



PUMPS

# STURDY BEARING ASSEMBLY AND AXIAL HEAT EXPANSION

HIGH-PRESSURE PUMPS, MP SERIES

**ANDRITZ**

ENGINEERED SUCCESS

# ANDRITZ Pumps for your industry



Water



Pulp and  
paper



Food



Mining and  
minerals



Power



Other  
industries

**ANDRITZ develops and manufactures high-quality custom tailored pumps for various industries. We supply pumps for different water and waste water applications. ANDRITZ pumps are operating successfully worldwide, for example in water resources management, waste water disposal, as well as large infrastructure projects for irrigation, desalination, and for drinking water and industrial water supplies.**

**Thousands of ANDRITZ submersible motors and pumps have been installed in mines around the world, working under severest conditions in water management and emergency drainage, including the largest submersible dewatering pumps in the world.**

**As plant and equipment supplier to the pulp and paper industry, ANDRITZ provides a complete pump program. Our product portfolio comprises medium-consistency pumps with an innovative fiber separation system, for example, as well as headbox pumps with efficiencies of over 90% and particularly low pulsation.**

**We also supply high-performance and reliable pumps for food applications such as proteins, dairy products, or beverages as well as a complete pump program for the entire sugar and starch industry. To round off the portfolio, ANDRITZ small hydropower plants and pumps used as turbines suitable for the private as well as the municipal sectors, and for industrial and commercial facilities ensure an economic and ecological independent power generation.**

# Premium pumping technology

## ANDRITZ HIGH-PRESSURE PUMPS FROM THE MP SERIES

are designed according to a strict modular compact system and sturdy bearing assembly for continuous operation in industrial plants. With this system different design variants can be supplied according to the customer's requirements quickly, easily and economically, without customizing and using a minimum number of components. The entire performance range is covered with seven mechanical pump sizes housing nine hydraulic systems. The axial heat expansion by the pump rotor is absorbed internally without influencing the coupling alignment. As the pump is designed for easy maintenance, the bearings and shaft seal can be changed without dismantling the pump body.

## HYDRAULIC SYSTEM

The closed, radial impellers are equipped with sealing strips on both sides. Axial thrust compensation by means of relief bore holes ensure low bearing load and long service life. Diffusors are mounted separately in the multi-stage casing and can be exchanged easily.

Balanced radial forces, lowest shaft excursion, and very smooth running are further highlights.

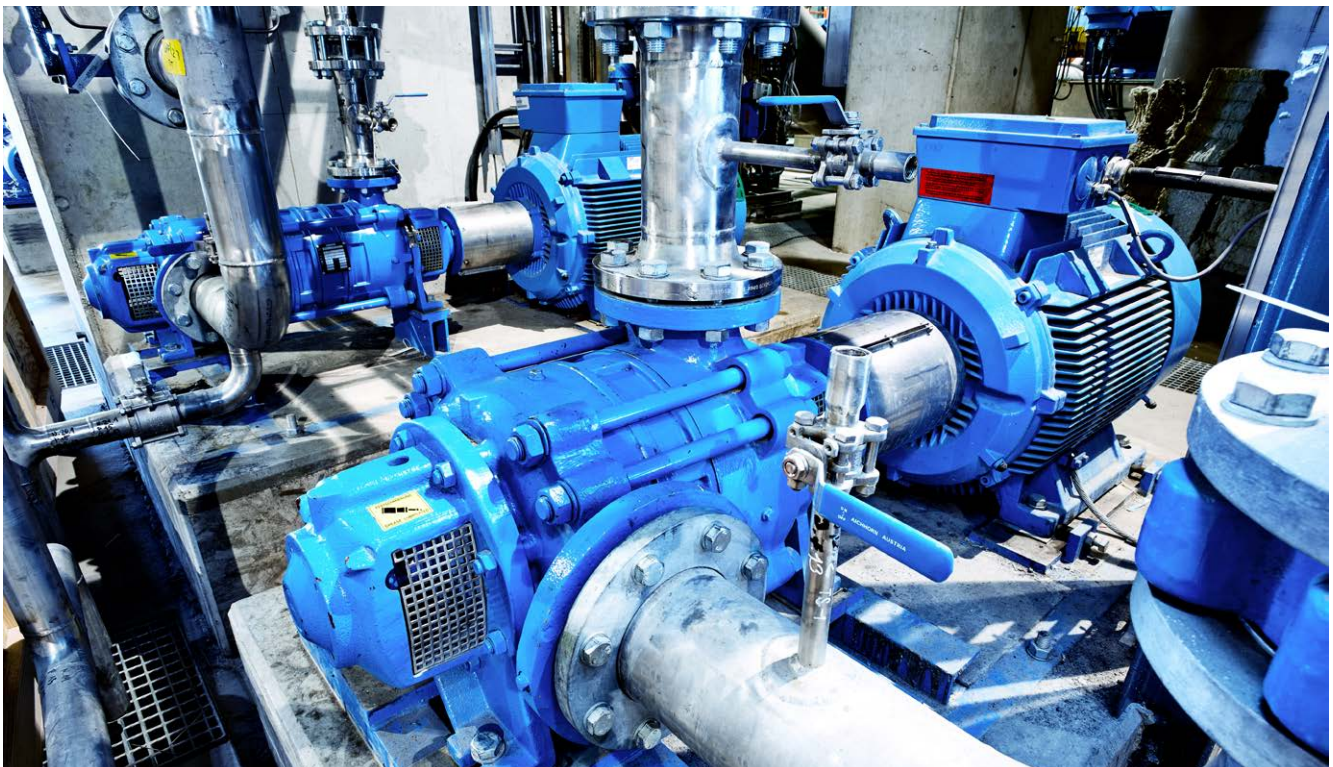
## FIELDS OF APPLICATION

- Cold and hot water
- Condensate
- Deionised water
- Oils
- Suspensions

## PRODUCT FACTS\*:

- Head up to 950 m
- Flow rate up to 400 m<sup>3</sup>/h
- Pressure up to 100 bar
- Temperature up to 160° C
- Power up to 600 kW

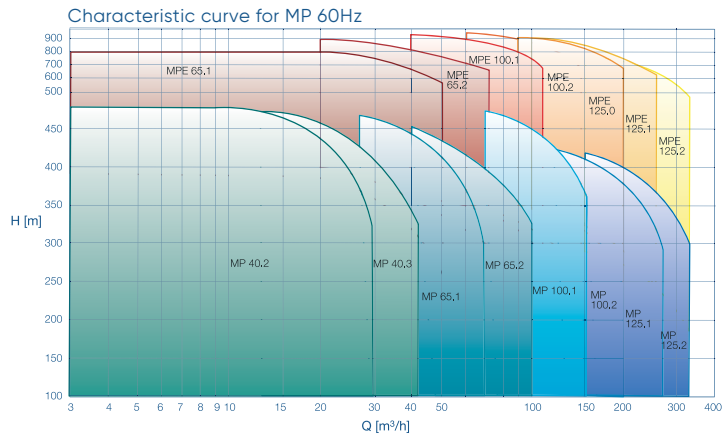
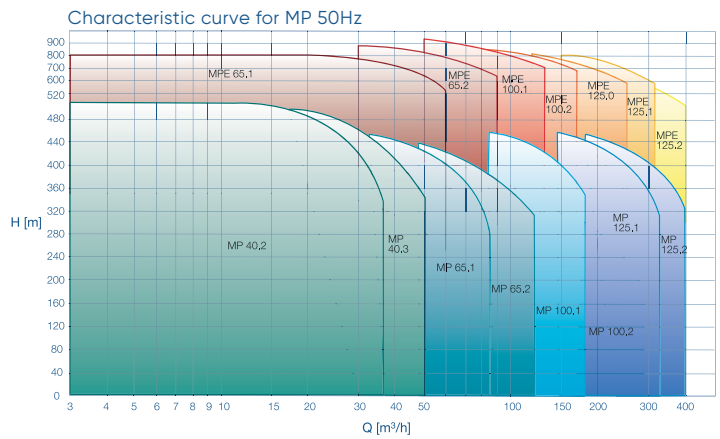
\*These values are guidelines and may differ depending on project requirements



# High-pressure pumps, MP Series

## PRODUCT BENEFITS

- Horizontal design with a closed impeller and external bearing assemblies on both sides
- Axial heat expansion by the pump rotor is absorbed internally without influencing the coupling alignment
- Easy maintenance
- IIoT ready

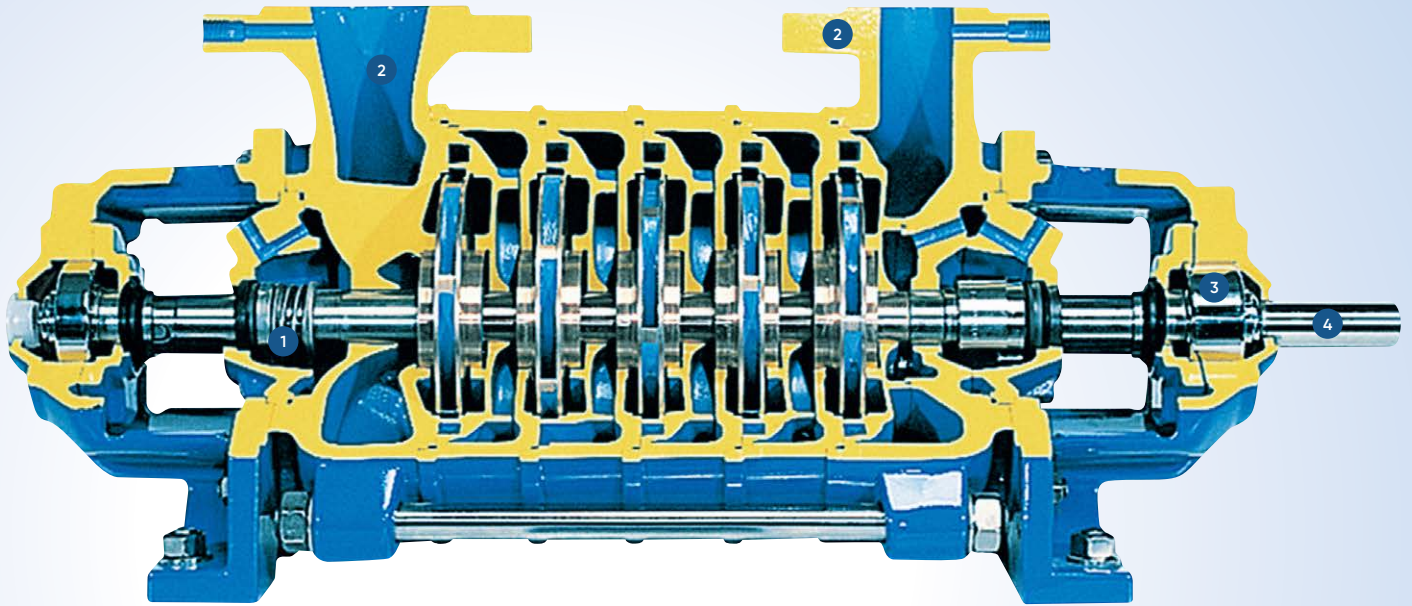


## MATERIAL COMBINATIONS

Designation	EN-GJL 250	1.4408	1.4021	1.4462
Multi-stage casing	■	■		
Discharge casing	■	■		
Suction casing	■	■		
Impeller		■		
Diffusor	■	■		
Shaft			■	■

European standard		US standard	
Number	Name	Grade	UNS
5.1301	EN-GJL-250	Class 40B	/
1.4408	GX5CrNiMo19-11-2	CF8M	J92900
1.4021	X20Cr13	420	S42000
1.4462	X2CrNiMoN22-5-3	2205	S31803, S32205





**1 SHAFT SEALS**

- Mechanical seals or stuffing box glands

**2 BRANCH POSITION**

- A choice between the following positions: delivery branch pointing upwards or to the left or right (also adaptable at a later date)

**3 BEARING ASSEMBLIES**

- Drive-side axial bearing designed as paired angular-contact bearing. Radial bearing designed as grooved bearing. Mechanical seals or stuffing box glands.

**4 DRIVE**

- Can be mounted on the discharge or suction side

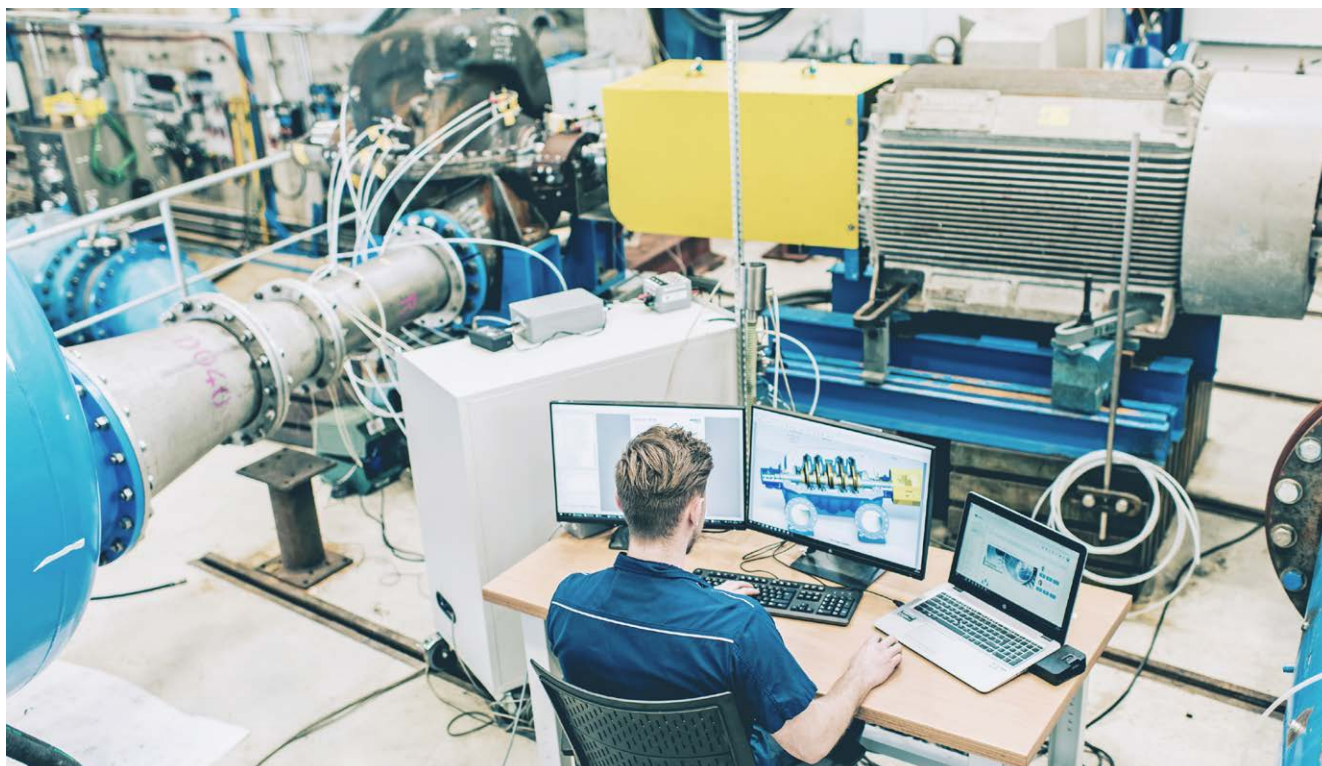
# Always a flow ahead - Research and development

Our affiliate ASTROE enjoys an internationally renowned reputation for its hydraulic developments and investigations. The high efficiency of the ANDRITZ pump series is ensured by Computational Fluid Dynamic (CFD) calculations and extensive testing carried out in our company owned laboratory.

Continuously increasing demands by customers in our operating industries emphasize the significance of R&D in the constant optimization of products and services. Today, efficiency, flexibility, and reliability over an extended lifetime are the major challenges of the market.

Our commitment to research and development forms the basis for our advances in hydraulic machine manufacturing. With ASTROE, center for hydraulic engineering and laboratory, we have an internationally renowned institute for hydraulic development work at our disposal. We are currently developing and testing our pumps and

turbines at five locations in Austria, Germany, Switzerland, and China. Our test stands are among the most accurate in the world. By networking these research and development centers, we provide a continuous transfer of know-how within the ANDRITZ GROUP for the benefit of our customers. The main tools for R&D are numerical simulation methods as well as experimental measurements in the laboratory and on site. State-of-the-art equipment, highly precise measuring instruments as well as the latest simulation technologies, and powerful software form the basis of the high technical quality of the pumps and turbines from ANDRITZ.



# Greater efficiency for a competitive edge - Pumps service

Optimization / Modernization / Operating reliability

The conditions of your plant have changed, but your pumps are still operating as previously and therefore, wasting energy? Would you like to optimize your system to reduce costs? With ANDRITZ, you will have a competent partner for these and numerous other services at your side.

Service and maintenance have a long tradition at ANDRITZ and complement the product portfolio. The century-long expertise is reflected not only in a service portfolio with innovative solutions and advanced products that can be optimally adapted to the respective customer needs, but also in a specially trained staff. ANDRITZ has specialized in the servicing of pumps to achieve improved efficiencies and adaptations to changed operating points of the installed pumps. A

large potential for savings can already be achieved by improving the efficiency of 20 percent of the installed pumps. Our service team provides prompt, professional, and reliable assistance – also for other manufacturers' products. Book our service package and you can be sure of the best operating reliability for your systems in the long term. We conduct an expert assessment together with you, thus creating transparency and making an optimum solution possible that is tailored to your needs. After examining your plant, we determine its savings potential and realize it by improving the efficiency of the pumps installed. Additionally, this individual solution lowers your maintenance costs. You do not have to think about personnel, nor about maintenance schedules or utilities. Assembly is conducted according to defined schedules and with assistance from our trained personnel.



## AN OVERVIEW OF OUR SERVICES

- Supply of original spare parts
- Deployment of trained personnel
- Installation and start-up
- Inspection
- Repairs, overhauls, maintenance
- Machine assessment by an expert for early fault detection
- Consulting and modernization
- Performance and vibration measurement
- Fault and damage analyses
- Feasibility studies
- Energy consulting for pumps and systems
- Preparation of maintenance schedules
- Service and maintenance agreements
- Automation and Electrical Power Systems
- Electronic equipment
- Training



## INNOVATION SINCE 1852

The internationally renowned ANDRITZ GROUP has been building pumps for more than 165 years. We offer innovative and targeted solutions with pumps and complete pumping stations. Our longstanding experience in hydraulic machine manufacturing and complete process know-how form the basis of the high standard of ANDRITZ pump engineering. Our quality and high-efficiency products as well as our understanding of customer requirements have made us a preferred partner for pumping solutions worldwide. ANDRITZ offers everything from a single source – from development work, model tests, engineering design, manufacture and project management, to after-sales service and training. We also perform complete start-up on site and guarantee our customers the best support. Our declared goal is your complete satisfaction. See for yourself!

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**ANDRITZ.COM/PUMPS**



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