



Specialist for Pumping Technology

INNOVATION
EFFICIENCY
QUALITY

SELECTION GUIDE



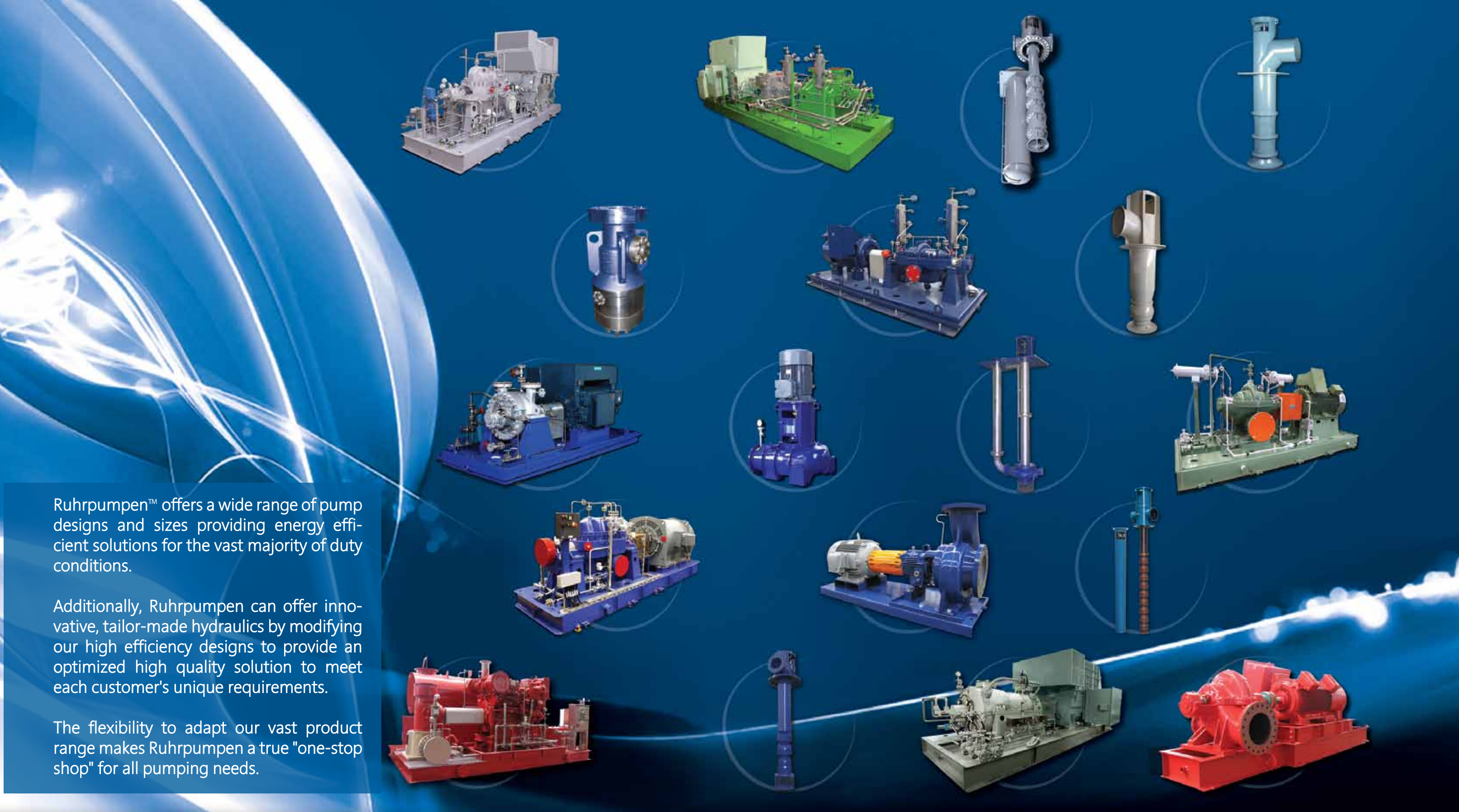
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Ruhrpumpen™ offers a wide range of pump designs and sizes providing energy efficient solutions for the vast majority of duty conditions.

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.



ANSI Horizontal Process Pumps

CHARACTERISTICS

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

DESIGN FEATURES

- ANSI/ASME Standard B 73.1 (OH1)
- "Back Pull Out" design for ease of maintenance, allows for removal of pump assembly without disturbing casing flange connections.
- Standard or large bore stuffing box selection allows for use of packing, and all designs of single or double mechanical seals.
- Close Coupled assembly available.
- Options for high and low temperature available.

STANDARD CONSTRUCTION MATERIALS

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

- Alloy 20, hastalloy, zirconium and other materials available upon request

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

RUHRPUMPEN NOMENCLATURE

- CPP-21
- ANSI
- IPP



Horizontal Process Pumps Single Stage

CHARACTERISTICS

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

DESIGN FEATURES

- Heavy duty process design according to API 610 latest edition
- API Type OH2
- 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

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

RUHRPUMPEN NOMENCLATURE

- SCE



SPN

CHARACTERISTICS

- Radially split, vertical in-line centrifugal pump
- Foot mounted
- Single volute casing
- Single suction, radial, 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
- API pump Type OH3/ OH5
- 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

Vertical In-line, Process Pumps



SPI

OPERATING LIMITS

- Capacity 2.5 to 500m³/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
- Double suction, radial, closed impeller
- Thrust compensation by double suction impeller
- Side-Side inline 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
- API pump Type BB1
- Ring oil lubrication, other methods of lubrication available
- Near centerline mounting 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

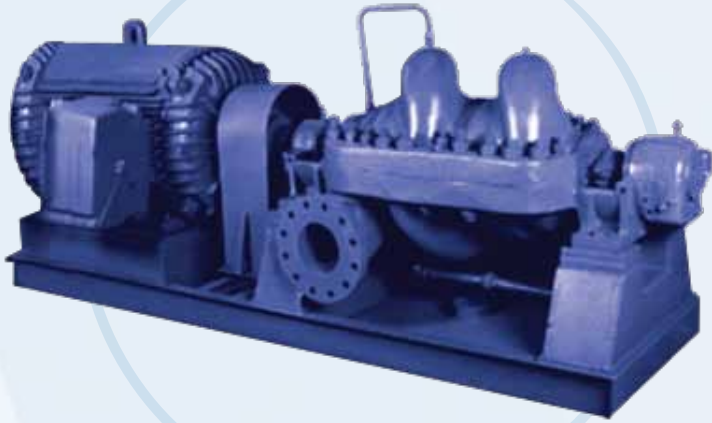
- Capacity to 31,800m³/h (140,000 U.S. gpm)
- Head to 340 m (1,115 ft)
- Pressure to 27 bar (298 psi)
- Temperature 10 to 150°C (50to 300°F)

APPLICATIONS

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

RUHRPUMPEN NOMENCLATURE

- | | |
|-------|-------|
| ■ HSC | ■ HSR |
| ■ HSD | ■ ZW |



Horizontal Split Case Pumps Multi Stage

CHARACTERISTICS

- Two and four stage horizontal centrifugal pumps, double volute
- Horizontally split casing, lateral suction and discharge
- Enclosed impeller
- Counterclockwise rotation viewed from coupling end

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

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



Horizontal Double Suction Pump, Between Bearing Single Stage

CHARACTERISTICS

- Radially split, horizontal single stage centrifugal pump
- Centerline mounted
- Double volute casing
- Double suction, radial, 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

DESIGN FEATURES

- Heavy duty process design according to API 610 latest edition
- API pump Type BB2
- Ring oil lubrication, other methods of lubrication available
- Fan and water cooling available
- Coke crusher design available for heater charge services
- Side side nozzles available
- Jacketed casings available for fly ash and similar
- Double Ended shaft available

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

- API Type BB2
- 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
- Materials of construction per API 610, other materials on request

DESIGN FEATURES

- Heavy duty process design according to API 610 latest edition
- 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

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
- CGT



Horizontal Multistage Pumps (Diffuser)

CHARACTERISTICS

- Axially split, horizontal multistage centrifugal pump
- Near-centerline mounted
- Diffuser casing
- Single suction, radial, 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
- API pump Type BB3
- 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



Horizontal Multistage Pumps (Volute)

CHARACTERISTICS

- Axially split, horizontal multi-stage centrifugal pump
- Near-centerline mounted
- Twin volute casing
- Single suction, radial, 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

DESIGN FEATURES

- Heavy duty process design according to API 610 latest edition
- API pump Type BB3
- Ring oil lubrication, other methods of lubrication available
- Replaceable wear rings for casing and impeller
- Sleeve / Tilt Pad bearings design available
- Fan and water cooling available

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)

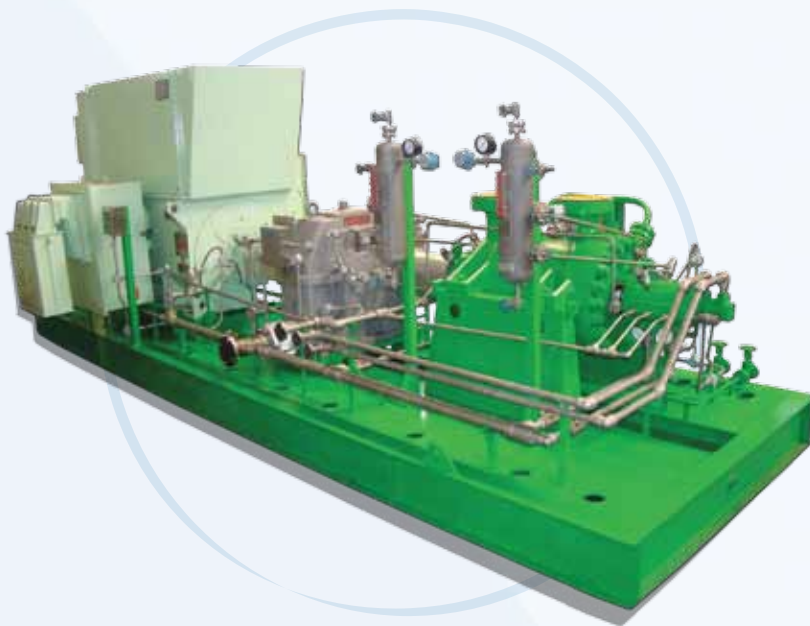
APPLICATIONS

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

RUHRPUMPEN NOMENCLATURE

- SM
- SM I

Multistage Barrel Pumps



CHARACTERISTICS

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

DESIGN FEATURES

- Heavy duty process design according to API 610 latest edition
- API pump Type BB5
- Ring oil lubrication, other methods of lubrication available
- True cartridge pull out design available
- Sleeve / Tiltingpad bearings 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

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

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

DESIGN FEATURES

- API 610 latest edition construction available. API pump type VS1.
- Product or oil lubricated
- Oversized bowl shaft sizing for longer life
- Epoxy coated bowls
- Collet mounted impellers

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 | ■ Fire service |
| ■ Irrigation | ■ Municipal |
| ■ Sump | ■ Industrial |
| ■ Condensate | |
| ■ Can pump requirements | |

RUHRPUMPEN NOMENCLATURE

- VTP
- HQ

Vertical Circulator and Mixed Flow Pumps



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. API pump type VS1
- Above or below ground discharge
- Packed stuffing box or mechanical seal

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

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 | ■ MX | ■ VX |
| ■ HX | ■ RX | ■ WX |
| ■ KX | ■ SX | ■ VMF |

Heavy-Duty, Double Suction, Vertical Process Pump



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

CHARACTERISTICS

- Single stage vertical, centrifugal, twin 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, API pump type VS2
- Above or below base discharge.
- Oil lubricated column, or may be force-lubricated by the pumped liquid

Vertical Axial Flow Pumps



STANDARD CONSTRUCTION MATERIALS

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

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

OPTIONAL ACCESSORIES

- Basket type strainer
- Extended Suction bell to minimize vortices

RUHRPUMPEN NOMENCLATURE

- | | | |
|-------|-------|-------|
| ■ VAF | ■ PV | ■ VPO |
| ■ POV | ■ PMR | |

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

DESIGN FEATURES

- API 610 latest edition construction available. API pump type VS3.
- 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

Sump Pumps



CHARACTERISTICS

- Vertical arrangement
- Sump
- Single suction
- Single stage
- API 610 latest edition construction available, API pump type VS4

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

Vertical Barrel Pumps



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

- Construction according to API 610 latest edition. API pump type VS6.
- 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 270°C (518°F)
- VMT Min. Temperature -196°C (-320°F)
- Horsepower 3,000 kW (4,000 hp)

APPLICATIONS

- Condensate
- Power plants
- Municipal
- Hydrocarbons
- Pipeline
- Refineries

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

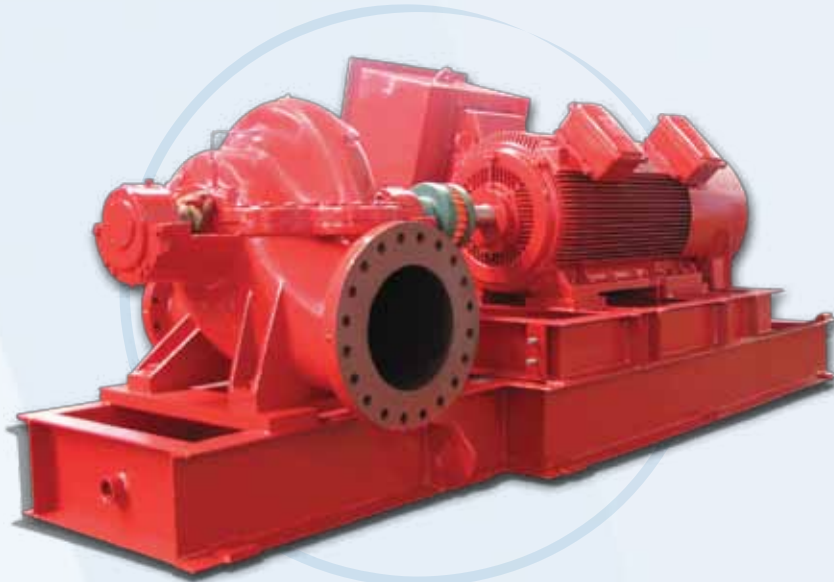
- Complete packaged fire pump skids are available
- Diesel engine starting. Electrical / pneumatic system available also

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 mounted
- Single volute casing
- Single suction, radial, closed impeller
- Thrust compensation by balance holes
- End-Top nozzle arrangement

APPLICATIONS

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

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)

RUHRPUMPEN NOMENCLATURE

- SO
- SOM



Floating Dock Pumps, Single Stage Double Suction Design

CHARACTERISTICS

- Radially split, vertical mounted centrifugal pump
- Vertical foot mounted
- 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

Horizontal Centrifugal Pumps with Single-Channel Impeller



CHARACTERISTICS

- Nonclogging / 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
- Discharge nozzle tangentially

APPLICATIONS

- Sewage
- Rain water
- Sludge

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



Submersible Pumps

CHARACTERISTICS

- Vertical
- Single suction
- Single stage
- Submersible motor

APPLICATIONS

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

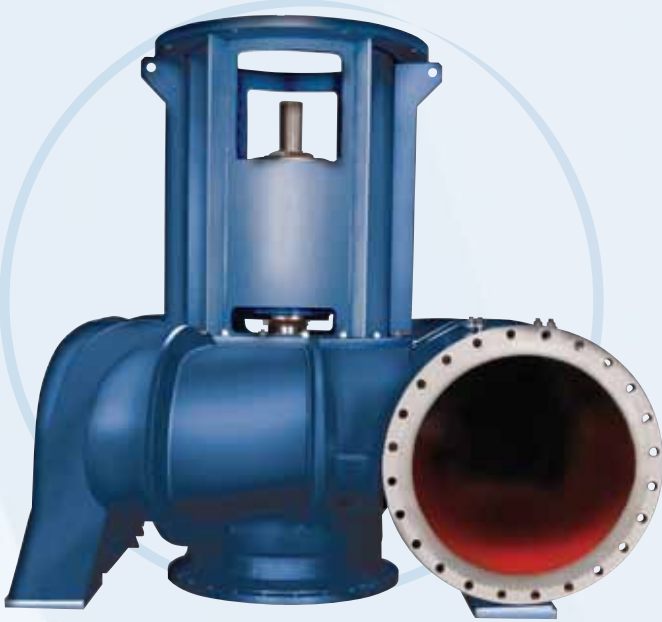
OPERATING LIMITS

- 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)

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

APPLICATIONS

SD:

- Cooling water
- General water
- Drinking water
- Rain water
- Sea water

SK & SKV:

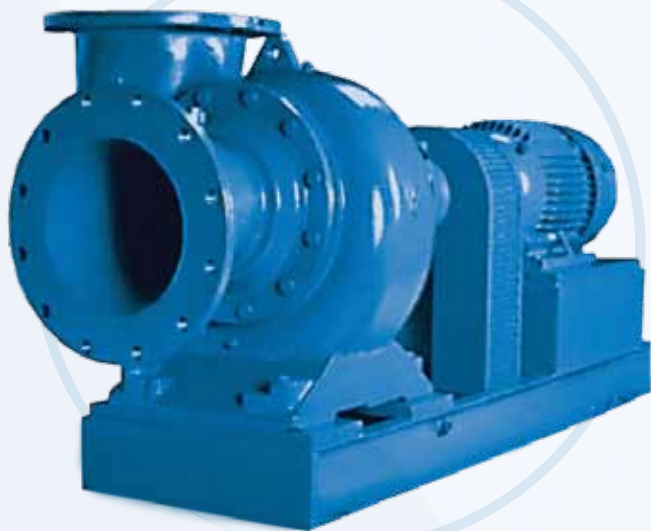
- Sewage.
- Wastewater

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

RUHRPUMPEN NOMENCLATURE

- SD
- SDV
- SK
- SKV



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)

APPLICATIONS

- Water
- Wastewater
- River water
- Rain water

RUHRPUMPEN NOMENCLATURE

- SHP
- Sump Pump

Horizontal Pumps with Three-Channel Impeller



CHARACTERISTICS

- Horizontal or vertical
- Single suction
- Single stage
- Radially split casing
- Three-Channell 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

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

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

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

RUHRPUMPEN NOMENCLATURE

- LS Barge Pump

Cryogenic Pumps



CHARACTERISTICS

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

APPLICATIONS

- Liquid nitrogen
- Liquid oxygen
- Cryogenic
- Hydrocarbons

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 psig)
- Temperature -196°C (-320°F)

RUHRPUMPEN NOMENCLATURE

- VLT Cryogenic
- SVNv
- VLTv

Hydraulic Decoking Jet Pumps



CHARACTERISTICS

- Horizontal arrangement
- Multistage, single suction
- Barrel type
- Calculated, designed, and manufactured for the demands of the customer
- API 610 BB5
- True cartridge pull out 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

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

CROSSHEAD WITH DRILL STEM DRIVE

Crosshead Design

Standard components of heavy duty industry

- Guide rails
- Wheels
- Free fall arrestor
- 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

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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