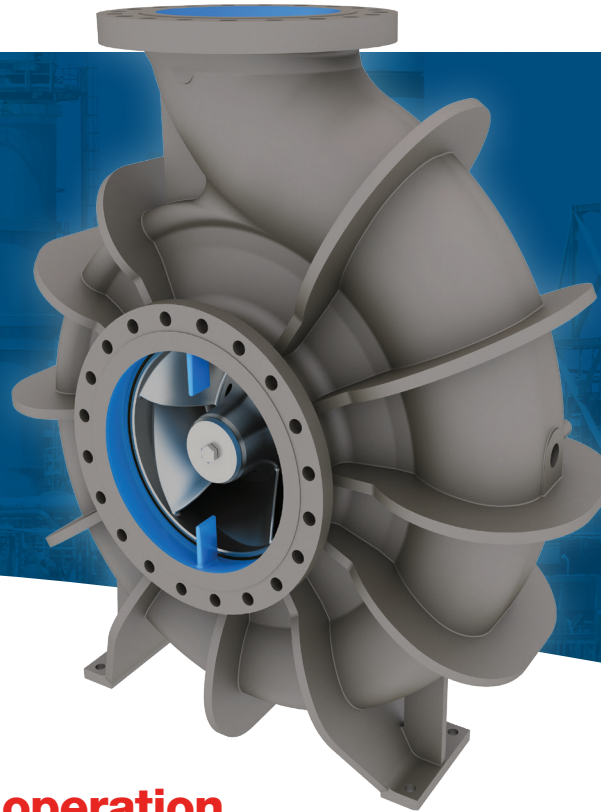




# DS-RO

Horizontal, end-suction, radially split, double volute pump for reverse osmosis desalination



*The DS-RO pump is based on the widely used Flowserve DS pump, which is designed for high-efficiency operation and long-term reliability.*

## High-efficiency operation with increased uptime

The Flowserve DS-RO single-stage, end-suction, foot-mounted pump is engineered specifically for auxiliary applications found in reverse osmosis (RO) desalination processes. This versatile pump is well-suited for any RO service that needs the next generation of end-suction pumps for desalination. Optimized hydraulics and desalination specific materials of construction provide high-efficiency performance and long-term reliability that result in increased uptime with low cost of ownership.

### A comprehensive portfolio

The DS-RO pump is one of a number of pumps offered by Flowserve designed to meet the specific pumping requirements of the desalination industry. With a pump portfolio that includes a variety of high-efficiency models for source water intake, high-pressure membrane feed, ERD boosters and auxiliary applications, Flowserve has solidified its position as a single-source supplier to the desalination industry.



**Watch the video!**

### Main features

**Rigid shaft and double volute casing** provide stable operation and enable sustained efficiency. Shaft deflection and radial thrust loads are minimized, reducing vibration and mechanical loads on all components.

The **end-suction design** with a choice of three alternative discharge nozzle locations provides system flexibility.

**Materials of construction** are designed to withstand the corrosive environments typical of desalination processes.

**Parts interchangeability** over a range of pump sizes lowers spare part inventories and costs.

A **spacer type coupling** allows full inspection of the back pull-out type pump in minimum time, without disturbing suction and discharge connections.

The **closed impeller** utilizes three-dimensionally contoured blades extending into the impeller, combining high efficiencies and low NPSHR.

A **mechanical seal** assures proper shaft sealing under all operating conditions.

## Typical applications

- Seawater and brackish water reverse osmosis processes
- Filtered seawater
- Low- and high-pressure feed boosters
- Product services
- Potable water
- Backwash

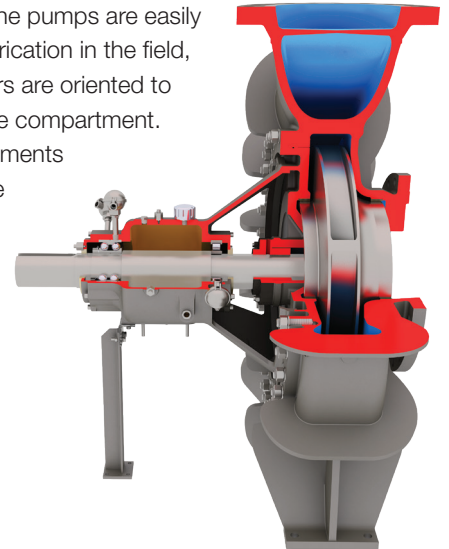
## Operating parameters\*

- Flows to 11,000 m<sup>3</sup>/h (48,432 gpm)
- Heads to 180 m (591 ft)
- Pressures to 27 bar (392 psi)
- Temperatures to 45°C (113°F)
- Frequency of 50 or 60 Hz; VFD compatible
- Sizes from 200 to 700 mm (8 to 28 in.)

\*For extended range, please consult with our specialists.

## Available bearing configurations

The DS-RO pump comes standard with antifriction-type, oil-lubricated bearings. A constant-level oiler ensures adequate oil levels are maintained for proper lubrication. The pumps are easily converted to grease lubrication in the field, if desired. Bearing covers are oriented to allow nipples and grease compartment. Bearing cooling arrangements are available for extreme conditions of service.



## Optional instrumentation



**REDRAVEN™**

The DS-RO pump is compatible with advanced internet of things (IoT) solutions such as RedRaven condition monitoring from Flowserve. Flowserve RedRaven IoT solutions give you the insights and

tools you need to monitor, analyze and predict equipment performance — so you can improve pump uptime while reducing maintenance and energy costs.



Ask your Flowserve representative about optional RedRaven IoT monitoring packages or visit [flowserve.com/iot](https://flowserve.com/iot) to learn more.

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