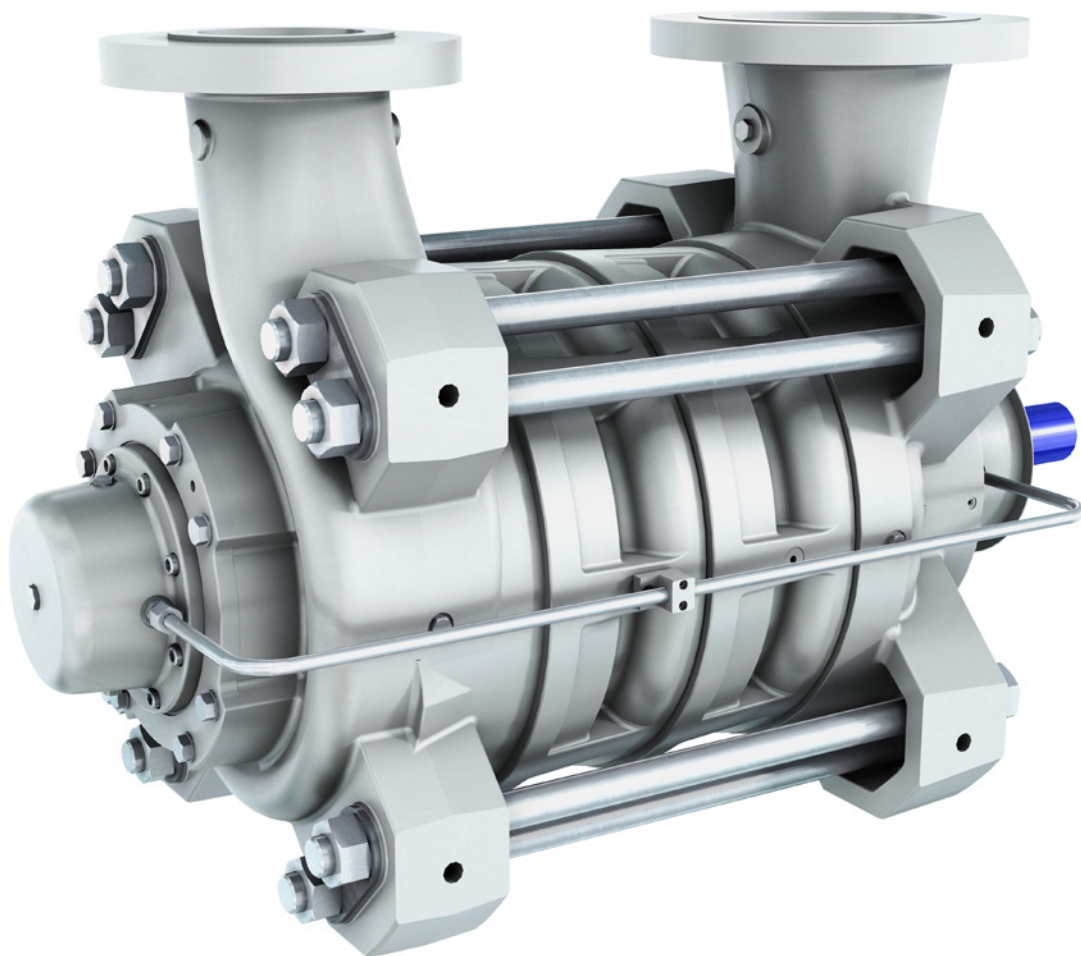


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LENNTECH
WATER TREATMENT Solutions

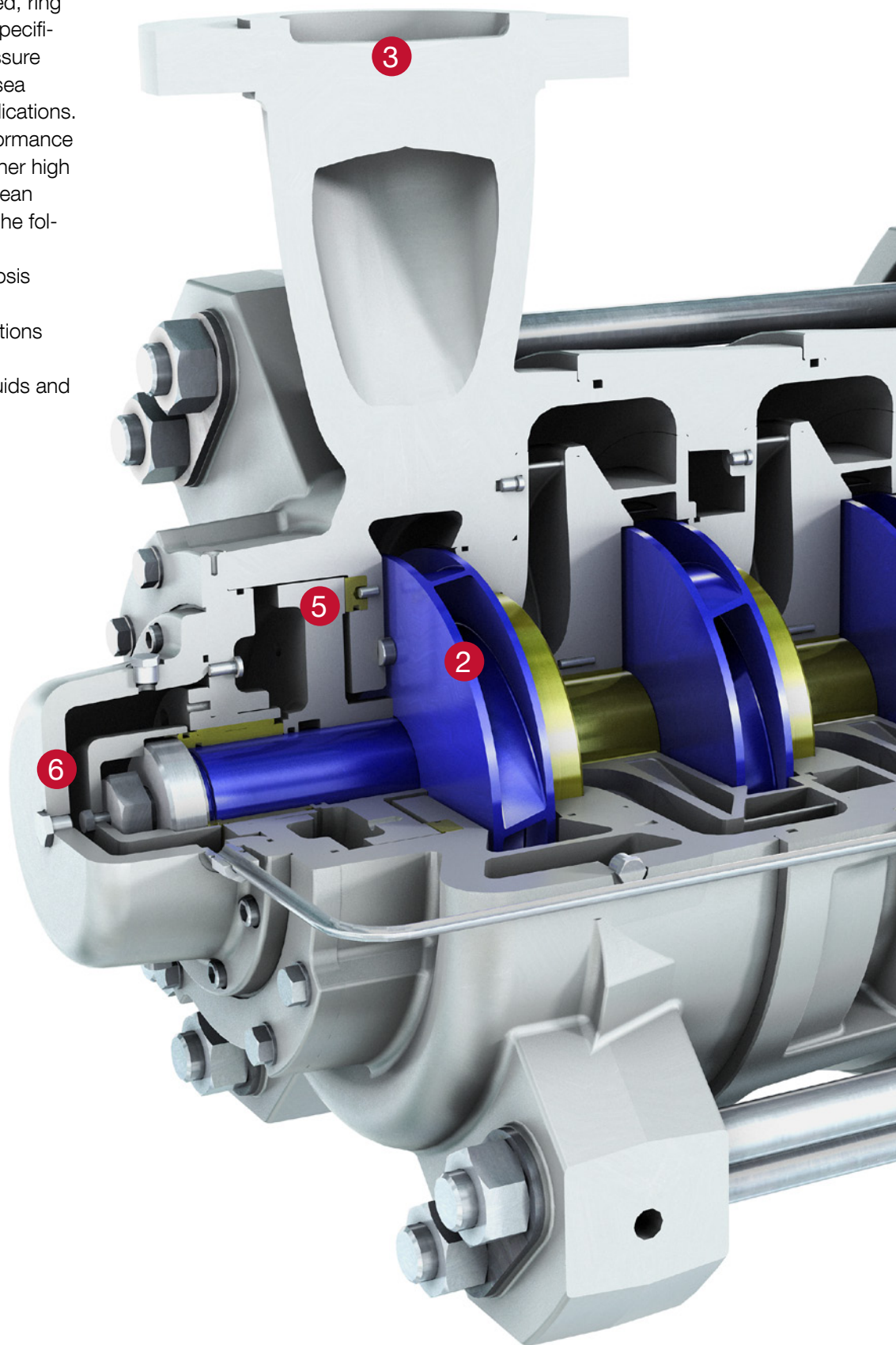
MBN-RO Multistage Ring Section Pump

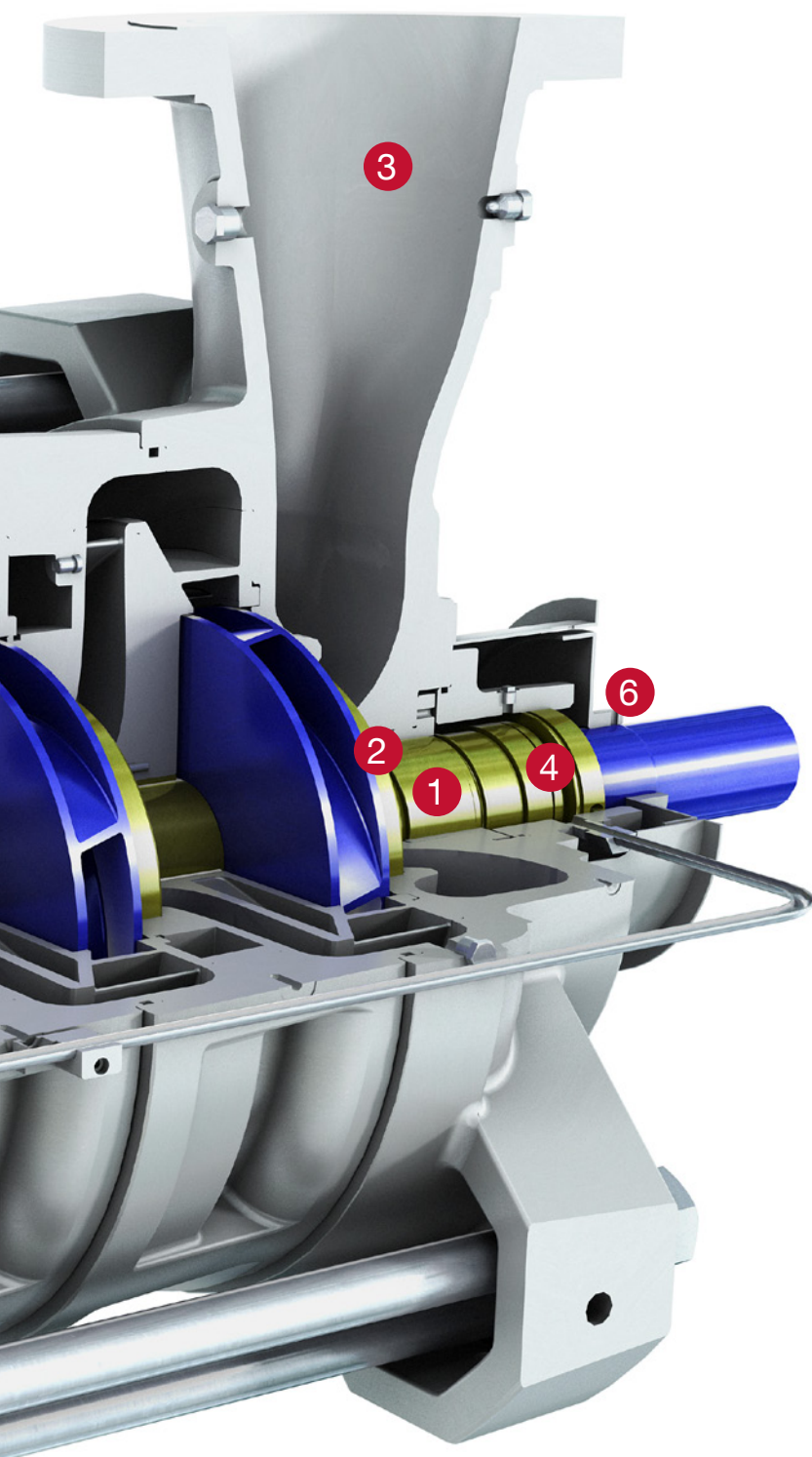


Main Applications

The MBN-RO is a configured, ring section, multistage pump specifically designed for high pressure membrane feed service in sea water reverse osmosis applications. Its improved hydraulic performance makes it suitable for any other high pressure application with clean liquids. It is mainly used in the following applications:

- Sea Water Reverse Osmosis (SWRO) applications
- Clean water pumping stations
- Any other high pressure application with clean liquids and low temperature





Features and Benefits

1 Bearing assembly

- Product-lubricated bearings at both Drive End (DE) and Non-Drive End (NDE) to make the pump compact, reliable and easy to maintain, do not require lubricating grease or oil

2 Hydraulics

- High efficiency, low Net Positive Suction Head (NPSH) impellers to match customer needs are used for all stages, providing modularity, top efficiency and ideal suction performance
- Double volute at last stage reduces the radial thrust and increases overall efficiency
- Replaceable stationary PEEK wear parts used to increase efficiency and reduce maintenance

3 Flanges

- Can be installed side or top position as per customer convenience allows flexibility in the pipe layout including the typical side-side orientation
- Radial suction flange allows accessibility to mechanical seal and product lubricated bearing at DE without disassembling the piping

4 Shaft sealing

- Integrated single mechanical seal at DE, low pressure side, with flushing from first stage
- No mechanical seal on the high pressure side

5 Axial thrust balance

- By means of balancing disc to ensure optimum efficiency

6 Maintenance

- All parts typically subject to maintenance (both DE and NDE bearings, balancing disc, mechanical seal) are accessible and can be replaced on site, without removal of suction and discharge piping

MBN-RO Multistage Ring Section Pump



Oil and gas



Hydrocarbon processing



Power generation



Pulp and paper



General industry



Chemical processing

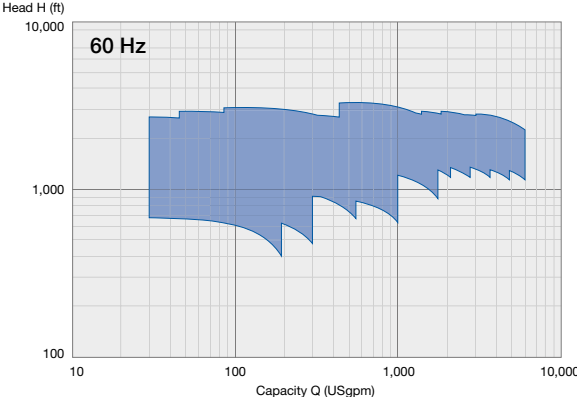
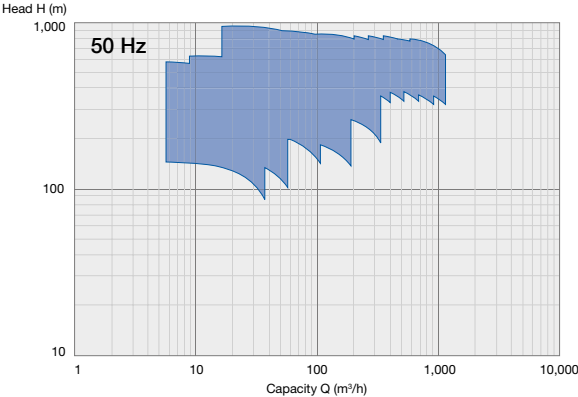


Water and wastewater

Operating data

50 Hz		60 Hz
25 to 200 mm	Pump sizes	1 to 8 in
up to 1,100 m ³ /h	Capacities	up to 4,800 USgpm
up to 900 m	Heads	up to 2,950 ft
up to 100 bar	Pressures	up to 1,450 psi
90°C	Temperatures	194°F

Performance ranges



Materials

Pump part	Material classes	
	41 (Duplex)	4T (Superduplex)
Casing, impeller, diffuser	ASTM A890 Gr 3A	ASTM A890 Gr 5A
Wear ring	PEEK	PEEK
Shaft	EN 1.4462	EN1.4410
Slide bearings	EN 1.4462 + PEEK/SUME	EN 1.4410+PEEK/SUME
Cover	ASTM A890 Gr 5A	ASTM A890 Gr 5A

We Do What We Say

Customer partnership

- We are **reliable partners**
- We provide a **high level of service**
- We **make our customers more competitive**



Committed people

- We drive **accountability**
- We are **open and transparent**
- We are **team players**



Operational excellence

- We **focus on results**
- We take **initiative** and work within **established processes**
- We **act safely**



A Global Specialist at Your Doorstep

Sulzer serves clients worldwide through a network of over 150 production and service sites and has a strong footprint in emerging markets.



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