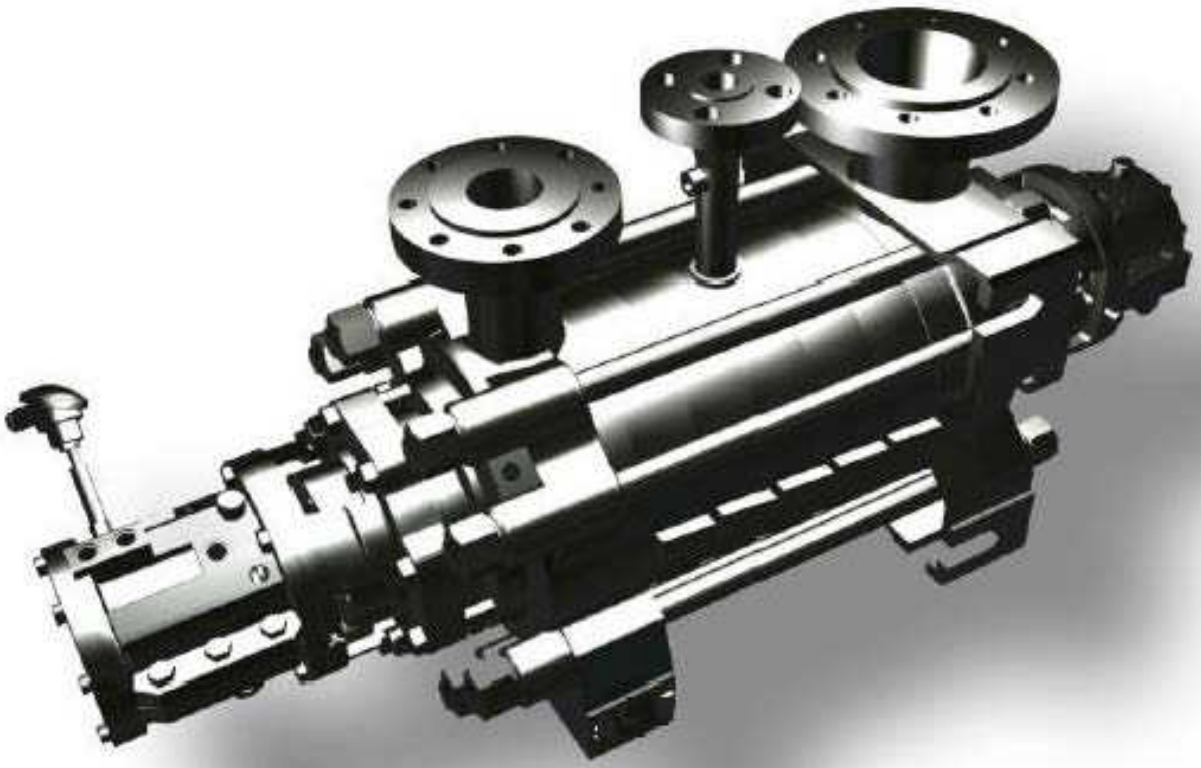
www.intMPE.com

# MPMSMCP HighPressure Multi-StageCasingPumps

IntMPE Pumps

## *Sulzer Equivalent Pumps
## MC 50 - 220*
## MC 80 - 260*



* intMPE is a registered trademark and does not represent or is not in any way affiliated with Sulzer. Names, numbers, symbols and descriptions are used for reference purpose only and do not imply that any pumps or parts listed is the product of Sulzer Pumps.

# "MP" MSMCP PUMP
# HighPressure

## About the pump

Type MC pumps are horizontal, radially spit, ring-section pumps with modular design.

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

The design is ideal for

- Boiler feed duties up to 210°C,
- Condensate service in power stations and individual plants.
- Desalination (Reverse Osmosis),
- Service within combined-cycle power plants.

Ring section pump MC 50-220

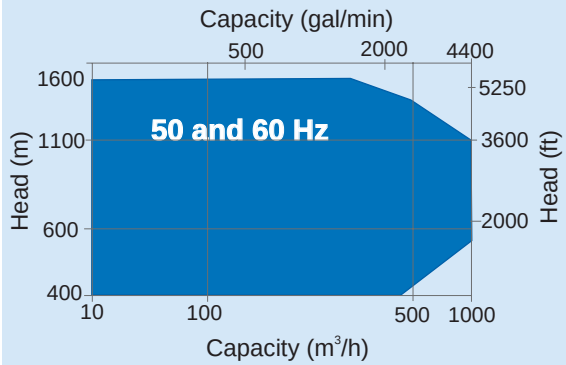
## Materials

Different material options for pressure casings, impeller, diffusor and shaft depending on the operating conditions and pumped liquid.

| shaft, pres.casing | impeller, diffusor |
|---|---|
| Steel | Cast iron |
| Chrome steel | Chrome steel |
| Duplex steel | Duplex steel |

MC 80-260, 13 ages, Head 1360 m, Capacity 100 $m^3$/h, 517 kW

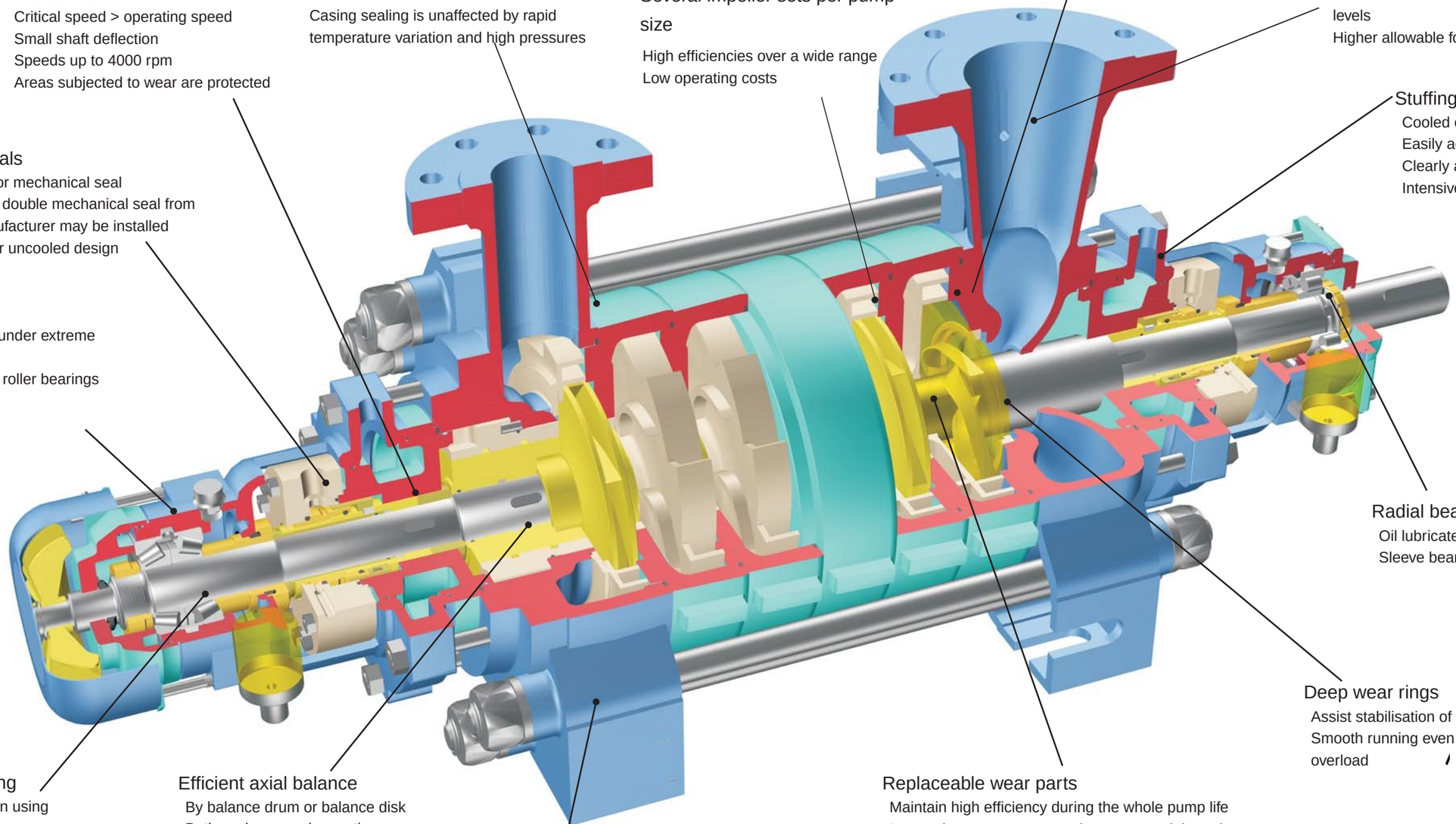
## Performance




| | |
|---|---|
| 7 sizes | DN 40 up to 200 / 1½ - 8” |
| Capacities | up to 1000 $m^3$/h / 4400 gal/min |
| Heads | up to 1600 m / 5250 ft |
| Max. Operating Pressure | up to 150 bar / 2175 psi. |
| Max. Temperature | up to 210°C / 410°F |

* intMPE is a registered trademark and does not represent or is not in any way affiliated with Sulzer. Names, numbers, symbols and descriptions are used for reference purpose only and do not imply that any pumps or parts listed is the product of Sulzer Pumps.

# Pump Design Features



### Special suction impeller at 1st stage

Low NPSH values

Double suction impeller optional

### Large branch sizes

Ideal flow pattern by positioning tie bolts externally at suction branch

Low branch velocities, reduced noise levels

Higher allowable forces and moments

### Robust shaft

Critical speed > operating speed

Small shaft deflection

Speeds up to 4000 rpm

Areas subjected to wear are protected

### Casing sealing by confined O-rings

Casing sealing is unaffected by rapid temperature variation and high pressures

### Several impeller sets per pump size

High efficiencies over a wide range

Low operating costs

### Stuffing box housing

Cooled or uncooled design

Easily accessible cooling chamber

Clearly arranged connections

Intensive, uniform cooling

### Shaft seals

Packing or mechanical seal

Single or double mechanical seal from any manufacturer may be installed

Cooled or uncooled design

### Axial thrust bearing

Long bearing lives even under extreme operating conditions

Paired, fan cooled  taper roller bearings

Sleeve bearing optional

### Radial bearing

Oil lubricated antifriction bearing

Sleeve bearing optional

### Deep wear rings

Assist stabilisation of pump rotor

Smooth running even at part load and overload

### Heavy bearing housing

With automatic lubrication using constant level oiler

Fan cooling

### Efficient axial balance

By balance drum or balance disk

Both seals are under suction pressure

Low residual thrust with balance drum design

Option with balance disk:  Use of the permanent-magnetic lift-off device “PERMAVOR” possible

### Casing support

Foot mounted

Centerline mounting available for large sizes and high temperatures

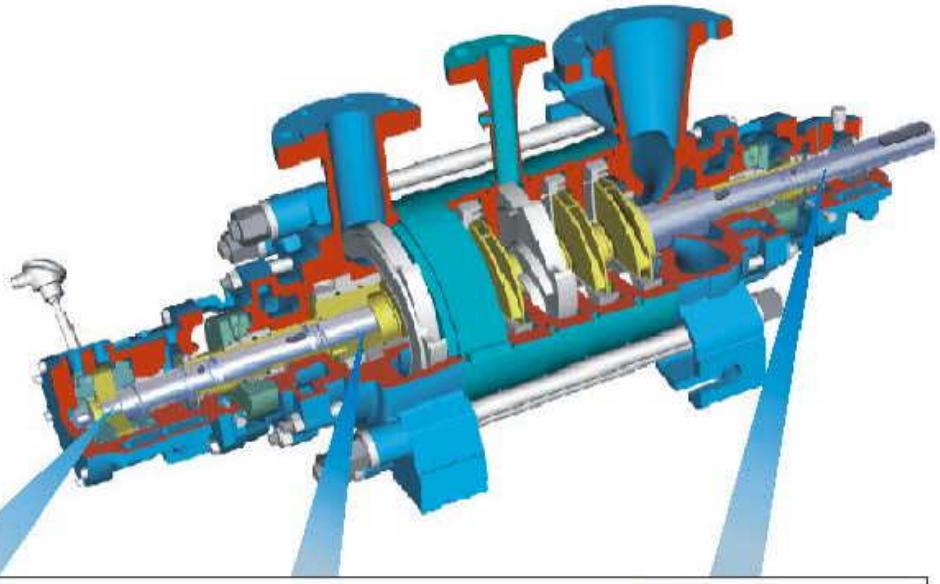
### Replaceable wear parts

Maintain high efficiency during the whole pump life

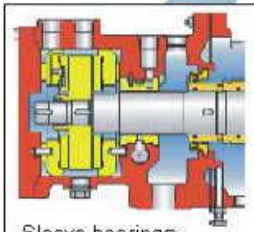
Low maintenance costs, saving on essential repairs and spare parts

High availability and short down times

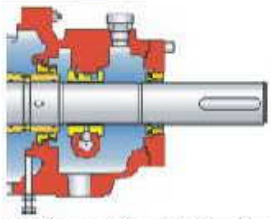
# "MP" MSMCP PUMP
# Design Variation



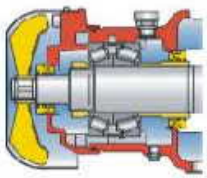
**Axial thrust balanced by balance drum**



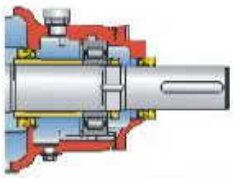
Sleeve bearings...



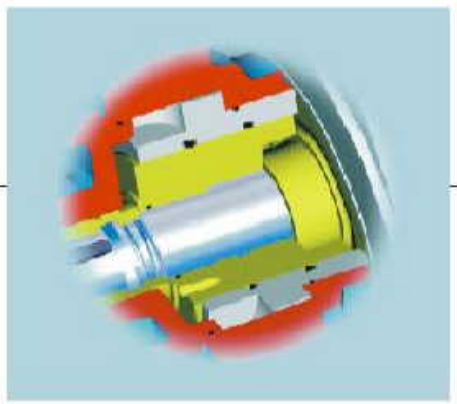
with forced feed lubrication



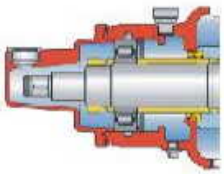
Taper roller bearings...



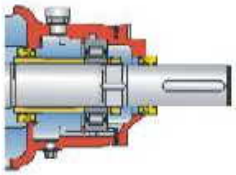
with splash oil lubrication



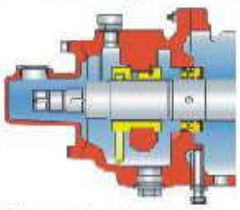
**Axial thrust balanced by balance disk**



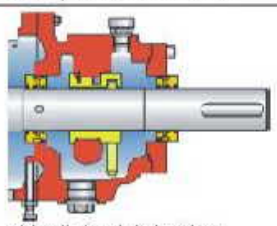
Roller bearings...



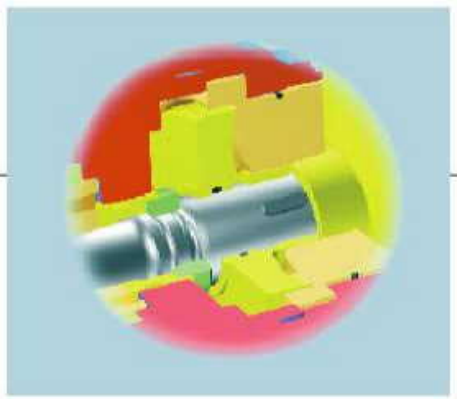
with splash oil lubriction



Sleeve bearings...

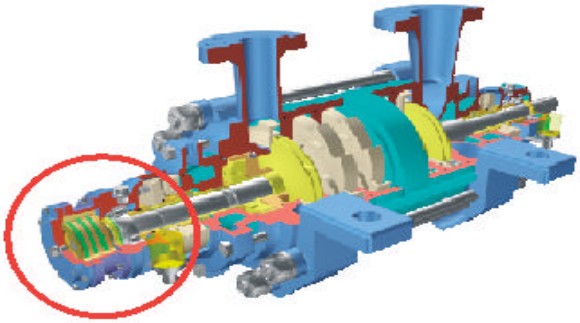


with oil ring lubric ation

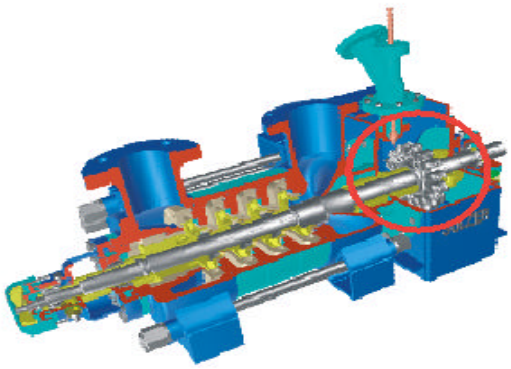


# "MP" MSMCP PUMP
# HighPressure

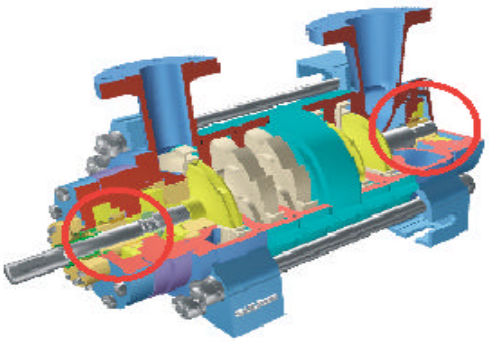
## Design Options



**Permanent-Magnetic Lift-Off Device**
With frequent start-stop operations the installation of a PERMAVOR lift off device is recommended, preventing a touching of the balancing parts and therefore wear.



**Pelton Wheel for Energy Recovery**
This unique design combines the hydraulic components from the M range with a Pelton wheel for energy recovery for desalination applications.



**Product Lubricated Bearings**
The bearing is lubricated by the pumped medium. This design offers a reduction of investment and operating costs as only one shaft seal is required on the driven end.

## Multistage Pumps MB, MC, MD and ME

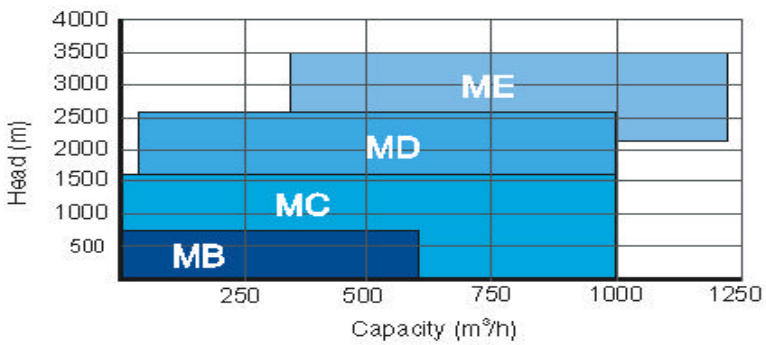
The M-line pump series provides a modular and proven design for different pressure ranges:

MB-pumps: up to 80 bar, 1160 psi

MC-pumps: up to 150 bar, 2175 psi

MD-pumps: up to 270 bar, 3915 psi

ME-pumps: up to 380 bar, 5510 psi



For more information about our products
and services please contact us


**INTMPE PUMPS.**

**Corporate Office**

# 318 – 2057 111 Street
Edmonton, Alberta Canada T6J 4V9
T +1 587 405 1039 F +1 780 440 0111
E crprt@intMPE.com
W www.intMPE.com


**intMPE * Mineral Processing Equipment**