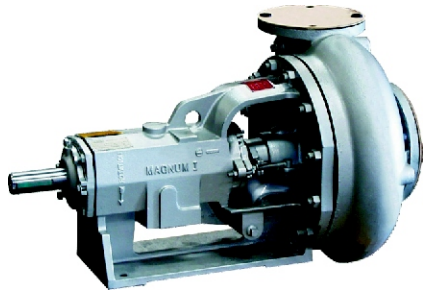
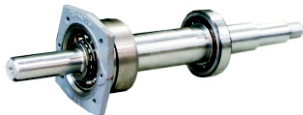


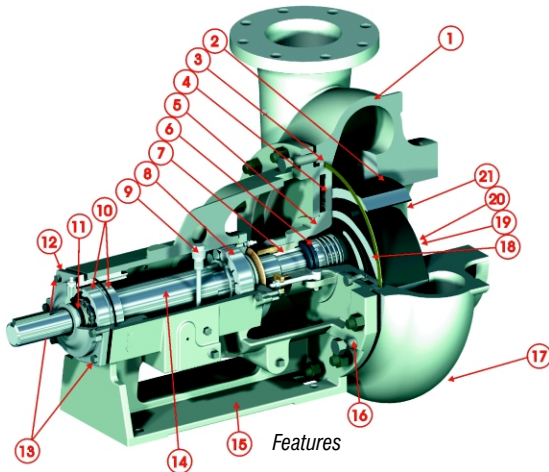
Magnum[®] Centrifugal Pumps



Magnum Centrifugal Pump



Heavy-Duty Shaft Bearing Assembly



Features

FEATURES:

- 1 Thick, strong concentric casing provides extended life over conventional volute designs; the concentric design minimizes turbulence and abrasive wear
- 2 Wide open-vane impeller creates lower axial thrust for improved bearing life
- 3 Casing gasket recessed for protection
- 4 Replaceable stuffing-box cover with dual stuffing box bolts
- 5 Optional stuffing boxes available for single and double mechanical seal applications and can be configured for flush lines
- 6 Long-life no-adjustment mechanical seal available for near zero leakage
- 7 Replaceable shaft sleeve prevents shaft wear
- 8 Single row roller bearings for increased bearing life
- 9 Oil lubrication for bearings available upon request and recommended for pump speeds in excess of 2400 RPM
- 10 Duplex angular contact bearings eliminate shaft end play and increases bearing and seal life
- 11 Lip and exclusion seals for bearing protection
- 12 Optional flanged bearing housing available for hydraulic drive
- 13 External adjustment of impeller clearance extends pump performance life
- 14 Large supreme-duty shaft reduces deflection for longer life of packing and mechanical seals
- 15 Solid base offering rigidity and strength
- 16 Casing jack bolts simplify casing removal
- 17 Easy accessible front access drain, when requested
- 18 Back vanes reduce collection of solids at stuffing box and reduce box pressure
- 19 Smooth impeller eye for minimum turbulence and higher efficiency
- 20 Anti-loosening impeller lock bolt to eliminate pump damage in case of improper motor hook-up
- 21 Full pipe diameter entrance for minimum turbulence and maximum efficiency

Magnum[®] Centrifugal Pumps

SLURRY PUMP SOLUTIONS:

National Oilwell Varco's line of Magnum[®] Centrifugal Pumps are proven as reliable, heavy duty, low cost slurry pumps. Magnum centrifugal pumps have been world leaders in the drilling industry since their inception in the 1970's. The 3x2x13 through 10x8x14 pump sizes all feature the same power end. By utilizing the same power end, these pumps can be provided at a low cost, and customer's spare parts inventory requirements are greatly reduced.

Featuring a concentric casing design coupled with wide vane impellers, Magnum centrifugal pumps exhibit reduced wear and increased pump life. Extended pump life reduces maintenance costs and, more importantly, decreases downtime and service requirements. Concentric casings eliminate vibration, turbulence, and aeration caused by the cutwater point in conventional volute pumps. Turbulence and aeration generate eddies that cause excessive wear when handling abrasive fluids.

Concentric casings also reduce the high bearing load and shaft deflection present in other designs, even at near shutoff flows.

The Magnum impeller design has wider vanes at the tip, which decrease the velocity of the fluid exiting the impeller. This eliminates the abrasive jetting effect that is present with narrow impellers. The distance between the impeller tip and the casing is greater, resulting in an increased re-circulation area. Lower velocity rates and increased re-circulation areas allow the exiting fluid to blend with the re-circulating fluid, reducing turbulence and wear. The entrance shape of the impeller vanes is more tangential to the circumference of the suction, creating a smoother flow pattern. Smooth flow patterns are crucial when handling abrasive fluids.

In addition to the superior fluid end features, Magnum centrifugal pumps are equipped with a heavy-duty shaft bearing assembly.

The shaft, larger in diameter than conventional pump shafts, provides heavy-duty performance, minimum deflection and increased operating life of the seal or packing. With a 2½" diameter at the seal area, and a 3" diameter between the bearings, these pumps can be direct connected or belt driven. Advanced front and rear bearing design reduces both radial and thrust loads.

Magnum centrifugal pumps are available with hard iron, Magnachrome™, stainless steel and aluminum bronze fluid ends.

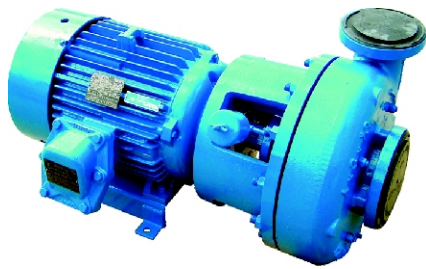
National Oilwell Varco offers both bare pumps and customized packaging. Years of experience in unitization design and assembly allow quick response to customer needs. Magnum pumps can be unitized with electric motors, diesel engines and hydraulic motors in a horizontal, vertical or close coupled configuration. National Oilwell Varco employs experienced personnel to assist customers with sizing and installation procedures.

www.nov.com / corporatemarketing@nov.com

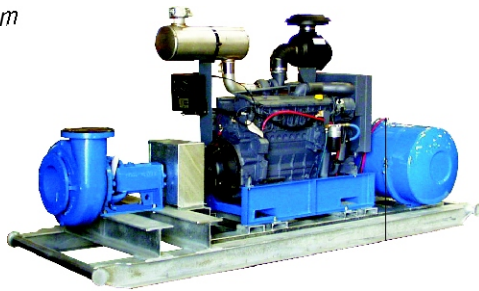
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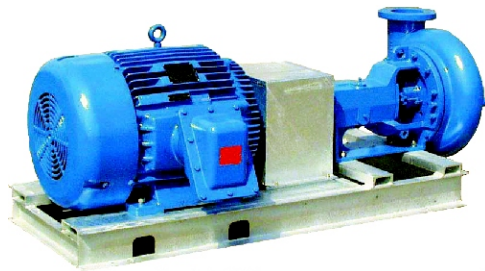
Magnum[®] Centrifugal Pumps



Close Coupled Magnum



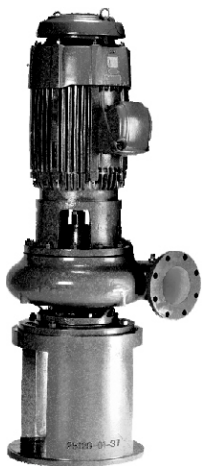
Diesel Driven



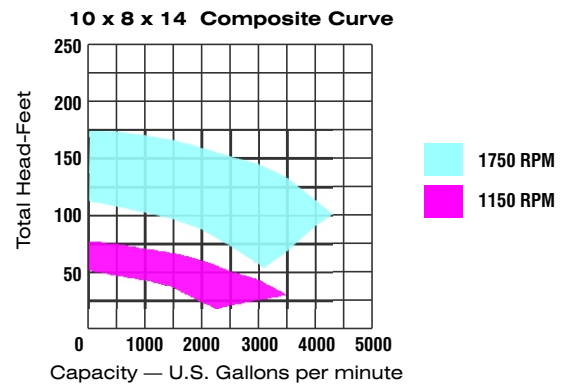
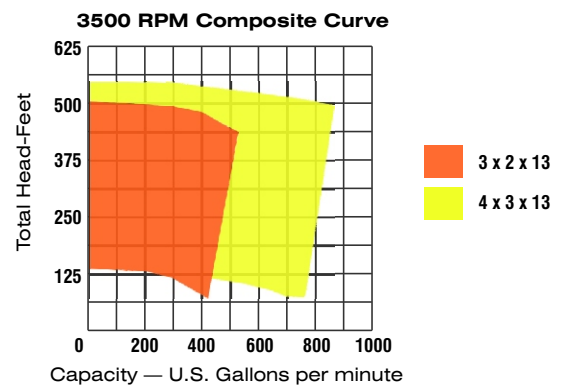
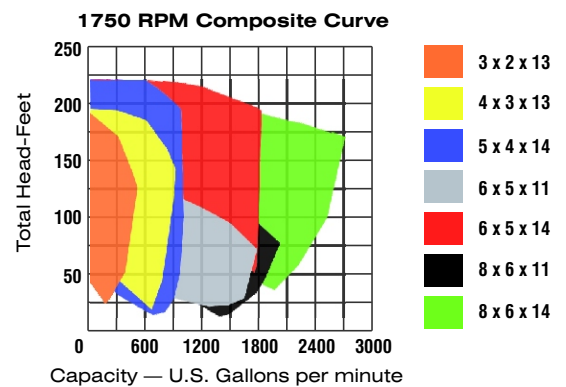
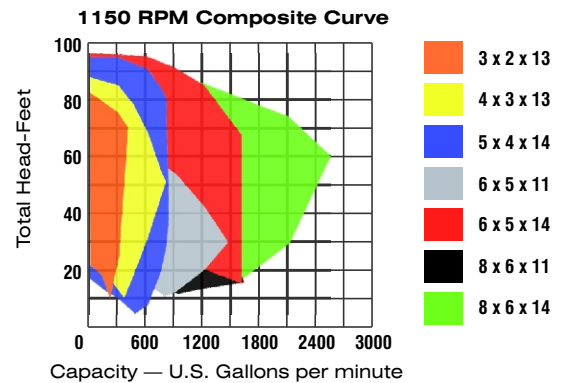
Electric Driven



Over Head Belt Drive



Vertical Magnum



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