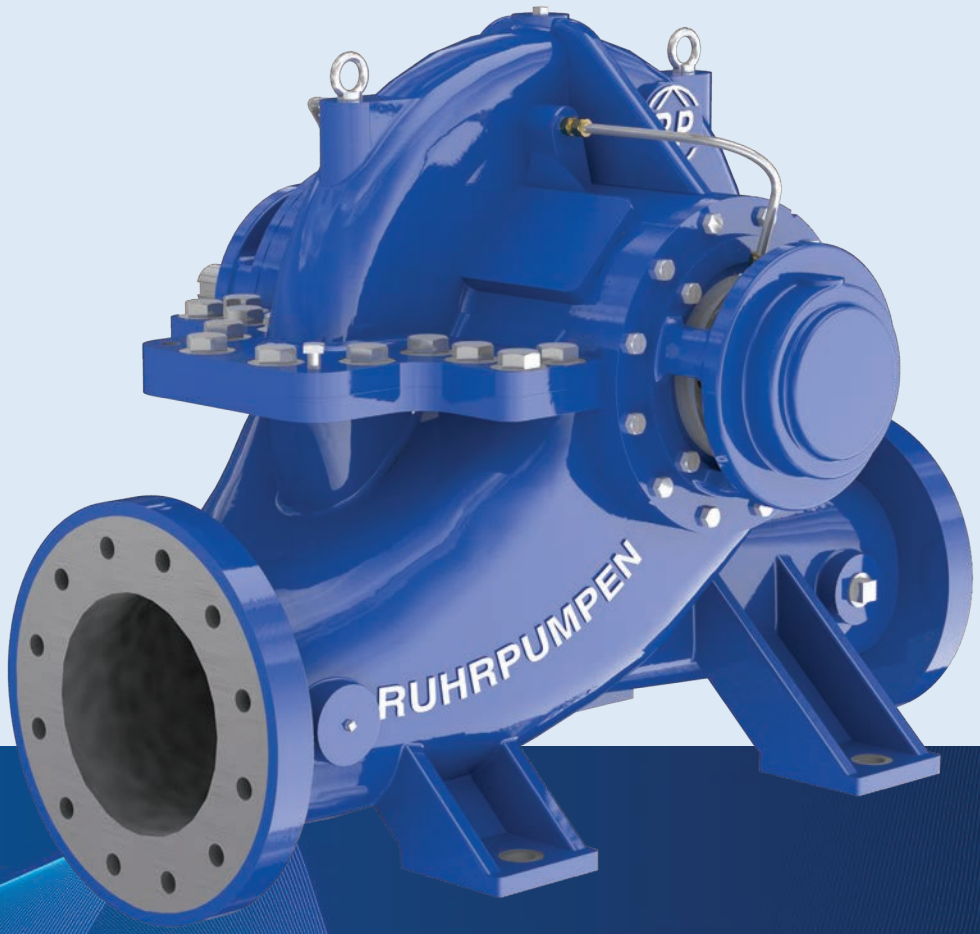
RUHRPUMPEN

Specialist for Pumping Technology



HS / ZW

Horizontal, axially split case pumps
HI design (BB1 & BB3)

Advanced pumping technology that moves our world

The outcome of many years of experience in the design and manufacture of centrifugal pumps, the Ruhrpumpen HS / ZW pumps are single- or multi-stage, single or double volute, axially split case centrifugal pumps.

The HS range (HSC, HSD, HSL, HSR and HSM models) and the ZW pump are designed and built according to the Hydraulic Institute (HI) standard (BB1 & BB3 types). Depending on mechanical features and material selection, they can pump various fluids providing maximum reliability in general industry applications, power generation plants, municipal water systems, mining operations, fire protection and many other industries. *For API build, check the ZM pump range.*

High reliability

These pumps are engineered for continuous, heavy-duty pumping with several combinations of metallurgical, mechanical and installation features to fit any specific needs.

Flexible design

To minimize footprint and simplify installation, all our HS / ZW pumps can be mounted in horizontal or vertical arrangements, according to customer requirements.

Easy-maintenance design

The axially split casing allows for the upper half to be removed for inspection and maintenance of the complete rotating assembly without disturbing piping or drive alignment.

HSD

HSC

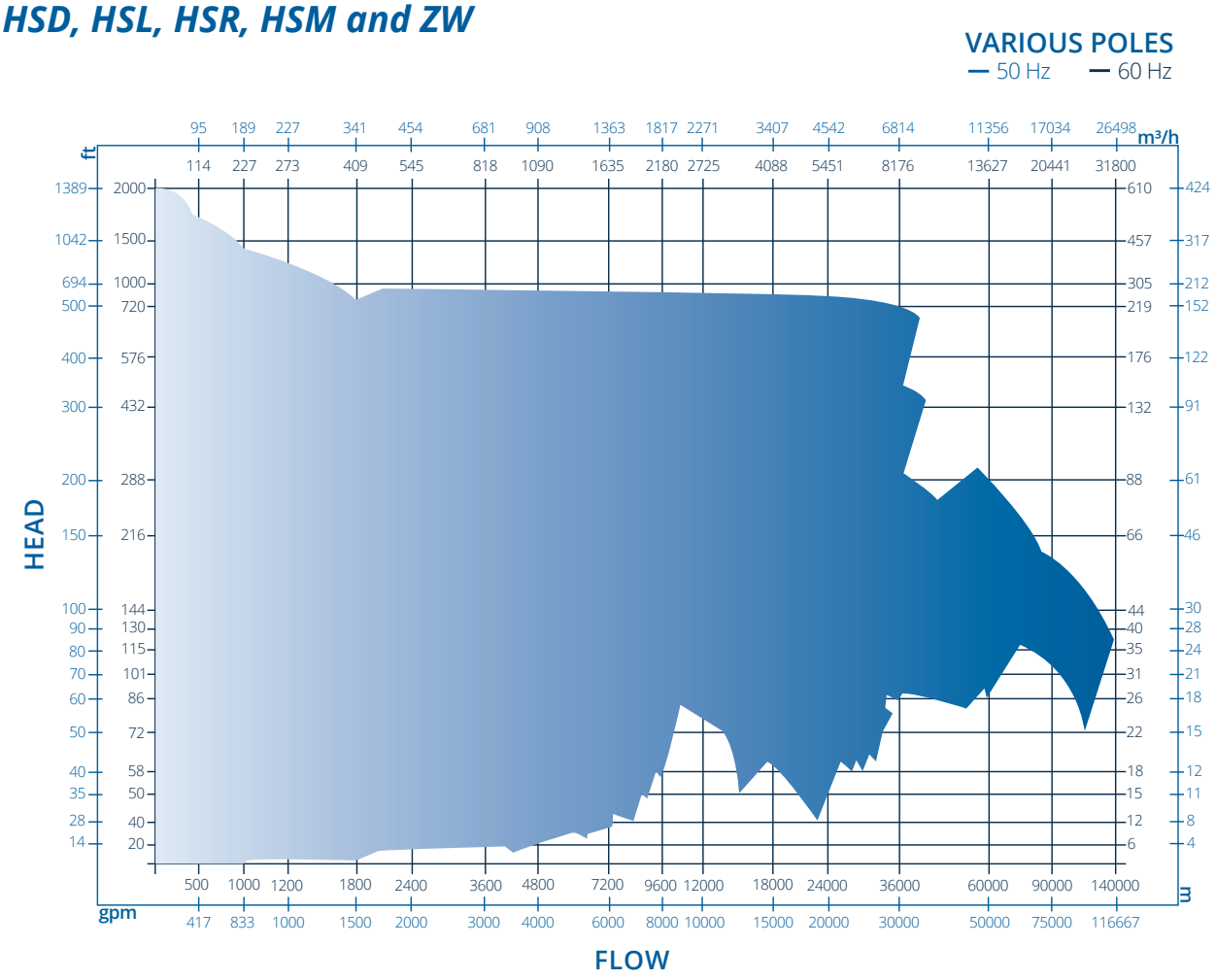
ZW

Our complete range of Horizontal Split Case Pumps and our expertise in pump engineering, allows Ruhrpumpen to bring a solution to every customer.

RP MODEL	STAGES	VOLUTE	IMPELLER	CAPACITY	HEAD
HSC	Single	Double volute	Double suction, enclosed impeller	up to 140,000 gpm up to 31,800 m^3/h	up to 550 ft up to 168 m
HSD	Single	Single volute	Double suction, enclosed impeller	up to 7,000 gpm up to 1,590 m^3/h	up to 550 ft up to 168 m
HSL	Single	Single Volute	Double suction enclosed impeller	up to 2,200 gpm up to 500 m^3/h	up to 500 ft up to 155 m
HSR	Single	Single volute	Double suction, enclosed impeller	up to 9,000 gpm up to 2,050 m^3/h	up to 500 ft up to 155 m
HSM	Multi (2 or 4)	Double volute	Single suction, enclosed impeller	up to 2,000 gpm up to 454 m^3/h	up to 2,200 ft up to 670 m
ZW	Single	Single and double volute	Double suction, enclosed impeller	up to 40,000 gpm up to 9,000 m^3/h	up to 1,115 ft up to 340 m

Pump Performance Chart

HSC, HSD, HSL, HSR, HSM and ZW

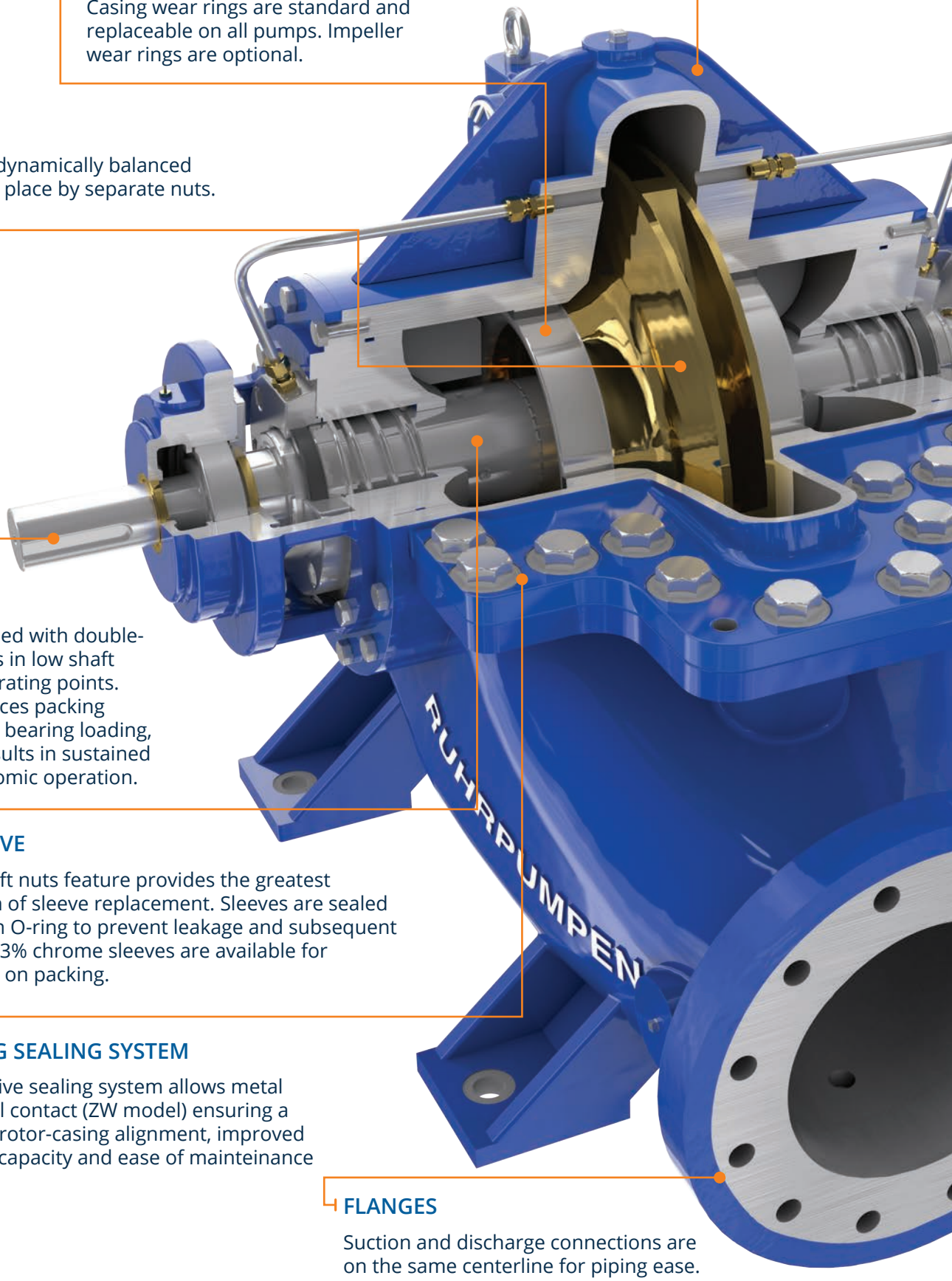


WEAR RINGS

Casing wear rings are standard and replaceable on all pumps. Impeller wear rings are optional.

IMPELLER

Double suction, dynamically balanced impellers held in place by separate nuts.



SHAFT

A rigid shaft combined with double-volute casing results in low shaft deflection at all operating points. Low deflection reduces packing wear, ring wear and bearing loading, which ultimately results in sustained efficiency and economic operation.

SHAFT SLEEVE

Separate shaft nuts feature provides the greatest simplification of sleeve replacement. Sleeves are sealed to shaft by an O-ring to prevent leakage and subsequent erosion. 11-13% chrome sleeves are available for extended life on packing.

CASING SEALING SYSTEM

Innovative sealing system allows metal to metal contact (ZW model) ensuring a perfect rotor-casing alignment, improved sealing capacity and ease of mainteinance

FLANGES

Suction and discharge connections are on the same centerline for piping ease.

MECHANICAL STRENGTH

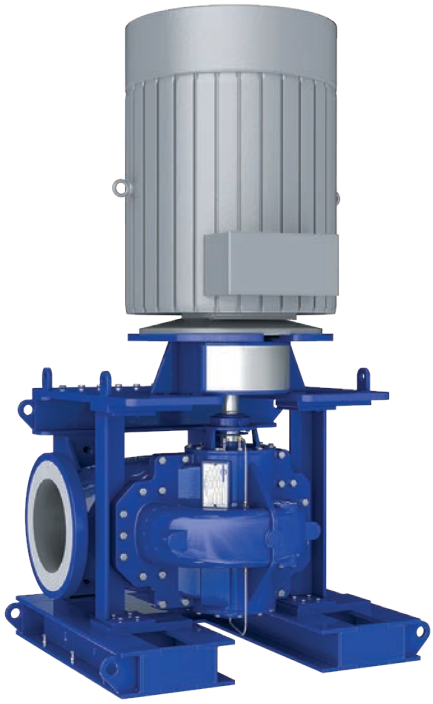
Provided with ribs and connection bosses to ensure mechanical strength during hydrostatic test and normal operation.

BEARING HOUSING

360° bearing housing arrangement to ensure mechanical stability and low vibration levels. Design allows to use the house for packing (as standard) or mechanical seal (optional).

BEARINGS

Interchangeability line and thrust bearings (rated up to 100,000 hours bearing life). Grease lubricated as standard, oil lubrication is optional.



All HS / ZW pumps can be mounted vertically or horizontally, depending on customer requirements.

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

CHARACTERISTICS AND DESIGN FEATURES

- Hydraulic Institute (HI) design - BB1 & BB3 type.
- Horizontal, between bearings, axially split centrifugal pump.
- Single or multi-stage depending on model.
- High efficiency, foot mounted design.
- Axially split case, single-volute or double-volute (depending on model), minimizes thrust loads and allows operation over a wide range of capacities.
- Flanged connections.
- Side-side nozzle configuration.
- Double suction, enclosed impellers provide hydraulic balance eliminating axial thrust..
- Clockwise or counterclockwise rotation.
- Stuffing box allows mechanical seal option.
- Horizontal or vertical mounting arrangements available.
- Cast iron as standard material (other materials on request).

APPLICATIONS

For pumping of pure, raw and wastewater, as well as seawater:

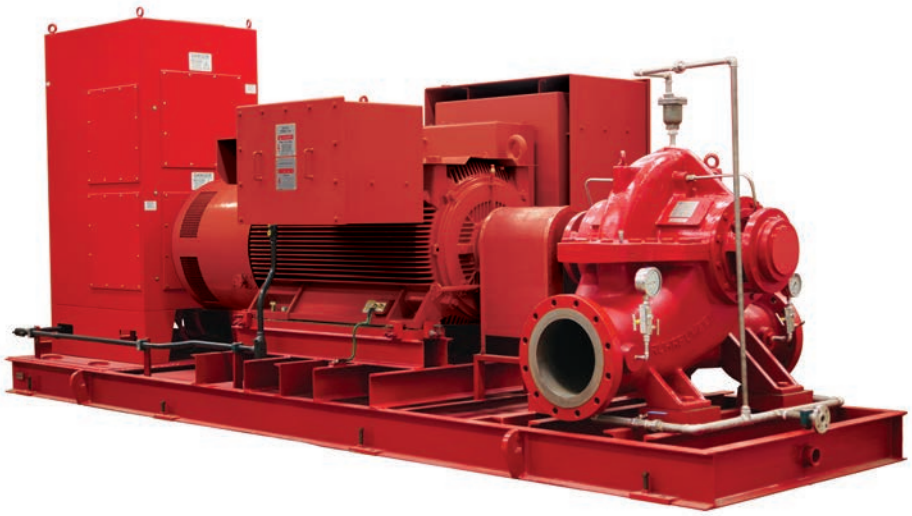
- Municipal water systems
- Cooling towers
- Circulating water
- Raw water transfer
- High and low water lift
- Water pipelines
- Dewatering
- Irrigation
- Desalination
- Marine services
- Cargo loading and unloading
- Fire protection

Split case pumps for fire protection service

Our HSC and ZW pump models are available for fire protection service, they are UL listed, FM approved and comply with the NFPA standard. Pumps are factory tested and can be provided as single pumping units or in complete pre-packaged fire systems with or without enclosure.

CHARACTERISTICS

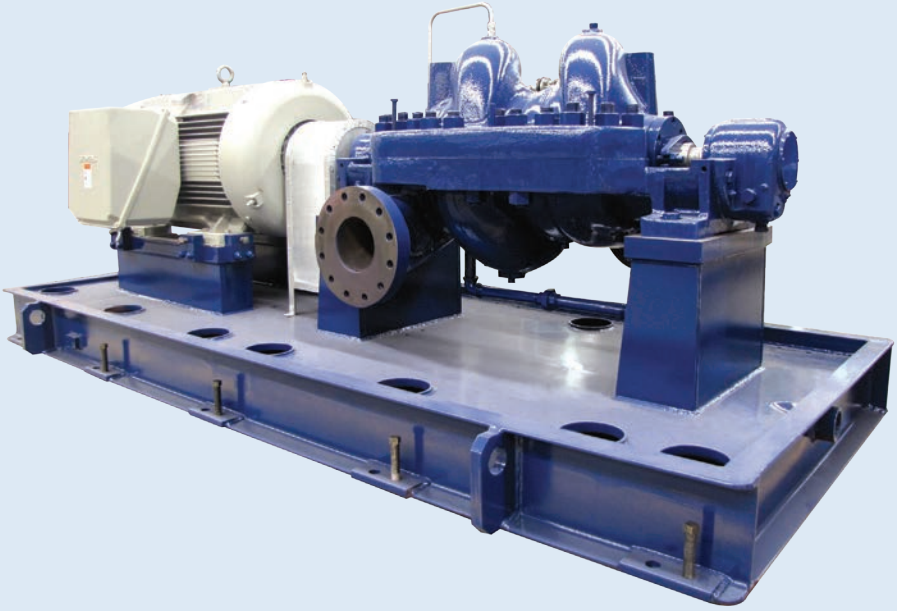
- Flows from 150 to 5000 GPM
- Pressures from 40 to 355 + PSI
- Electric or Diesel driven
- UL-448 listed
- FM-1311 approved
- NFPA-20 design



HSM

Horizontal, multi-stage, split case pumps for high pressure applications

From our HS line, the HSM pump is a heavy-duty, multi-stage, split case process pump engineered according to the Hydraulic Institute standard (BB3 type). Its design, in two- or four- stages, allows it to operate with high reliability in high pressure applications such as: boiler feed water, water pipelines and cooling water.



DESIGN FEATURES

- Oil lubricated bearings
- Flanged connections
- Stuffing box allows for packing or mechanical seal

Looking for an API 610 pump?

Meet the ZM pump range

Our ZM pump range of axially split case centrifugal pumps has a heavy-duty process design according to API 610 latest edition (BB1 type) for applications in the oil and gas industry such as the extraction of oil (land and offshore), as mainline and booster pumps in hydrocarbon pipelines, and different applications in refineries, tank farms and petrochemical plants.

OPERATING LIMITS

Capacity	up to 44,000 gpm up to 10,000 m³/h
Head	up to 1,300 ft up to 400 m
Pressure	up to 580 psi up to 40 bar
Temperature	14 °F to 428 °F -10 °C to 220 °C

+65 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
- RUSSIA, Moscow
- UK, Lancing
- USA, Tulsa

Manufacturing plant & service center

Service center