



Specialist for Pumping Technology



**PUMPS FOR
WATER & WASTEWATER**

Advanced pumping technology for water and wastewater applications

Recent statistics show that global water consumption has increased at twice the rate of population growth, and meeting this demand has become a key challenge worldwide, both environmentally and economically.

In Ruhrpumpen, we are committed to the development of pumping technologies that enhance the way we use, preserve and re-use water. We provide reliable, efficient and high quality water and wastewater pump systems for domestic, municipal and industrial water applications with thousands of pumps operating in municipal pumping stations and treatment plants around the world.

We offer reliable and environmentally friendly pumping solutions for pumping of clean water and the proper disposal of wastewater

- Raw water intake
- Water treatment and transportation
- Drinking water treatment
- Clean water supply and distribution
- Irrigation systems
- Industrial water treatment
- Wastewater collection
- Wastewater treatment
- Flood control and drainage
- Sewage
- Desalination



NSF ANSI 61/372 compliant pumps



Understanding the importance of delivering clean, safe drinking water to millions of people worldwide, Ruhrpumpen manufactures horizontal split case and vertical turbine pump assemblies that comply with the latest lead-free requirements of the U.S. Safe Drinking Water Act.

NSF/ANSI 61 means that our pumps meet the strict industry standards without the risk of contaminants leaching into your drinking water and NSF/ANSI 372 means they are certified to meet the 0.25 percent lead-free requirements.



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

HSC / HSD / HSL / HSR / ZW

**See ZM line for API build*

Horizontal, single stage, axially split case pumps



CHARACTERISTICS AND DESIGN FEATURES

- HI design (BB1)
- High efficiency, foot mounted design
- Double suction, dynamically balanced enclosed impeller
- Mechanical seal or packing
- All HS/ZW pumps can be mounted vertically or horizontally
- Cast iron as standard material (other materials on request)

OPERATING LIMITS

Capacity	up to 140,000 gpm up to 31,800 m³/h
Head	up to 1,115 ft up to 340 m
Pressure	up to 298 psi up to 20 bar
Temperature	50 °F to 300 °F 10 °C to 150 °C

APPLICATIONS

- Circulating water service
- Cooling towers
- Pipelines
- HVAC
- Dewatering
- Municipal water systems
- Fire protection

VTP

Multi-stage, vertical turbine pump with diffuser type bowl



CHARACTERISTICS AND DESIGN FEATURES

- HI design and API 610 latest edition (VS1) constructions available
- Collet mounted or ring and key, semi-open and enclosed impellers
- Threaded or flanged bowls are provided depending on pump size
- Up to 30 stages, number of stages according to requirement
- Basket or conical strainer available according to requirement
- Can be built as a vertical canned pump (VS6)
- Standard materials include cast iron bowls, bronze impellers and 416 SS shafting (other materials on request)

OPERATING LIMITS

Capacity	up to 60,000 gpm up to 13,630 m³/h
Head	up to 2,500 ft up to 762 m
Pressure	up to 1,080 psi up to 74 bar
Temperature	up to 250 °F up to 121 °C

APPLICATIONS

- Hydrocarbon service
- Offshore facilities
- Deep well irrigation and dewatering
- Condensate extraction
- Municipal water systems
- Fire protection

**For operation outside operating limits, please contact a Ruhrpumpen representative.*

VCT

Single or multi-stage, mixed and radial flow circulating pumps



CHARACTERISTICS AND DESIGN FEATURES

- HI design and API 610 latest edition (VS1) constructions available
- Open, semi-open and enclosed impellers available according to pump model
- Packing as standard, mechanical seal is available
- Above or below ground discharge
- Optional pull-out design for ease of maintenance (for some large models)
- Cast iron as standard material (other materials on request)

OPERATING LIMITS

Capacity	up to 300,000 gpm up to 68,137 m³/h
Head	up to 330 ft up to 100 m
Pressure	up to 285 psi up to 20 bar
Temperature	-20 °F to 275 °F -30 °C to 135 °C

APPLICATIONS

- Condensate extraction service
- Cooling water service
- Offshore facilities
- Pipelines
- Storm and flood water disposal
- Water transportation, distribution and treatment

VLT

Single or multi-stage, vertical canned pumps



CHARACTERISTICS AND DESIGN FEATURES

- HI design, cryogenic and API 610 latest edition (VS6) constructions available
- Low NPSH "shockless" entry" first stage impeller
- Integral fabricated column support bearings
- One-piece shaft construction for shaft lengths up to 6 m (20 ft)
- Materials of construction per API 610 (other materials on request)

OPERATING LIMITS

Capacity	up to 45,000 gpm up to 9,500 m³/h
Head	up to 4,900 ft up to 1,494 m
Pressure	up to 2,020 psi up to 140 bar
Temperature	up to 1,500 °F up to 815 °C

APPLICATIONS

- Condensate extraction service
- Molten salt application for Concentrated Solar Power
- Hydrocarbon processing
- Pipelines
- Municipal water systems

VAF

Axial flow impeller for low head applications



CHARACTERISTICS AND DESIGN FEATURES

- HI design and API 610 latest edition (VS3) constructions available
- Axial flow impeller
- Can handle solids up to 365 mm (14")
- Standard materials include cast iron for bowls, bronze for impellers, stainless steel for pump shaft (other materials on request)

OPERATING LIMITS

Capacity	up to 320,000 gpm up 72,700 m ³ /h
Head	up to 90 ft up to 28 m
Pressure	up to 75 psi up to 5.2 bar
Temperature	up to 203 °F up to 95 °C

APPLICATIONS

Applications that require large quantities of water with low head:

- Drainage
- Wastewater
- Flood control
- Water irrigation
- Construction dewatering
- Raw water intake
- Condenser cooling

DSV

Heavy-duty, double suction, single or multi-stage centrifugal pump



CHARACTERISTICS AND DESIGN FEATURES

- HI design and API 610 latest edition (VS2 & VS7) constructions available
- Twin volute (DSV) case designed to efficiently convert to pressure the velocity added to the liquid by the double suction, enclosed impeller
- Its good NPSH characteristics make these pumps ideal for open sumps, channels, lakes and rivers
- Packed stuffing box or mechanical seal / Above or below base discharge
- Can be built as vertical canned pump (VS7)

OPERATING LIMITS

Capacity	1,500 to 80,000 gpm 340 to 18,170 m ³ /h
Head	40 to 800 ft 12 to 244 m
Pressure	up to 280 psi up to 19 bar
Temperature	up to 302 °F up to 150 °C

APPLICATIONS

Large volumes of liquid with relatively high head:

- Cooling water
- Raw water intake
- Pipeline booster pump
- Condensate service

Reference projects



ZMS pumps for water station in Oman

The water transmission pipeline from the Pump Station IWP beside the desalination plant in Qurayyat, which is pumping water to the city of Muscat, is one of the various projects the Public Authority for Electricity and Water (PAEW) is executing in order to achieve water security to all people in the Sultanate of Oman.

Elecnor selected our ZMS pumps for the potable water pumping station.

Ruhrpumpen provided 6 ZMS pumps with a capacity of 2272 m³/h @ 386 m and Siemens motors of 3600 Kw.

VTP pumps for major water transfer project in Bolivia

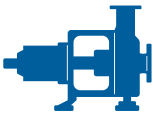
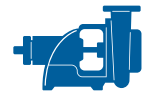
Bolinter chose Ruhrpumpen's VTP pumps for the two pumping stations along the water transfer project Pongo - Estrellani, one of many projects that will help offset the impact of water scarcity in La Paz, Bolivia.

At altitudes between the 4200 and 4600 meters above sea level, the Ministry of Environment and Water required Bolinter to build an aqueduct to counteract the severe water drought that led to water rationing in the city. This undertaking provides La Paz with 200 liters of water per second to the water treatment plant in Chuquiaguillo.

Ruhrpumpen provided 8 vertical multi-stage pumps, VTP 12B-75 model of 7 stages, with motors of 4000 Kw. Each pump operates at a capacity of 240 m³/h at an altitude of 4200 m.



Additional Ruhrpumpen pumps for water and wastewater services

	RP MODEL	DESCRIPTION	SERVICE	OPERATING LIMITS
	CPP / CPO	Single stage, end suction ANSI B73.1 process pumps (enclosed and open impellers)	Process water Water treatment Fire protection	Capacity up to 7,000 gpm (1,590 m³/h) Head up to 920 ft (281 m)
	CRP	Single stage, end suction ISO 2858 & 5199 process pump	Process water Water treatment	Capacity up to 2,200 gpm (500 m³/h) Head up to 705 ft (215 m)
	GSD	Single stage, end suction general service centrifugal pump (OH0)	Water supply Irrigation Dewatering	Capacity up to 4,000 gpm (908 m³/h) Head up to 400 ft (122 m)
	SHD / SK SKO / SKV ST / STV	Single stage, end suction pumps (solids handling) in horizontal and vertical configurations (OH1)	Wastewater transport and treatment Sludge Rainwater	Capacity up to 35,223 gpm (8,000 m³/h) Head up to 380 ft (116 m)
	SWP	Self-priming pump for solids handling applications (OH1A)	Wastewater treatment Dewatering	Capacity up to 6,500 gpm (1,476 m³/h) Head up to 140 ft (42 m)
	IVP	Vertical in-line pump in split and close coupled configurations (OH4 / OH5)	Water supply Fire protection	Capacity up to 10,000 gpm (2,271 m³/h) Head up to 400 ft (122 m)
	IIL	Vertical in-line process pump (close coupled - OH5) dimensionally compliant with ANSI B73.1	Process water Water treatment Fire protection	Capacity up to 1,300 gpm (295 m³/h) Head up to 340 ft (119 m)
	HSM	Horizontal, 2 or 4 stage, split case pumps for high pressure applications (BB3)	High pressure water Water pipelines	Capacity up to 2,000 gpm (454 m³/h) Head up to 2,200 ft (670 m)
	VSP	Single casing, vertical sump pumps (VS4)	Drainage Dewatering Water treatment	Capacity up to 8,500 gpm (1,931 m³/h) Head up to 425 ft (130 m)
	SMF	Vertical submersible mixed flow pump for installation in a steel tube or concrete well (OH8A)	Irrigation Industrial water Water supply	Capacity up to 79,344 gpm (18,000 m³/h) Head up to 165 ft (50 m)
	VTP Sub	Vertical submersible, single or multi-stage, turbine pumps with diffuser type bowl (VS0)	Irrigation Water intake	Capacity up to 60,000 gpm (13,630 m³/h) Head up to 2,500 ft (762 m)
	RDP	Reciprocating plunger pumps in triplex and quintuplex formats	High pressure water Water injection	Capacity up to 1,611 gpm (366 m³/h) Discharge pressure up to 14,500 psi (1,000 bar)

The Ruhrpumpen range of pumps for water and wastewater applications is not limited to the pumps mentioned in this brochure. If you are interested in other pumps for water and wastewater, or any other application, visit us online at www.ruhrpumpen.com.

+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