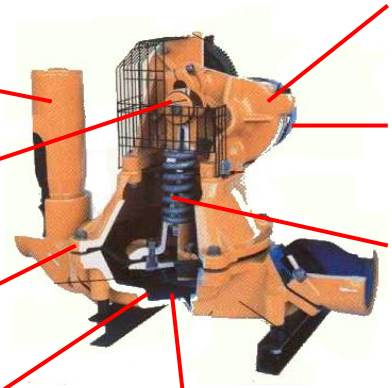
Features

- Standard engine – Hatz 1B30
  Also available with electric motor.
- Quick dry prime from 20 feet
- Self-priming, positive displacement
- Solids handling to 2”; Maximum flows to 140 gpm; Moderate heads to 50 feet
- 66 hours @ 2,900 rpm
  132 hours @ 1,400 rpm
- High resistance to abrasive and corrosive liquids
- Wear parts are easily replaced
- Rotating parts do not come in contact with the pumping liquid
- Optional spring-loaded connecting rod to protect against pump casing damage

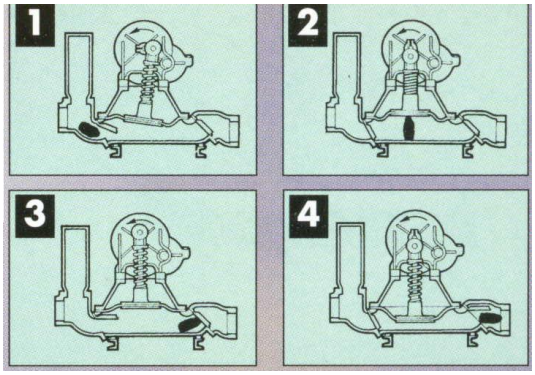
Working Principle

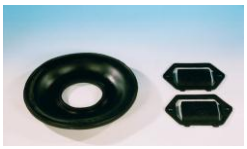
(Fig. 1) As the connecting rod moves upward, the diaphragm creates a vacuum inside the pump casing that causes the suction valve to open and the discharge to close.
(Fig. 2) Fluid begins to fill the pump casing until the connecting rod reaches the top of the stroke.
(Fig. 3) Once the pump casing is full, the connecting rod begins to travel downward.
(Fig. 4) As the diaphragm a travel downward, the discharge valve is forced open while the suction valve is closed, preventing fluid from re-entering the suction.

The fluid in the pump casing is then directed out of the discharge of the pump. An oversized solids channel in the bottom of the pump casing allows large solids and high amounts of sediment to pass through the pump without harming the components.



** Some features not available on all models*

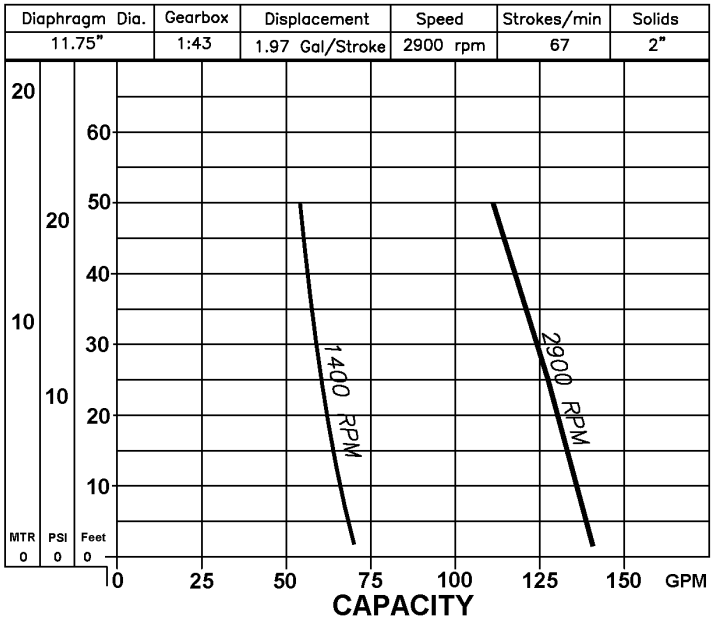




THOMPSON PUMP
EXPERIENCE INNOVATION

4” Double Diaphragm Pump
4D-DHST-EOV-1B30

4D-DHST-EOV-1B30
Performance Curve



Materials of Construction

Pump Casing: Rugged, heavy-duty class 30 cast iron with integral solids channel and drain valve
Top Housing: ASTM A-36 steel
Diaphragm: Dry running, neoprene with nylon cloth insert, field replaceable
Connecting Rod: Constructed of rigid type cast aluminum, available with spring loaded connecting rods, with self lubricating bearings
Connecting Rod Bottom Plate: Cast aluminum
Eccentric Crank: Class 30 cast iron
Eccentric Bearing: Needle roller type
Clappets: Dry running, non-clogging flapper style, neoprene with class 30 cast iron weighted insert, field replaceable
Suction & Delivery Branch: Cast aluminum
Suction/Delivery Manifold: Class 30 cast iron
Surge Suppression Chamber: ASTM A-36 threaded to suction for water hammer and shock protection
Gaskets: Neoprene
Eccentric Guard: ASTM A-36 steel

Engine Specifications

Engine: Hatz, 1B30, 7.0 hp @ 3,200 rpm
Battery: 12-volt, 270 CCA, 160A reserve capacity
Type: 1-cylinder, 4-cycle, air-fan cooled diesel with fuel lift pump, and force feed lubrication.
Standard Equipment: Electric Start, Recoil starter, fuel lift pump, and instrument panel
Displacement: 21.16 cubic inches
Fuel Economy: .421 lb/hp-hr @ 3,200 rpm
Safety Shutdowns: Low oil pressure

Unit Specifications

Fuel Tank Capacity: 21 US gallons
Fuel Consumption: 0.317 gph @ 2,900 rpm
Maximum Operating Speed: 68 strokes/min
Maximum Operating Temperature: 212°F
Maximum Operating Pressure: 21 psi
Maximum Suction Lift: 20 feet
Maximum Casing Pressure: 32 psi

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