



PUMPS

**HIGH PERFORMANCE
UNDER TOUGH
CONDITIONS**

**SUBMERSIBLE CENTRIFUGAL PUMP,
ASCP SERIES**

ANDRITZ

ENGINEERED SUCCESS

ANDRITZ Pumps for your industry



Water and
wastewater



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

For over 165 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 submersible 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 SUBMERSIBLE CENTRIFUGAL PUMPS FROM THE ASCP SERIES

The ANDRITZ submersible centrifugal pump (ASCP series) is a single-stage centrifugal pump equipped with a submersible motor. The series has a range of different impellers – open, semi-open and closed.

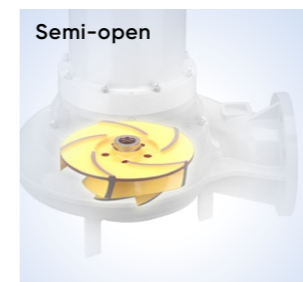
The design not only allows for optimal conveyance of pre-cleaned wastewater (for example inside a wastewater treatment plant) but also highest efficiencies of up to 80 percent, which is higher than most other wastewater hydraulics on the market.

Another big advantage is the modular system, which means that only a small number of parts have to be kept in stock. The pump itself is a standard ANDRITZ centrifugal pump and the same spare parts can be used for the submersible centrifugal pump, such as a wear ring, casing cover, front liner and many more. Additionally, the sealing between pump and motor is achieved by means of high-quality of mechanical seals. At the same time, a monitoring system protects the motor against damage.

The series has a range of different impellers:



Open



Semi-open



Closed

FIELDS OF APPLICATION

- Water treatment plants
- Wastewater plants
- Industrial water/wastewater
- Flood control
- Irrigation and drainage pumping stations

PRODUCT FACTS*

- Nominal diameter (DN) 32 to 300
- Flow rates up to 2,200 m³/h at 50 Hz
- Heads up to 70 m
- Temperatures up to 40 °C
- Consistencies up to 4%
- Efficiency up to 88%
- Pressure up to 10 bar (higher on demand)
- IP68 submersible motor (with or without cooling jacket)

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



ASCP series – Two different types of installation

M(OBILE)-INSTALLATION

- 1 Elbow
- 2 Lantern



N(WET)-INSTALLATION

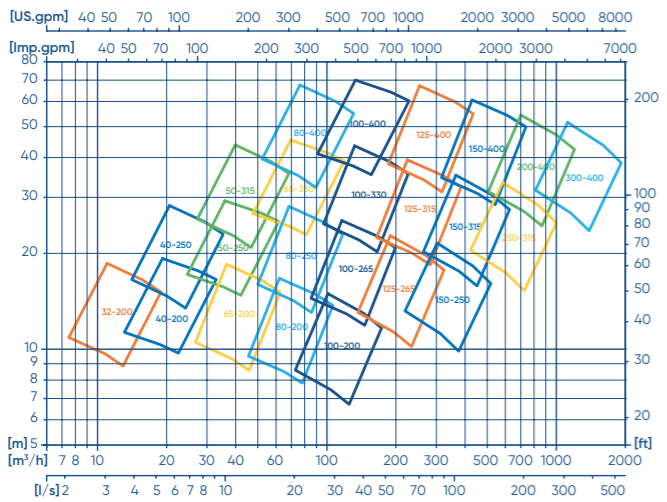
- 1 Claw
- 2 Discharge bend
- 3 Guide rail



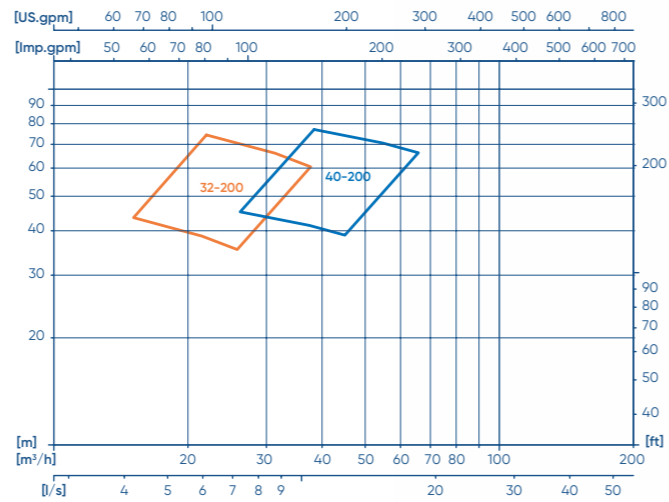
PRODUCT BENEFITS

- Easy maintenance
- Efficiency above industrial standard
- Low energy consumption
- Sensors are modifiable on request
- Robust design
- Well-proven hydraulics
- Modular design

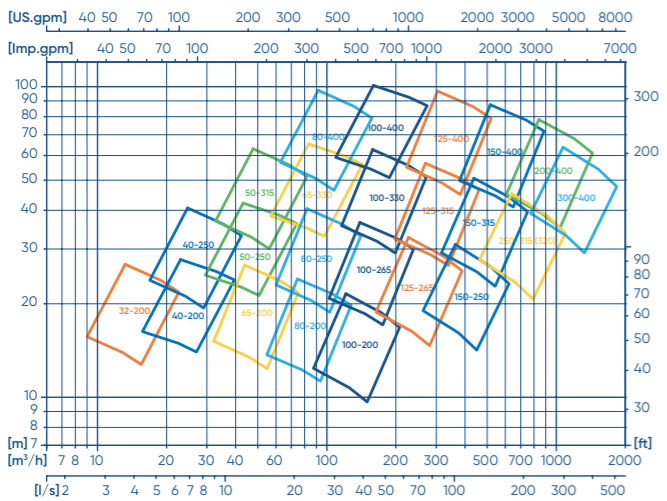
50HZ / 1500 RPM



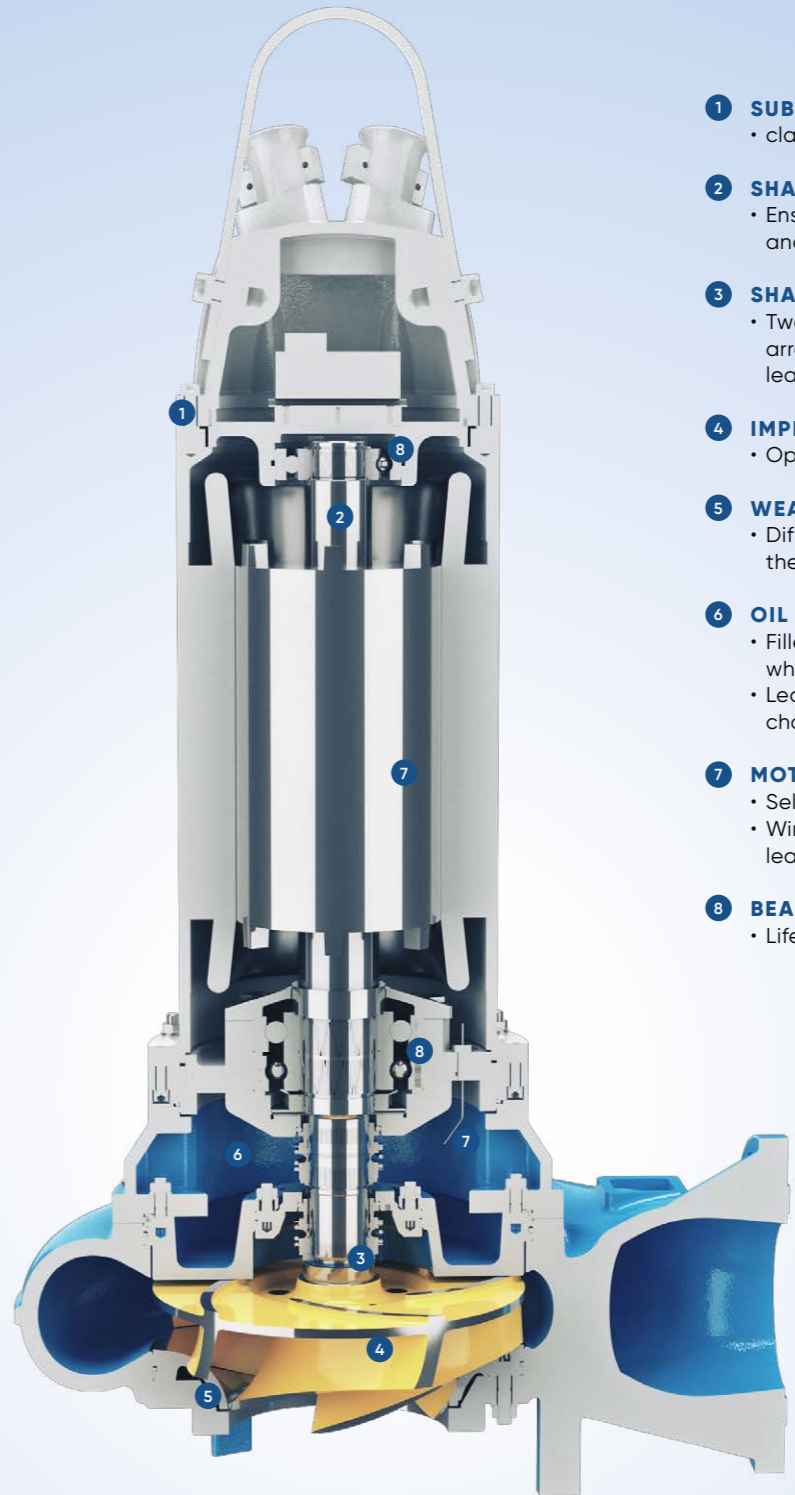
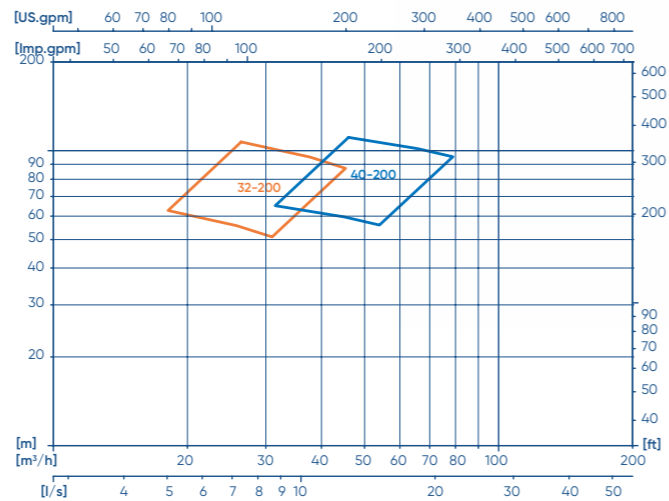
50HZ / 3000 RPM



60HZ / 1800 RPM



60HZ / 3600 RPM



- 1 SUBMERSIBLE IP68 MOTOR**
 - class F or H insulation
- 2 SHAFT**
 - Ensures minimum shaft deflection and low mechanical vibration
- 3 SHAFT SEALING**
 - Two single mechanical seals in tandem arrangement to protect the motor against leakage
- 4 IMPELLER DESIGN**
 - Open, semi-open or closed
- 5 WEAR PROTECTION**
 - Different wear protection depending on the impeller design (wear ring or wear lining)
- 6 OIL CHAMBER**
 - Filled with biologically degradable oil; which ensures lubrication of the seals
 - Leakage electrodes to monitor the oil chamber for leakage potential
- 7 MOTOR SENSOR**
 - Selection of different motor sensors possible
 - Winding and bearing temperature and leakage electrodes
- 8 BEARING ARRANGEMENT**
 - Life-long lubricated bearings

Material design / CD

Volute casing	EN-GJL-250
Front lining	1.4474
Impeller	1.4474
Casing cover	EN-GJL-250
Wear ring	1.4404
Shaft	1.4021 or 1.4462
Claw	EN-GJL-250
Discharge bend	EN-GJL-250
Lantern	S235JR or 1.4301
Elbow	S235JR

European standard

Number	Name	Grade	UNS
5.1301	EN-GJL 250	/	Class 40B
1.4474	GX4CrNiMoN26-5-2	1A	J93370
1.4021	X20Cr13	420	S42000
1.0038	S235JR	A36	K02600
1.4404	X2CrNiMo17-12-2	316L	S31603
1.4301	X5CrNi18-10	304	S30400
1.4462	X2CrNiMoN22-5-3	2205	S31803, S32205

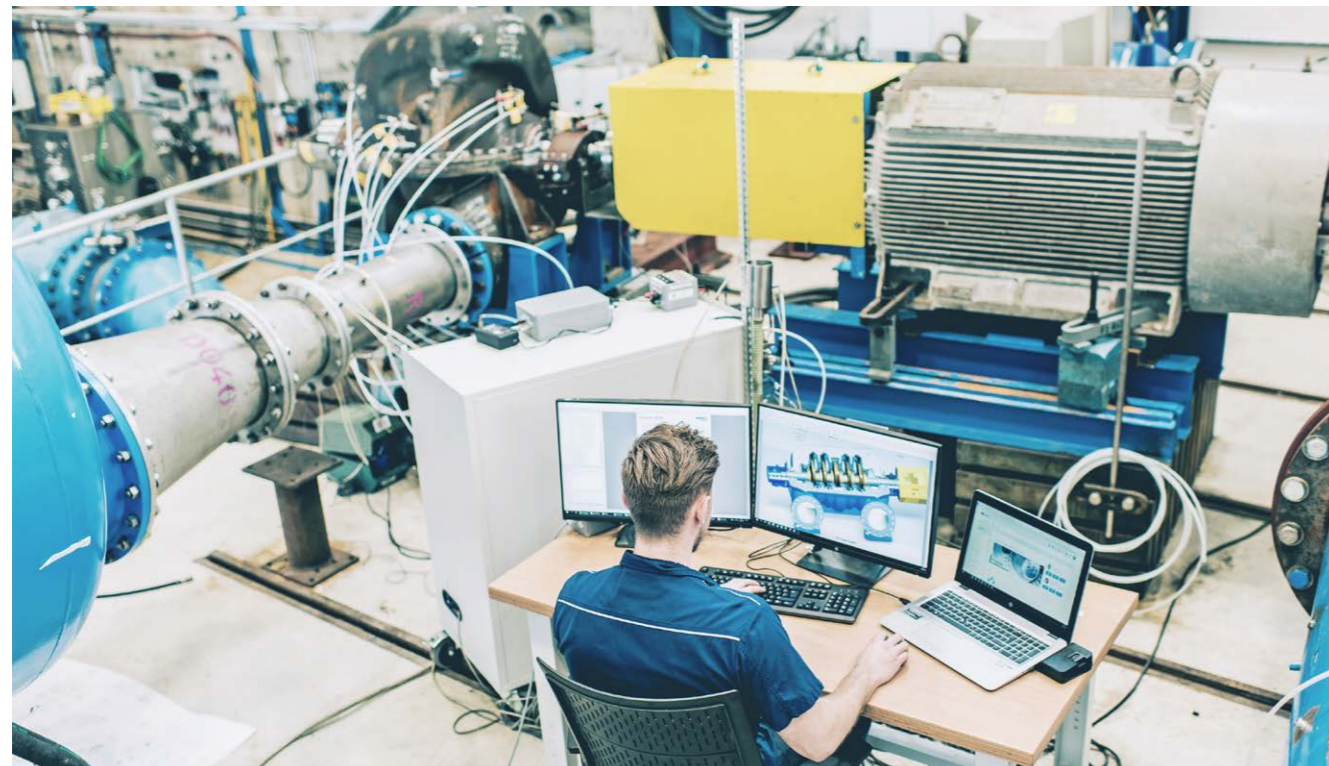
Always a flow ahead - Research and development

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 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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