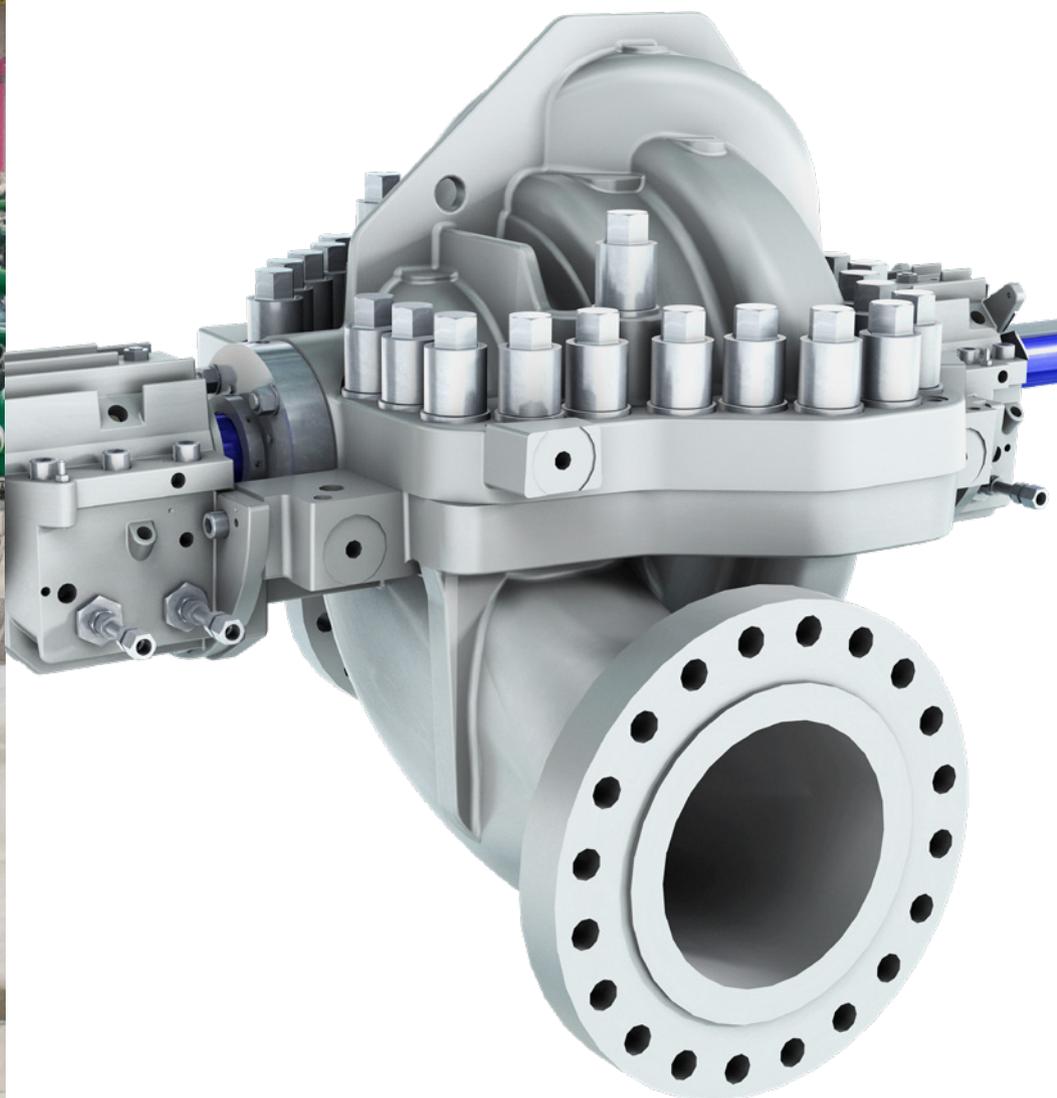


## MSD-RO axially split multistage pump



# Main industries and applications

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The MSD-RO is the result of Sulzer's experience in supplying high pressure pumps for large Seawater Reverse Osmosis (SWRO) plants worldwide, with a total of 2.5 million m<sup>3</sup>/d installed capacity.

The MSD-RO meets the needs of a high pressure pump for the desalination market for large SWRO pumps, covering SWRO train capacities from 20'000 to 30'000 m<sup>3</sup>/d.

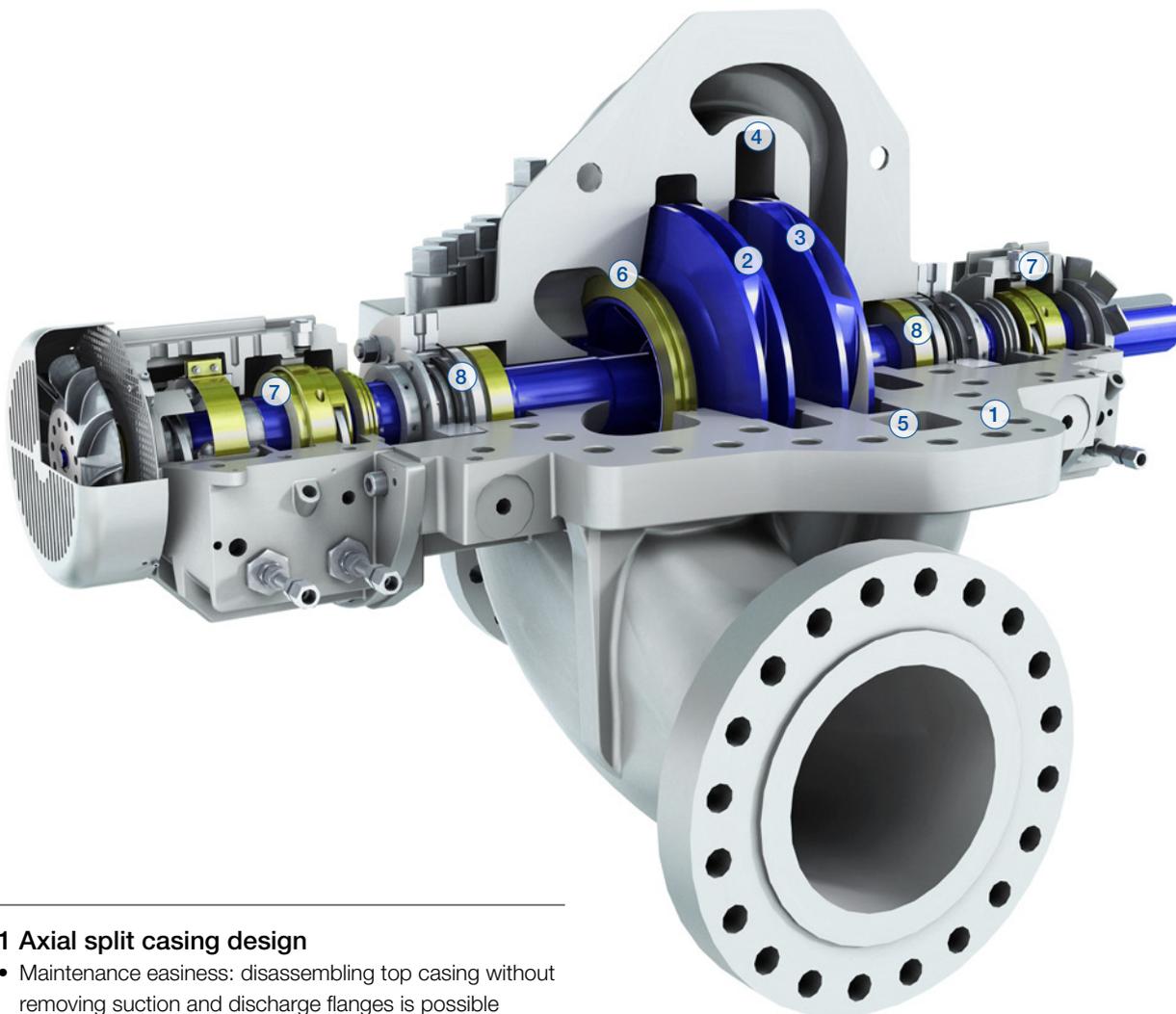
Main applications:

- High pressure membrane feed pump in SWRO applications
- Water transport



# Features and benefits

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## 1 Axial split casing design

- Maintenance easiness: disassembling top casing without removing suction and discharge flanges is possible

## 2 Two stages, single suction impeller

- Compact design and top of its class efficiency

## 3 Special opposed, dynamically balanced impellers design

- Ideal axial thrust balance, increasing the overall pump efficiency by avoiding a balancing line that causes flow recirculation

## 4 Specific cross-over design

- Reduces internal pressure losses maximizing efficiency and allows shorter bearing span

## 5 Double volute construction

- Radial thrust balance

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## 6 Reduced wear parts clearances by using PEEK

- To increase pump efficiency

## 7 Sleeve journal and duplex angular contact thrust bearing as standard

- Sleeve journal and pivot shoe thrust bearing with force oil lubrication system is available when required

## 8 Single, balanced, cartridge mechanical seal

- Option for API 682 mechanical seal is available

# Specifications

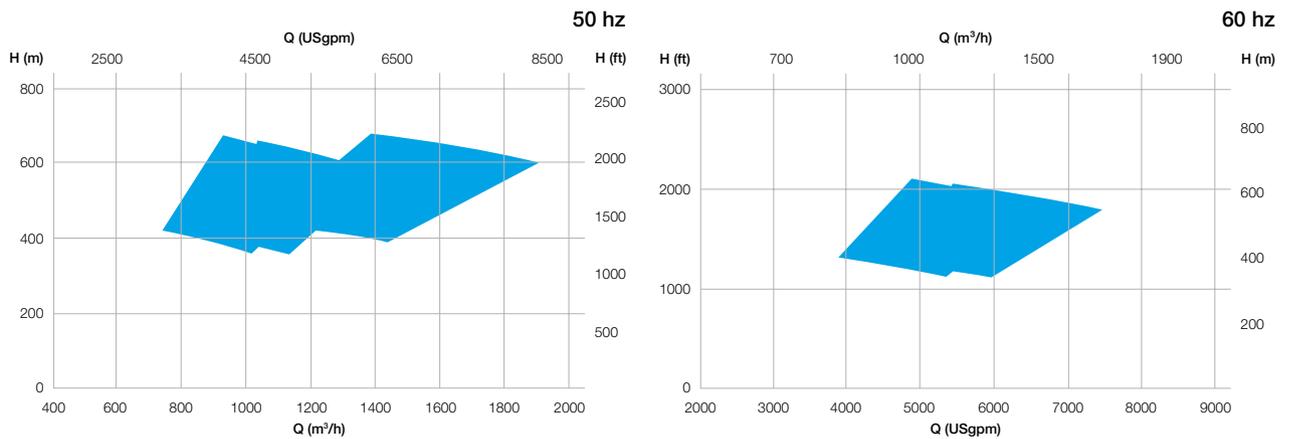
## Materials

|                  |                 |
|------------------|-----------------|
| <b>Pump part</b> | <b>Material</b> |
| Casing           | Super duplex    |
| Impeller         | Super duplex    |
| Wear rings       | PEEK            |
| Bearing housing  | Carbon steel    |

## Operating data

|                     | 50 Hz                            | 60 Hz                |
|---------------------|----------------------------------|----------------------|
| <b>Pump sizes</b>   | 200 to 300 mm                    | 8 to 12 in.          |
| <b>Capacities</b>   | 1'000 to 1'600 m <sup>3</sup> /h | 4'400 to 7'000 USgpm |
| <b>Heads</b>        | up to 650 m                      | up to 2'150 ft.      |
| <b>Pressures</b>    | up to 90 bar                     | up to 1'305 psi      |
| <b>Temperatures</b> | up to 60°C                       | up to 140°F          |

## Performance range



# A global specialist at your doorstep

Sulzer serves clients worldwide through a network of over 180 production and service sites and has a strong footprint in emerging markets.



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

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The Flow 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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