Ruhrpumpen offers a wide range of pump designs and sizes providing energy efficient solutions for the vast majority of duty conditions.

Additionally, Ruhrpumpen can offer innovative, tailor-made hydraulics by modifying our high efficiency designs to provide an optimized high quality solution to meet each customer’s unique requirements.

The flexibility to adapt our vast product range makes Ruhrpumpen a true “one-stop shop” for all pumping needs.
CHARACTERISTICS

- Single stage horizontal centrifugal pump
- Radially split casing with flanged connections, horizontal end suction and top discharge on the center line
- Enclosed or Semi-open impeller
- Clockwise rotation (viewed from coupling end)
- Foot mounted
- Oil lubricated

OPERATING LIMITS

- Capacity to 1,150 m³/h (5,000 U.S. GPM)
- Head to 235 m (770 ft)
- Temperature -45 to 315 °C (-50 to 600 °F)

APPLICATIONS

- Petrochemical
- Oil & Gas
- Steel Industry
- Automotive
- Food Processing
- Power Generation
- Pharmaceuticals
- Water Treatment
- General Process

STANDARD CONSTRUCTION MATERIALS

- All ductile iron
- Ductile iron / stainless steel
- All 316 stainless steel

RUHRPUMPEN NOMENCLATURE

- CPP-21
- ANSI
- IPP
RUHRPUMPEN NOMENCLATURE

Horizontal Process Pumps Single Stage

CHARACTERISTICS
- Radially split, horizontal single stage centrifugal pump
- Centerline mounted
- Single / double volute, depending on size
- Single suction, enclosed impeller
- Thrust compensation by balance holes
- End-Top nozzle arrangement
- Materials of construction per API 610, other materials on request

OPERATING LIMITS
- Capacity to 2,800 m³/h (12,340 U.S. GPM)
- Head to 400 m (1,300 ft)
- Discharge flange size 1 to 12 in
- Pressure to 46 bar (668 PSI)
- Temperature -46° to 450°C (-50° to 850°F)

APPLICATIONS
- Petroleum refining, production and distribution
- Petrochemical
- Heavy duty chemical
- Gas industry services
- Power plant
- Utilities

DESIGN FEATURES
- Heavy duty process design according to API 610 latest edition (OH2 type).
- Other methods of lubrication available
- Replaceable front and back wear rings for casing and impeller
- Special design for abrasive liquids available
- Low temperature design on request
- Inducers for low NPSH available
- Fan or water cooling is available
- Coke crusher design available for heater charge services
- Jacketed casings available for fly ash and similar service

RUHRPUMPEN NOMENCLATURE
- SCE
Vertical In-line, Process Pumps

CHARACTERISTICS
- Radially split, vertical in-line centrifugal pump
- Foot mounted
- Single volute casing
- Single suction, closed impeller
- Thrust compensation by balance holes
- Side-Side in-line nozzle arrangement
- Materials of construction per API 610, other materials on request

DESIGN FEATURES
- Heavy duty process design according to API 610 latest edition (OH3 / OH5 type)
- OH5 (SPN) close coupled design
- OH3 (SPI) separate bearing bracket
- Replaceable wear rings for casing and impeller

APPLICATIONS
- Petroleum refining, production and distribution
- Petrochemical
- Chemical

OPERATING LIMITS
- Capacity 2.5 to 500 m³/h (11 to 2,201 U.S. GPM)
- Head 15 to 290 m (52 to 950 ft)
- Speed up to 3,600 RPM
- Temperature to 260°C (500°F)
- MAWP to 41 bar (597 PSI)

RUHRPUMPEN NOMENCLATURE
- SPI
- SPN
Axially Split Case Centrifugal Pumps

**CHARACTERISTICS**
- Axially split, horizontal, single or double stage centrifugal pump
- Foot or Near-centerline mounted
- Double volute casing
- Enclosed impeller, double suction provides hydraulic balance eliminating axial thrust.
- Side-Side nozzle arrangement
- Two-stage design for higher heads
- Materials of construction per API 610, other materials on request

**DESIGN FEATURES**
- Heavy duty process design according to API 610 latest edition (BB1 type)
- Ring oil lubrication, other methods of lubrication available
- Diffuser design available
- Replaceable wear rings for casing and impeller
- Fan and Water cooling available

**OPERATING LIMITS**
- Capacity 100 to 22,000 m³/h (440 to 96,863 U.S. GPM)
- Head 10 to 1,200 m (33 to 3,930 ft)
- Discharge flange size 4 to 40 in
- Max. Pressure 145 bar (2,103 PSI)
- Temperature 205°C (401°F)

**APPLICATIONS**
- Pipeline service: mainline and booster
- Oil extraction technology: onshore and offshore
- Refinery technology
- Chemical / Petrochemical industry
- General industry
- Metallurgical and steel industries
- Combined heating and power stations
- Power stations

**RUHRPUMPEN NOMENCLATURE**
- ZM
- ZMS
- ZLM
Horizontal Split Case Pumps Single Stage

CHARACTERISTICS
- Single stage double suction horizontal centrifugal pump
- Horizontally split casing, double volute
- Flanged connections
- Enclosed impellers, double suction provides hydraulic balance eliminating axial thrust
- Clockwise or counterclockwise rotation
- Double ended shaft available
- Foot Mounted

DESIGN FEATURES
- Oil or grease lubricated bearings
- Stuffing box configured for packing or mechanical seals
- Horizontal or vertical mounting configurations
- Renewable wear rings

STANDARD CONSTRUCTION MATERIALS
- Cast iron
- Cast iron, Stainless steel fitted
- All bronze
- All WCB grade carbon steel
- All stainless steel
- Other material available upon request

OPERATING LIMITS
- Capacity to 31,800m³/h (140,000 U.S. GPM)
- Head to 340 m (1,115 ft)
- Pressure to 27 bar (298 PSI)
- Temperature 10 to 150°C (50 to 300°F)

APPLICATIONS
- Dewatering
- Mining
- Water
- Fire service
- Cooling towers
- Municipal
- Oil process
- Petrochemical
- Sugar industry
- Paper industry
- Pipeline
- Power generation
- Others

RUHRPUMPEN NOMENCLATURE
- HSC
- HSD
- HSR
- ZW
CHARACTERISTICS
- Two and four stage horizontal centrifugal pumps, double volute
- Horizontally split casing, side-side nozzle arrangement
- Enclosed impeller
- Counterclockwise rotation viewed from coupling end

OPERATING LIMITS
- Capacity to 454 m³/hr (2,000 U.S. GPM)
- Head to 670 m (2,200 ft)
- Pressure 50 bar (739 PSI)
- Temperature max: 121°C (250°F)

APPLICATIONS
- High pressure applications (Boiler Feed, Petrochemical, Chemical, Industrial)
- Power plants

RUHRPUMPEN NOMENCLATURE
- HSM

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

STANDARD CONSTRUCTION MATERIALS
- All cast iron
- Cast iron, bronze fitted
- Carbon steel, iron fitted
- Cast iron, 316 SS fitted
CHARACTERISTICS

- Radially split, horizontal single stage centrifugal pump
- Centerline mounted
- Double volute casing
- Double suction, enclosed impeller
- Thrust compensation by double suction impeller
- Top-Top nozzle arrangement, other arrangements on request
- Materials of construction per API 610, other materials on request

OPERATING LIMITS

- Capacity to 6,814 m³/h (30,000 U.S. GPM)
- Head to 610m (2,000 ft)
- Max. pressure to 125 bar (1,813 PSI)
- Temperature to 450°C (850°F)

APPLICATIONS

- Heavy duty high temperature process
- Process and industrial applications including: Charge, Transfer, Injection and Utility Booster

RUHRPUMPEN NOMENCLATURE

- HVN
- J
- JD
Horizontal Process Pumps
Two Stage

CHARACTERISTICS
- Radially split, horizontal two stage centrifugal pump
- Centerline mounted
- Diffuser / volute combined casing
- Single suction, radial, closed impeller
- Double suction on request
- Thrust compensation by opposed impellers
- Top-Top nozzle arrangement, other arrangements on request
- Materials of construction per API 610, other materials on request

OPERATING LIMITS
- Capacity 18 to 2,000 m³/h (75 to 8,806 U.S. GPM)
- Head 150 to 1,000 m (492 to 3,281 ft)
- Discharge flange size 2 to 14 in
- Max. pressure 125 bar (1,813 PSI)
- Temperature 450°C (850°F)

APPLICATIONS
- Refineries
- Oil fields
- Petrochemical plants
- Chemical plants

RUHRPUMPEN NOMENCLATURE
- RON / RON-D

DESIGN FEATURES
- Heavy duty process design according to API 610 latest edition (BB2 type)
- Ring oil lubrication, other methods of lubrication available
- Replaceable wear rings for casing and impeller
- Fan and water cooling available
- Coke crusher design available for heater charge services
Horizontal Multi-stage Pumps (Diffuser)

**Characteristics**
- Axially split, horizontal multistage centrifugal pump
- Near-centerline mounted
- Diffuser casing
- Single suction, enclosed impeller
- Thrust compensation by opposed impeller groups
- Side-Side nozzle arrangement
- Materials of construction per API 610, other materials on request

**Design Features**
- Heavy duty process design according to API 610 latest edition (BB3 type)
- Ring oil lubrication, other methods of lubrication available
- Replaceable wear rings for casing and impeller
- Fan and water cooling available

**Operating Limits**
- Capacity 10 to 350 m³/h (44 to 1,540 U.S. GPM)
- Head 100 to 1,000 m (325 to 3,280 ft)
- Discharge flange size 1 1/2 to 6 in
- Max. Pressure 130 bar (1,890 PSI)
- Temperature 205°C (400°F)

**Applications**
- Power plants
- Refineries
- Oil fields
- Petrochemical plants
- Chemical plants

**Ruhrpumpen Nomenclature**
- JTN
CHARACTERISTICS

- Axially split, horizontal multi-stage centrifugal pump
- Near-centerline mounted
- Double volute casing
- Single suction, closed impeller
- Double suction impellers for higher flows
- Thrust compensation by opposed impeller groups
- Side-Side nozzle arrangement
- Materials of construction per API 610, other materials on request

OPERATING LIMITS

- Capacity 50 to 3,000 m³/h (220 to 13,209 U.S. GPM)
- Head 200 to 3,000 m (656 to 9,843 ft)
- Discharge flange size 3 to 14 in
- Max. Pressure 420 bar (6,000 PSI)
- Temperature up to 205°C (400°F)

APPLICATIONS

- Oil fields and terminals
- Crude oil and oil product pipelines
- Water pipelines
- Fluid injection
- High pressure services
- Power plants

RUHRPUMPEN NOMENCLATURE

- SM
- SM I
CHARACTERISTICS
- Radially split, horizontal multi-stage centrifugal pump
- Centerline mounted
- Diffuser casing
- Single / Double suction, enclosed impeller
- Thrust compensation by balance drum
- Top-Top nozzle arrangement
- Materials of construction per API 610, other materials on request

OPERATING LIMITS
- Capacity up to 2,000 m³/h (8,806 U.S. GPM)
- Head up to 4,572 m (15,000 ft)
- Discharge flange size 2 to 12 in
- Max. Pressure 420 bar (6,000 PSI)
- Temperature 450°C (850°F)

APPLICATIONS
- Hydrocarbons
- Chemical solutions
- Water
- Seawater
- Decoking Jet service
- Charge pumps
- Descaling service pumps

DESIGN FEATURES
- Heavy duty process design according to API 610 latest edition (BB5 type)
- Ring oil lubrication, other methods of lubrication available
- Cartridge pull out design available
- Sleeve / Tilt Pad bearings design available
- Replaceable wear rings for casing and impeller
- Alternate nozzle arrangements available
- Fan cooling available
- Special design for decoking service available
- Low NPSH double suction design available

RUHRPUMPEN NOMENCLATURE
- A
- ADC
- ADSL
Vertical Turbine Pumps

CHARACTERISTICS
- Multistage vertical centrifugal pumps with diffuser type bowl
- Semi-Open / enclosed impellers
- Counterclockwise rotation viewed from coupling end
- Basket or conical strainer, according to pump requirements

STANDARD CONSTRUCTION MATERIALS
- **Bowls**: Cast iron bowls, Bronze impellers, 416 SS shafting, Integral cast wear surfaces with optional wear rings in bronze or SS, Optional materials available on request
- **Columns**: Carbon steel pipe – threaded or flanged, AISI-1045 carbon steel or 416 SS line shafting, Optional materials available on request
- **Discharge Head**: Cast Iron with 125# ANSI FF flanges, Fabricated steel with 150# or 300# ANSI flanges (optional), Optional custom fabricated discharge head to meet your criteria
- **Bearing Material**: Bronze as standard, Other materials and configurations available as options

OPERATING LIMITS
- Capacity to 13,636 m³/hr (60,000 U.S. GPM)
- Head to 762 m (2,500 ft)
- Pressure to 74 bar (1,080 PSI)
- Temperature 121°C (250°F)

APPLICATIONS
- Deep Well
- Irrigation
- Sump
- Condensate
- Can pump requirements
- Fire service
- Municipal
- Industrial

RUHRPUMPEN NOMENCLATURE
- VTP
- HQ
Vertical Circulator and Mixed Flow Pumps

- Optional pull-out design for ease in maintenance except VMF and TR
- Pump mounted thrust bearings when required
- Rotor ‘Pull-Out’ design available

CHARACTERISTICS
- Vertical space saving construction
- Open, semi-open and closed impellers available for wide range of applications and according to pump model
- Oil, fresh water or self-lube column construction
- Engineered to customer specifications
- Wide range of impeller designs and specific speeds (1,800-14,000) for optimum hydraulic coverage
- Integral bearing retainer
- Threaded or flanged column (depending on its size), with water or oil lubrication
- Sizes 20 cm (8 in) to 305 cm (120 in)

DESIGN FEATURES
- API 610 latest edition construction available (VS3 type)
- Above or below ground discharge
- Packed stuffing box or mechanical seal

OPERATING LIMITS
- Capacity to 50,000 m³/h (220,000 U.S. GPM)
- Head to 175 m (575 ft)
- Pressure 10 bar (156 PSI)
- Temperature -30 to 135°C (-20 to 275°F)

APPLICATIONS
- Power generation
- Condenser cooling water service
- Cooling tower service
- Flood service
- Storm water disposal
- Water treatment
- Primary water supply
- Waste treatment plants
- Industrial service
- Sump drainage

RUHRPUMPEN NOMENCLATURE
- TR
- HX
- KX
- MX
- RX
- SX
- VX
- WX
- VMF
Heavy-Duty, Double Suction, Vertical Process Pump

CHARACTERISTICS
- Single stage vertical, centrifugal, double volute
- Double suction enclosed impeller
- Counterclockwise rotation viewed from shaft
- Available as a low NPSH first-stage for other vertical models

DESIGN FEATURES
- API 610 latest edition construction available (VS2 type)
- Above or below base discharge
- Oil lubricated column, or may be force-lubricated by the pumped liquid

STANDARD CONSTRUCTION MATERIALS
- Liquid End: cast iron with bronze impellers
- Column: carbon steel pipe and shaft
- Discharge Head: carbon steel with 150 and 300 ANSI flanges
- Other materials available upon request

OPERATING LIMITS
- Capacity 340 to 18,170 m³/h (1,500 to 80,000 GPM)
- Head 12 to 244 m (40 to 800 ft)
- Discharge flange size 10 to 48 in
- Maximum Pressure 19 bar (280 PSI)
- Temperature 150°C (302°F)

APPLICATIONS
- Cooling towers and other applications requiring large volumes of liquid with relatively high head
- Raw water intake

RUHRPUMPEN NOMENCLATURE
- DSV
- DX
Vertical Axial Flow Pumps

CHARACTERISTICS
- Multi-stage vertical centrifugal pump, diffuser type bowl
- Axial flow impeller, high efficiency
- Handles solids up to 36 cm diameter (14 in)
- Counterclockwise rotation viewed from shaft coupling

OPERATING LIMITS
- Capacity to 72,680 m³/h (320,000 U.S. GPM)
- Head 27 m (90 ft)
- Pressure 5 bar (75 PSI)
- Temperature 95°C (230°F)

APPLICATIONS
- All applications that require large quantities of water with low head, like drainage, wastewater, flood control, irrigation, waste treatment plants, underpass drainage, condenser cooling, construction dewatering, ditch pumps and raw water intakes

DESIGN FEATURES
- API 610 latest edition construction available (VS3 type)
- Above or below base discharge
- Discharge elbows designed to reduce friction losses, diffusers designed to minimize turbulence and increase efficiency
- Product, oil, or fresh water lubrication
- Rotor ‘Pull-Out’ design available

STANDARD CONSTRUCTION MATERIALS
- Bowls: Cast iron with bronze impeller
- Column: Carbon steel with AISI-1045 shaft
- Discharge head: Fabricated steel

OPTIONAL ACCESSORIES
- Basket type strainer
- Extended Suction bell to minimize vortices

RUHRPUMPEN NOMENCLATURE
- VAF
- POV
- PV
- PMR
- VPO
- PVD
Sump Pumps

CHARACTERISTICS
- Vertical arrangement
- Sump
- Single suction
- Single stage
- API 610 latest edition construction available (VS4 type)

APPLICATIONS
- Water
- Hydrocarbons
- Process water
- River water
- Chemical solutions

OPERATING LIMITS
- Capacity 3 to 1,931 m³/h (10 to 8,500 U.S. GPM)
- Head 3 to 130 m (10 to 425 ft)
- Max. Pressure 40 bar (580 PSI)
- Temperature 200°C (400°F)

RUHRPUMPEN NOMENCLATURE
- VSP
- VSP CHEM
**Characteristics**
- Double suction first stage available
- Low NPSH “Shockless Entry” first stage impeller
- Over 700 vertical Ruhrpumpen pump hydraulics can be used for construction
- Integral fabricated column support bearings
- Collet or ring and key impeller mounting
- One-piece shaft construction for shaft lengths to 6 m (20 ft)
- Rigid 4-piece coupling
- Single or double suction first stage
- Single stage or multistage available
- Nozzles are available with the suction in the head or barrel

**Design Features**
- API 610 latest edition construction available (VS6 type)
- Fabrications manufactured using ASME

**Operating Limits**
- Capacity to 9,500 m³/hr (45,000 U.S. GPM)
- Head to 1,500 m (4,921 ft)
- Pressure to 102 bar (1,493 PSI)
- Max. Temperature 600°C (1100°F)
- VMT Min. Temperature -196°C (-320°F)
- Horsepower 3,000 kW (4,000 hp)

**Applications**
- Condensate
- Power plants
- Municipal
- Hydrocarbons
- Pipeline
- Refineries
- Molten Salt Applications

**Ruhrpumpen Nomenclature**
- VLT
- VMT
Pre-Packaged Fire Systems

APPROVAL
- Ruhrpumpen’s horizontal and vertical fire pumps are listed by Underwriter's Laboratories Inc and approved by Factory Mutual

CHARACTERISTICS
- Electric motor or diesel engine
- Main and jockey pumps and controller mounted on a common base
- Complete equipment compatibility
- Reduced field cost installation
- Interconnection wiring in accordance with area classifications
- Delivered to site in a single shipment
- Factory piped suction, discharge and test pipe line manifolds (optional)
- Fuel tank into the common base with fuel lines (optional)
- System is totally wired and tested

DESIGN FEATURES
- NFPA-20
- UL-448
- FM-1311
- FM-1312
- Special design available on request

APPLICATIONS
- Commercial centers
- High rise buildings
- Oil & gas onshore and offshore platforms
- Power stations
- Manufacturing and chemical industries
Vertical Fire Pumps
Pumps Listed for Fire Protection Service

APPROVALS
- Ruhrpumpen’s vertical turbine fire pumps are listed by Underwriter’s Laboratories Inc and approved by Factory Mutual

CHARACTERISTICS
- Number of stages will be designed upon pressure requirements
- Enclosed impellers, single suction
- Counterclockwise rotation viewed from coupling end
- Column lengths in accordance with applications
- Column pipe threaded construction is standard
- Open line shaft construction is standard
- Large bowl shaft sizing provides longer life
- Standard materials discharge head and bowls are Cast Iron. Impellers, rings and other internal in bronze
- Special materials for discharge head, columns, shafts, bowls, impellers, rings on request
- Fabricated base capable of supporting the weight of pump diesel engine and gear drive

Complete packaged fire pump skids are available
- Diesel engine starting. Electrical / pneumatic system available also

DESIGN FEATURES
- NFPA-20
- UL-448
- FM-1312
- Special design available on request

APPLICATIONS
- Commercial centers
- High rise buildings
- Oil & gas onshore and offshore platforms
- Power stations
- Manufacturing and chemical industries
Horizontal Fire Pumps
Pumps Listed for Fire Protection Service

APPROVALS
- Ruhrpumpen’s fire pumps are listed by Underwriter’s Laboratories Inc and approved by Factory Mutual

CHARACTERISTICS
- Single stage double suction impeller
- Split case design allows for service without disturbing the piping
- Dynamically balanced double suction Impeller to reduce thrust loads
- Clockwise or counterclockwise rotation (viewed from coupling side) available
- Grease lubricated bearings
- Standard materials are cast iron case, bronze impellers & wear rings, other materials available
- Special material for casing and internals on request
- Base fabricated steel capable of supporting the weight of the pump and driver, other base designs are available on request
- Complete packaged fire pump skids available
- Diesel engine starting electrical / pneumatic system

DESIGN FEATURES
- NFPA-20
- UL-448
- FM-1311
- Special design available on request

APPLICATIONS
- Commercial centers
- High rise buildings
- Oil & gas onshore and offshore platforms
- Power stations
- Manufacturing and chemical industries
Centrifugal Pumps, Single Stage, Single Suction Design

CHARACTERISTICS
- Radially split, horizontal, centrifugal pump
- Foot or centerline mounted
- Single volute casing
- Single suction, radial, closed impeller
- Thrust compensation by balance holes
- End-Top nozzle arrangement

OPERATING LIMITS
- Capacity up to 2,800 m³/h (12,340 U.S. GPM)
- Head up to 160 m (525 ft)
- Discharge flange size 6 to 16 in
- Pressure up to 20 bar (298 PSI)
- Temperature up to 210°C (410°F)

APPLICATIONS
- Cooling water
- Drinking water
- Sea water
- Fire pump
- SOM as hot water pump

RUHRPUMPEN NOMENCLATURE
- SO
- SOM
Floating Dock Pumps, Single Stage

CHARACTERISTICS
- Radially split, vertical foot mounted centrifugal pump
- Volute casing with double suction impeller
- Double suction, radial, closed impeller
- Thrust compensation by double suction impeller
- Side-Side nozzle arrangement

APPLICATIONS
- Main bilge pump on floating docks

OPERATING LIMITS
- Capacity 170 to 6,000 m³/h (750 to 26,500 U.S. GPM)
- Head 3 to 20 m (10 to 66 ft)
- Discharge flange size 12 to 28 in
- Pressure up to 5 bar (71 PSI)
- Temperature up to 40°C (104°F)

RUHRPUMPEN NOMENCLATURE
- ZVZ
Floating Dock Pumps, Single or Multi-Stage

**CHARACTERISTICS**
- Radially split centrifugal pump.
- Single or multi-stage
- Diffuser casing
- Single suction segmental.

**OPERATING LIMITS**
- Capacity 20 to 300 m³/h (88 to 1,320 U.S. GPM)
- Head 25 to 160 m (82 to 525 ft)
- Discharge flange size 12 to 28 in
- Maximum Pressure up to 20 bar (71 PSI)
- Temperature up to 40 °C (104 °F)

**APPLICATIONS**
- Wash-down pumps in floating docks
- Fire protection service

**RUHRPUMPEN NOMENCLATURE**
- LVZ
Horizontal Centrifugal Pumps with Single-Channel Impeller

**CHARACTERISTICS**
- Non-clogging / Non-stringing single-channel impeller
- Back pull out design
- Casing with a cleaning opening and replaceable wear plate
- Impeller with a large waterway and vanes on the front and back shroud
- Shaft sealing with a special waste water seal or a mechanical seal

**APPLICATIONS**
- Municipal and industrial raw wastewater
- Combined sewage and rain water
- Wastewater pumping stations

**OPERATING LIMITS**
- Capacity 70 to 2,000 m³/h (308 to 8,820 U.S. GPM)
- Head 4 to 35 m (13 to 115 ft)
- Discharge flange size 5 to 14 in
- Pressure up to 4 bar (56 PSI)
- Temperature up to 80°C (176°F)

**RUHRPUMPEN NOMENCLATURE**
- ESK
Two Channel Impeller Centrifugal Pumps

**CHARACTERISTICS**
- Horizontal or vertical
- Single suction
- Single stage
- Clog-Free impeller design
- Two channel pot impeller
- Bearing bracket
- Radially split
- Tangential Discharge Nozzle

**OPERATING LIMITS**
- Capacity up to 8,000 m³/h (35,223 U.S. GPM)
- Head 3.5 to 32 m (11 to 115 ft)
- Pressure up to 4.5 bar (65 PSI)
- Temperature up to 80°C (176°F)

**RUHRPUMPEN NOMENCLATURE**
- ST
- STV

**APPLICATIONS**
- Sewage
- Rain water
- Sludge
Submersible Pumps

**Characteristics**
- Vertical
- Single suction
- Single stage
- Submersible motor

**Operating Limits**
- Capacity 300 to 18,000 m³/h (1,320 to 79,344 U.S. GPM)
- Head 2 to 50 m (6 to 165 ft)
- Pressure up to 7 bar (99 PSI)
- Temperature up to 40°C (104°F)

**Applications**
- Water
- Rain water
- Combined sewage
- Sea water
- Cooling water
- Sludge

**Ruhrpumpen Nomenclature**
- STT (Volute casing)
- PVT (Propeller pump, only for clean water)
- TRT (Mixed flow, only for clean water)
- LKT (Mixed flow)
Single Stage, Single Suction Mixed Flow Pumps

**Characteristics**
- Single stage
- Single suction
- Semi-axial enclosed impeller
- Antifriction bearings
- Mixed flow pump

**Operating Limits**
- Capacity up to 14,000 m³/h (61,700 U.S. GPM)
- Head up to 45 m (147 ft)
- Pressure up to 4.4 bar (64 PSI)
- Temperature up to 40°C (104°F)
- Discharge flange size 10 to 40 in

**Applications**
- **SD & SDV:**
  - Cooling water
  - General water
  - Drinking water
  - Rain water
  - Sea water
- **SK & SKV:**
  - Sewage
  - Wastewater

**Ruhrpumpen Nomenclature**
- SD
- SDV
- SK
- SKV
Horizontal Pumps with Three-Channel Impeller

**CHARACTERISTICS**
- Horizontal or vertical mounted
- Single suction
- Single stage
- Radially split casing
- Three-Channel impeller
- Bearing bracket

**APPLICATIONS**
- Wastewater
- Combined sewage
- Rain water
- Fecal matter
- Sludge

**OPERATING LIMITS**
- Capacity 250 to 3,000 m³/h (1,100 to 13,220 U.S. GPM)
- Head 2 to 20 m (6 to 131 ft)
- Temperature up to 60°C (140°F)
- Pressure up to 1.9 bar (28 PSI)

**RUHRPUMPEN NOMENCLATURE**
- SKO
Solid Handling Pumps

**Characteristics**
- Horizontal or vertical
- Single stage
- Enclosed impeller

**Operating Limits**
- Capacity 18 to 1,590 m³/h (80 to 7,000 U.S. GPM)
- Head 1.8 to 42 m (6 to 140 ft)
- Temperature up to 120°C (248°F)
- Pressure up to 4.4 bar (64 PSI)

**Ruhrpumpen Nomenclature**
- SHD
- Sump Pump

**Applications**
- Water
- Wastewater
- River water
- Rain water
LS Barge Pump

**CHARACTERISTICS**
- Vertical self-contained pump
- Primary self-priming 1st stage impeller
- Capable of handling air and product for efficient stripping
- Vertical unit requires minimal space
- Handles large variety of petroleum distillates and sea water during offloading process

**OPERATING LIMITS**
- Capacity 182 to 1,136 m³/h (800 to 5,000 GPM)
- Head 12 to 91 m (40 to 300 ft)
- Max. viscosity 48 cSt (1,500 SSU)
- Max. temp. 74 °C (165 °F)

**APPLICATIONS**
- Ballast operation
- Transfer petroleum distillates including gasoline, fuel oils, light lubricants, some heavy oils (not to exceed 48 sCt (1,500 SSU))
- Barge Stripping / Dewatering

**DESIGN FEATURES**
- Efficient function under adverse stripping phase
- No need for auxiliary vacuum pump to maintain prime
- Pollution prevention design system to minimize costly product clean up
- Broad range of metallurgies available for special applications

**RUHRPUMPEN NOMENCLATURE**
- LS Barge Pump
Cryogenic Pumps

OPERATING LIMITS
- Capacity 3 to 3,000 m³/h (10 to 13,200 U.S. GPM)
- Head 6 to 1,152 m (26 to 370 ft)
- Max. pressure 145 bar (2,105 PSI)
- Temperature -196°C (-320°F)

CHARACTERISTICS
- Vertical arrangement
- API 610 latest edition
- Special sealing system
- Low temperature design
- Construction materials for Cryogenic applications
- VLT single or multi-stage
- SVNV single stage

APPLICATIONS
- Liquid nitrogen
- Liquid oxygen
- Cryogenic
- Hydrocarbons

RUHRPUMPEN NOMENCLATURE
- VLT Cryogenic
- SVNV
- VLTV
Vertical Turbine Generators

**CHARACTERISTICS**
- Multi-stage vertical centrifugal pump, which can also be used as a Turbine Generator
- Enclosed and open impeller available
- Bearings are product lubricated
- Different types of turbines for different operation conditions
- Available for sump or closed system applications

**APPLICATIONS**
- Hydroelectric generators
- Industrial systems
- Water transportation systems
- Dams
- Reverse Osmosis
- Oil supply systems
- Chemical & petrochemical processes
- Cryogenic closed systems

**OPERATING LIMITS**
- Capacity up to 6,626 m³/h (29,174 U.S. GPM)
- Head to 1,067 m (3,500 ft)
- Pressure up to 105 bar (1,523 PSI)
- Temperature -185 to 121°C (-300 to 250°F)

*Depending on materials and size of the turbine; higher pressures or head are possible, please contact Ruhrpumpen*

**DESIGN FEATURES**
- Semi-open runners which are axially adjustable from the operating floor level
- Good efficiency and good choke-flow characteristics
- Discharge may be open into a sump, or into a barrel in a closed system
- API 610 latest edition construction available

**RUHRPUMPEN NOMENCLATURE**
- VTG
- VTG CRYOGENIC
CHARACTERISTICS
- Horizontal arrangement
- Multistage, single suction
- Barrel type
- Calculated, designed, and manufactured for the demands of the customer
- Heavy duty process design according to API 610 latest edition (BB5 type)
- Full pull-out cartridge design available

OPERATING LIMITS
- Capacity up to 400 m³/h (1,760 U.S. GPM)
- Head up to 4,000 m (13,120 ft)
- Speed according to requirement
- Temperature up to 150°C (302°F)
- Higher heads base on requirements

APPLICATIONS
- High-pressure cutting water

RUHRPUMPEN NOMENCLATURE
- Hydraulic Decoking system ADC
Hydraulic Decoking System

CROSSHEAD WITH DRILL STEM DRIVE

Crosshead Design
Standard components of heavy duty industry
- Guide rails
- Wheels
- Free fall aresstor
- Double block

Functional test
- Simulation of broken rope

Drill Stem Drive Design
Standard Components of heavy duty industry
- Main gear, grease lubricated
- Auxiliary gear, oil lubricated
- Packing cartridge
- Engine with hydraulic, electric, or pneumatic drive

High torque at the drill stem
- High gear ratio
- Main gear without sealing at the Drill Stem Control
- Measurement of torque and speed at the drill stem
- Manual override for max. torque (optional for hydraulic systems)

Favorable Maintenance
- Cartridge system

Test condition of Drill Stem Drive
Hydro Test
- 525 bar (7,800 PSI)
Functional test
- 15 rpm at 350 bar (5,200 PSI)
Measurement
- Torque
- Leakage

HOIST HYDRAULIC DRIVEN

Performance
Pull Force
- 4,500 kg (9,912 lb)
- Compact design
- Low noise

Pull speed (Hoist)
- Up to 70 m/min (230 ft/min)
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With every project you can count on QUALITY, SERVICE, EXPERTISE, INNOVATION, and COMPETITIVENESS. We are committed to serving our customers, the community, and the world. We are Ruhrpumpen, the specialist for pumping technology!

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