PUMPS

HIGHEST EFFICIENCIES FOR VARIOUS INDUSTRIAL APPLICATIONS

CENTRIFUGAL PUMP, ACP SERIES

ANDRITZ

ANDRITZ Pumps for your industry

Water | Pulp and paper | Power | General industries

ANDRITZ specializes in the development and manufacturing of high-quality pumps, offering a comprehensive range from standardized products to tailor-made solutions across various industries. Our pumps have achieved global success in diverse applications, including municipal drinking water supply, wastewater disposal, industrial water distribution, and significant infrastructure projects such as irrigation, seawater desalination, and water transmission.

In flood control, irrigation, and water transport, ANDRITZ not only provides the largest and most powerful pumps, but also complete systems and pumping stations. As a prominent supplier to the pulp and paper industry, we leverage strong process expertise to deliver pump solutions that enhance process stability and energy efficiency. Our product portfolio encompasses a full range of robust process pumps and innovative medium-consistency pumps with an advanced system to avoid fiber losses. Notably, our double-suction headbox pumps boast efficiency levels of up to 93% and low-pulsation impellers, crafted with innovative methods. They thus provide the best performance in the paper manufacturing process.

In line with our commitment to sustainability, ANDRITZ offers reliable small hydroelectric power plants and pumps utilized as turbines for private, municipal, industrial, and commercial applications. Our diverse range ensures economically and ecologically sustainable energy production. Specializing in hydroelectric storage, our pumps cover a wide range from high heads to high flows, showcasing our engineering competence.

Our pump series, distinguished by modern and robust designs, high efficiency levels, and sustainability features, find applications in various demanding industries, including sugar and starch, lysine, bioethanol, hydrogen, fertilizer, mining, offshore, and general process industries.

Additionally, ANDRITZ provides IIOT-enabled premium pump technology for enhanced process monitoring, thus reflecting our commitment to cutting-edge solutions.

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 ACP SERIES are available in a highly wear-resistant, open impeller design. Thanks to their low axial thrust and open channels, these pumps are suitable for conveying many different media. Depending on the impeller design, they can convey slightly contaminated and contaminated media with some solids and content with consistencies of up to 8%. Thus, operating as processes pumps, they cover a wide range of applications in the pulp and paper, mining, offshore, power, food, and chemical industry. Additionally, ANDRITZ single-stage centrifugal pumps can also be used in water supply, waste water treatment, desalination plants, and irrigation as well as drainage. A modular system ensures high availability, enables the use of proven components and reduces the number of spare parts to be held in stock. ANDRITZ centrifugal pumps from the ACP series can be delivered with and for an Industrial Internet of Things upward integratable base.

FIELDS OF APPLICATION

- Pulp and paper industry
- Water and waste water management
- Mining industry
- Offshore industry
- Power industry
- Food industry (e.g. sugar, starch, tomato juice)
- Bioethanol
- Chemical industry

PRODUCT FACTS*:

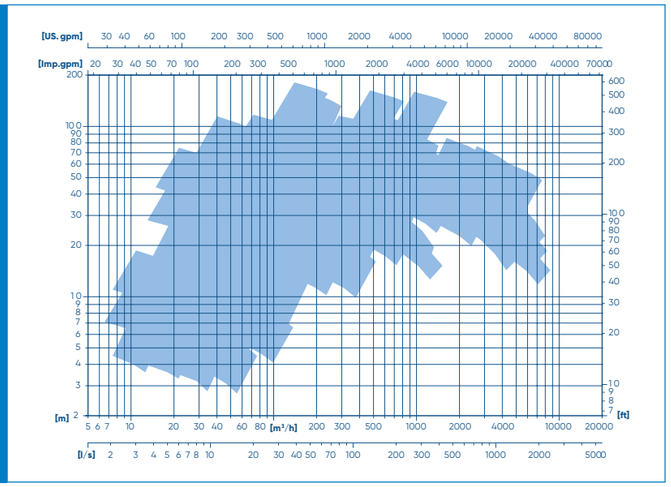
- Flow rates up to 9.000 m3/h
- Heads up to 190 m
- Temperatures up to 180°C
- Consistencies up to 8%
- Efficiency up to 91%
- Pressure up to 83 bar

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

Single-stage centrifugal pump ACP series

PRODUCT BENEFITS

- Maximum efficiency of up to 90%
- State-of-the-art NPSH behavior
- Part load behavior better than industry benchmark
- Reduced number of spare parts to be held in stock
- Only seven bearing support sizes for the entire series
- SMARTSEP degassing system
- IIoT ready

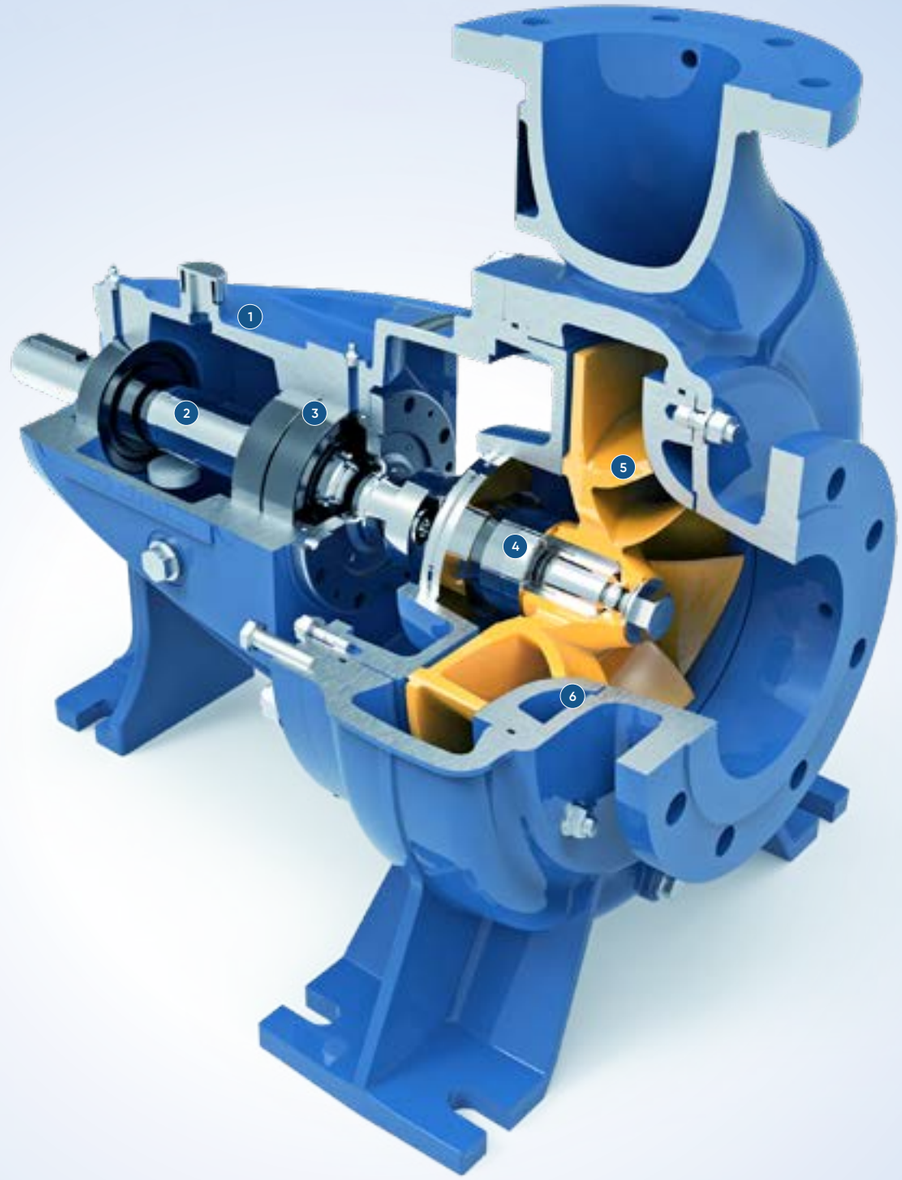


ANDRITZ SMARTSEP-DEGASSING SYSTEM has been especially designed for high gas content and stock suspensions of up to 8%. An additional separation impeller acting as an integrated degassing system removes gas from the media and conveys fibers reliably back to the pump at the same time. Thus, no additional vacuum pump is needed. The controlling of the degassing valve becomes very easy. When the pump is running the valve is open, but when the pump is not running the valve is closed.

MATERIAL COMBINATIONS

ACP SERIES	GREY CAST IRON	DUPLEX STAINLESS STEEL	STAINLESS STEEL	SUPER DUPLEX STAINLESS STEEL	ABRASION RESISTANT CAST IRON
Impeller		■		■	■
Casing/casing cover	■	■		■	■
Bearing housing	■				
Front lining		■		■	■
Stuffing box body	■	■		■	■
Shaft		■	■		

	European standard		US standard	
Material	**Number**	**Name**	**Grade**	**UNS**
Grey cast iron	5.1301	EN-GJL-250	ASTM A48 Class No. 25 B	F10007
Duplex stainless steel	1.4474	GX4CrNiMoN26-5-2	ASTM A890 Grade 3A	J93371
Duplex stainless steel	1.4462	X2CrNiMoN22-5-3	ASTM A789 Grade S32205	S32205
Stainless steel	1.4021	X20Cr13	ASTM A276 Type 420	S42000
Super duplex stainless steel	1.4517M	GX2CrNiMoCuN26-6-3-3	ASTM A890 Grade 1B	J93372
Super duplex stainless steel	1.4469	GX2CrNiMoN26-7-4	ASTM A890 Grade 5A	S32615
Abrasion resistant cast iron	5.5610	EN-GJN-HB555 (XCr23)	ASTM A532 III A level 1	-



1 BEARING SUPPORT
- Single casting with integrated lantern
- Only seven bearing support sizes for the entire series

2 SHAFT
- Ensures minimum shaft deflection and low mechanical vibration

3 TOUGH BEARINGS
- Long service life

4 SHAFT SEALING
- Single mechanical seal for stock conveyance without sealing and rinsing water
- Double mechanical seal
- Dynamic seal

5 IMPELLER DESIGN
- Open, semi-open or closed
- Special impeller for tomato paste and fruit concentrate
- Low-pulse impeller for pulp and paper industry

6 WEAR LINING
- One wear lining to protect the pump casing

Single-stage centrifugal pump with internal and external vacuum pump, ACP-SI and ACP-SE series

In addition to the conventional ACP series, the two pump types ACP-SI and ACP-SE have the function of self-priming and degassing. The ACP-SI is equipped with an internal and the ACP-SE with an external vacuum system. Both pump types are availablewith a semi-open impeller design and are equipped with a separator. Through the separator the gas enters the vacuum system and is conveyed in the process. Thanks to their low axial thrust and open channels, these pumps are suitable for pumping a wide variety of media. They can handle media up to 8% consistency and gas up to 12%.

Among others, the process pumps therefore cover a wide range of applications in the pulp and paper, water and power industries. Thanks to the modular system of the ACP series, an upgrade to an ACP-SI or ACP-SE can be done at any time without major modifications.

FIELDS OF APPLICATION

- Pulp and paper industry
- Water and waste water management
- Power industry
- Food industry (e.g. sugar and starch)
- Other industries

Single-Stage centrifugal pump with internal vacuum pump, ACP-SI series

Single-Stage centrifugal pump with external vacuum pump, ACP-SE series

The ACP-SI is equipped with an internal degassing system and is suitable for media with consistencies up to 8% and increased gas content up to 8%. The degassing system consists of a separator, that separates the gas form the medium. In addition, an internal liquid vacuum pump is mounted on the shaft with the impeller. The strength of the vacuum is controlled via a vacuum relieve valve. This enables ideal gas separation with no loss of medium.

PRODUCT FEATURES*

- Flow rates up to 9.000 m^3/h
- Heads up to 190 m
- Temperatures up to 100°C
- Consistencies up to 8%
- Gas content up to 8%
- Suction height up to 8 m
- Efficiency up to 89%
- Pressure up to 25 bar

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

ACP-SI series

The ACP-SE is equipped with an external vacuum pump and is suitable for media with consistencies up to 8% and increased gas content up to 12%. The degassing system in the pump consists of a separator that separates the gas from the medium and an external liquid ring vacuum pump placed next to the process pump. A double mechanical seal effectively ensures the sealing of the system in the pump from the atmosphere. The strength of the vacuum is adjusted via vacuum relieve valve, making gas separation possible without loss of medium. Afterwards the gas gets removed by the water separator, which separates the sealing water from the mechanical seal and the liquid ring vacuum pump from the gas.

PRODUCT FEATURES*

- Flow rates up to 9.000 m^3/h
- Heads up to 190 m
- Temperatures up to 100°C
- Consistencies up to 8%
- Gas content up to 12%
- Suction height up to 8 m
- Efficiency up to 89%
- Pressure up to 25 bar

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

ACP-SE series

BASEFRAME OPTIONS

T-Baseframe

The T-Baseframe enables solid installation of pumps and motors.

T-BASEFRAME

- With the flexible sliding rail system, the motor can be aligned easily horizontally and vertically.
- The T-Baseframe and the sliding rail system are available in galvanized or painted version.
- The sliding rails allow the mounting of the next bigger motor type on the T-Baseframe, if more motor power is needed.

SSG-Baseframe

The SSG-Baseframe is designed for low vibrations regarding the SSG 3030 standard, with its rigid design and optimized goruting.

SSG-BASEFRAME

- Rigid riser blocks provide a mix of an easy motor alignment as well as the minimization of transmitted vibrations.
- The riser blocks allow the mounting of the next bigger motor type on the SSG Baseframe, if more motor power is needed.

Single-stage centrifugal centerline pump

Next to our standard and self-priming centrifugal pumps, the ACP is available in a centerline supported design.

The ACP centerline pumps are extremely versatile and perfect for a wide range of high-temperature applications. They have been specially developed to withstand temperatures of up to 200°C and are designed in pressure class PN25. Higher pressure classes can be realized on request.

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 Pump Technology Center (PTC) ASTROE, center for hydraulic engineering and laboratory, we have an internationally renowned institute for hydraulic development work at our disposal. We are developing and testing our pumps at different locations worldwide. 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 more than 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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