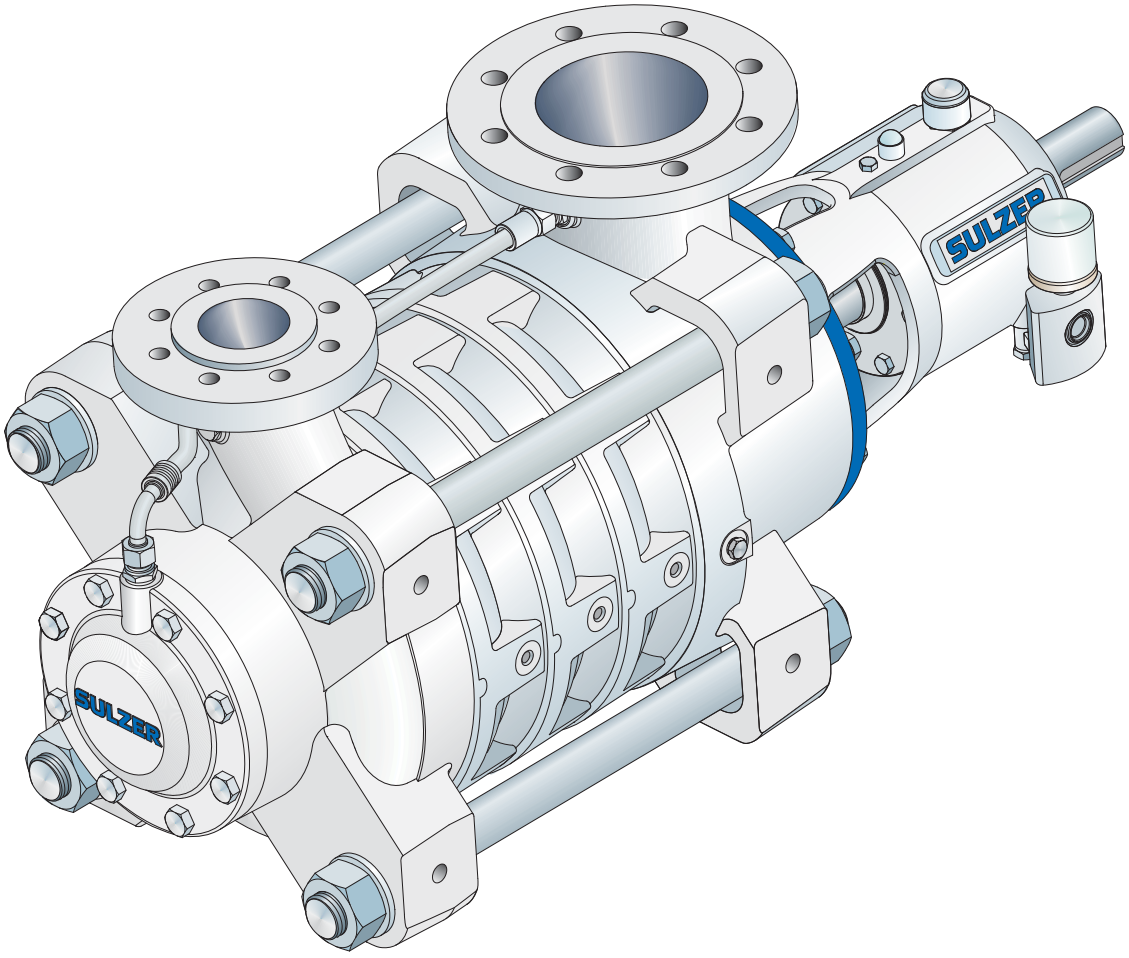
SULZER

Sulzer Pumps

MBN Multistage Ring Section Pumps



The Heart of Your Process

Sulzer Pumps – Striving to Serve You Better

Sulzer Pumps is a leading global supplier of reliable products and innovative pumping solutions for end users.

Our active research and development, detailed process and application knowledge together with a comprehensive understanding of market demands keeps us consistently at the leading edge of technical development.

Our global network of modern manufacturing and packaging facilities together with sales offices, service centers and representatives located close to major markets provide fast responses to customer needs.

Innovation, Expertise, Research & Development

Innovation

Sulzer Pumps has a long history of providing innovative pumping solutions to business partners in the following industries:

- Oil & Gas
- Hydrocarbon Processing
- Pulp and Paper
- Power Generation
- Food, Metals & Fertilizers
- Water and Wastewater

Expertise

Our expertise supports innovative technological solutions and equipment for all types of power plants - nuclear, fossil-fired, geothermal, combined-cycle plus large and small industrial power plants.
We offer an extensive range of innovative products and services. Sulzer Pumps delivers boiler feed, condensate extraction, boiler circulator, cooling water and auxiliary pumps, as well as specialized safety related pumps for nuclear power plants. We are leaders in boiler feed pumps for supercritical fossil-fired power plants.

Research & Development

Research & Development has always been a top priority at Sulzer Pumps. Basic research focuses on hydraulics, cavitation, erosion, corrosion and mechanical design, which is then applied to advance product development. Our engineers work closely with customers all over the world on the practical implementation of innovative ideas. At any point, they can call upon the diverse expertise of the many research specialists working in our laboratories. Successful research and development activities require continuous investment. Beyond immediate job results, this benefits our customers by ensuring that they have a stable business partner at the leading edge of pump technology.

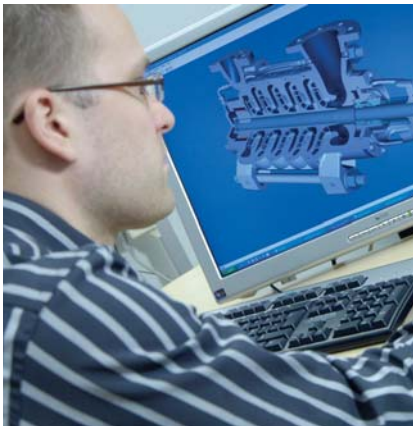
MBN Multistage Ring Section Pumps

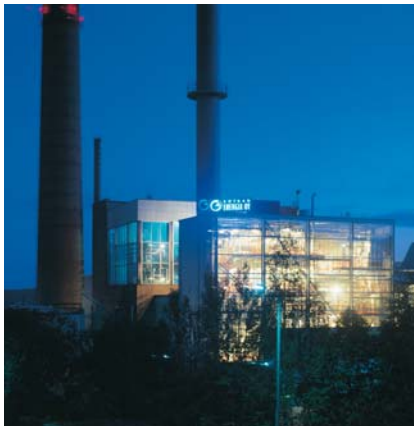
MBN type pumps are horizontal, radially split, ring section pumps with modular design.

MBN pumps are suitable for pumping clean or slightly polluted, hot or cold, chemically neutral or aggressive liquids.

The design is ideal for:

- feed water supply in boiler plants
- condensate supply in power stations and industrial plants
- desalination (reverse osmosis)
- shower water in paper mills
- high pressure pumps in various industries





Materials

Suction casing Stage casing Discharge casing	Chromium steel, Duplex, Superduplex
Shaft seal housing	Chromium steel, Duplex, Superduplex
Impellers Stationary wear rings	Chromium steel, Duplex, Superduplex
Shaft Shaft sleeves	Duplex, Superduplex
Bearing bracket	Cast iron

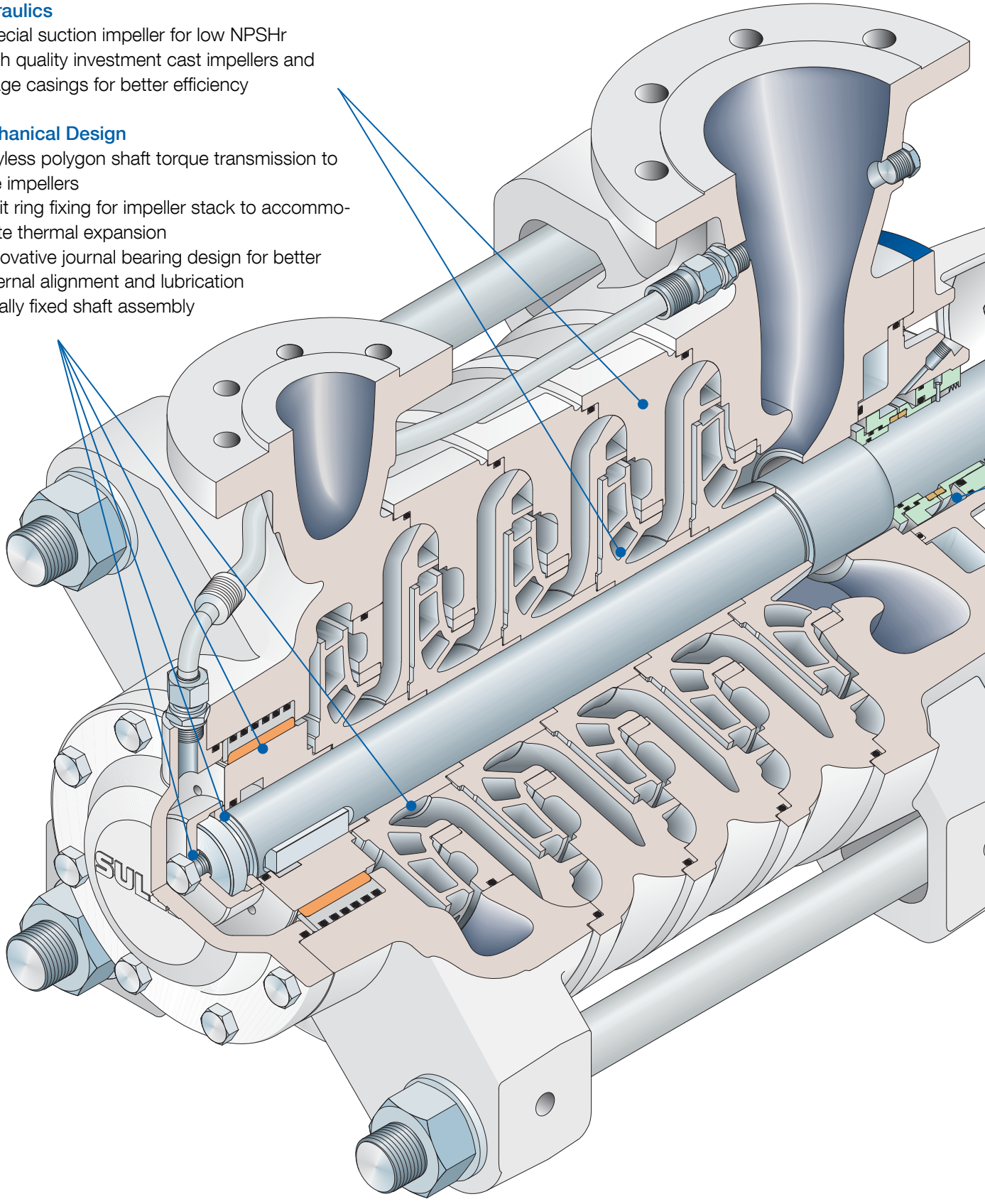
Design Features and Benefits

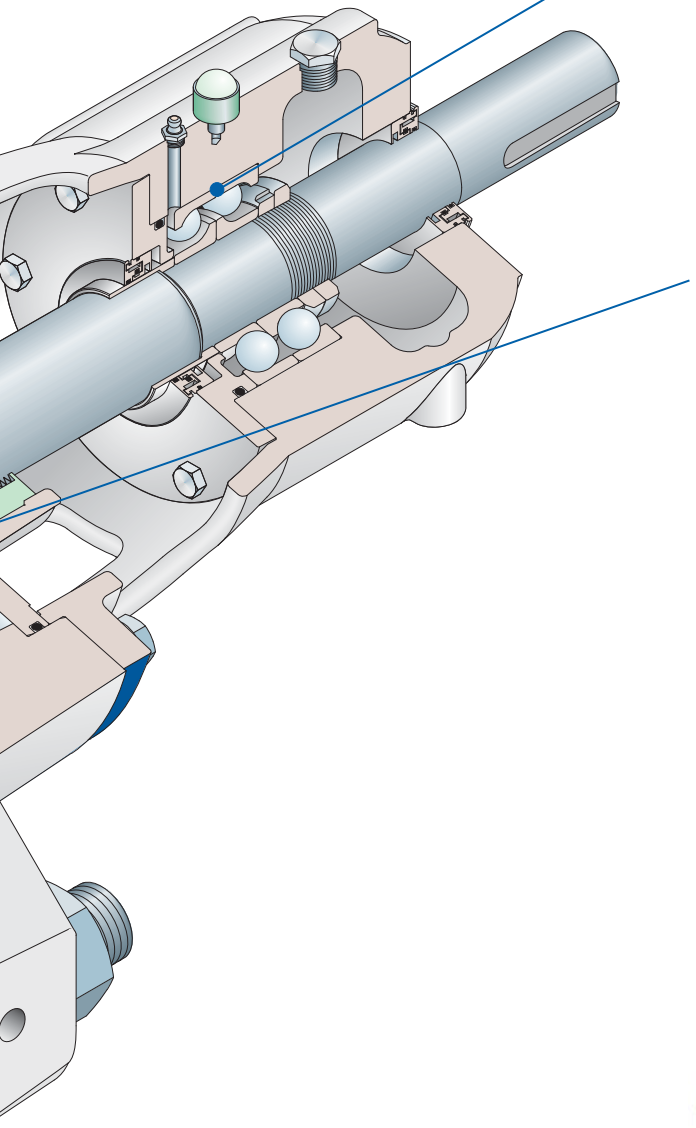
Hydraulics

- special suction impeller for low NPSHr
- high quality investment cast impellers and stage casings for better efficiency

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
- axially fixed shaft assembly



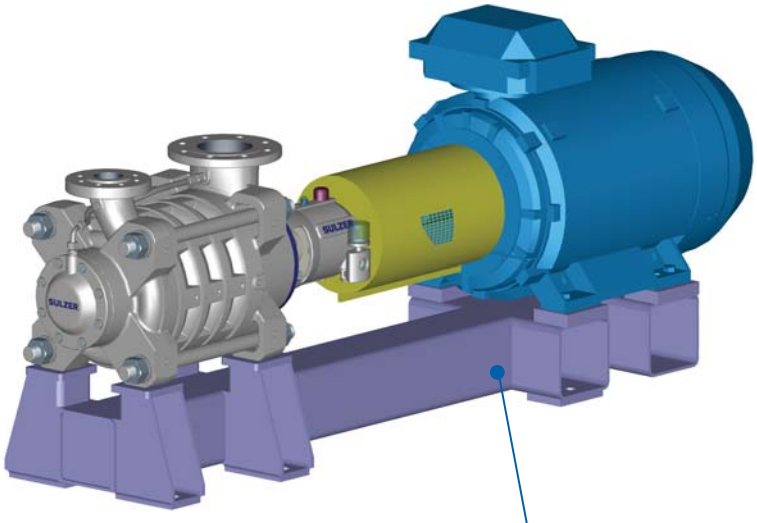


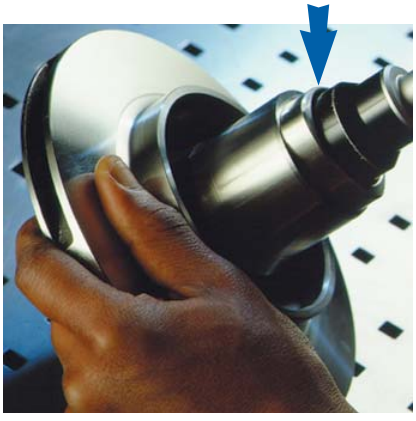
Bearing Unit

- 4 bearing units serve 6 hydraulics
- same bearing housing for both oil and grease lubrication
- increased oil sump for better heat dissipation
- Inpro™ metallic bearing isolators
- constant level oiler maintains optimum oil level
- grease lubrication for temperatures up to 120° C (240° F)
- oil lubrication for temperatures up to 180° C (350° F)
- bearing unit can be serviced without disassembling the pump

Shaft Sealing

- 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 sealing only required on the low pressure suction side
- shaft seal can be serviced without disassembling the pump





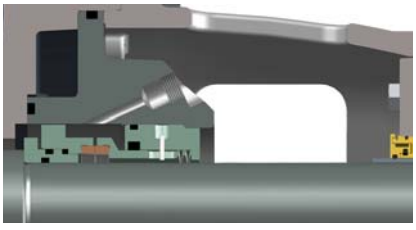
Polygon Impeller Mounting

Fast and easy impeller mounting on the shaft using a polygon form. Shaft straightness is guaranteed, deflection and stress points are virtually eliminated and the standard keyed design is no longer required thanks to the unique polygon mounted impellers.

Baseplate

- fabricated steel, painted or hot-dip galvanized
- to be grouted at installation site

Shaft Sealing Options

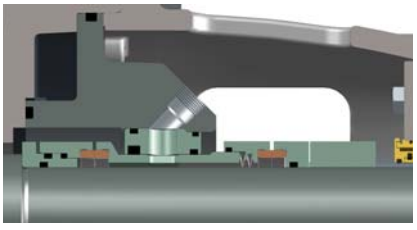


Single Mechanical Seal

The standard mechanical seal is an integrated design for increased reliability.

A large variety of other mechanical seals with different fittings gives the flexibility to choose the right seal according to the application and customer's specification.

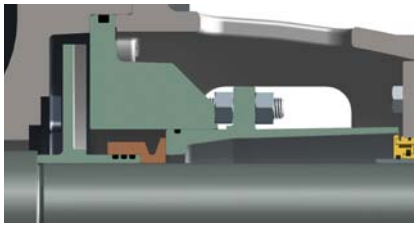
- MS 11 unflushed:
  up to 90° C (194° F)
- MS 12 + Plan 11:
  up to 140° C (280° F)
- Plan 23 with pumping ring:
  up to 180° C (350° F)



Double Mechanical Seal

Double seal minimizes the need for sealing liquid. New sealing control equipment for double mechanical seals can save more than 90 % of the sealing liquid required by conventional equipment.

- MS 21 + Plan 54:
  up to 180° C (350° F)

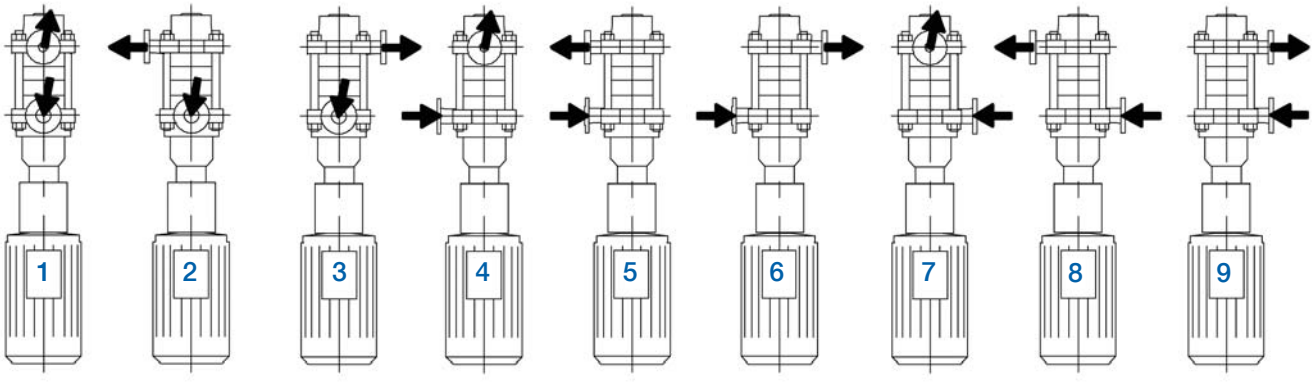


Dynamic Seal

Dynamic seals don't need external sealing water or sealing water piping thus reducing installation, operating and maintenance costs.

- up to 100° C (210° F)

Flange Connection Options



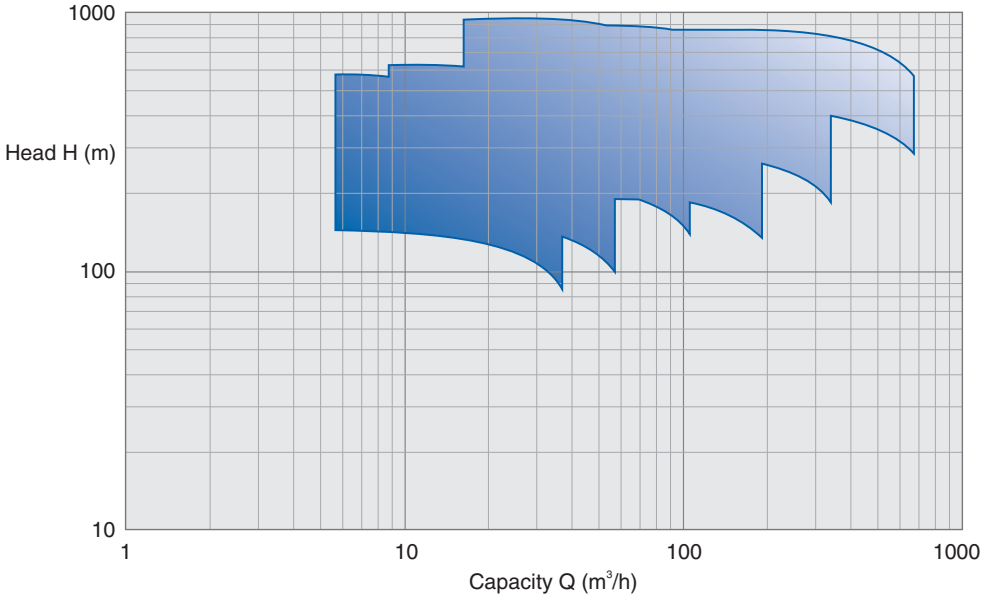
Different suction and discharge flange orientation (left-up-right) allows individual customer flexibility during installation and simplifies piping design.

Operating Data

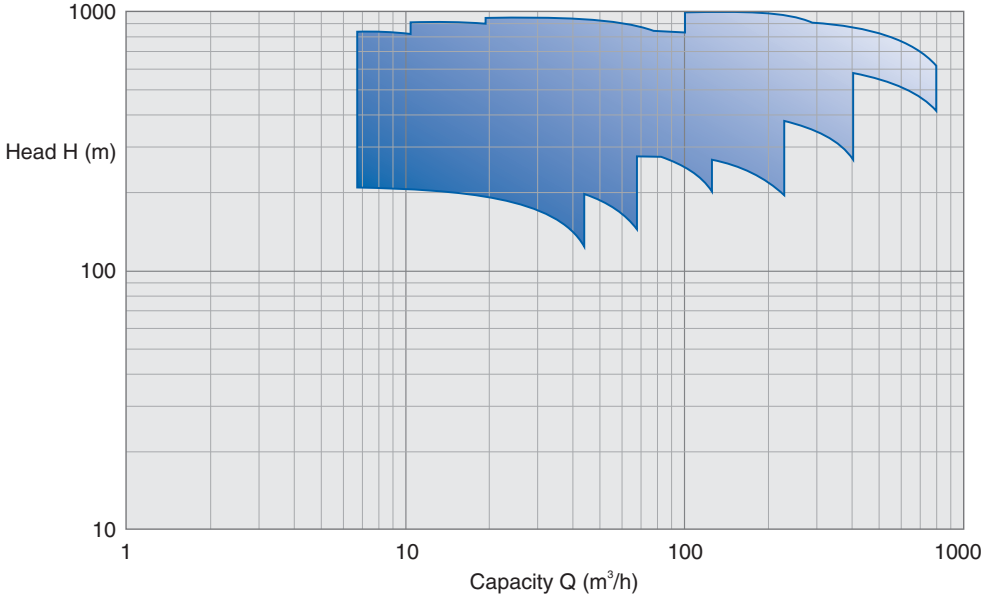
	50 Hz	60 Hz
Pump sizes	25 mm to 150 mm	1 to 6 inches
Capacities	up to 700 m^3/h	up to 3,080 USgpm
Heads	up to 900 m	up 2,950 feet
Pressures	up to 100 bar	up to 1,450 psi
Temperatures	up to 180° C	up to 350° F

Performance Range

50 Hz



60 Hz



Check our worldwide offices at
www.sulzerpumps.com