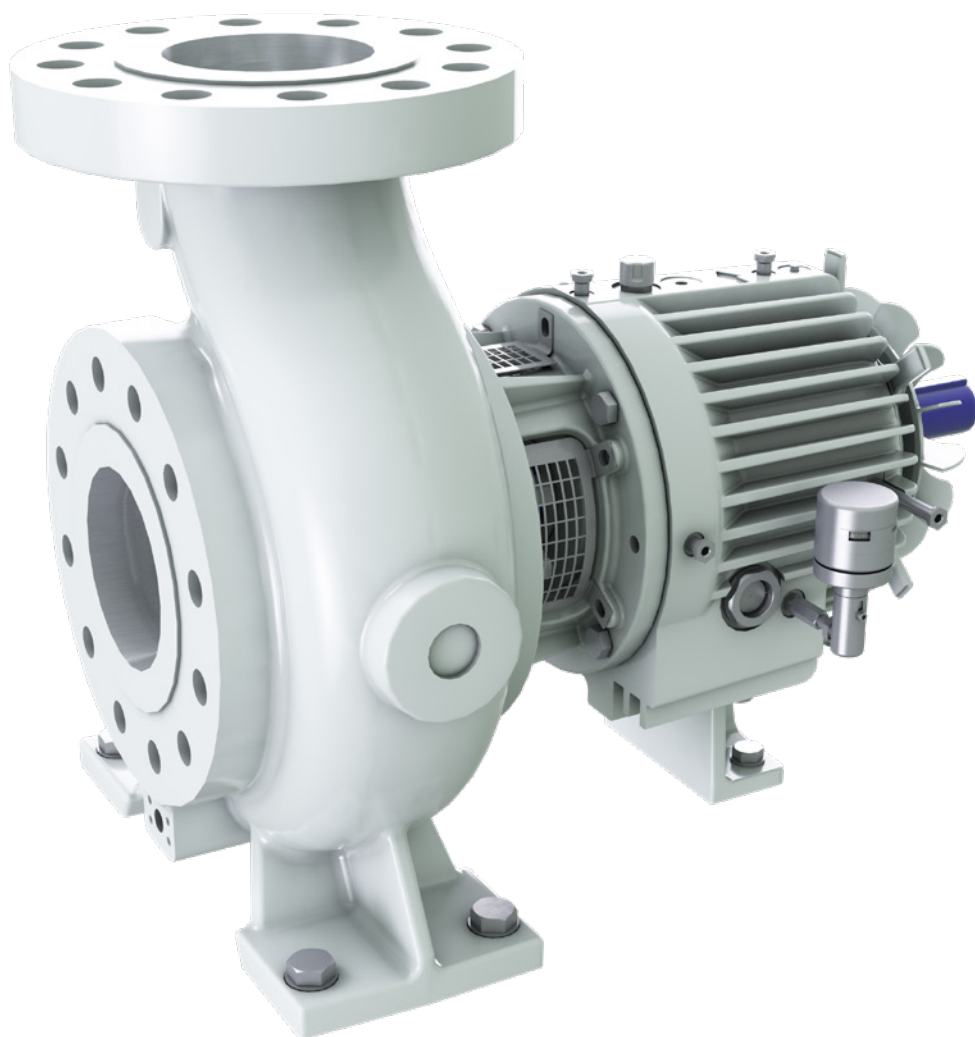


Flow Equipment

ZF-RO end-suction pump





Main industries and applications

Process pumps in desalination applications need to offer long-term reliability and efficiency to ensure operating costs are kept to a minimum. Working with seawater demands a high-quality build and precision design that minimizes maintenance costs, enabling the local population to receive a reliable source of high-quality fresh water.

The ZF-RO pumps are end-suction pumps derived from Sulzer's ZF range that have delivered decades of exceptional service in the hydrocarbons industry. Renowned for reliability and excellent performance, the ZF-RO range has been optimized for efficiency and long service while working in the challenging conditions of seawater reverse osmosis (RO) applications.

This series of pumps is tailored for delivering seawater, or similar liquids, across a wide performance range. For flexible operations, ZF-RO pumps are designed to operate with variable speed drives, enabling them to meet the process specifications as the booster pump for energy recovery devices (ERD).

Optimized design

Sulzer's ZF-RO has been developed specifically for applications in desalination plants. The fully configured pump models ensure short lead-times for delivery and excellent parts availability.

Improved efficiency has been achieved through state of the art hydraulic and mechanical design, making a direct contribution to lowering the cost of fresh water to the local population.

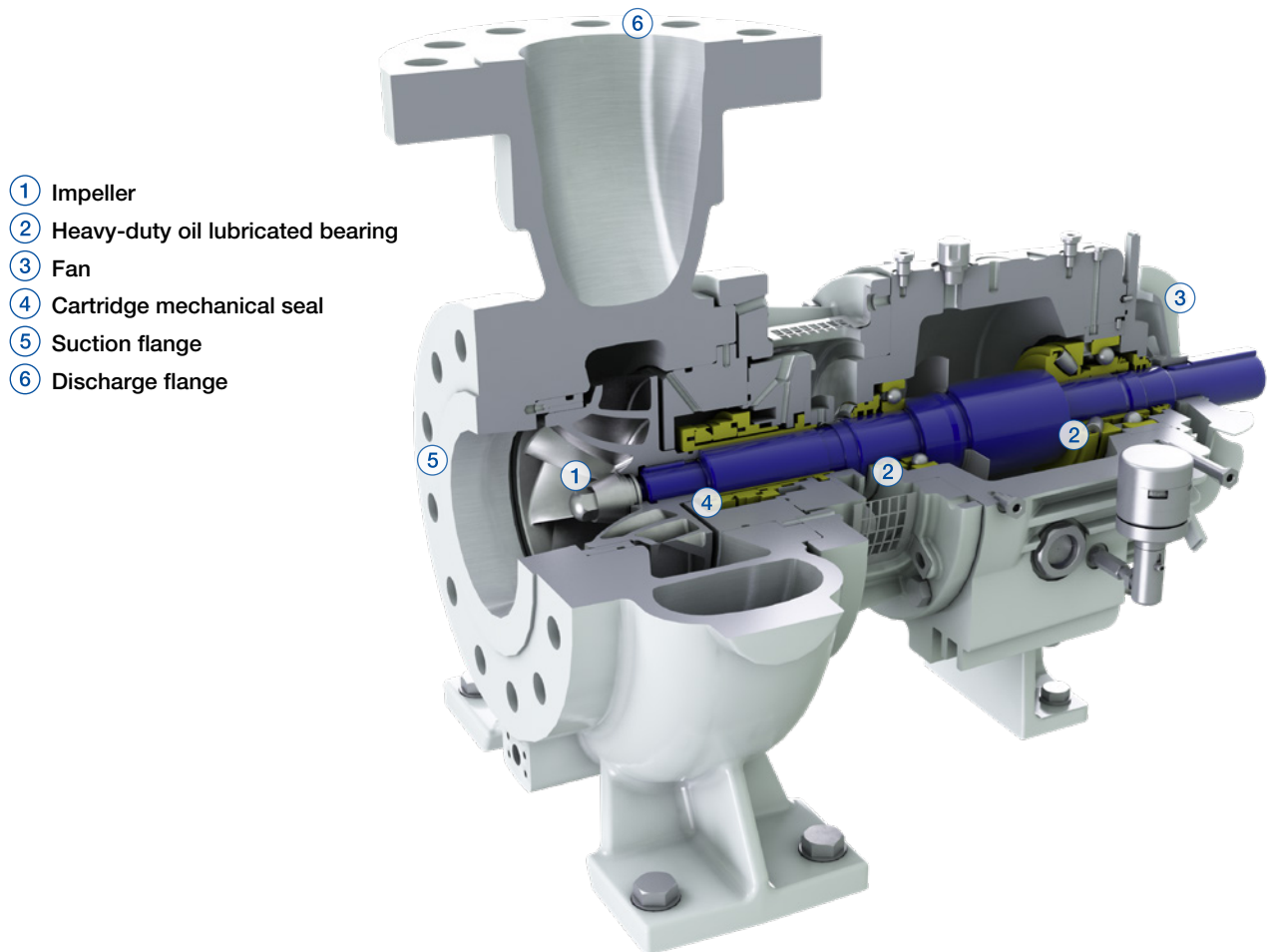
The minimal footprint of the pumps makes for a compact installation, maximizing the available space within a processing plant.

The materials used in pumps that operate with seawater are very important. The ZF-RO range is constructed from super duplex stainless steel, which offers excellent protection against erosion and corrosion.

The ZF-RO range is just part of Sulzer's wider portfolio of pumps specifically designed for seawater reverse osmosis.

 [More info at **sulzer.com/desalination**](https://www.sulzer.com/desalination)

Features and benefits



- ① Impeller
- ② Heavy-duty oil lubricated bearing
- ③ Fan
- ④ Cartridge mechanical seal
- ⑤ Suction flange
- ⑥ Discharge flange

Industry-leading efficiency

- Optimized pump efficiency
- Reduced energy consumption
- Closed impeller for higher efficiency

Wide operational envelope

- Operation via VFD enables high-efficiency performance across a wide range of heads and flow rates

Optimal mechanical design

- Suitable for high suction pressure
- Heavy-duty thrust bearings
- Mechanical seal for high pressure

Super duplex stainless steel construction

- Excellent resistance to erosion and corrosion
- Long service life

Easy maintenance

- Back pull-out design with spacer coupling to allow maintenance of wear parts (bearings, mechanical seal and wear rings) without disassembling the pipework

Flexibility for installation and piping design

- Discharge flange orientation can be top or side, as per customer convenience

Specifications

Materials

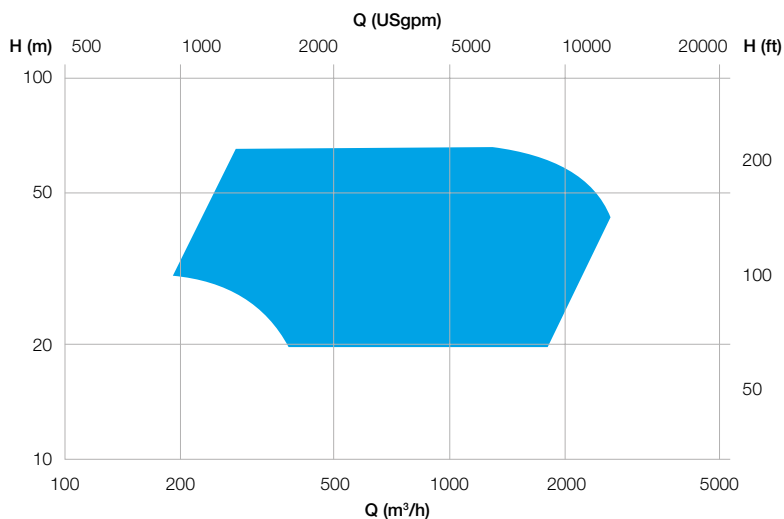
Pieces	Material
Volute case	Duplex, super duplex
Case cover	Duplex, super duplex
Shaft	Super duplex
Impeller	Duplex, super duplex
Stationary wear ring	Duplex, super duplex



Operating data

	Metrics units	US units
Pump sizes (discharge)	up to 350 mm	up to 14 inch
Capacities	up to 2'600 m ³ /h	up to 11'450 USgpm
Heads	up to 70 m	up to 230 ft.
Pressures	up to 100 bar	up to 1'450 psi
Temperatures	up to 60°C	up to 140°F

Performance range



The Sulzer Flow Equipment division keeps your processes flowing. Wherever fluids are treated, pumped, or mixed, we deliver highly innovative and reliable solutions for the most demanding applications.

The Flow Equipment division specializes in pumping solutions specifically engineered for the processes of our customers. We provide pumps, agitators, compressors, grinders, screens and filters developed through intensive research and development in fluid dynamics and advanced materials. We are a market leader in pumping solutions for water, oil and gas, power, chemicals and most industrial segments.

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