



PUMPS

HIGH EFFICIENCY FOR THE MARINE INDUSTRY

**CENTRIFUGAL PUMP,
AICP SERIES**

ANDRITZ

ENGINEERED SUCCESS

ANDRITZ Pumps for your industry



Water and
wastewater



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.

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

For over 170 years, ANDRITZ has been a byword for competence and innovation in designing centrifugal pumps. Our end-suction centrifugal pumps are operating in various industrial applications successfully all over the world. They offer robustness and wear resistance, and fulfill highest customer expectations in terms of efficiency, life cycle, maintenance friendliness, and economic efficiency. The high standard of ANDRITZ centrifugal pumps is based on decades of experience in designing hydraulic machines and on extensive know-how. Our goals at ANDRITZ are to provide first-class products and service to secure sustained customer satisfaction.

ANDRITZ SINGLE-STAGE CENTRIFUGAL PUMPS FROM THE AICP SERIES

Our single-stage centrifugal pumps of the AICP series are based on the proven hydraulics of the ACP series. This pump was developed in a vertical and inline design for applications with limited space, especially for marine applications. With its closed impeller design and ACP casing hydraulics, the AICP pump achieves outstanding efficiency and the lower hydraulic forces enable various installation options.

The closed design with the most compact and economical advantages meets the requirements of the market. No special motor is required to carry the axial and radial forces, which is a good solution for the customer when selecting a motor.

In addition to the enclosed design, the AICP is also available with a bearing unit and an extractable design. With this design, maintenance work can be carried out without having to remove the motor, which is a particularly useful solution when space is limited vertically on ships. Different motor sizes can be exchanged using various adjustable motor plates.

FIELDS OF APPLICATION

- Marine desulfurization
- Offshore industry
- Industry water supply
- Fire pressure pump

PRODUCT BENEFITS

- High hydraulic efficiency
- Low NPSH value
- Compact and rigid design
- Modular design
- Different structure arrangement available
- Maintenance friendly
- Standard motor selection

PRODUCT FACTS

- Flow rates up to 2000 m³/h
- Heads up to 100m
- Temperatures up to 80°C
- Efficiency up to 86%
- Pressure up to 12 bar

Closed coupled design



Design with bearing unit and pull-out design



Closed impeller



Closed coupled design

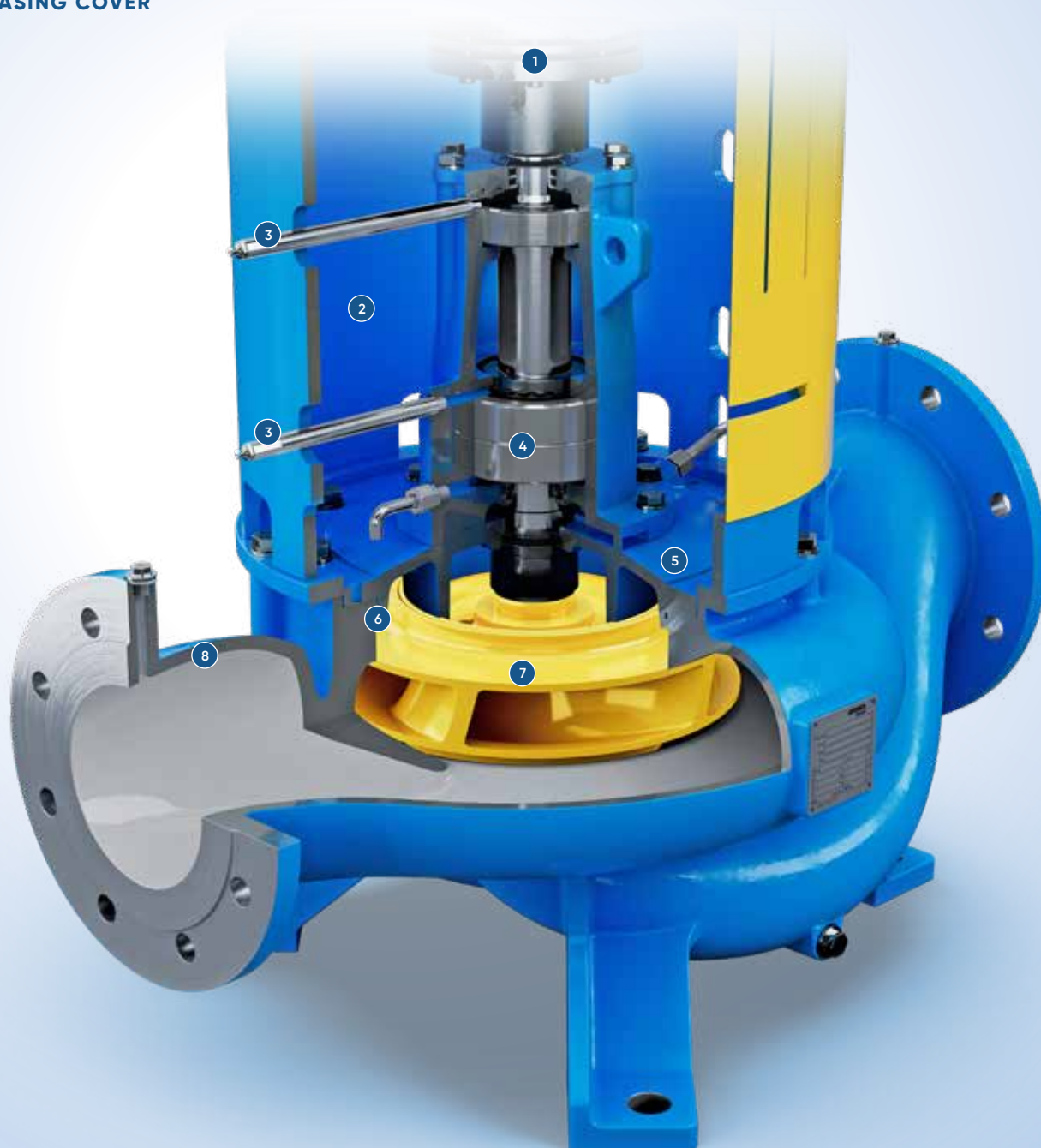
- | | |
|-------------------|---------------------|
| 1 MOTOR | 6 CASING COVER |
| 2 COUPLING HUB | 7 WEAR RING |
| 3 LANTERN | 8 IMPELLER |
| 4 SHAFT | 9 GAS RELEASED PIPE |
| 5 MECHANICAL SEAL | 10 VOLUTE CASING |



Design with bearing unit and pull-out

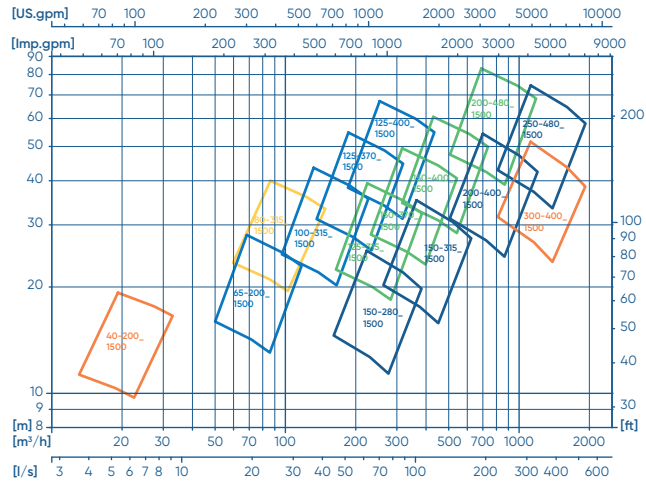
- 1 SPACER COUPLING
- 2 LANTERN
- 3 GREASE NIPPLE
- 4 BEARING SUPPORT
- 5 CASING COVER

- 6 WEAR RINGS
- 7 IMPELLER
- 8 VOLUTE CASING

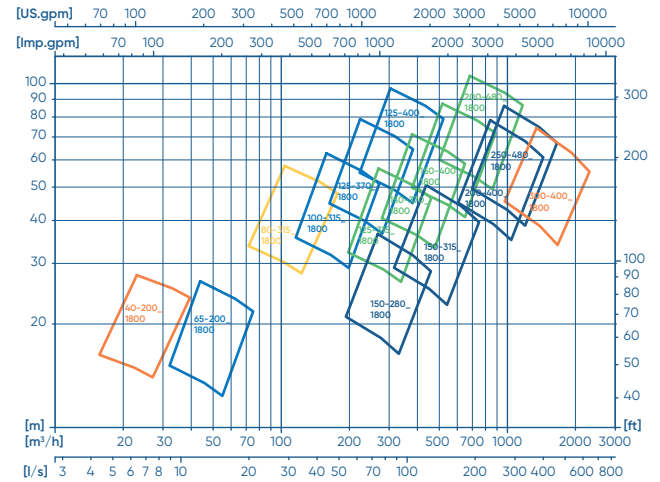


Centrifugal pump, AICP series

50HZ / 1500 RPM



60HZ / 1800 RPM



MATERIAL COMBINATIONS

AICP	GREY CAST IRON	CARBON STEEL	STAINLESS STEEL	DUPLEX STAINLESS STEEL	SUPER DUPLEX STAINLESS STEEL
Casing				■	■
Shaft				■	■
Impeller				■	■
Bearing Housing	■				
Lantern	■	■			
Wear ring			■	■	■

	European standard		US standard	
Material	Number	Name	Grade	UNS
Grey cast iron	5.1301	EN-GJL-250	Class 40B	F1007
Carbon steel	-	S345JR	-	-
Stainless steel	1.4404	X2CrNiMo17-12-2	A182	S31603
Duplex stainless steel	1.4474	GX4CrNiMoN26-5-2	A890 Grade 3A	J93370
Duplex stainless steel	1.4470	GX2CrNiMoN22-5-3	A995	J92205
Duplex stainless steel	1.4462	X2CrNiMoN22-5-3	A276	S32205
Supper duplex stainless steel	1.4469	GX2CrNiMoN26-7-4	A890 Grade 5A	S32615
Supper duplex stainless steel	1.4410	X2CrNiMoN25-7-4	A276 S32570	S32570



Greater efficiency for a competitive edge

RESEARCH AND DEVELOPMENT

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.



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 almost 170 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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