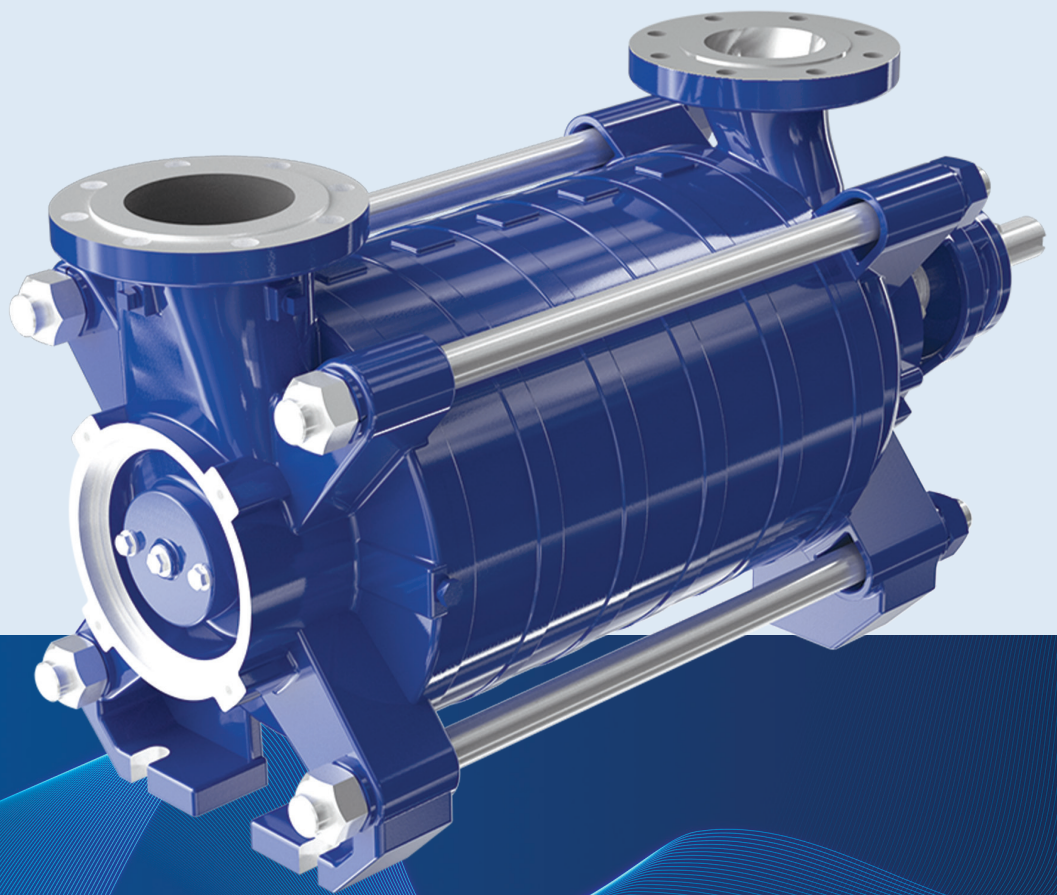




*Specialist for Pumping Technology*



# GPA

**Multistage Centrifugal Ring Section 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 Institute (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 and 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

### GPA Pumps

The GPA line is designed to meet high pressure requirements for Industrial pump. All GPA sizes ensure efficiencies across a wide spectrum of operating conditions, unparalleled application flexibility and superior interchangeability.

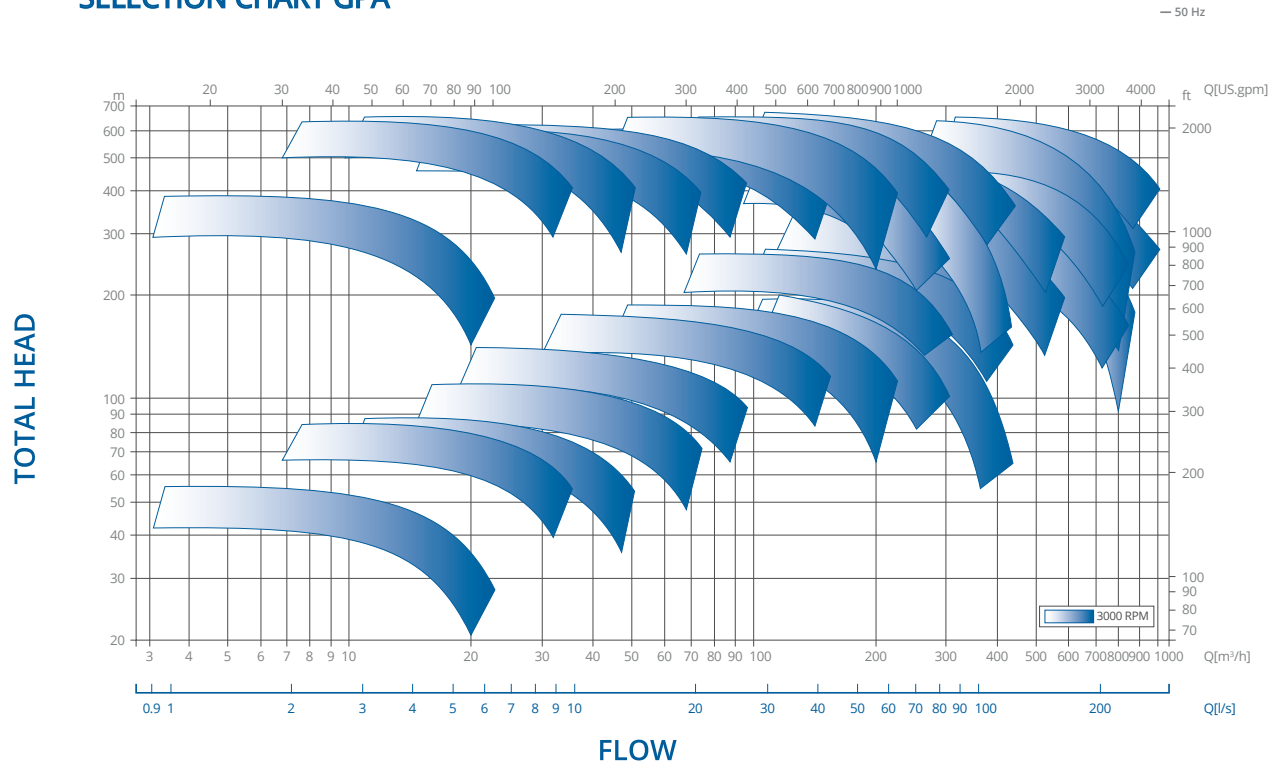
This rugged process pump is designed to operate dependably and even in the toughest industrial applications.

The GPA line features 14 sizes to precisely meet service conditions within a wide range of hydraulic parameters.

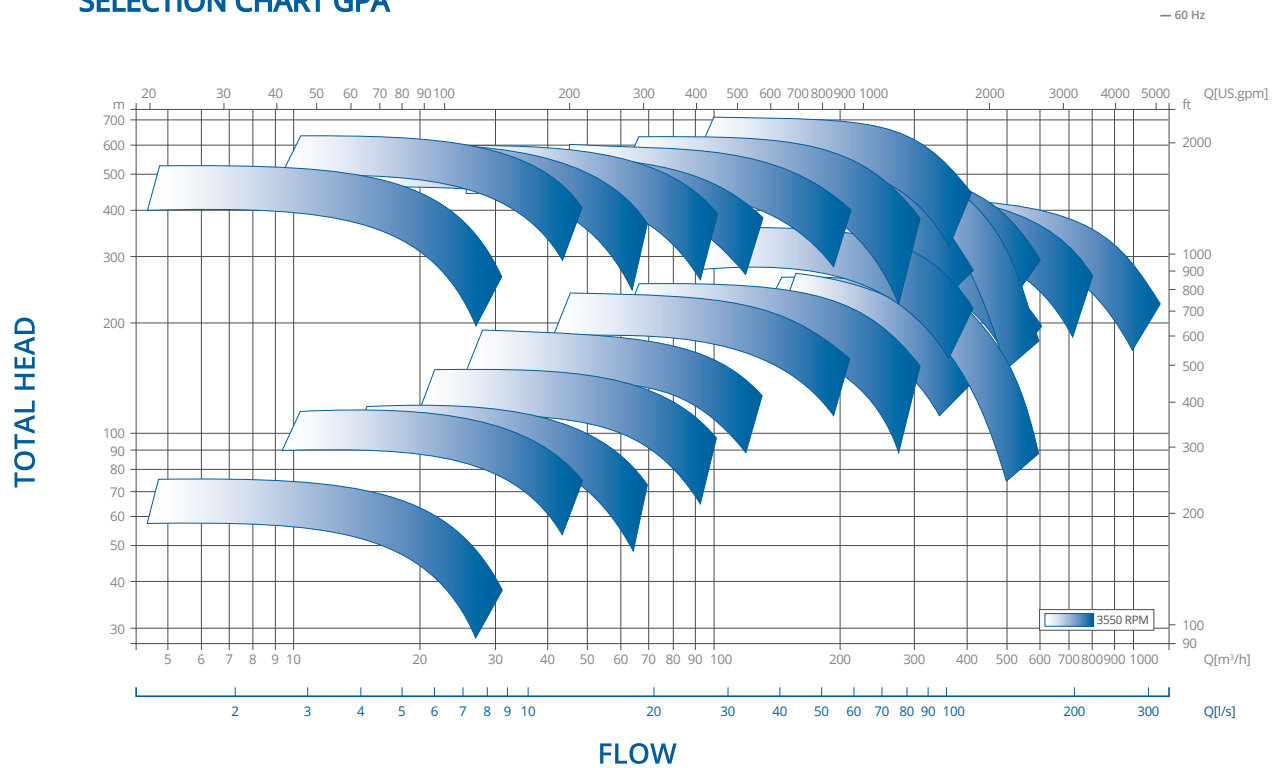


# Performance Range

SELECTION CHART GPA



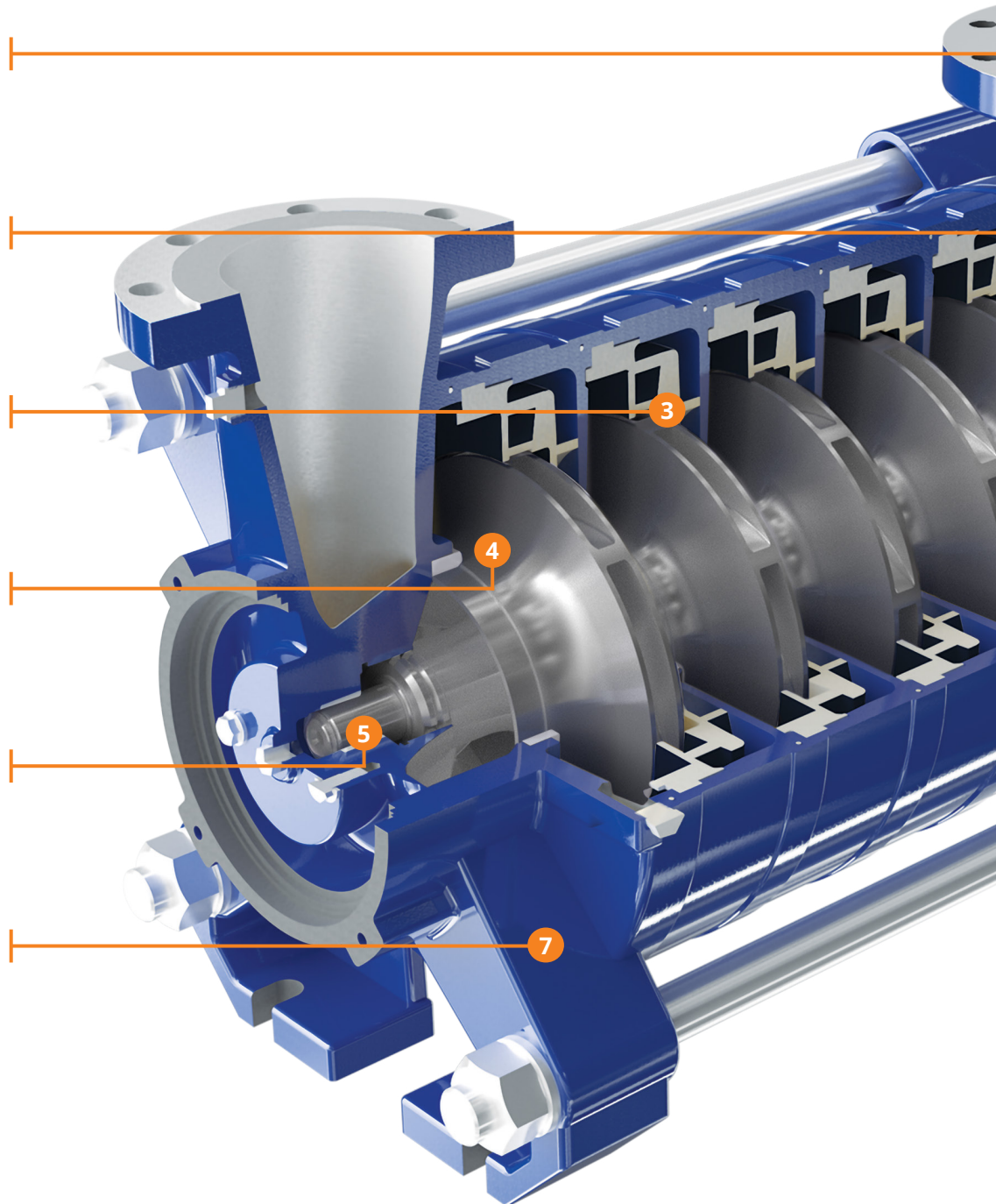
SELECTION CHART GPA



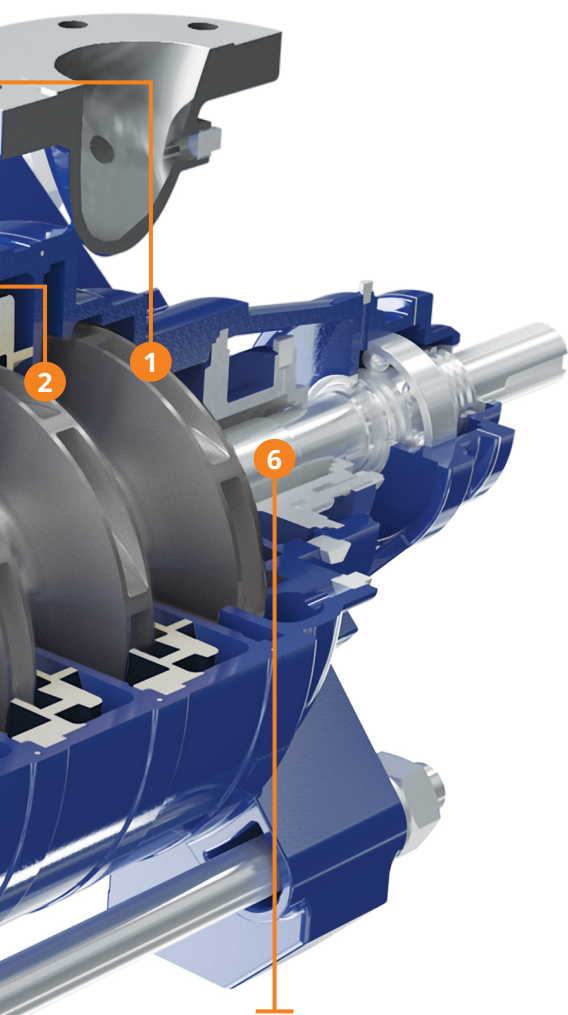


## Characteristics

- 1 Balancing Device**  
Improved bearing load.  
Low pressure in seal area.  
Long life in rolling bearings.
- 2 Wear Rings**  
High resistant.  
Easy to install and replace.
- 3 Hydraulic Development**  
State of the art hydraulic design for the highest efficiency.
- 4 Improvement in NPSH**  
1st stage with enhanced performance.
- 5 Plain Bearings**  
Low cost maintenance.  
Seal only in one side.  
Long service life.
- 7 Friendly Service**  
Easy dismantling of bearing and mechanical seal.



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



- 6 Seal System**  
Option to mechanical seal (cooled up to 200°C).  
Sleeve to protect shaft from wearing.

#### GPA PERFORMANCE DATA

Capacity	up to 3,742 gpm	up to 850 m <sup>3</sup> /h
Head	up to 1,968 ft	up to 600 m
Pressure	up to 899 psi	up to 62 bar
Temperature	up to 392°F	up to 200°C
Dis. Flange Size	50 to 150 mm	2 to 6 in

Notes:

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

## DESCRIPTION

Multi-stage, horizontal centrifugal pump.

- Radially split casing with flanged connections.
- Enclosed impeller, clockwise rotation (viewed from coupling end).
- Foot mounted.
- Modular suction and discharge nozzles for side or top configuration.
- ASME flanges as standard, optional DIN flanges.
- Investment casted impellers to ensure maximum efficiency.
- Grease lubricated.  
Optional oil lubrication with labyrinth seal.
- Single thrust bearing arrangement or between bearing construction is available.
- Standard version for component type seal, optional cartridge seal single or double.
- All ANSI flush plans are offered, as needed, in a variety of configurations.

## BROAD APPLICATION RANGE

The Ruhrpumpen GPA is designed for a wide range of industrial, chemical process and municipal applications such as, but not limited to:

- Boiler Feed
- Reverse Osmosis
- Pressure Boosting
- Irrigation
- Hot Water Supply
- Filtering System
- Condensation
- High Pressure Service for all kind of industries.

## MATERIALS OF CONSTRUCTION

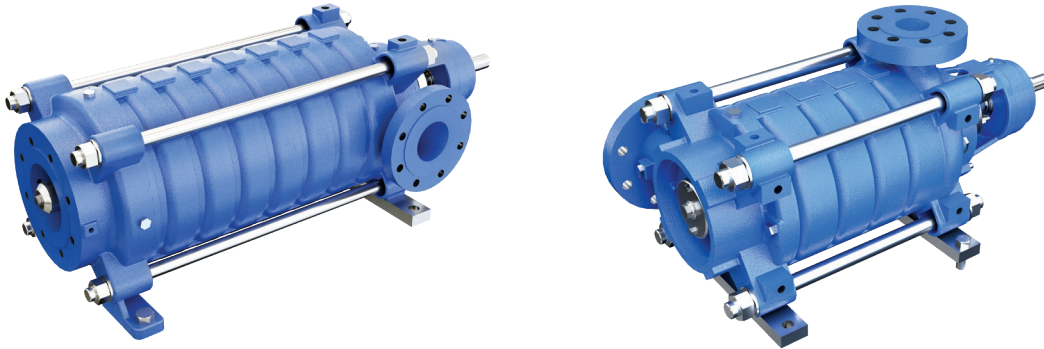
Ruhrpumpen GPA pump is available in many materials such as:

- Ductile Iron / Duplex
- Duplex / Duplex
- Superduplex for Desalination Market
- Carbon Steel and other special alloys are available upon request

We cover a large range of material options to satisfy every need, please contact us for more information.

### Application of the GPA Pump in a Process

Best matching adaptation to system condition by variety of installation types and variable nozzle position. The required nozzle position has to be selected when completing an order in the selection program.



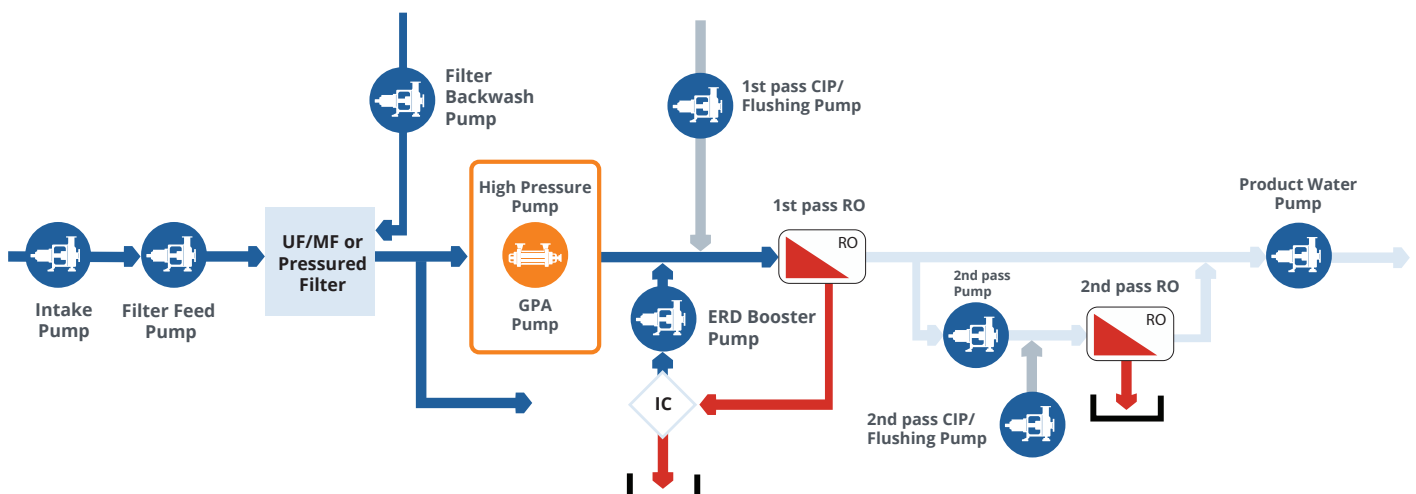
### Plasma Nitriding



Rotor components exposed to wear are previously treated by Ruhrpumpen Plasma Nitriding process. Finished machine parts without warping, extending their life, reducing friction, and increasing corrosive resistance. The nitride layer is dense and durable making it hard to remove and has low coefficient of friction.

### Reverse Osmosis Service

GPA Pump is a very good solution for High Pressure Process in Desalination. High Pressure pumps are normally used for Membrane Feed in desalination plants with capacities up to 300 m<sup>3</sup>/hr.







## Other Ruhrpumpen Products

### ANSI Vertical In-Line Close Coupled Pump



IIL - Back pull-out design, CI/SS impeller, packing box cover, casing-flanged suction, front wear rings, manual vent plug.

Chemical, Petrochemical, Petroleum, Coal, Fiber, Pulp and Paper, Food and Beverage, Pharmaceutical Fats and Oils, Soap, Paint, and Automotive.

### Vertical Turbine Pump



VTP - Multistage vertical centrifugal pump with diffuser type bowl, semi-open / enclosed impellers, cast iron bowls, counterclockwise rotation viewed from coupling end.

Deep well and Irrigation, Cooling Tower, Sump, Condensate, Can Pump requirements.

### ANSI Horizontal Process Pump



CPP - ANSI Single Stage end suction horizontal centrifugal pump, enclosed impeller, radially split casing with flanged connections.

Petrochemical, Oils & Gas, Steel Industry, Automotive, Food Processing, Power Generation, Pharmaceuticals, Water Treatment, General Process.

### Sump Pump



VSP - Single Stage single suction vertical centrifugal pump, volute type case, flanged and threaded discharge, cast iron casing, flexible coupling.

Sump Drainage, Flood Control, Air Wash Systems, Power Plants, Chemical Industry, Municipal Systems, Water Treatment, Process Plants, Sewage Lift Stations.

### Submersible Sewage Pump



NE - Cast Iron body, multipurpose pump, double mechanical seal, discharge nozzle up to 6", semi-open impeller.

General Industry, Commercial, Irrigation, Farming, Landscaping.

### Horizontal Split Case Pump












ZW - Single stage double suction horizontal centrifugal pump, enclosed impellers, oil or grease lubricated bearings, foot mounted.

Dewatering, Mining, Water, Cooling Towers, Oil Process, Petrochemical, Paper Industry.

## +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