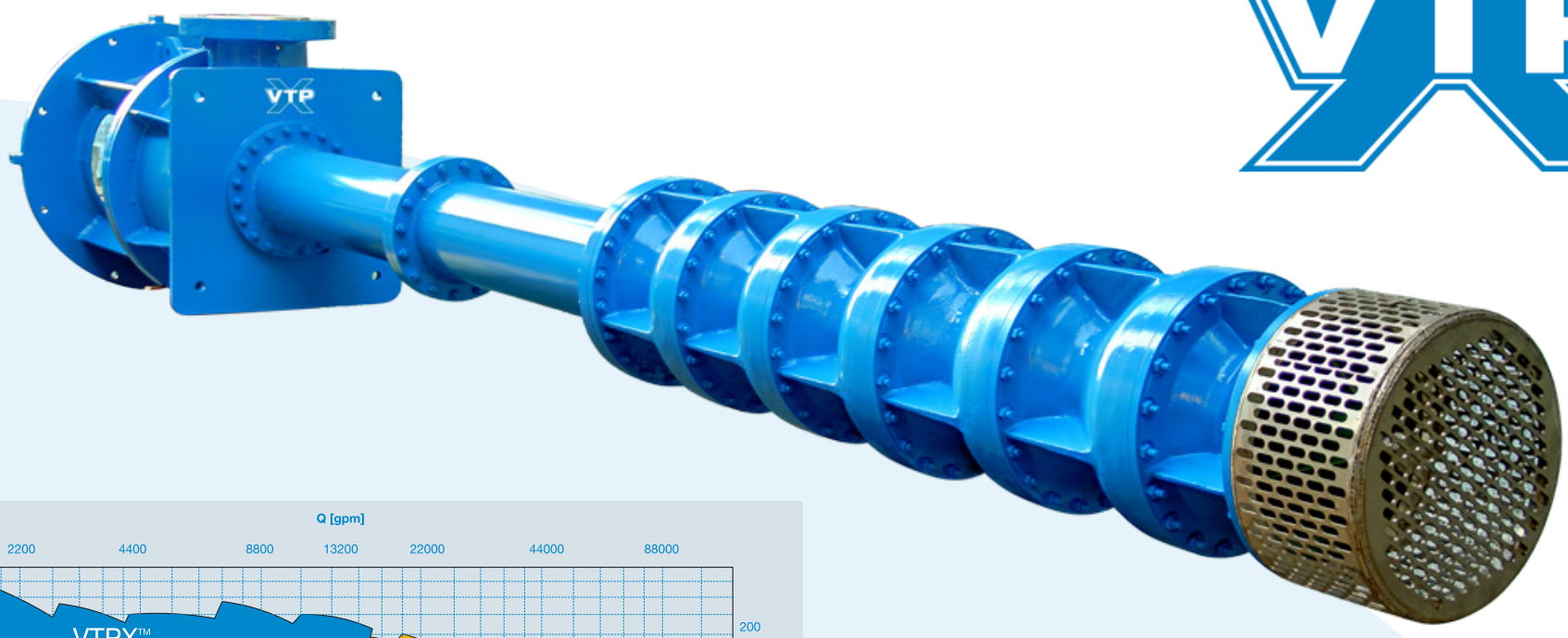
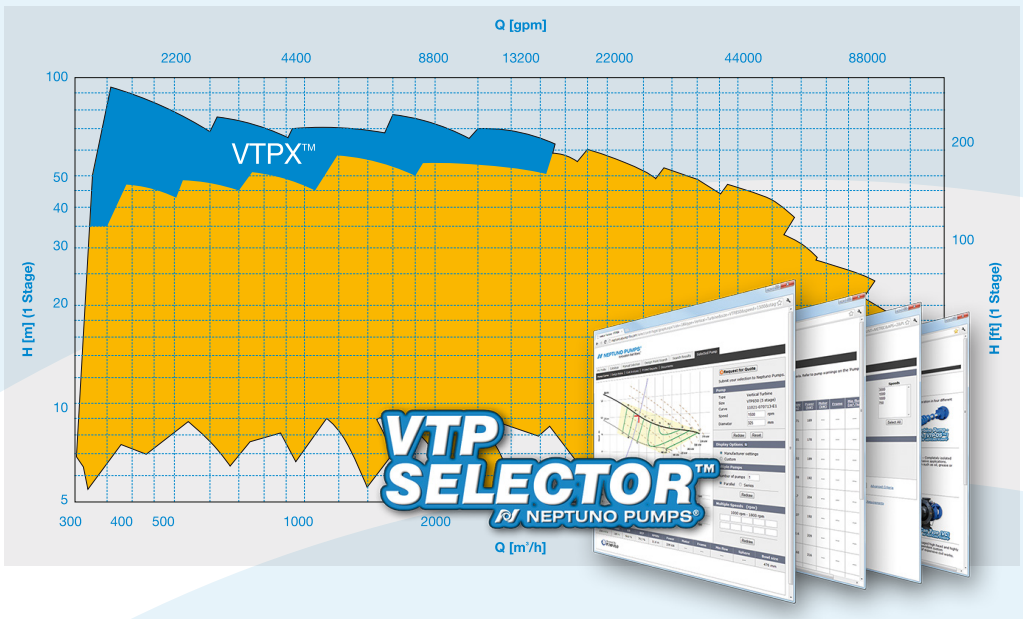
NEPTUNO PUMPS®
Innovation that flows.™

VTP™





OPERATING PARAMETERS

- Capacities up to 25000 (m^3/h) (95000 gpm)
- Head up to 600 (m) (1968 Feet)
- Power through 2.237 (kW) (3,000 hp)
- Frequency 50/60 Hz
- Temperatures to 200 (°C) (400 °F).

DESIGN FEATURES

- Low NPSH first stage construction
- Thrust balanced impellers available
- Packing or mechanical seal
- Independent axial-thrust bearing assembly
- VS1, VS2, VS3, VS6 & VS7 according to API 610 available.

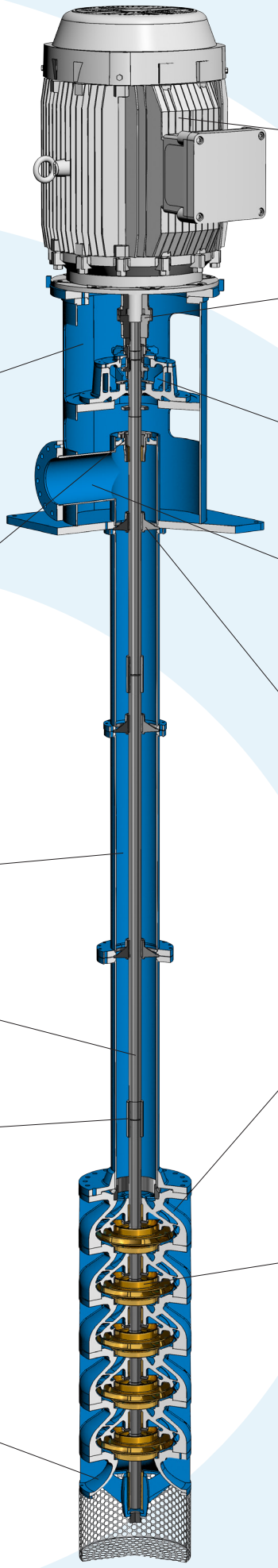
SERVICES

- Primary Water Supply – Fresh water or Sea water
- Mining Processes - Solvent Extraction/ Electro-Winning (SX/EW), Dewatering, Tailings & Post Processed Solutions
- Oil & Gas Production – Onshore, Offshore and Pipeline
- Pulp and Paper
- Municipal Water & Wastewater
- Agriculture - Irrigation.

MATERIALS

- Bronze, Cast Iron, Carbon Steels
- Stainless Steels - 316, 317 SS
- Duplex - 2205
- Super Duplex - 2507
- Super Austenitic - 254 SMO, 654 SMO
- Nickel-Based Super Alloys - Hastelloy
- I-1, I-2, S-1, S-3, S-4, S-5, S-6, S-8, C-6, A-8 and D-1 (According to API 610).

VTPX™



Driver
- Vertical Solid Shaft (VSS)
- Fixed or variable speed drives
- Specified to customer needs and location data

Coupling
- Flexible with spacer or rigid (flange adjustable)
- Allows servicing the thrust bearing and mechanical seal as needed

Independent Axial Thrust Bearing Assembly
- Withstands the total hydraulic thrust as well with the rotor weight
- Allows servicing with standard drives

Discharge Head
- Fabricated or fully Casted Heavy-Duty and Low-loss design
- Fabricated segmented elbow available for efficiency improvement
- Flanges ratings of ASME Class150 -300 depending on pressure requirements

Bearing Retainer / Lineshaft Bearing
- Provides shaft support and maintains alignment
- Retainers spaced between column sections
- Polymer or metal bearings available

Bowls
- Thrust balance chamber in order to withstand high axial thrust forces
- Fully investment casted to provide smooth passageways for low-loss fluid flow
- Wear rings and bearings available in a wide range of materials for extended operation life

Impellers
- Radial impellers for high pressure per stage
- Thrust balance chamber in order to withstand high axial thrust forces
- Precisely trimmed and reduce vibration and wear
- Located with collet construction for heavy-duty operation
- Wear rings for extended life

Driver Stand
- Mechanical cartridge seal or stuffing box arrangements with piping plans
- Reliable sealing and simple maintenance

John Crane

Mechanical Seal
- John Crane® Type RREP High Pressure Cartridge

Flanged Column Assembly
- Flanged ends for ease of assembly
- Custom fabricated to fit any size

Pumpshaft
- Fully machined and sized for application thrust and torque
- Different engineered alloys for aggressive applications

Lineshaft Coupling
- Threaded or sleeve available depending on shaft diameter and horsepower
- Locks lineshafts sections together Hydrodinamically design for high efficiency

Suction Bell
- Provides efficient flow into first stage impeller
- Basket strainer available to restrict large solids from entering the pump