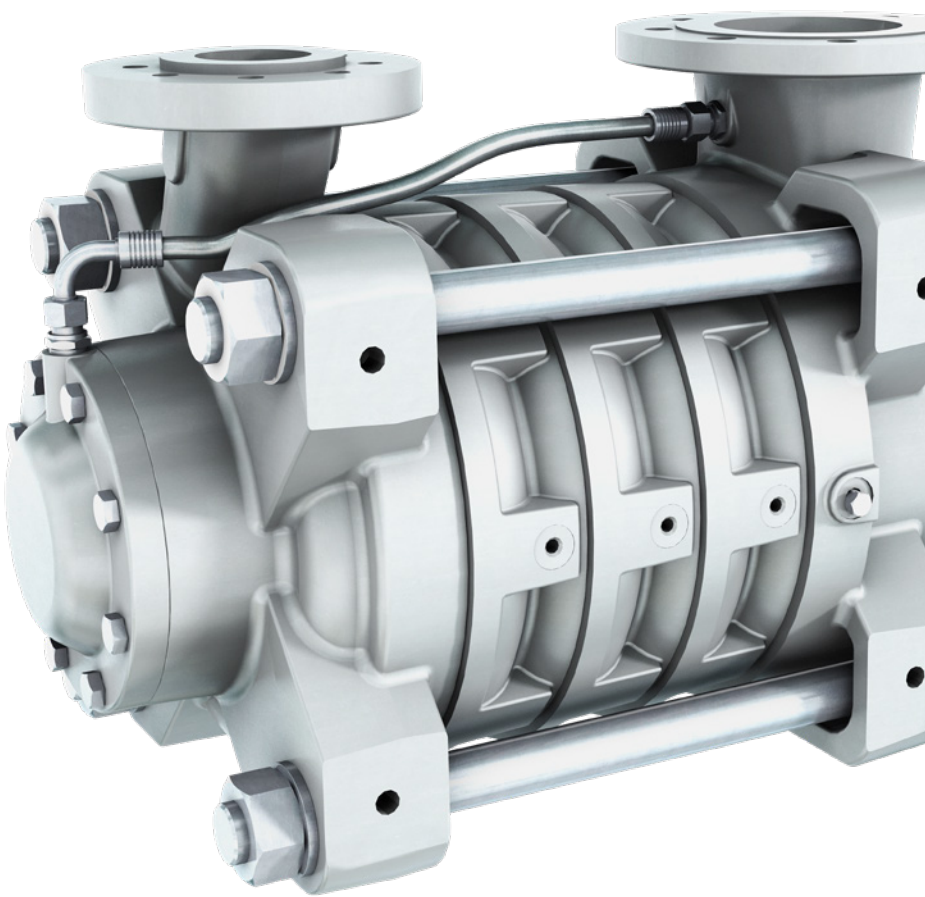


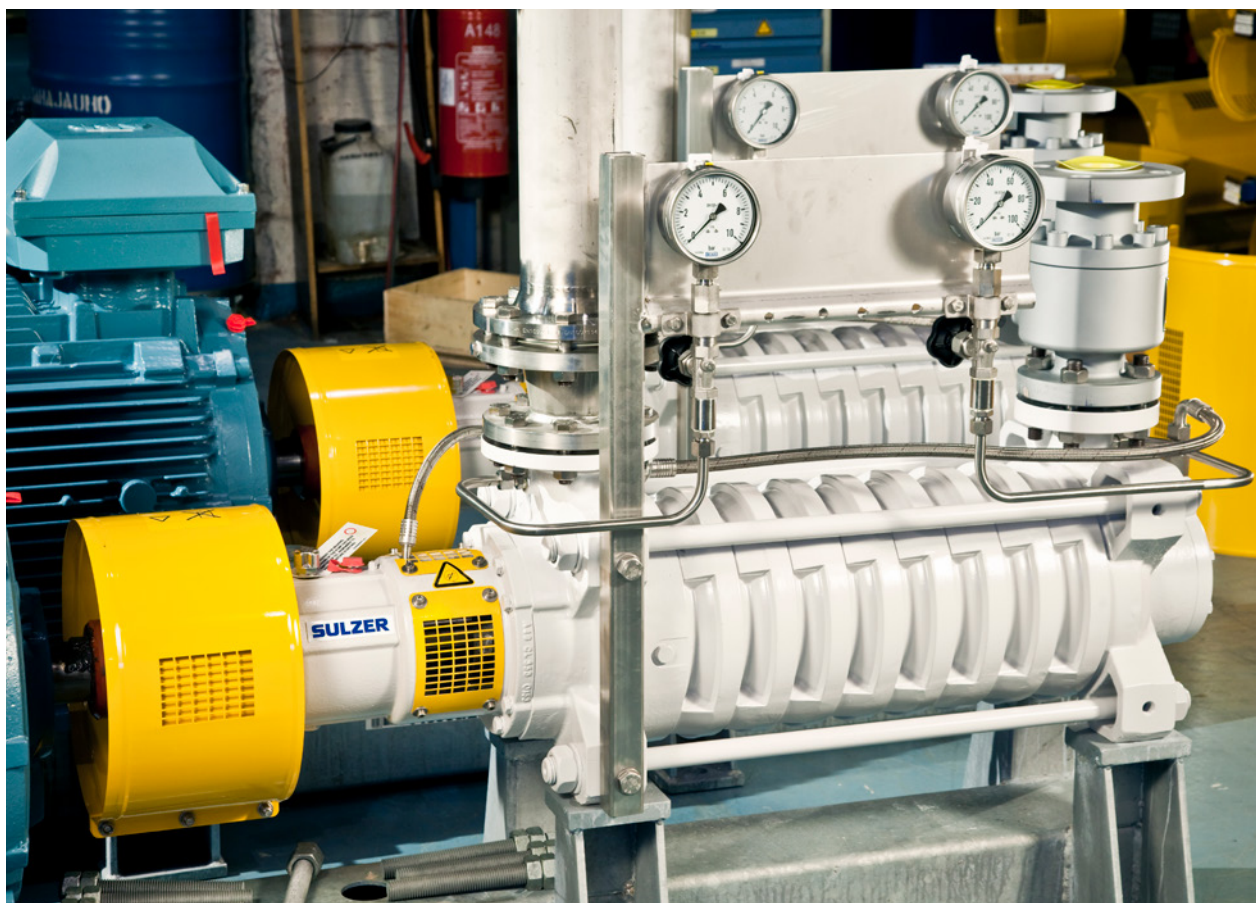
## MBN high pressure stage casing pump



# Main industries and applications

The MBN pumps are horizontal, radially split, ring section pumps with a modular design. They are suitable for pumping clean or slightly polluted, hot or cold, chemically neutral or aggressive liquids. They fulfill all requirements wherever a robust pump for high pressure applications is needed, such as:

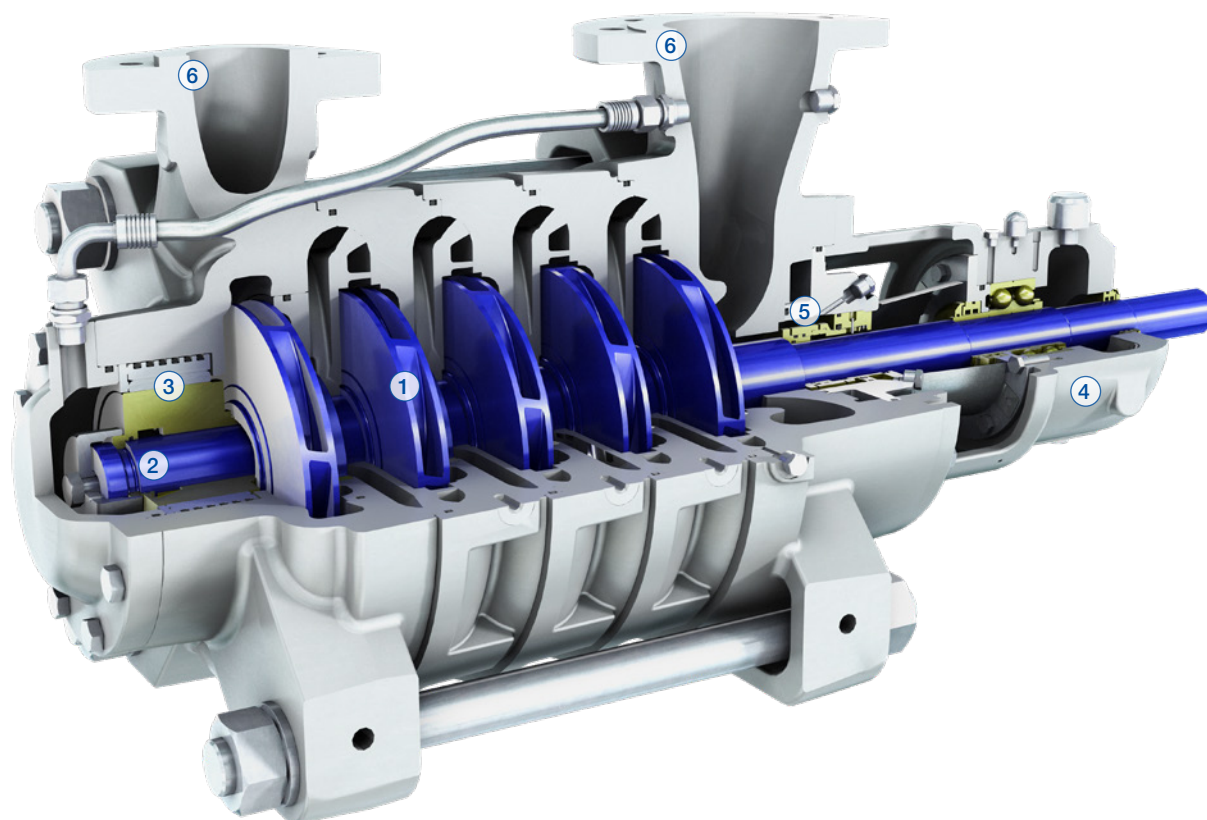
- Boiler feed duties in industrial power applications up to 180°C
- Condensate service in power stations and industrial plants
- Feed pumps in desalination by reverse osmosis
- Shower water in paper mills
- High pressure water in general industry





# Features and benefits

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## 1 Impellers

- Special suction impeller for low Net Positive Suction Head required (NPSHr)
- High quality investment cast impellers and stage casings for better efficiency
- Polygon impeller mounting allows fast and easy mounting of the impeller on the shaft, maintains straightness of the shaft, decreases deflection and stress points and eliminates the need of standard keyed design

## 2 Mechanical design

- Keyless polygon shaft torque transmission to the impellers
- Split ring fixing for impeller stack to accommodate thermal expansion
- Innovative journal bearing design for better internal alignment and lubrication

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## 3 Hydraulic balance

- By means of balance drum
- Product lubricated radial bearing located at Non-Drive End (NDE)

## 4 Bearing unit

- Double row ball radial and thrust bearing located at Drive End (DE)
- 4 bearing units serve 6 hydraulics
- Same bearing housing for both oil and grease lubrication
- Increased oil sump for better heat dissipation
- Constant level oiler maintains optimum oil level

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## 5 Shaft sealing

- Shaft sealing only required on the low pressure suction side
- Separate seal chamber enables the seal type to be changed without having to replace the suction casing
- Mechanical seal (single and double), dynamic seal and gland packing are available
- Shaft seal can be serviced without disassembling the pump

## 6 Flange connection options

- Different suction and discharge flange orientation (left-up-right) allows individual customer flexibility during installation and simplifies piping design

# Specifications

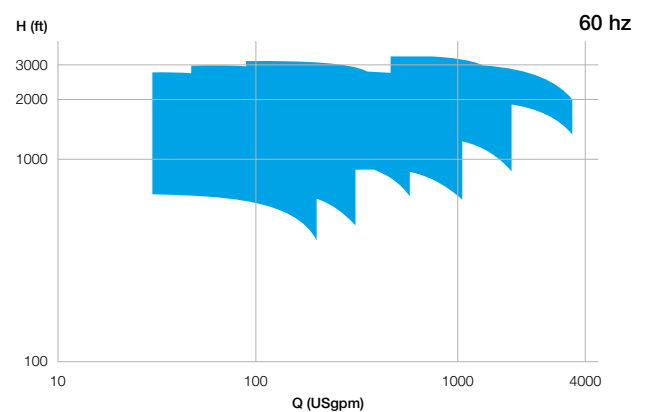
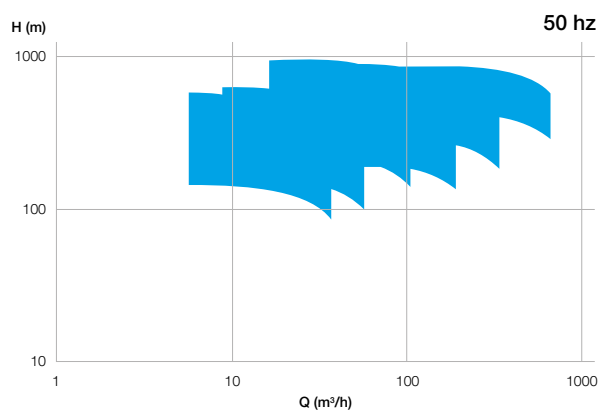
## Materials

Pump part	Material
Suction, stage and discharge casing	Chromium steel, duplex, super duplex
Shaft seal housing	Chromium steel, duplex, super duplex
Impeller and stationary wear rings	Chromium steel, duplex, super duplex
Shaft and shaft sleeves	Duplex, super duplex
Bearing bracket	Cast iron

## Operating data

	50 Hz	60 Hz
Pump sizes	up to 150 mm	up to 6 in.
Capacities	up to 700 m <sup>3</sup> /h	up to 3'080 USgpm
Heads	up to 900 m	up to 2'950 ft.
Pressures	up to 140 bar	up to 2'030 psi
Temperatures	up to 180°C	up to 356°F

## Performance range







**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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