



Specialist for Pumping Technology

INNOVATION
EFFICIENCY
QUALITY



DESALINATION

Reverse Osmosis
Multi-Stage Flash Distillation
Multi-Effect Distillation

For more than 60 years the name Ruhrpumpen™ has been synonymous worldwide with innovation and reliability for pumping technology

Ruhrpumpen is an innovative and efficient centrifugal pump company that offers operators of Pump Systems a wide range of quality products. Ruhrpumpen is committed to worldwide excellence, with a complete range of pumps to support core markets such as Petrochemical, Oil & Gas, Power, Heavy Industry Applications, Mining and Water. Our broad product line complies with the most demanding quality standards and industry specifications such as: API, ANSI and Hydraulic Institute Standards.

Ruhrpumpen is vertically integrated with its own foundry, machine shop, pump manufacturing plants and service centers. With strategically located manufacturing plants, operating offices and service centers in many parts of the world, Ruhrpumpen truly is a global pump company which also has the strength to focus on the local necessities of each client.

The Desalination Market

Agricultural production, industrial development and population growth, are some of the drivers for the desalination market. The governments are compelled to resort to solutions such as desalination to provide the increasing population with one of the basic needs: water.

Ruhrpumpen is committed to support the actual world issues such as the growing necessity of water; that is the reason why our products can be found in the newest technologies of the desalination plants, such as Reverse Osmosis, Multi-Flash Distillation and Multi-Effect Distillation.

A pumping solution for every application

Ruhrpumpen has the pumping solution for the most common technologies for the growing desalination market.

Technologies in which our products can be found:

- Reverse Osmosis.
- Multi-Stage Flash Distillation.
- Multi-Effect Distillation.



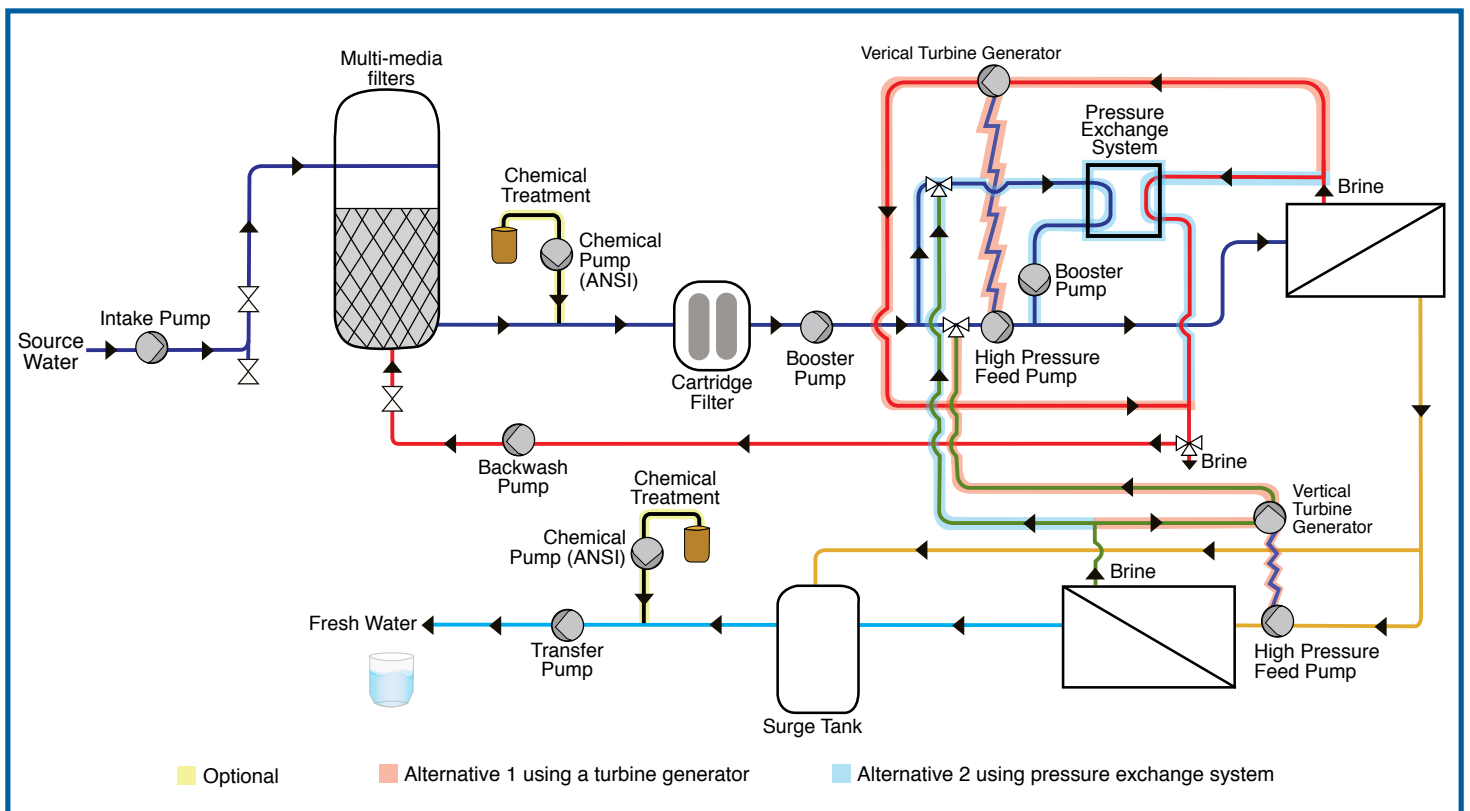
REVERSE OSMOSIS

This filtration method is the most commonly used method of desalination in the world and consists in removing molecules and ions from solutions such as brackish or sea water by applying pressure; making it pass through a permeable membrane. Fresh water in one side and a brine stream in the other side are the results of this process. The main driver of a Reverse Osmosis plant is the high pressure pump which has to be a reliable heavy-duty, corrosive resistant pump.

Ruhrpumpen has a pumping solution for every stage of a Reverse Osmosis plant. Whether a source water intake pump, a high-pressure membrane feed pump, a turbine to recover energy or any other service pump is needed, Ruhrpumpen has the solution according to your requirements, with the right materials to resist any corrosive flow.

The biggest cost in desalination plants are the energy costs, and Ruhrpumpen can supply your Reverse Osmosis plant with our Energy Recovery Device; the Vertical Turbine Generator (see page 13). Our products are designed to work with other types of Energy Recovery Devices as well.

Every plant has specific operational requirements, those will determine which products will be used. The following diagram shows one variation of a reverse osmosis plant, with two alternatives of energy recovery systems.



Reverse Osmosis Plant

Our energy recovery device will not only help you reduce energy consumption, but it will also help the environment by reducing CO2 emissions to the atmosphere by not generating this energy from fossil fuels.



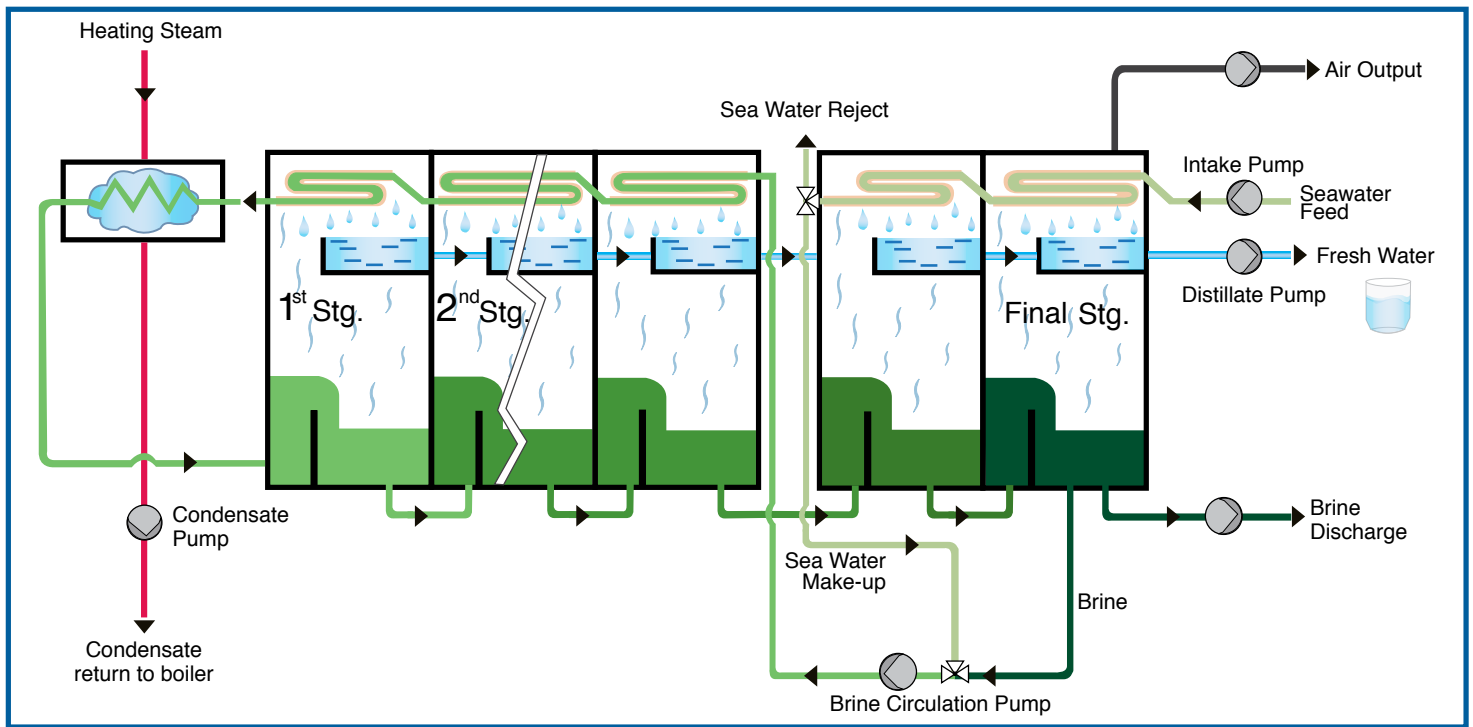
DESALINATION

Reverse Osmosis, Multi-Stage Flash and Multi-Effect Distillation

MULTI-STAGE FLASH DISTILLATION

This technology is the second most commonly used method in the world for water desalination. The suspended solids in sea water are removed through flash distillation in multi-stage pressure chambers, in order to obtain fresh water. The sea water is heated before entering the first stage, and it evaporates in every stage due to the different pressures in each chamber, allowing flash distillation to be performed.

From source water intake to brine circulation, distillate extraction, cooling seawater recirculation and potable water transfer, Ruhrpumpen has the pumping solution for your plant, with the materials to resist corrosive sea water.



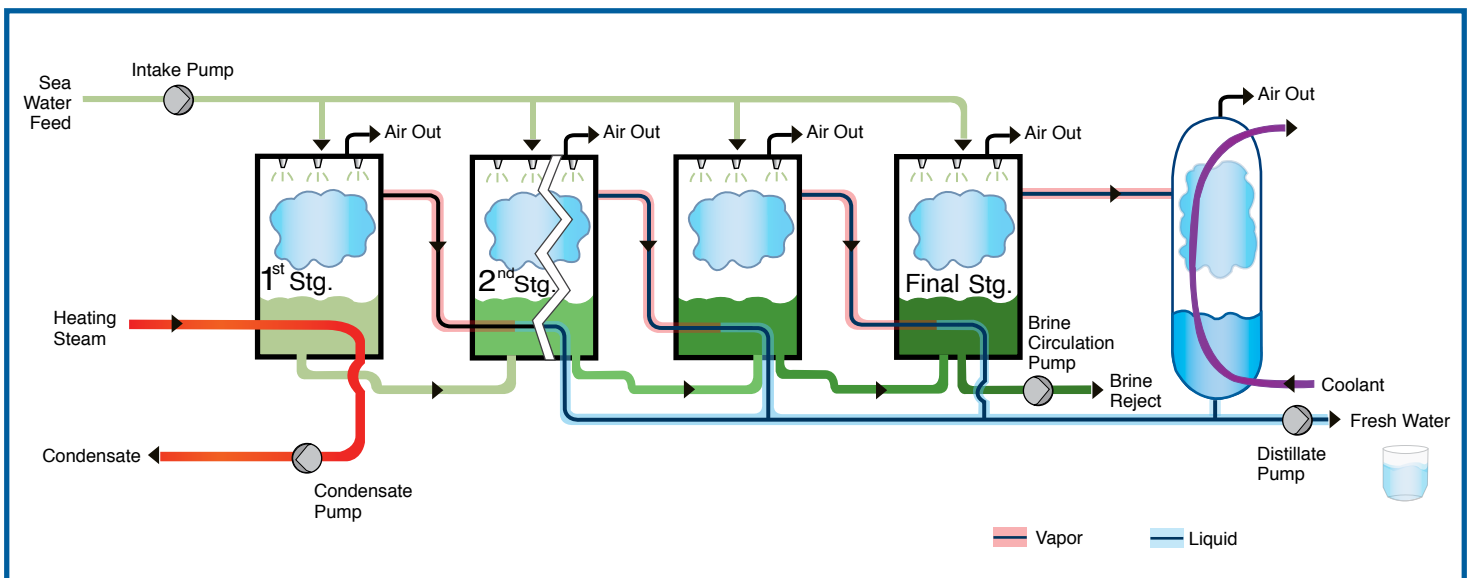
Typical Multi-Stage Flash Distillation Plant



MULTI-EFFECT DISTILLATION

This desalination method is also based on distillation. The seawater is heated by steam in tubes in multi stages or the commonly called “effects” that use the energy of the previous effect, evaporating water in each effect and becoming fresh water at the end. This growing market still accounts for a significant percentage of global desalination capacity.

Ruhrpumpen has a pumping solution for every step of a Multi-Effect Distillation process. Our heavy-duty pumps are constructed with materials that handle high temperatures, high pressures and high corrosive fluids such as sea water.



Typical Multi-Effect Distillation Plant



Ruhrpumpen Products Suitable for the Desalination Market

Source Water Intake Pumps for Reverse Osmosis

VTP – Vertical Turbine Pumps

Designed to operate in wells or sumps, this is one of many examples of source water intake pumps that Ruhrpumpen can offer for the desalination market. This pump is constructed in 316 SS to resist the corrosive and high flows that Reverse Osmosis and other Desalination processes may require.

PRODUCT DESCRIPTION

- Multi-stage vertical centrifugal pump with diffuser type bowl.
- Francis vane enclosed impellers.
- Counter clockwise rotation viewed from coupling end.
- Large bowl shaft sizing provides longer life.
- Also available with submersible motor configuration.

PERFORMANCE DATA

Capacity	up to 17,000 U.S. gpm	3,870 m ³ /hr
Head	up to 2,500 feet	762 m
Pressure	up to 1,080 psi	74 bar
Temperature	up to 250 °F	121 °C

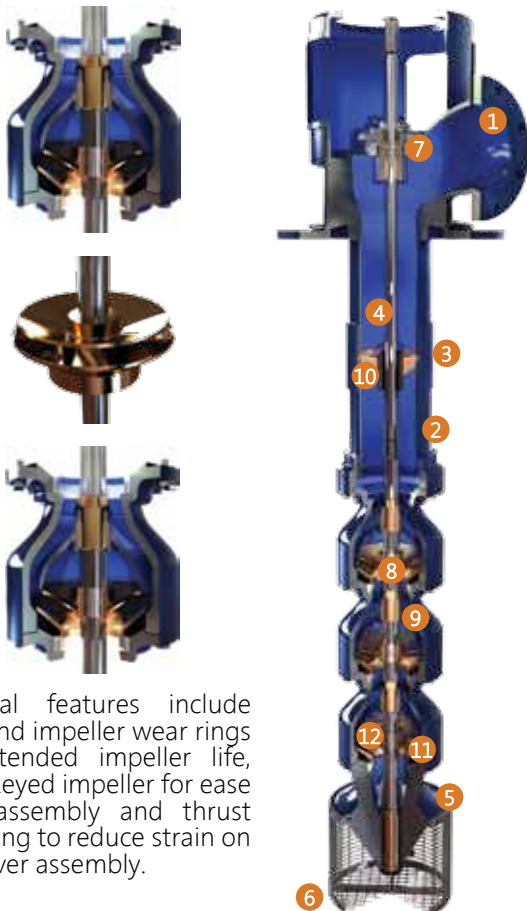
Note: For pump operations outside this range, please contact a Ruhrpumpen representative.



VTP

CHARACTERISTICS

- 1 Discharge head provides support for entire pump and column assembly. As well as the driver, available in cast iron, fabricated steel or a variety of optional materials.
- 2 Columns are flanged or threaded, and available as product-lubricated or with the enclosing tubes for oil, or water flushed lubrication.
- 3 Column assemblies are manufactured to assure accurate fit, and are available in a variety of materials and coatings.
- 4 Line shafts are turned, ground, and polished carbon steel with ends faced and threaded. Other materials available for special applications.
- 5 Suction bell is cast iron with integral straightening vanes to prevent turbulence. Other materials available for special applications.
- 6 Strainer (optional) prevents entry of foreign objects into pump suction.
- 7 Machined stuffing box for mechanical seals or packed stuffing box with bushing to maintain proper shaft alignment.
- 8 Bearings are available in a variety of materials to meet pumping requirements.
- 9 Shaft couplings bored and threaded from precision forged steel bar.
- 10 Sleeve bearings operate in conjunction with the pump shaft to provide proper alignment and maintain hydraulic clearances.
- 11 Enclosed impellers are designed for long life and high efficiency. Each is precision machined and balanced for vibration-free operation.
- 12 The tapered collet (standard) secures the impeller to the pump shaft.



Optional features include bowl and impeller wear rings for extended impeller life, and a keyed impeller for ease of disassembly and thrust balancing to reduce strain on the driver assembly.

DESALINATION

Reverse Osmosis, Multi-Stage Flash
and Multi-Effect Distillation

Booster or Feed Pump for Reverse Osmosis

HSM – Horizontal Split Case Pumps Multi Stage

In the desalination market, the HSM can suit the Reverse Osmosis technology as a booster pump or as a feed pump. When handling sea water, which requires higher pressures than brackish water in the membrane stage, the HSM works as a booster pump helping the high pressure feed pump. When handling brackish water, this pump is enough to reach the required pressure at the membrane.

PRODUCT DESCRIPTION

- Multistage horizontal centrifugal pumps.
- Two or four stages, double volute pump.
- Horizontally split casing, elastic seals o-rings, suction and discharge.
- Enclosed impeller.
- Short, heavy shafts, elastic seals, axial and radial balance.
- Wear rings, stage pieces, diaphragm and stuffing box break-down bushings are provided with elastic seal o-rings.
- Pump feet beneath bearings to maintain coupling alignment at higher temperatures.
- Self Venting.

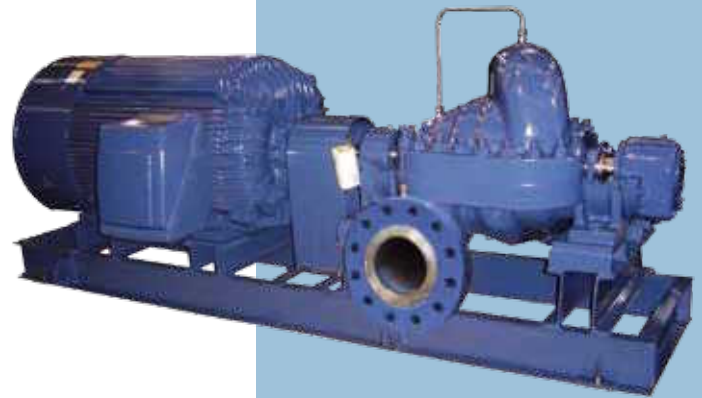
PERFORMANCE DATA

Capacity	up to 2,000 U.S. gpm	454 m ³ /hr
Head	up to 2,200 feet	670 m
Pressure	up to 740 psi	51 bar
Temperature	up to 250 °F	121 °C

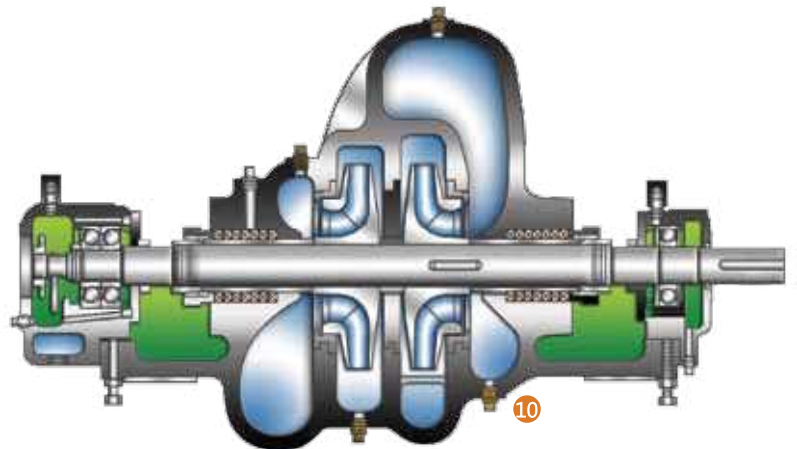
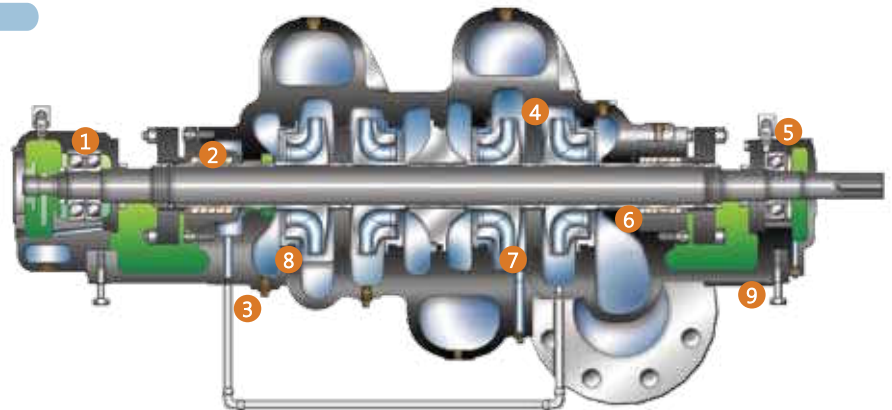
Note: For pump operations outside this range, please contact a Ruhrpumpen representative.

CHARACTERISTICS

- 1 Oil lubricated ball bearings double row angular contact thrust bearing are water cooled.
 - 2 Stuffing Box allows for packing or mechanical seal.
 - 3 Vent on suction of first stage.
 - 4 Opposed impellers for axial hydraulic balance.
 - 5 Oil lubricated ball line bearing.
 - 6 Elastic seal o-rings on casing rings, stage pieces and breakdown bushings.
 - 7 Staggered volutes hold pump in radial balance.
 - 8 Renewable wearing rings. Tongue and groove joint in lower half casing.
 - 9 Pump feet. Beneath bearings. Near horizontal centerline permits high temperature operation without coupling misalignment.
 - 10 UNB optional.
- Water Cooled Stuffing Box (Optional).



HSM



To see more features of this pump, please see the HSM brochure, or contact a Ruhrpumpen representative.

DESALINATION

Reverse Osmosis, Multi-Stage Flash
and Multi-Effect Distillation

High-Pressure Feed Pump for Reverse Osmosis Membranes

SM / SMI – Axial Split Casing Multi-Stage Pumps

The Ruhrpumpen SM / SMI are heavy duty, horizontal volute, multi-stage, centrifugal pumps. These are heavy duty pumps that can meet the high pressures that Reverse Osmosis plants require, specially for sea water. They are constructed in duplex and super-duplex. High-Pressure Feed Pumps are the heart of a Reverse Osmosis plant.

PRODUCT DESCRIPTION

- Multi-stage, axially split casing, centerline mounted horizontal centrifugal pump.
- Side-side suction and discharge nozzles.
- Roller bearings with oil ring bearing lubrication. Optional sleeve bearings.
- Easy to inspect and maintain.

PERFORMANCE DATA

Capacity	up to 2,000 U.S. gpm	454 m ³ /hr
Head	up to 2,200 feet	670 m
Pressure	up to 740 psi	51 bar
Temperature	up to 250 °F	121 °C

Note: For pump operations outside this range, please contact a Ruhrpumpen representative.

CHARACTERISTICS

- 1 AXIAL SPLIT CASING.**
Full design pressure, double volute construction, hydraulically balanced, near centerline mounted. A balancing line equalizes the pressure in both seal chambers.
- 2 PRECISION CAST.**
Closed Impellers, dynamically balanced, individually secured against movements in either direction.
- 3 REPLACEABLE CASING.**
And Impeller Wear Rings, shrink fitted and secured by axial locking screws.
- 4 LARGE SHAFT DIAMETER.**
Ample sized to satisfy stringent shaft dynamic and power transmission requirements, shaft ends tapered.
- 5 SEAL CHAMBERS.**
Are in compliance with API 682 ready to accommodate single as well as tandem and double mechanical cartridge seals. Throttle bushing sized to balance axial thrust.

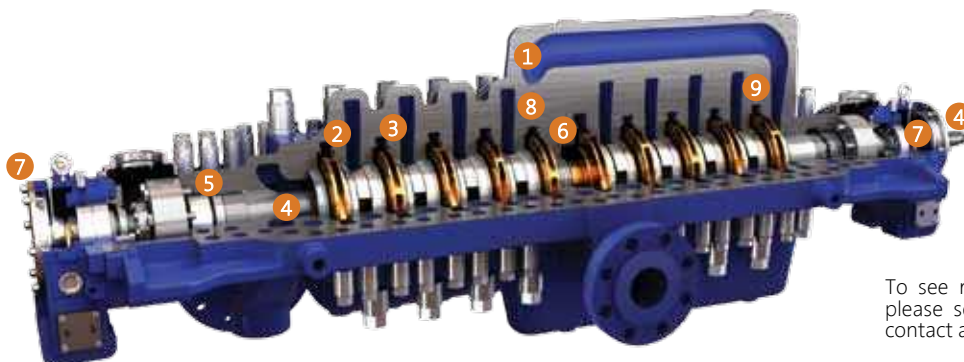


SM / SMI

- 6 CENTER BUSHING.**
Sized to balance axial thrust for maximum rotor support and dampening.
- 7 BEARING HOUSINGS.**
With air cooling, finned surface and standard ring-oil lubrication. Pure or purge oil mist lubrication available on request. Bearing housing covers are equipped with INPRO® bearing isolators. Roller bearing in the drive end and an angular contact bearing in the non-drive end as standard (Anti-Friction Bearings). Sleeve/Roller-Anti-Friction and Sleeve/Tilting Pad configurations are optional.
- 8 IMPELLERS ARRANGED IN OPPOSED GROUPS.**
Pumps available up to 14 stages.

SPECIAL IMPELLER DESIGN

- 9 Special Impeller Design.** For low NPSHA applications, a double suction impeller for the first stage is available for most of the pump sizes.



To see more features of this pump, please see the SM/SMI brochure, or contact a Ruhrpumpen representative.

Source Water Intake Pump for Multi-Stage Flash and Multi-Effect Distillation

VCT – Vertical Circulator and Mixed Flow Pumps

The Mixed Flow Impeller is designed to handle large volumes of fluids, which makes it a good choice for use as a water intake pump in Multi-stage Flash or Multi-Effect Distillation plants which see large amounts of fluids. They are fabricated in duplex and super-duplex materials to handle the most corrosive liquids.

PRODUCT DESCRIPTION

- Single or multi-stage mixed flow, vertical centrifugal pump.
- Semi-open impeller allows handling of large solids (closed impeller also available).
- Large bowl passages for better efficiency.
- Threaded or flanged column (depending on size) with water or oil lubrication.

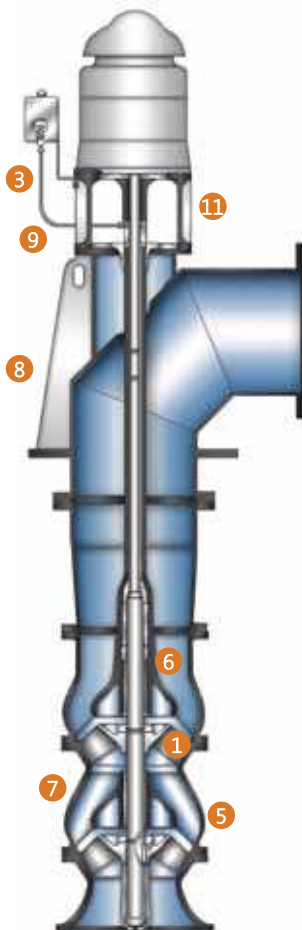
PERFORMANCE DATA

Capacity	up to 220,000 U.S. gpm	50,000 m ³ /hr
Head	up to 575 feet	175 m
Pressure	up to 160 psi	11 bar
Temperature	-20 to 275 °F	-30 to 135 °C

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



VCT



CHARACTERISTICS

- 1 With its mixed flow impeller, this pump handles large volumes of fluids with higher head than axial flow pumps.
- 2 Oil, fresh water, or self-lube column construction.
- 3 Wide range of impeller designs and specific speeds (1,800 – 14,000 US units) for optimum hydraulic coverage
- 4 Integral bearing retainer.
- 5 Column sizes 20 cm (8 in) to 305 cm (120 in).
- 6 Above or below ground discharge.
- 7 Packed stuffing box or mechanical seal.
- 8 Pump-mounted thrust bearings when required.
- 9 Vertical space-saving construction.
- 10 Engineered to customer specifications.
- 11 Optional pull-out design for ease of maintenance.

To see more features of this pump, please see the VCT brochure, or contact a Ruhrpumpen representative.

Brine Circulation Pump for Multi-Stage Flash and Multi-Effect Distillation

JTN – Horizontal Process Pumps Multi-Stage

The brine circulation is the main process in a Multi-Stage Flash and Multi-Effect Distillation plant. Corrosion resistant and high flow pumps are required for this process and Ruhrpumpen's JTN pump is the perfect solution to meeting these requirements. The JTN pump is one of the several pumps that can be used as a brine circulation pump.

PRODUCT DESCRIPTION

- Axially split, horizontal multi-stage centrifugal pump.
- Near-centerline mounted.
- Diffuser casing.
- Single suction, enclosed impeller.
- Thrust compensation by opposed impeller groups.
- Side-side nozzle arrangement.

CHARACTERISTICS

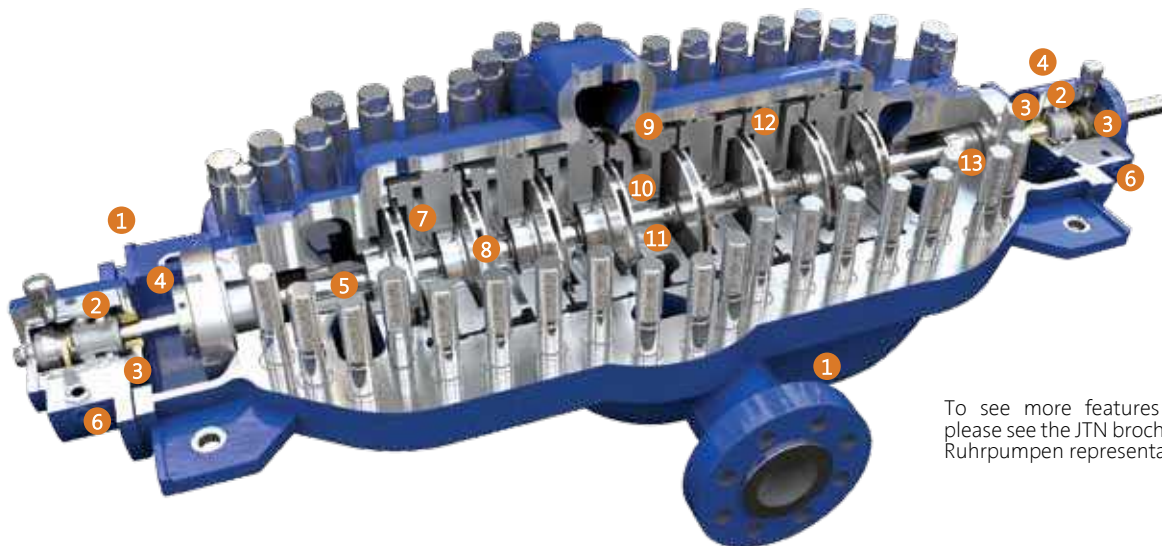
- 1 All process connections are flanged including suction & discharge nozzles and auxiliary piping. Flange connection sizes to ASME B 16.5 (DIN and BS also possible). Discharge flange size up to 6 in (152 mm). Flange ratings up to 900#.
- 2 Anti-friction bearings with a service L10 Bearing Life of more than 25,000 hours even under arduous conditions.
- 3 Sealing of Bearing Housing with Bearing Isolators.
- 4 Single-piece bearing housing, air cooled.
- 5 Shaft deflection less than 0.03 mm in the area of the mechanical seal due to the ample pump shaft dimensions and the balancing of the hydrodynamic radial loads.
- 6 Ring Oil Lubrication with automatic monitoring of oil level by constant level oiler.

PERFORMANCE DATA

Capacity	44 to 2,100 U.S. gpm	10 to 480 m ³ /hr
Head	325 to 3,900 feet	100 to 1,200 m
Pressure	up to 1,880 psi	130 bar
Temperature	-4 to 400 °F	-20 to 200 °C
Disch. flange size	1½ to 6 in	

Note: For pump operations outside this range, please contact a Ruhrpumpen representative.

- 7 Interchangeable interstage bushings. Clearances according to API 610.
- 8 Impellers machined to a high accuracy, providing for excellent surface finish resulting in high efficiencies and low NPSH values.
- 9 Near-centerline mounted.
- 10 The impellers are arranged in opposed groups to reduce axial forces and thus help to reduce bearing loads.
- 11 Renewable wear rings on the suction side of each impeller are standard. Clearances according to API 610.
- 12 One piece diffusers ensure proper balancing of the radial forces and thus help to reduce the bearing load.
- 13 The Stuffing Boxes are designed to accommodate all cartridge, dual or single mechanical seals according to API 610 and API 682.



To see more features of this pump, please see the JTN brochure, or contact a Ruhrpumpen representative.

Transfer Pump (for Distillate extraction or cooling seawater circulation) for Multi-Stage Flash and Multi-Effect Distillation

HSC / HSD / HSR / ZW – Split Case Pumps

Horizontal, single stage, double suction, double volute, axially split case centrifugal pump product line. This line is one of the multiple options that can handle the large flows of the distillate or cooling water of the Multi-Stage Flash Processes and the Multi-Effect Distillation Plants.

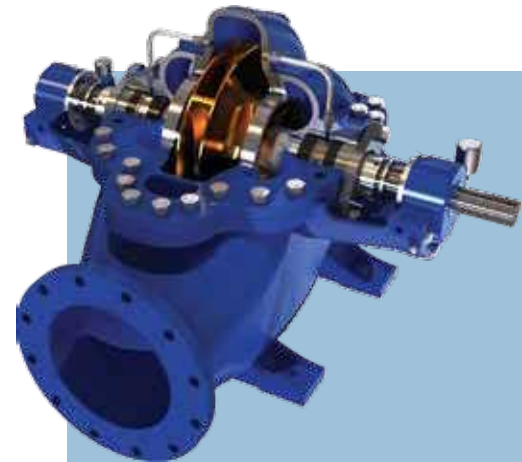
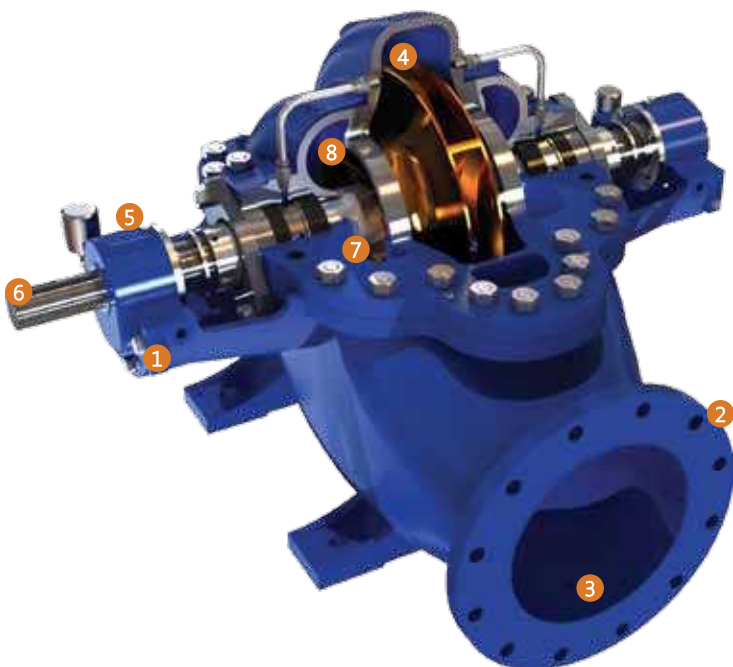
PRODUCT DESCRIPTION

- Single stage horizontal split case centrifugal pump.
- Horizontally split casing, double volute (HSC pumps and some HSR pumps) minimizes thrust loads and accommodates a wide range of capacities.
- Flanged connections.
- Enclosed impellers, double suction provides hydraulic balance eliminating axial thrust.
- Clockwise or counter clockwise rotation.
- Double ended shaft available.
- Oil or grease lubricated bearings.
- Stuffing box configured for packing or mechanical seals.
- Horizontal or vertical mounting configuration.
- Renewable wear rings.

PERFORMANCE DATA

Capacity	up to 140,000 U.S. gpm	31,800 m ³ /hr
Head	up to 1,000 feet	305 m
Pressure	up to 400 psi	28 bar
Temperature	50 to 300 °F	10 to 150 °C

Note: For pump operations outside this range, please contact a Ruhrpumpen representative.



HS/ZW

CHARACTERISTICS

- 1 Bearing brackets are integrally cast with the casing, assuring perfect alignment.
 - 2 All suction and discharge connections on the same center line to accommodate piping.
 - 3 Smaller discharge diameter.
 - 4 Dynamically balanced impellers for vibration-free operation.
 - 5 Interchangeable line and thrust bearings.
 - 6 A rigid shaft in combination with double volute casing results in low shaft deflection at all operating points.
 - 7 Shaft sleeve is keyed to shaft and held in place by separate shaft nut (HSR and HSC).
 - 8 Casing wear rings are renewable. Stuffing box optional.
- Many sizes available with bottom suction for installation flexibility.

To see more features of this pump, please see the Split Case Pump brochure, or contact a Ruhrpumpen representative.

Condensate Extraction Pumps for Multi-Stage Flash and Multi-Effect Distillation

VLT – Vertical Barrel Pumps

The VLT is a vertical process pump of the “double casing” type. The special first stage allows operation with extremely low NPSH requirements while running at optimum speeds. This makes this pump the best choice to be used as a condensate extraction pump, not only for a Desalination Plant, but for other Power Plants.

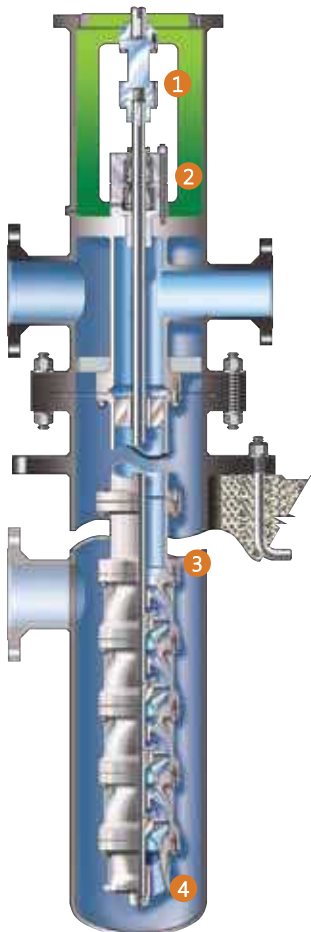
PRODUCT DESCRIPTION

- Low NPSH “Shockless Entry” first stage impeller.
- Integral fabricated column support bearings.
- Collet, or ring and key mounted impellers.
- One-piece shaft construction for shaft lengths to 20 ft (6 m).
- Rigid four-piece coupling.
- Wide range of hydraulic designs to suit all applications.
- Choice of bearings and mechanical seals.
- Pump mounted thrust bearing when required.
- Tank or sump mount options available.

PERFORMANCE DATA

Capacity	up to 7,000 U.S. gpm	1,600 m ³ /hr
Head	up to 4,900 feet	1,500 m
Pressure	up to 2,020 psi	140 bar
Temperature	-320 °F to 1,100 °F	-196 °C to 590 °C
Horsepower	1,600 HP	1,200 kW

Note: For pump operations outside this range, please contact a Ruhrpumpen representative.



CHARACTERISTICS

- 1 The head is fitted with an all steel rigid 4 piece pump to motor coupling. It has a spacer which can be removed without disturbing the motor or pump connections. The spacer is long enough to allow replacement of the mechanical seal as a single cartridge.
- 2 The mechanical seal is located in full flow of discharge for positive lubrication-cooling and is inherently self-venting and self-cleaning. Water jacketed, bleed-off stuffing boxes are also available.
- 3 The O-ring gaskets throughout allow metal-to-metal rabbeted fits between all components, which prevents possible leaking.
- 4 Graphite-babbeted alloy bearings are standard throughout.



VLT

To see more features of this pump, please see the VLT brochure, or contact a Ruhrpumpen representative.

Energy Recovery Turbine for Reverse Osmosis

VTG – Vertical Turbine Generator for Energy Recovery

The VTG is a multi-stage vertical centrifugal pump which can also be used as a turbine generator. In a Reverse Osmosis plant, the pump can be placed in the reject brine flow and can convert the energy of the brine flow to electricity, to power other plant services, such as the high pressure pump (see diagram page 3).

PRODUCT DESCRIPTION

- 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 operating conditions.
- Available for sump or closed system applications.
- The fact that the pump and the electric generator are the same product, reduces costs.
- API-610 latest edition construction available.

PERFORMANCE DATA

Capacity	up to 29,174 U.S. gpm	6,626 m ³ /hr
Head	up to 3,500 feet	1,067 m
Pressure	up to 2,020 psi	140 bar
Temperature	-300 to 250 °F	-185 to 121 °C

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

CHARACTERISTICS

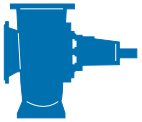
- 1 Less downtime. Column pieces are designed so that Shaft critical speeds (Bearing Spans) are within API 610 latest edition requirements. All bearing retainers are integrally fabricated into the column sections for alignment and concentricity.
 - 2 Available for sump or closed system applications.
 - 3 Enclosed and open impellers available.
 - 4 Coupling. All metal, four piece adjustable coupling for solid shaft drivers. Spacer in coupling also serves to facilitate seal cartridge removal for servicing.
 - 5 Longer seal life. Mechanical seal is located in full flow of inlet pressure for positive lubrication-cooling and is inherently self-venting and self-cleaning. Water jacketed, bleed-off stuffing boxes are also available.
 - 6 No leaking. O-Ring gaskets throughout allow metal-to-metal rabbeted fits between all components.
 - 7 Semi-open runners which are axially adjustable from the operating floor level.
- Complete water-to-wire machinery packages.
 - Bearing construction can be self-lube (open-shaft) or oil-lube (enclosed shaft).
 - Restore efficiency and always have optimum output with theadjustable rotor clearance.



To see more features of this pump, please see the VTG brochure, or contact a Ruhrpumpen representative.

Additional Ruhrpumpen Pumps for Desalination Applications

SKO



Characteristics

- Horizontal or Vertical mounted.
- Single suction.
- Single stage.
- Radially split casing with axial suction nozzle.
- Three channel mixed flow closed impeller.
- Bearing bracket.
- Materials: Duplex, Super Duplex.

Application

- Source Water Intake Pump for Reverse Osmosis.
- Multi-Stage Flash and Multi-Effect Distillation.

Performance Range

US Units:
Q: 1,100 to 13,220 gpm
H: 6 to 131 ft
Temp: 14 to 140 °F
Pd: up to 29 psi

Metric Units:
Q: 250 to 3,000 m³/h
H: 2 to 20 m
Temp: -10 to 60 °C
Pd: up to 2 bar

A LINE



Characteristics

- Radially split, horizontal multi-stage.
- Centerline mounted.
- Diffuser casing.
- Single / Double suction, enclosed impeller.
- Top-top nozzle.
- Materials: Duplex, Super Duplex.

Application

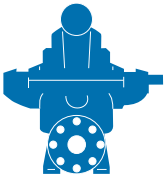
- High Pressure.
- Feed pump for Reverse, Osmosis membranes.

Performance Range

US Units:
Q: up to 8,806 gpm
H: up to 15,000 ft
Temp: up to 850 °F
Pd: up to 6,000 psi
Discharge flange size:
127 mm to 915 mm

Metric Units:
Q: up to 2,000 m³/h
H: up to 4,572 m
Temp: up to 450 °C
Pd: up to 420 bar
Discharge flange size:
5" to 36"

ZM



Characteristics

- Axially split, horizontal, single or double stage.
- Foot or near-centerline mounted.
- Double volute casing.
- Double suction, closed impeller.
- Side-side nozzle.
- Materials: Duplex, Super Duplex.

Application

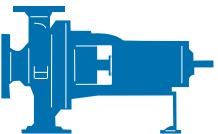
- Booster pump for Reverse Osmosis.

Performance Range

US Units:
Q: 440 to 88,057 gpm
H: 30 to 3,900 ft
Temp: up to 401 °F
Pd: up to 2,103 psi

Metric Units:
Q: 100 to 20,000 m³/h
H: 10 to 1,200 m
Temp: up to 205 °C
Pd: up to 145 bar

CPP-21



Characteristics

- Single stage horizontal pump.
- Radially split casing with flanged connections.
- Horizontal end suction and top discharge on the center line.
- Enclosed or semi-open impeller.
- Foot-mounted.
- Oil lubricated.
- Materials: 316, Duplex.

Application

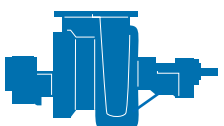
- Chemical treatment for Reverse Osmosis to remove micro-organisms.
- Also as a backwash or flushing pump for Reverse Osmosis.

Performance Range

US Units:
Q: up to 5,000 gpm
H: up to 770 ft
Temp: -50 to 600 °F
Pd: up to 375 psi

Metric Units:
Q: up to 1,150 m³/h
H: up to 235 m
Temp: -45 to 315 °C
Pd: up to 26 bar

RON



Characteristics

- Radially split, horizontal two stage pump.
- Centerline mounted.
- Diffuser / volute combined casing.
- Single suction, radial, closed impeller.
- One stage double suction impeller on request.
- Top-top nozzle arrangement.
- Materials: Duplex, Super Duplex.

Application

- Brine Circulation Pump for Multi-Stage Flash and Multi-Effect Distillation.

Performance Range

US Units:
Q: 75 to 8,806 gpm
H: 492 to 3,281 ft
Temp: - 58 to 850 °F
Pd: up to 1,813 psi

Metric Units:
Q: 18 to 2,000 m³/h
H: 150 to 1,000 m
Temp: -50 to 450 °C
Pd: up to 125 bar

The Ruhrpumpen product range for the desalination market is not limited to the pumps mentioned in this brochure. If you are interested in other pumps for desalination, or any other application, please contact us at info@ruhrpumpen.com or visit us online at www.ruhrpumpen.com.

Other Ruhrpumpen Products



Horizontal Double Suction Pump

Radially split, centerline mounted, double volute casing, thrust compensation by double suction impeller, Top-Top nozzle arrangement, design according to API 610 latest edition (Type BB2).

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



Sump Pump

Vertical arrangement, single suction, single stage. Water, Hydrocarbons and Chemical Solutions.



Fire Pump

Horizontal Split Case, listed by Underwriters Laboratories Inc. and approved by Factory Mutual. Commercial Centers, High Rise Buildings, Onshore/ Offshore Platforms, Power Stations and Chemical Industries.



Single Stage Horizontal Pump








Horizontal, radially split casing, centerline mounted, heavy-duty centrifugal pump. Single suction enclosed impeller. Heavy duty process design according to API 610 latest edition (Type OH2). Pipelines, Petrochemicals, Chemicals, Hydrocarbons, Utilities, Power Plant and Gas Industry Service.



With every project you can count on **QUALITY, SERVICE, EXPERTISE, INNOVATION** and **COMPETITIVENESS**.
Because we have a commitment to each customer, the community, and the world.
We are Ruhrpumpen, the specialist for pumping technology!



RUHRPUMPEN PLANTS

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More Information:

