



DS-RO

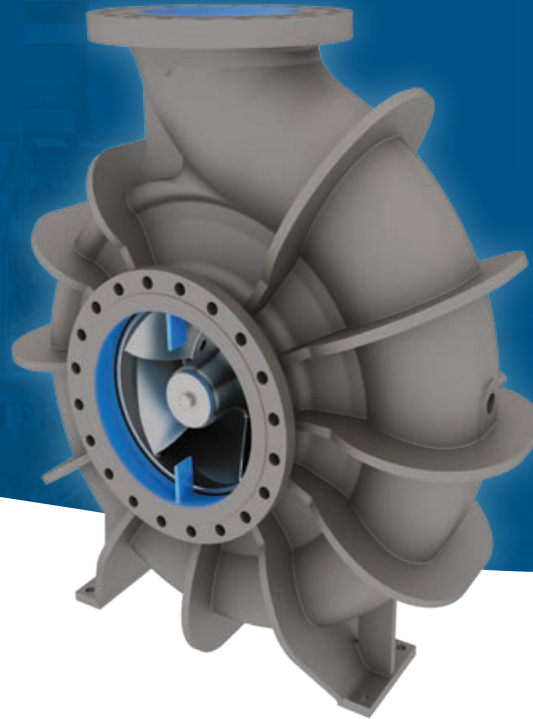
Horizontal end-suction radially split double volute pump for reverse osmosis desalination processes

*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 desalination processes. Developed in accordance with ISO 5199, this versatile pump is well-suited for plant support services such as pretreatment, boosting and product water supply. 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.



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

Main features

A **rigid shaft and double-volute casing** keep shaft deflection low, reducing radial load and promoting high sustained efficiency.

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.

Double-volute casing provides stable operation. Radial thrust loads are minimized, reducing vibration and mechanical loads on all components.

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.

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 10,000 m³/h (44,029 gpm)
- Heads to 180 m (530 ft)
- Pressures to 25 bar (365 psi)
- Temperatures to 45°C (113°F)
- Frequency of 50 or 60 Hz; compatible with VFD applications
- Sizes from 200 to 600 mm (8 to 20 in)

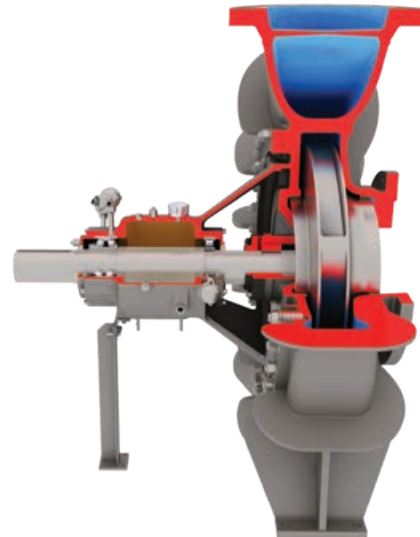
*For extended range, please consult with our specialists.

Available bearing configurations

DS-RO pumps come 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.

Sealing arrangements

A stuffing box with soft packing and mechanical seal configurations are available.



Flowserve Corporation
5215 North O'Connor Blvd.
Suite 2300
Irving, Texas 75039-5421 USA
Telephone: +1 937 890 5839

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