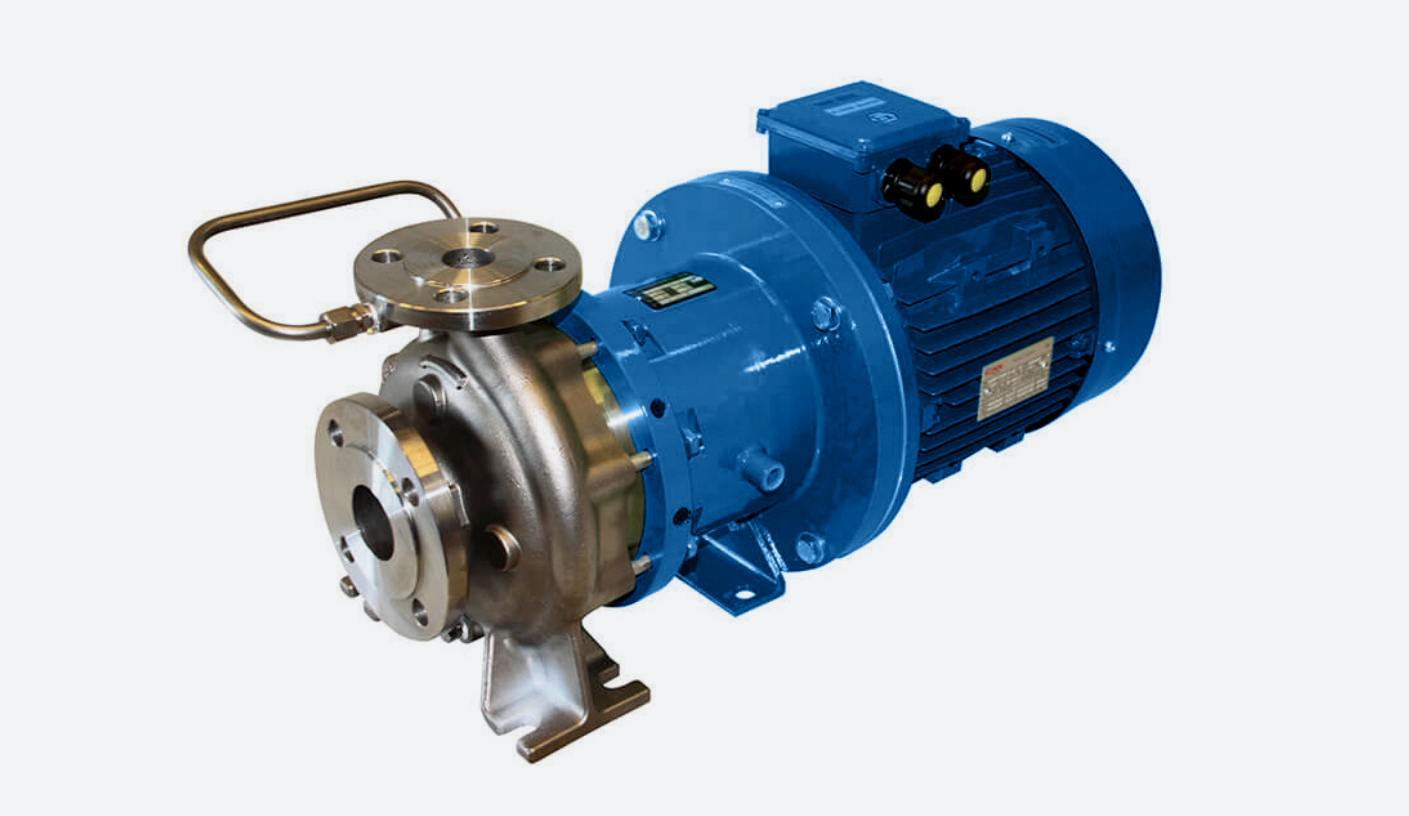
Steel Centrifugal Pump



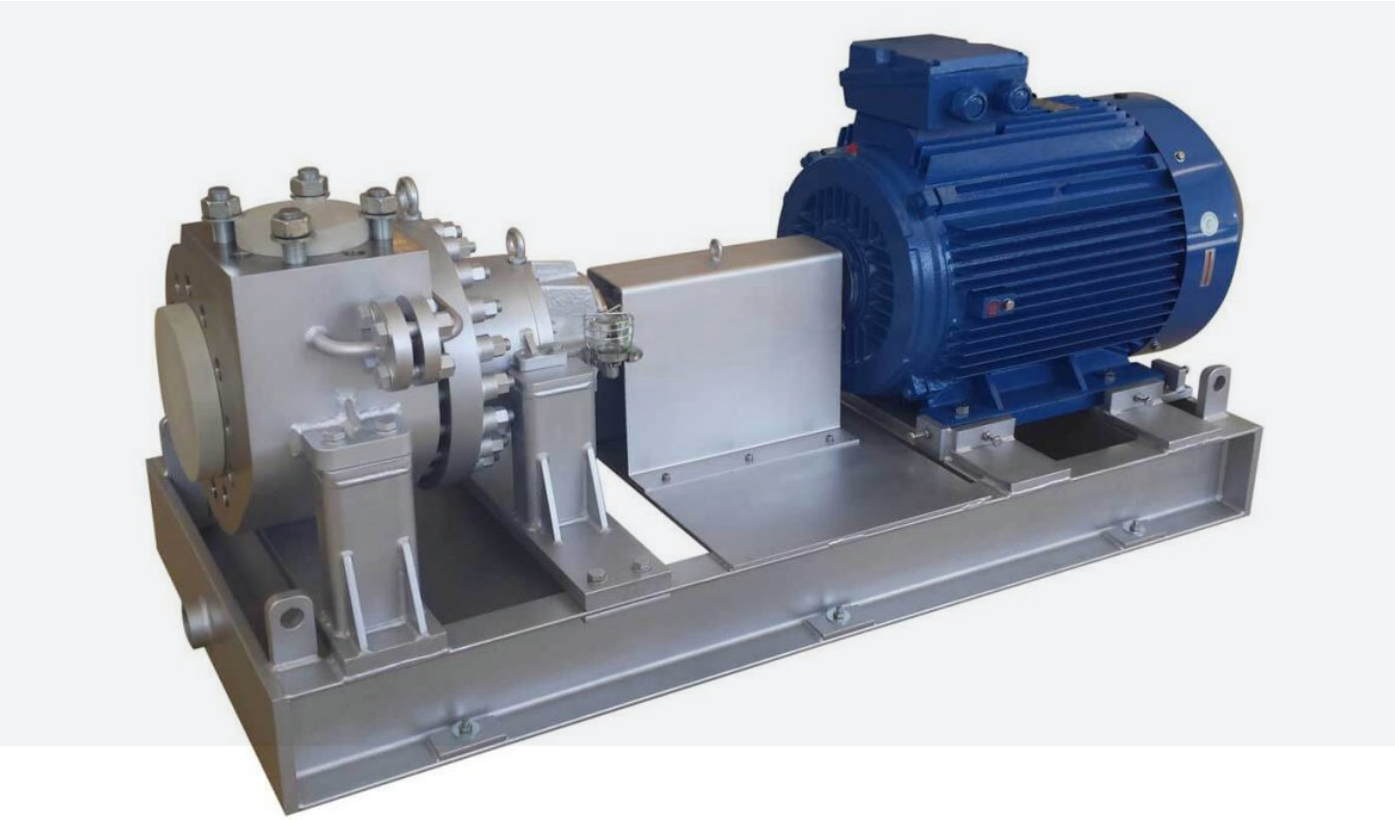
STEEL CENTRIFUGAL PUMP

The Steel Centrifugal Pump series offers a robust solution for diverse industrial applications. Engineered with precision and efficiency in mind, these pumps boast a foot mounting, single volute casing with flanged end suction, and top discharge.

The hydraulically and dynamically balanced impeller ensures high efficiency and low NPSH values. With a close-coupled configuration and oil-lubricated ball bearings supporting the bearing frame shaft, the Steel Centrifugal Pump meets ISO 2858, ISO 5199, DIN 24256, and NFE 44121 standards.

FEATURES & BENEFITS

- Designed with a modular concept for reduced spare stock and lower stocking costs
- Back-pull-out design allows for complete rotor removal without disassembling the pump unit when equipped with a spacer-type coupling
- Samarium-Cobalt magnets (Synchronous Magnet Couplings only, no slipping)
- Silicon carbide bearings as standard
- Common routine maintenance components shared among pumps within each range



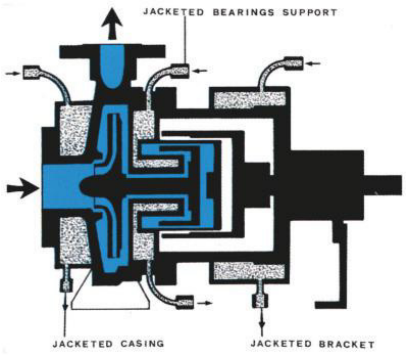
PERFORMANCE

- **Max Capacity:** Up to 1000m³/hr @ 50 Hz & up to ~600m³/hr @ 60 Hz
- **Max Pressure:** Up to 140m @ 50 Hz & up to 200m @ 60 Hz
- **Temperature range:** -100°C up to 315°C
- **Specific weight:** up to 2 kg/dm³
- **Standard system pressure:** 16 Bar, special applications up to 250 Bar and above
-

MATERIALS

- SS AISI 316
- ALLOY 20
- INCOLOY 825
- HASTELLOY B-C
- MONEL
- TITANIUM

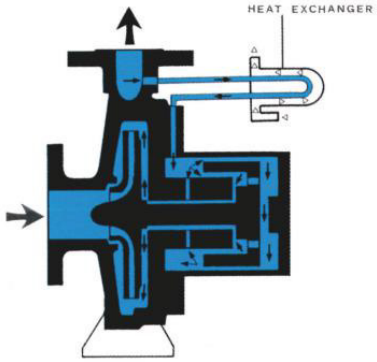
Special Duty



JACKETED PUMPS

Sealless Magnetic Drive

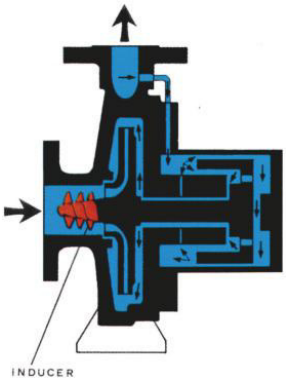
When pumping liquids which tend to solidify at low temperatures, or heat sensitive liquids, the pump casing, bracket and the bearing support can be equipped with a heating jacket.



EXTERNAL HEAT EXCHANGER

Sealless Magnetic Drive

For liquid temperatures over 300°C (600°F), rear components of the pump, bushings, and thrust bearings, must be cooled through an external heat exchanger connected to a circulation pipe.



LOW NPSH PUMPS

Sealless Magnetic Drive

For applications where the value of N.P.S.H. available on the plant is very low, the pump can be equipped with an inducer in order to reduce the required N.P.S.H.

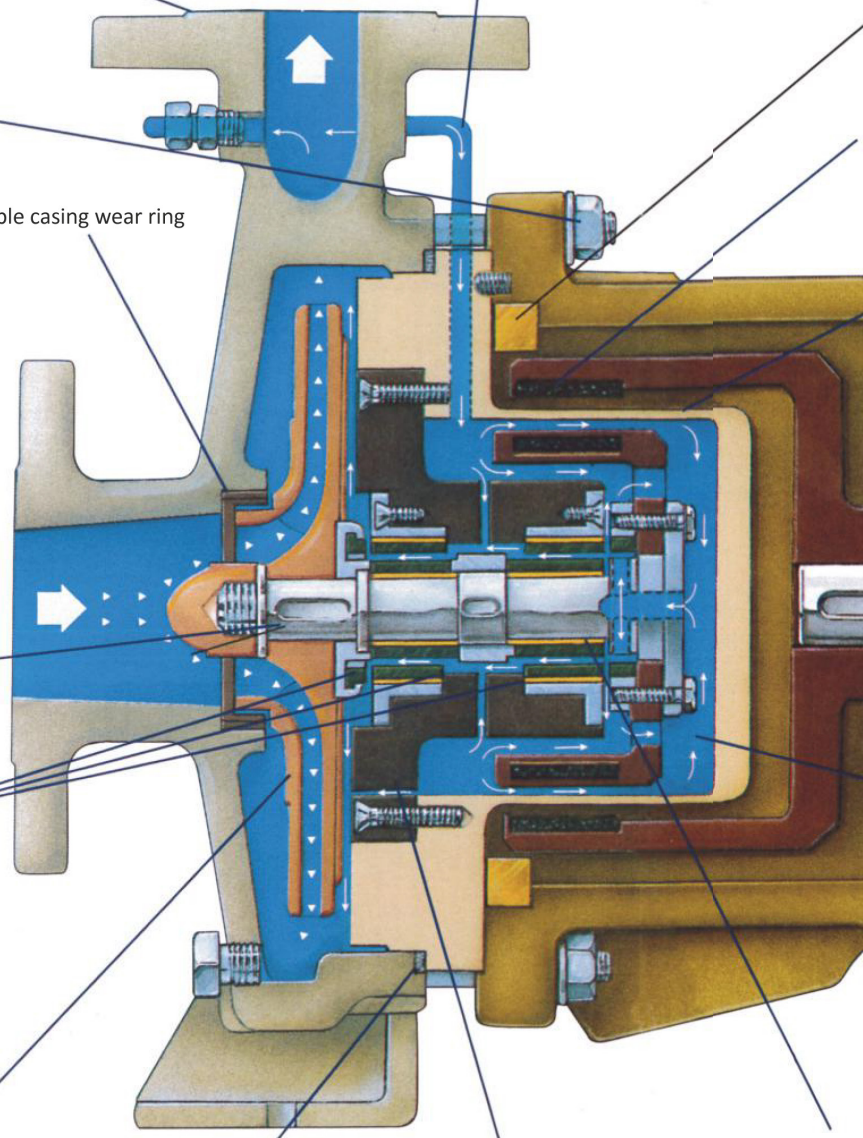
It is important to note inducers are designed for specific duty points to provide uniform eye velocity. Furthermore, if operated outside +10% -20% of the rated capacity, an inducer will generally have an adverse effect on N.P.S.H. performance.

Lubrication system maintains highest pressure differential and allows for dead-heading

DIN or ANSI flanges

Back-pull-out hydraulic end

Replaceable casing wear ring



Shaft & bearings are supperted by pump frame for withstanding hydraulic loads

Silicon carbide vs. silicon carbide sleeve and thrust bearings, with grooves to pass particles

Impeller utilizes pump-out vanes for balancing axial thrust

Self-draining rear cavity port

Confined casing gasket

tapflo GULF

Tapflo Gulf LLC | Warehouse 11, 4A St | Al Qusais Industrial Area | Dubai
PO Box 19944 | +971 4 2352717 | sales@tapflogulf.com | tapflopumps.ae

UAE | SAUDI ARABIA | QATAR | OMAN | BAHRAIN | KUWAIT

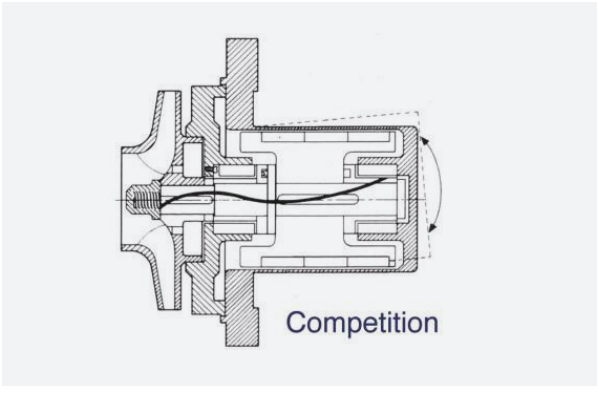
Star tolerance ring positively locate silicon carbide bearings, absorb shaft vibrations and allow for differential thermal expansion

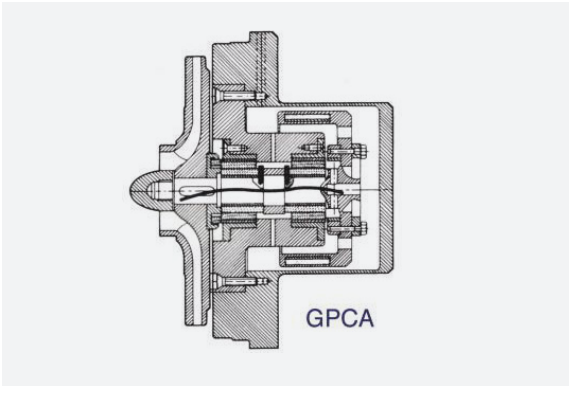
MAXIMUM COMPONENT INTERCHANGEABILITY

A modular design concept results in fewer spares and reduced costs. All routine maintenance components (shaft bearings and power frame) are common to all pumps within each range.

TECHNICAL DESIGN FEATURES

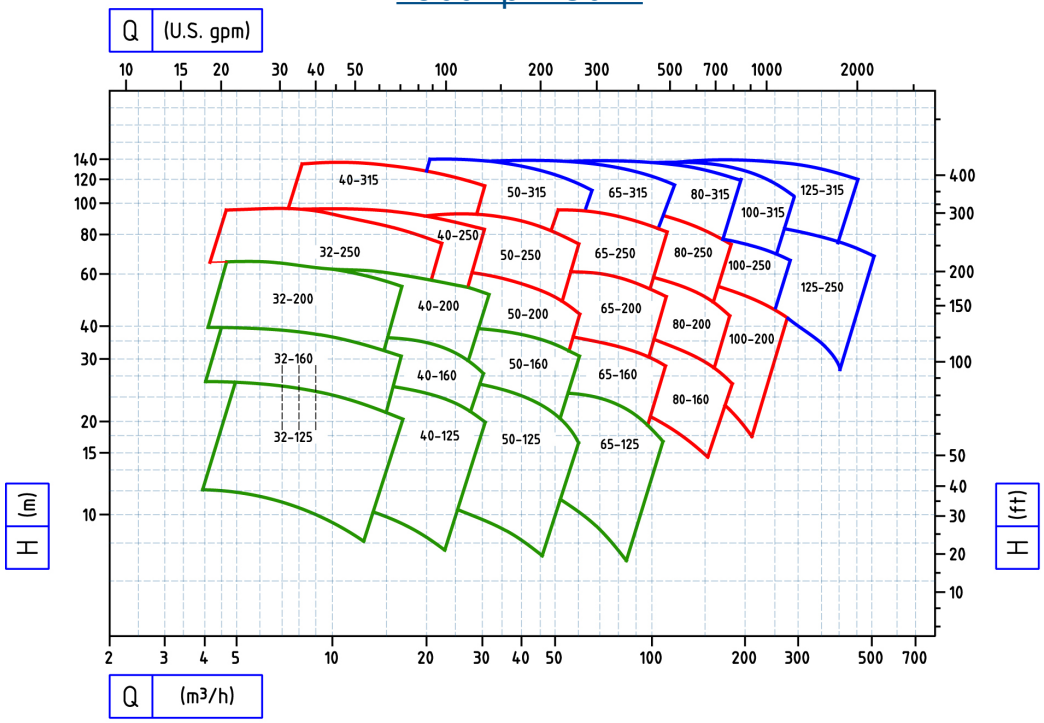
- Casing built with heavy wall thicknesses; flanges machined to 150 or 300 ANSI standard
- One-piece, .050" Hastelloy C276 containment housing exceeding ASME pressure vessel codes
- External lubrication for dead-head operation
- Impeller pump-out vanes balance axial thrust
- Silicon carbide sleeve and thrust bearings capable of intermittent dry running
- Dual back-pull-out design for servicing hydraulic end or ball bearing assembly
- Interchangeable mag-couplings & spare parts
- Hand-fit sleeve bearings & components
- Replaceable casing wear ring
- Quick-change rear cartridge assembly for replacement and restart within 10 minutes
- Containment housing isolated from forces and moments on the shaft due to hydraulic loading
- Internal bearing housing & shaft supported by the pump.



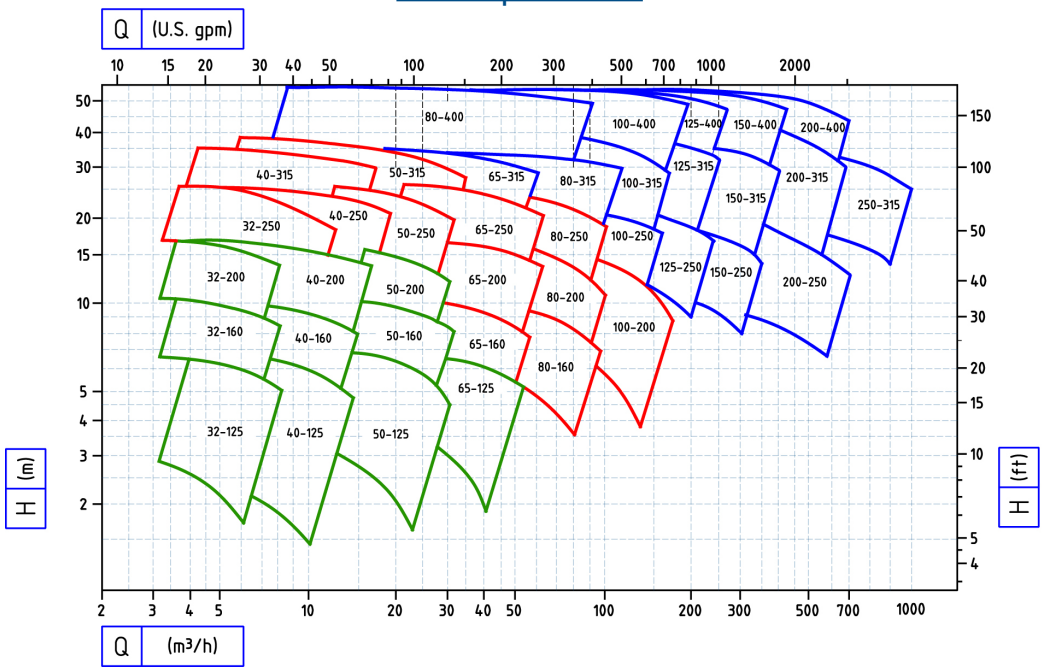


Design Curves

2900 rpm 50hz

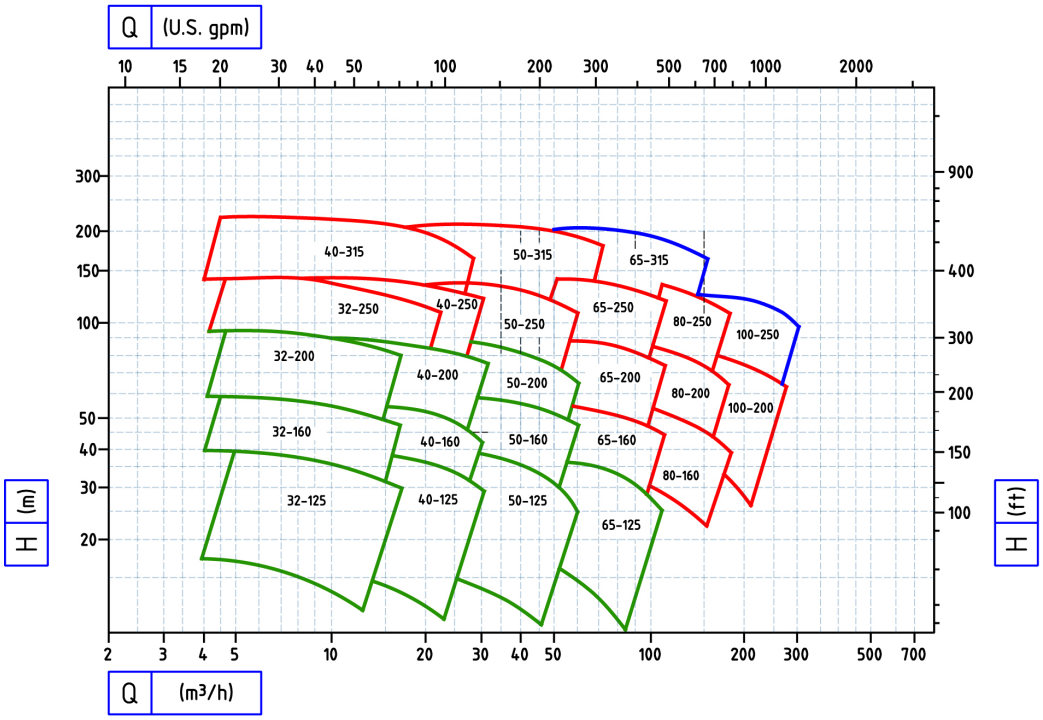


1450 rpm 50hz

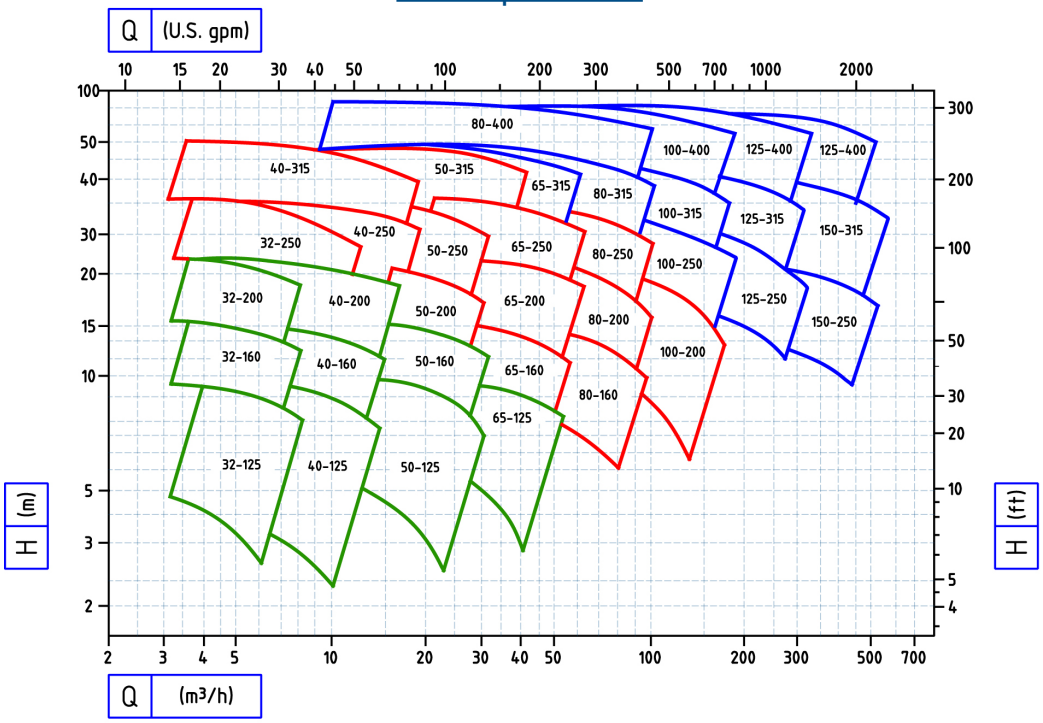


Design Curves

3500 rpm 60hz



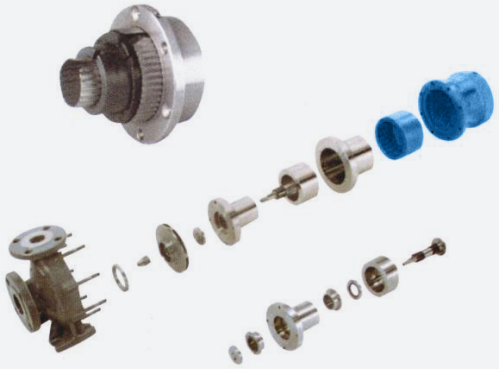
1750 rpm 60hz



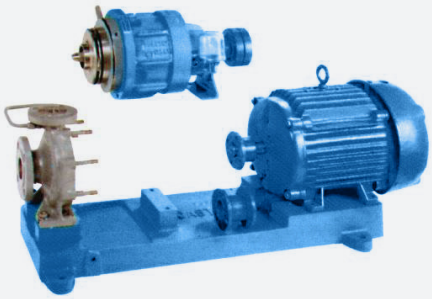
Maintenance Features

Quick-chance cartridge.

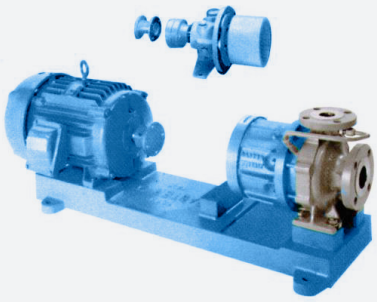
Internal cartridge (Rear Wet End) with inducer for low NPSH.



Maintenance can be performed in minutes!



The entire impeller magnet assembly and power frame is designed for back-pull-put, leaving pipe work intact.



Steel Centrifugal pumps are designed for accessing the power frame without exposing process fluid to the atmosphere; jackout screws allow for safe removal and reassembly of magnetic coupling.