

VOGEL® ICP
High Pressure / High Temperature
Chemical Process Pumps



ITT Industries
Engineered for life



Vogel® ICP

High Pressure / High Temperature Chemical Process Pumps

- Capacities to 450 m³/h (1980 USGPM)
- Heads to 150 m (492 Ft)
- Temperature Range -40°C to 280°C (-40°C F to 535°F)
- Pressures to 25 bar (363 Psig)



The Vogel ICP Is a Heavy Duty Chemical Process Pump Designed For Extreme Temperatures and Pressures and is Ideal for Chemical, Petrochemical, Hot Water or Heat Transfer Fluid Applications.

Hydraulic Components Comply with ISO 2858 and DIN 24256 For Easy Integration to Most Process Piping Systems. Mechanical Design In Accordance to ISO 5199 for Extended Reliability.



Material of Construction

- Carbon Steel (1.0619)
- Stainless Steel (1.4408)
- Duplex Stainless Steel (1.4517)
- Hastelloy C (2.4810)

Performance Features

Extended Pump Reliability

- Patented „Cyclone“ Seal Chamber Extends Seal Life
- Standard Center-Line Mounted Casing Controls Thermal Growth & Maintains Pump Alignment for Extended Bearing Life
- Large Capacity Oil Sump Improves Oil Cooling for Extended Bearing Life
- Optional Inducer Reduces NPSHr, Ideal for Marginal NPSH Applications

Reduces Maintenance Costs

- Back Pull Out Design Simplifies Maintenance Activities
- Modular Interchangeability with IC Pump Reduces Spare Parts Inventories
- Optional Wear Rings Renew Pump Performance and Extend Pump Life

Markets - Applications

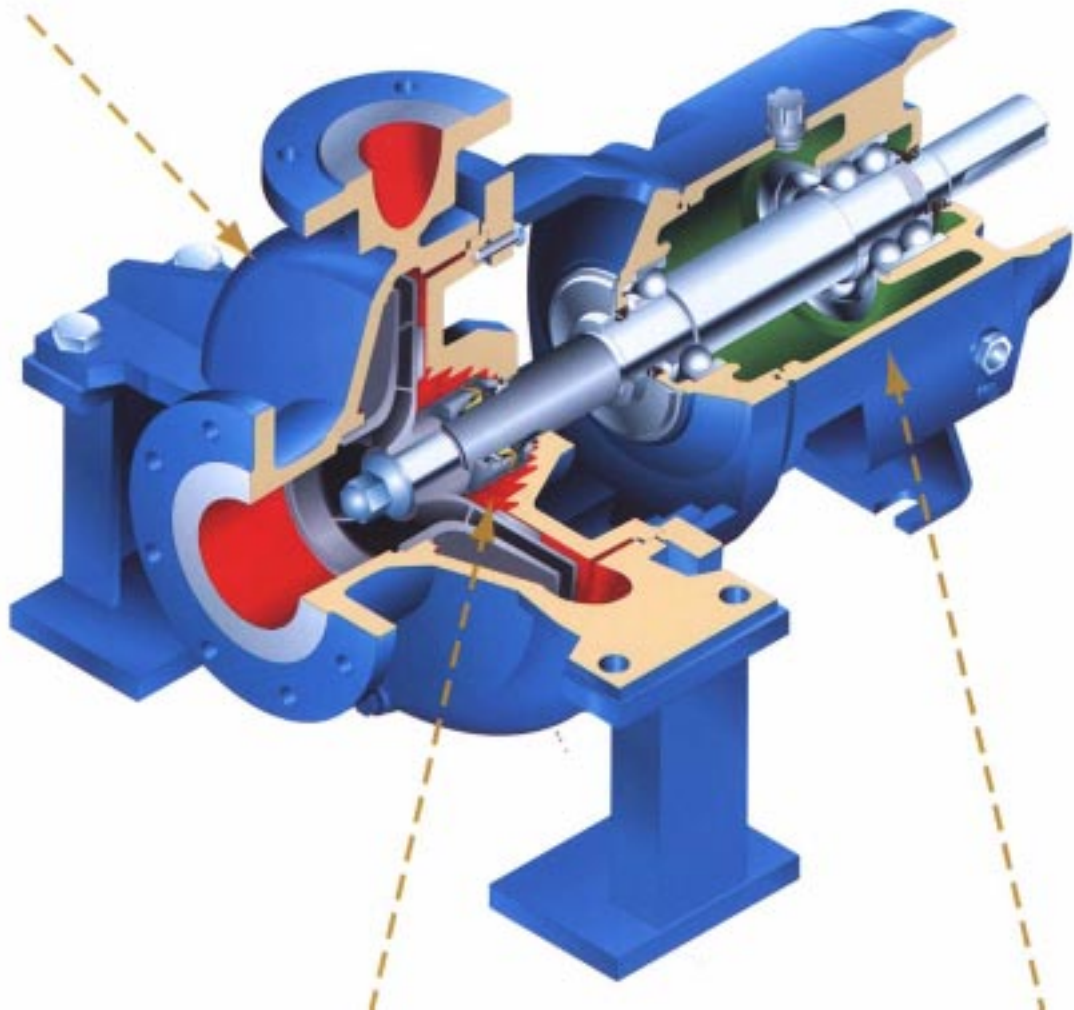
- Chemical Process
- Petrochemical
- Pharmaceutical
- Condensate
- District Heating
- Heat Transfer Fluids
- Rubber & Plastic Manufacturing

Vogel ICP

Value Packed Features Engineered For Reliability

Heavy Duty Casing

- Centerline Mounted Design Controls Thermal Growth and Maintains Pumps Alignment for Extended Bearing Life
- Heavy Duty Design Meets ISO 5199 Nozzle Loading Criterion
- Minimum 3 mm Corrosion Allowance Maximizes Pump Life
- Standard 3/8"-NPT Casing Drain For Safe and Simple Maintenance
- ISO 2858 Dimensions For Easy Installation In All Systems



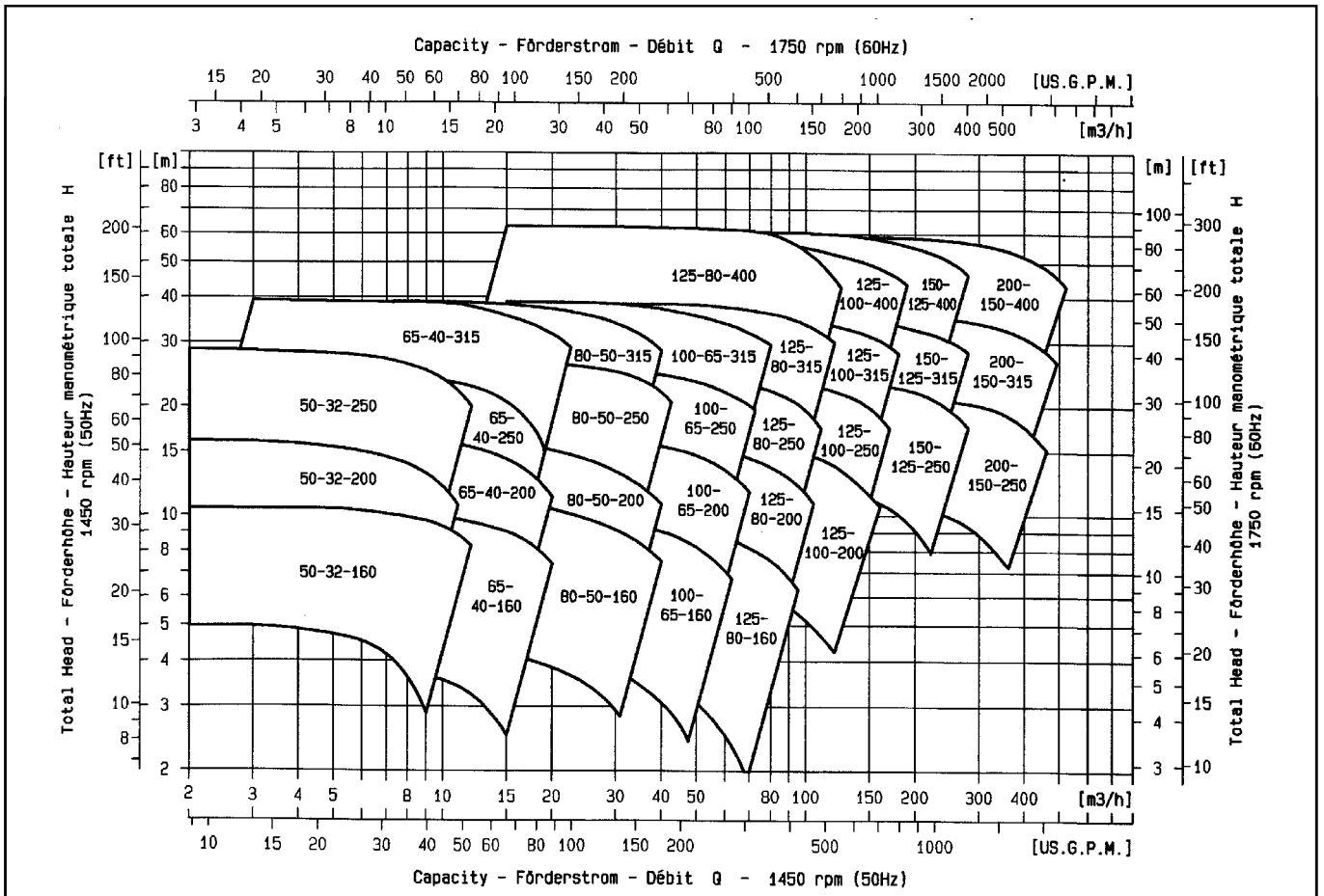
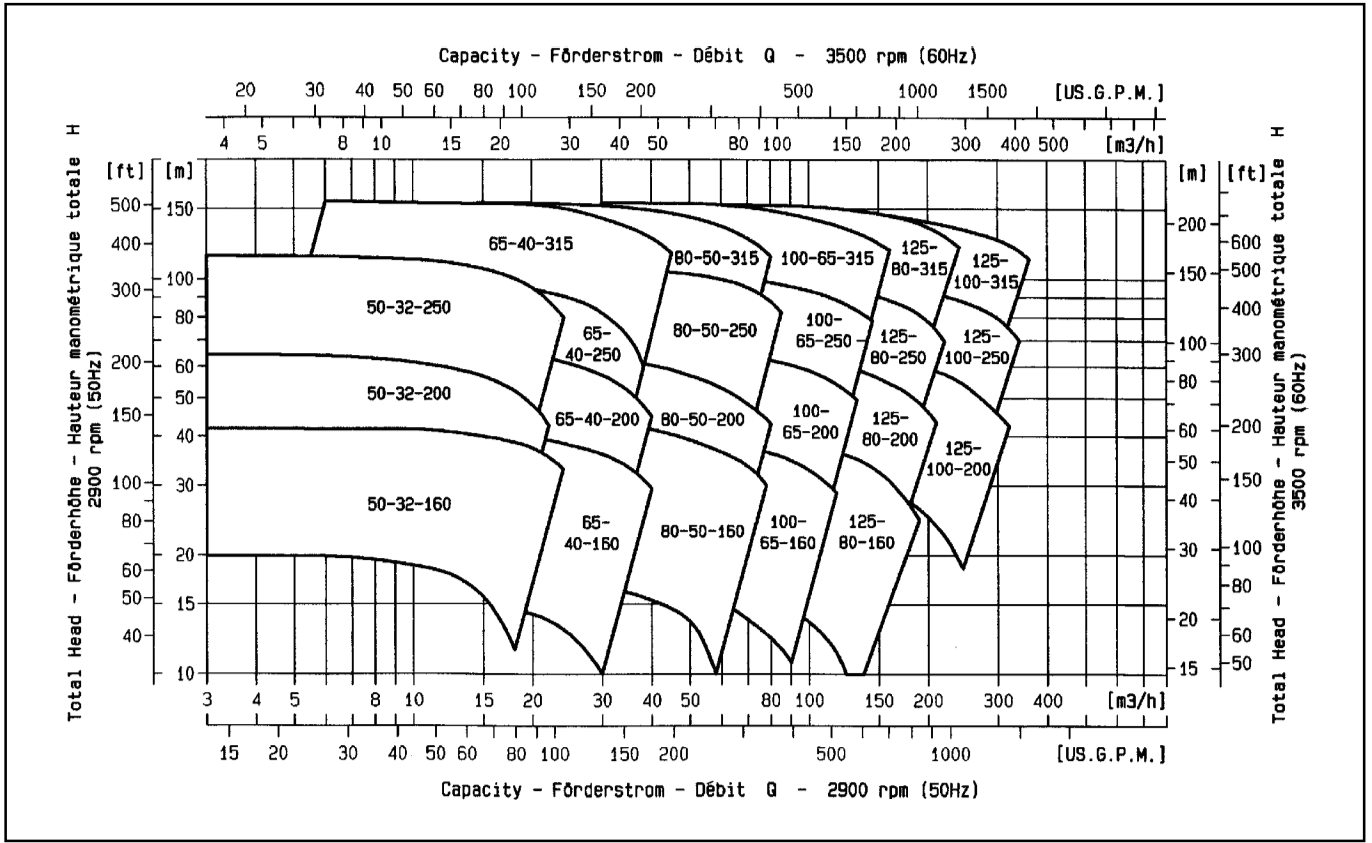
Engineered Seal Chamber

- Patented „Cyclone“ Seal Chamber Keeps Solids and Vapors Out Of the Seal Area for Extended Seal Life
- Tapered Bore Design Enhances Lubrication and Cooling of Seal Faces Often Eliminating the Need for External Flush Connections
- Can Be Fitted With Standard DIN 24960 L_{1k} Seals or Cartridge Seals

Heavy Duty Bearing Bracket

- Large Capacity Oil Sump Increases Oil Cooling for Increased Bearing Life
- Rigid Shaft Designed to Limit Shaft Deflections to less than 0,05 mm for Reliable Shaft Sealing
- Heavy Duty, Double Angular Contact Bearings Designed for L 10 Bearing Lives in Excess of 25.000 hours
- Standard Stainless Steel Shaft (1.4021) for Reliable, Corossion Resistant Power Transmission

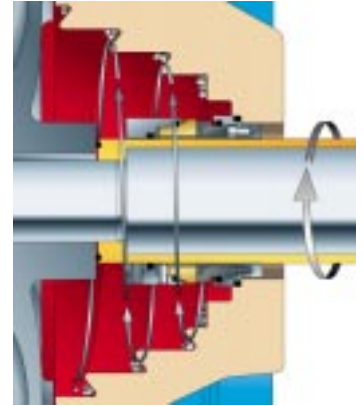
Vogel-ICP - Performance



Engineered For Reliability for Severe Duty Chemical Process Applications

Patented „Cyclone“ Seal Chamber Keeps Solids & Vapors Out of the Seal Environment for Extended Seal Life

- A Tapered Bore Design Enhanced with Cast Helical Grooves which Act to Keep Solids and Vapors Out of the Sealing Area
- Increased Radial Clearance and Volume for Improved Cooling of Seal Faces
- Self-Venting Design Eliminates the Build up of Vapors in the Seal Area while Simplifying Pump Start-ups
- Designed for Shaft Sealing With Any DIN 24960 L_k Mechanical Seal or Cartridge Seal



High Efficiency, Enclosed Impeller Design *Engineered Performance with Low Hydraulic Loads*

- Enclosed Impeller Design Featuring Back Vanes or Rear Ring Fits Act to Reduce Hydraulic Thrust Loads for Extended Seal and Bearing Life
- Precision Cast, Enclosed Impellers Provide High Efficiency and Low NPSHr For Reduced Operating Cost and Smooth Operation
- Key Driven To Pump Shaft To Prevent Start-up Failures Resulting from Mis-wiring
- Optional Wear Rings Re-new Pump Performance and Extend Service Life



Pumping Solutions for Extreme Services *Proven Technology, Process „Know How“*

- Optional Jacketed Casing and Seal Chamber Provide Direct Temperature Control for Critical Applications
- Finned Tube Oil Sump Cooler or Shaft Mounted Fan Maintain Oil Temperature for Extended Bearing Life
- Optional Suction Inducers Reduce NPSHr up to 50%, Ideal for Marginal NPSH Applications
- Broad Range Of Engineered Shaft Sealing Solution for „difficult to seal“ Liquids

