RUHRPUMPEN

Specialist for Pumping Technology

JTN

Heavy Duty, Multi-Stage, API 610 Process Pump

+75 years developing the pumping technology that drives progress

Ruhrpumpen is an innovative and efficient pump technology company that offers highly engineered, custom made solutions for oil & gas, chemical processing, power generation, industrial applications and water.

Implementation of cutting-edge technology and world-class engineering, combined with our unique vertically integrated structure, allows Ruhrpumpen to design complex technical solutions, creating the most robust and powerful pump systems in the marketplace.

Our broad product line complies with the most demanding quality standards and industry specifications such as **American Petroleum Institute (API), American National Standards Instiute (ANSI), Underwriter's Laboratories (UL), Factory Mutual (FM), National Fire Protection Association (NFPA), ISO and Hydraulic Institute.**

Products Include:

- Single stage overhung pumps
- Vertical in-line pumps
- Single and multi-stage between bearing pumps
- Multi-stage vertical pumps
- Reciprocating plunger pumps
- Sealless magnetic drive pumps
- Fire protection systems
- Pitot tube pumps
- Hydraulic decoking systems
- Horizontal pumping systems

Ruhrpumpen is your single source supplier

- Original Equipment
- Spare parts
- Installation and startup support
- Repair and maintenance
- Engineering, training an consulting
- Reverse engineering

Benefits of our pumps

- Proven reliability
- High efficiency designs ensure lowest operating cost
- Robust design allows for long system life with minimal maintenance
- Optimized total cost of ownership

JTN Pumps

The JTN Pump Model is a heavy duty line of between bearing multistage axially split case pumps suitable for a variety of applications.

The pumps meet the stringent specifications of API Standard 610 and reflect the many years of our experience in the design, manufacture, quality assurance and operation of process pumps under heavy duty conditions. These pumps also comply with the requirements specified in ISO 9905.

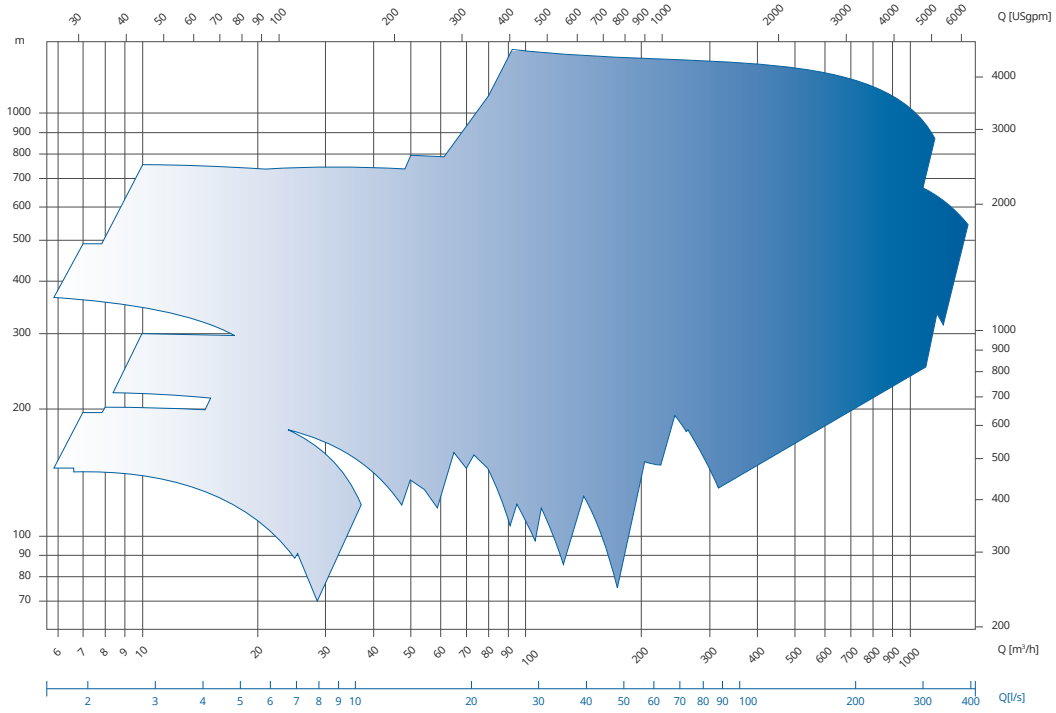
Intensive research and development guarantees that the products of Ruhrpumpen are continuously improved to meet the latest technical requirements.

The use of modern and reliable engineering and production methods, offers our customers high reliability and speed in all working processes, from planning and production to the delivery of pumping systems and spare parts. The instant availability of spare parts, together with first class service, ensures customers that they have selected the right partner.

Performance Range

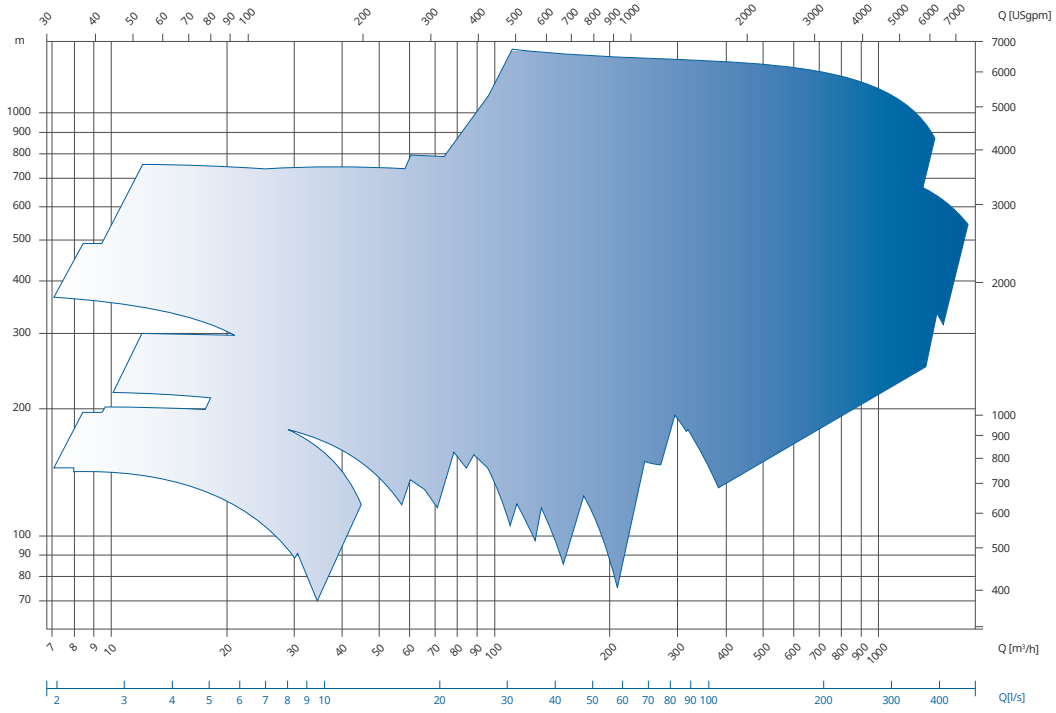
SELECTION CHART JTN

50 Hz



SELECTION CHART JTN

60 Hz



Characteristics

1 All process connections are flanged including suction and discharge nozzles and auxiliary piping. Flange connection sizes to ASME B 16.5 (DIN and BS also possible). Discharge flange size up to 6 in (152 mm). Flange ratings up to 900#.

2 Anti-friction bearings with a service L10 Bearing Life of more than 25,000 hours even under arduous conditions.

3 Sealing of Bearing Housing with Bearing Isolators.

4 Single-piece bearing housing, air cooled. Alternatively, cooling by integrally cast cooling channels with external piping connections for cooling water pipes according to API 610, Annex B fan cooling available.

5 Shaft deflection less than 0.03 mm in the area of the mechanical seal due to the ample pump shaft dimensions and the balancing of the hydrodynamic radial loads.

6 Ring Oil Lubrication with automatic monitoring of oil level by constant level oiler. Purge & Pure Oil Mist Options available.

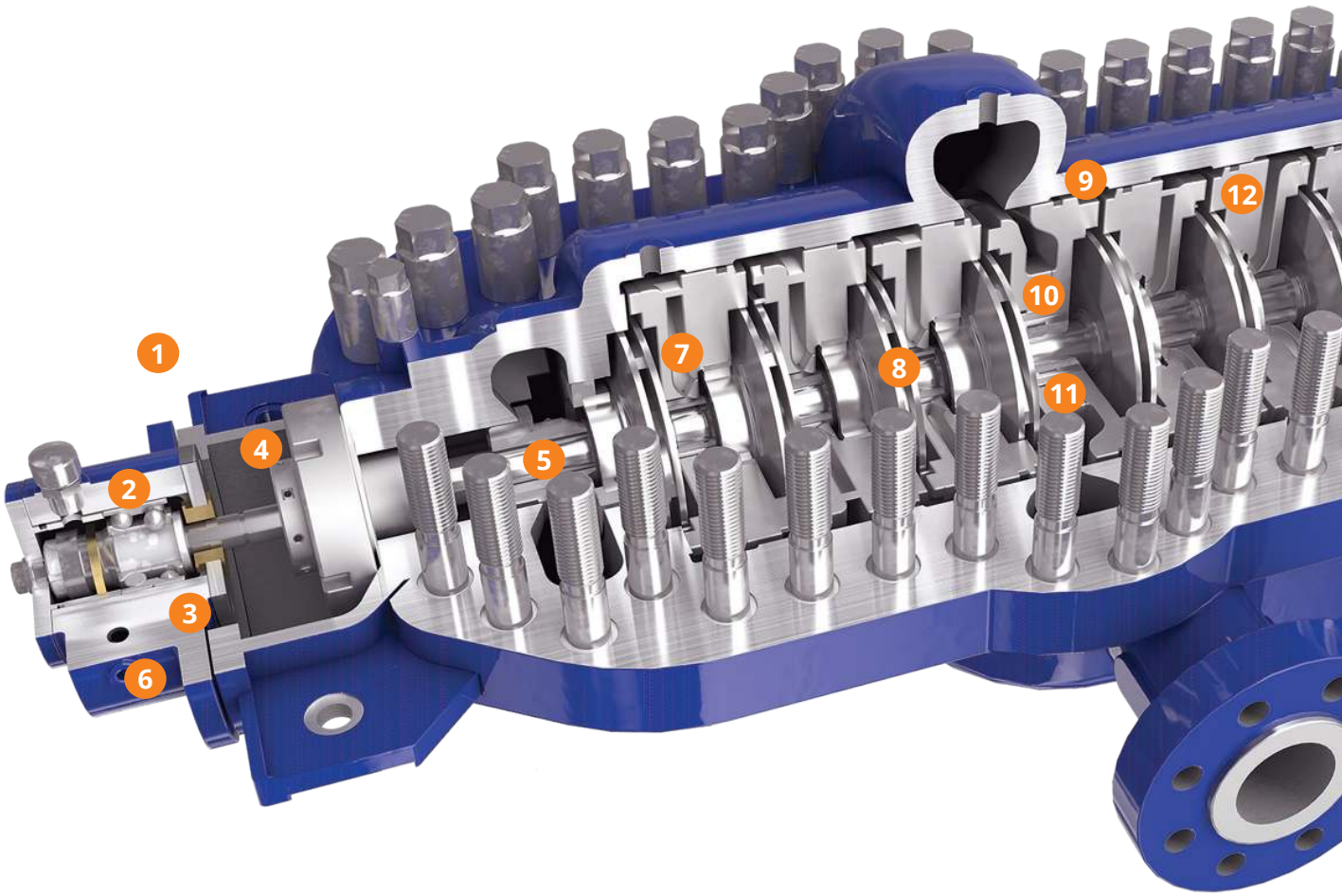
7 Interchangeable interstage bushings. Clearances according to API 610.

8 Impellers machined to a high accuracy, providing for excellent surface finish resulting in high efficiencies and low NPSH values.

9 Near-centerline mounted.

10 The impellers are arranged in opposed groups to reduce axial forces and thus help to reduce bearing loads.

11 Renewable wear rings on the suction side of each impeller are standard. Clearances according to API 610.

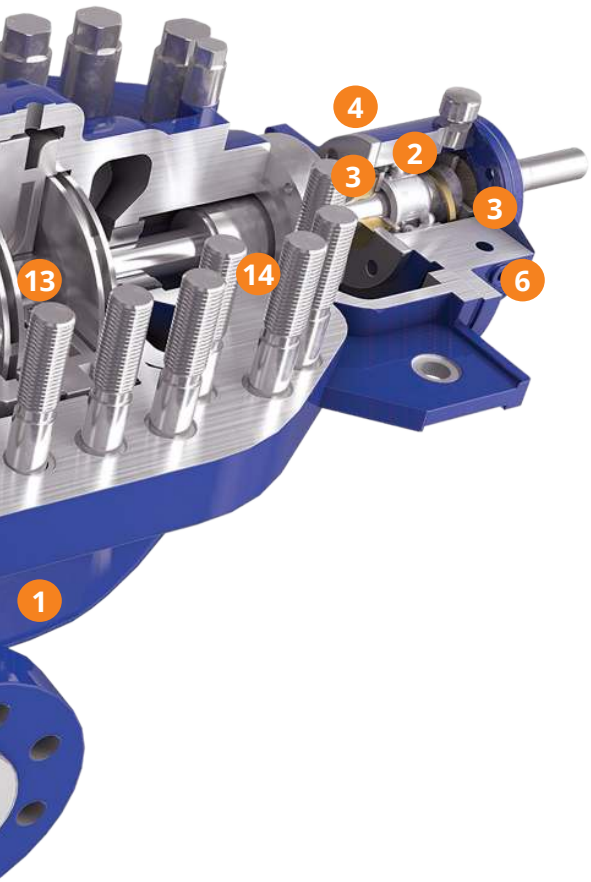


Images for general arrangement use only, not certified for construction.

12 One piece diffusers ensure proper balancing of the radial forces and thus help to reduce the bearing load.

13 Low-vibration operation due to dynamic balancing both of the individual impellers and the complete rotor to balancing grade G 2.5.

14 The Stuffing Boxes are designed to accommodate all cartridge, dual or single mechanical seals according to API 610 and API 682.



DESCRIPTION

- Horizontal arrangement.
- Axially split casing.
- Modular design system.
- Multi-stage, single entry.
- Near centerline support.
- Impellers arranged in opposed groups.
- Heavy duty process design according to API 610 latest edition (BB3 type).

BROAD APPLICATION RANGE

- Refineries
- Oil fields
- Petrochemical plants
- Chemical plants
- Pipeline
- Power Plants
- Boiler Circulation
- Desalination

PERFORMANCE DATA

Capacity	up to 500 m^3/h	up to 2,200 gpm
Head	up to 215 m	up to 705 ft
Pressure	up to 25 bar	up to 360 psi
Temperature	up to 300°C	up to 572°F

Notes:

For pump operations outside this range, please contact a Ruhrpumpen Representative.

OTHER FEATURES AND BENEFITS

- Easy of Maintenance - Axially Split Design enables easy access to pump internals for removal and maintenance.
- All materials according to ASME, DIN/ISO and BS are available.

Optional Features

SPECIAL BEARING DESIGNS

1. STANDARD:
   Double angular contact Thrust Bearing and single row radial ball bearing oil lubricated.
2. OTHER DESIGNS AVAILABLE:

   a. Medium duty Double angular contact ball. Bearing Cartridge mounted and Radial sleeve bearing. Standard ring oil lubrication.

   b. Heavy duty thrust Bearing tilting pad and Radial sleeve bearing. Oil Pressure lubrication.

- Pure oil mist and force feed lubrication are optional.
- Temperature and vibration measurements are optional.
- Sealing with Bearing housing with Labyrinth Seals. Other materials are available upon special request.

Pre-heated system arrangement or several types of steam Jacket options (photo) available.

MECHANICAL SEAL OPTIONS

- Double back to back mechanical seal.
- Double tandem mechanical seal.
- Single acting, balanced in cartridge design mechanical seal.

Ruhrpumpen Test Lab

Ruhrpumpen's test capabilities cover the full flow and head range of our pumps and we can test up to 20,000 Hp (15 MW), in both 50 and 60 Hz.

With the strictest standards, the following test types can be performed:

- Performance test
- NPSH
- Vibration Analysis
- Noise level
- Bearing temperature
- Hydrostatic
- Submergence

Other Ruhrpumpen Products

Horizontal Double Suction Pump

HVN - Between bearing, radially split single stage centrifugal pump, heavy duty process design according to API 610 latest edition (Type BB2).

Heavy Duty, High Temperature Process, Process and Industrial Applications.

Vertical Barrel Pump

VLT - Low NPSH “Shockless Entry” first stage impeller (single or double suction), Single or multi-stage. Standard construction materials according to API 610 latest edition (type VS6).

Condensate, Power Plants, Municipal, Hydrocarbons, Pipeline and Refineries.

Multi-Stage, Barrel Pump

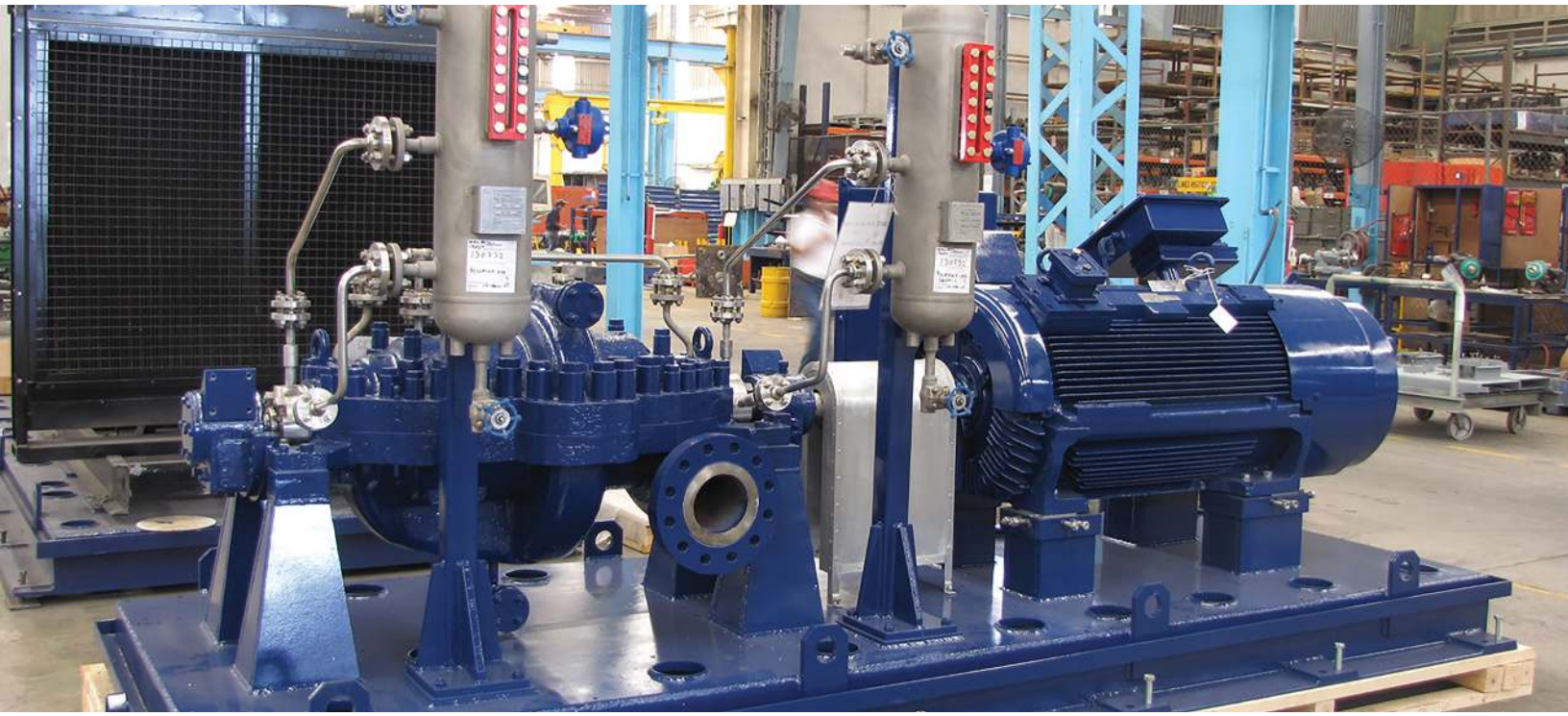
Radially split, horizontal multi-stage, centerline mounted, single suction, radial, closed impeller, Heavy duty process design according to API 610 latest edition (Type BB5).

Hydrocarbons, Chemical Solutions and Water.

Vertical Inline Process Pump

ILL - Radially split, vertical in line centrifugal pump, heavy duty process design according to API 610 latest edition (Type OH3 / OH5).

Petroleum Refining / Distribution, Petrochemical and Chemical Applications.



+75 years creating the pumping technology that moves our world

Ruhrpumpen is an innovative and efficient pump technology company that offers highly-engineered and standard pumping solutions for the oil & gas, power generation, industrial, water and chemical markets. We offer a broad range of centrifugal and reciprocating pumps that meet and exceed the requirements of the most demanding quality specifications and industry standards such as API, ANSI, UL, FM, ISO and Hydraulic Institute.

Ruhrpumpen Plants

- ARGENTINA, Buenos Aires
- BRAZIL, Rio de Janeiro
- CHINA, Changzhou
- EGYPT, Suez
- GERMANY, Witten
- INDIA, Chennai
- MEXICO, Monterrey
- UK, Lancing
- USA, Tulsa

Manufacturing plant & service center

Service center