



**PUMPS**

# **DESIGNED TO CUSTOMERS' SPECIFIC REQUIREMENTS**

**MULTI-STAGE AXIAL SPLIT CASE PUMP  
ASPM SERIES**

**ANDRITZ**

**ENGINEERED SUCCESS**

# ANDRITZ Pumps for your industry



Water



Pulp and  
paper



Power



Other  
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 designing and manufacturing customized pump solutions at the highest level. Our engineered 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 extensive know-how. In the interests of our customers, we set no limits on size and flow rate in the development and manufacture of customer-specific pumps. Experienced experts assist our customers with planning, development, installation, start-up and after-sales service. Engineering, design, material selection and manufacturing all run according to defined standards. The processes are transparent and can be adapted to individual needs. Our goals at ANDRITZ are to provide first-class products and service to secure sustained customer satisfaction.

## ANDRITZ MULTI-STAGE AXIAL SPLIT CASE PUMP

is a highly engineered pump designed to customers' specific requirements. Its multi-stage impeller arrangement that can be combined in different ways to fulfill different application needs. The design is rigid, the machine is calculated and designed to withstand all load cases which might occur during the lifetime of the pump. In a horizontal installation, the motor can be placed on the left or right or on both sides as twin drive. For a vertical installation, ANDRITZ multi-stage split case pumps are available in a radial split case design with barrel casing. The machine is used for continuous use for the pumping of clean liquids in water supply projects, power station projects and desalination plants. Peak ef-

ficiencies and user-friendliness make this technology particularly effective, and in the axial split design maintenance-friendliness at high heads. Thanks to the excellent efficiency, which is above the industry average, and the speed-variable drive (order-related), this series is characterized by its low energy consumption.

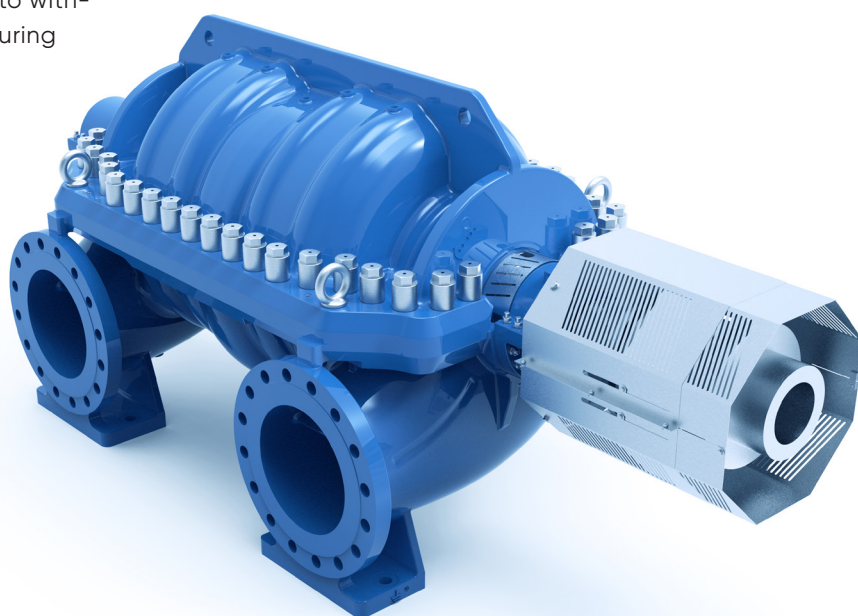
## FIELDS OF APPLICATION

- Water transport for irrigation and drainage
- Water transport for drinking and industrial water supplies
- Cooling water pumps for power stations in power supply
- Flue gas desulfurization pumps in power supply
- Seawater intake pumps in desalination
- Pump storage plants

## PRODUCT FACTS\*:

- Nominal diameter (DN) 150 to 1600
- Head up to 1000 m
- Flow rate up to 10 m<sup>3</sup>/s
- Highest efficiency available
- Power up to 40 MW

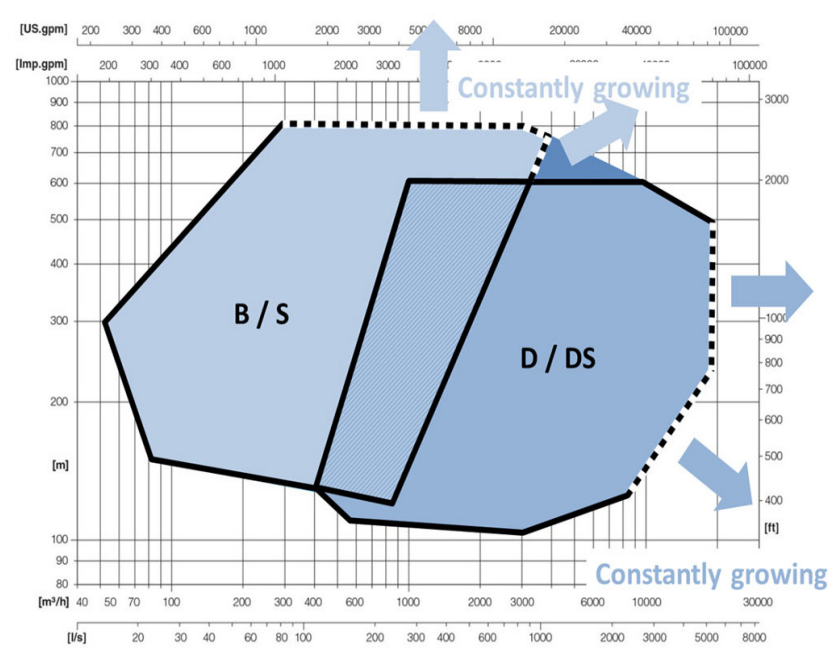
\*These values are guidelines and may differ depending on project requirements



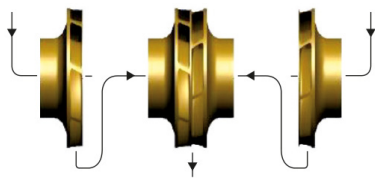
# ANDRITZ multi-stage axial split case pump (ASPM)

## PRODUCT BENEFITS

- Excellent efficiencies above industry average
- NPSH values significantly below industry standard
- Low energy consumption
- Lower civil engineering costs due to lower NPSH requirements
- Less weight (radial split case/barrel casing)
- Cost-efficient (radial split case/barrel casing)
- Machine position provides an additional advantage for NPSH values (radial split case/barrel casing)
- IIoT ready

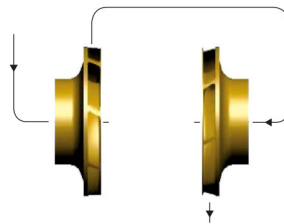


## IMPELLER ARRANGEMENT



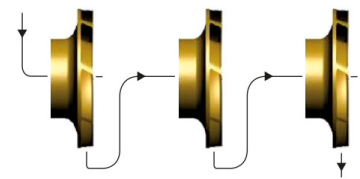
### 2D

Double-stage, double-suction design, with two double-suction impellers arranged back to back; also available as 3D



### S+S

Double-stage arrangement with two singlesuction impellers arranged back to back; also available as 2S+2S



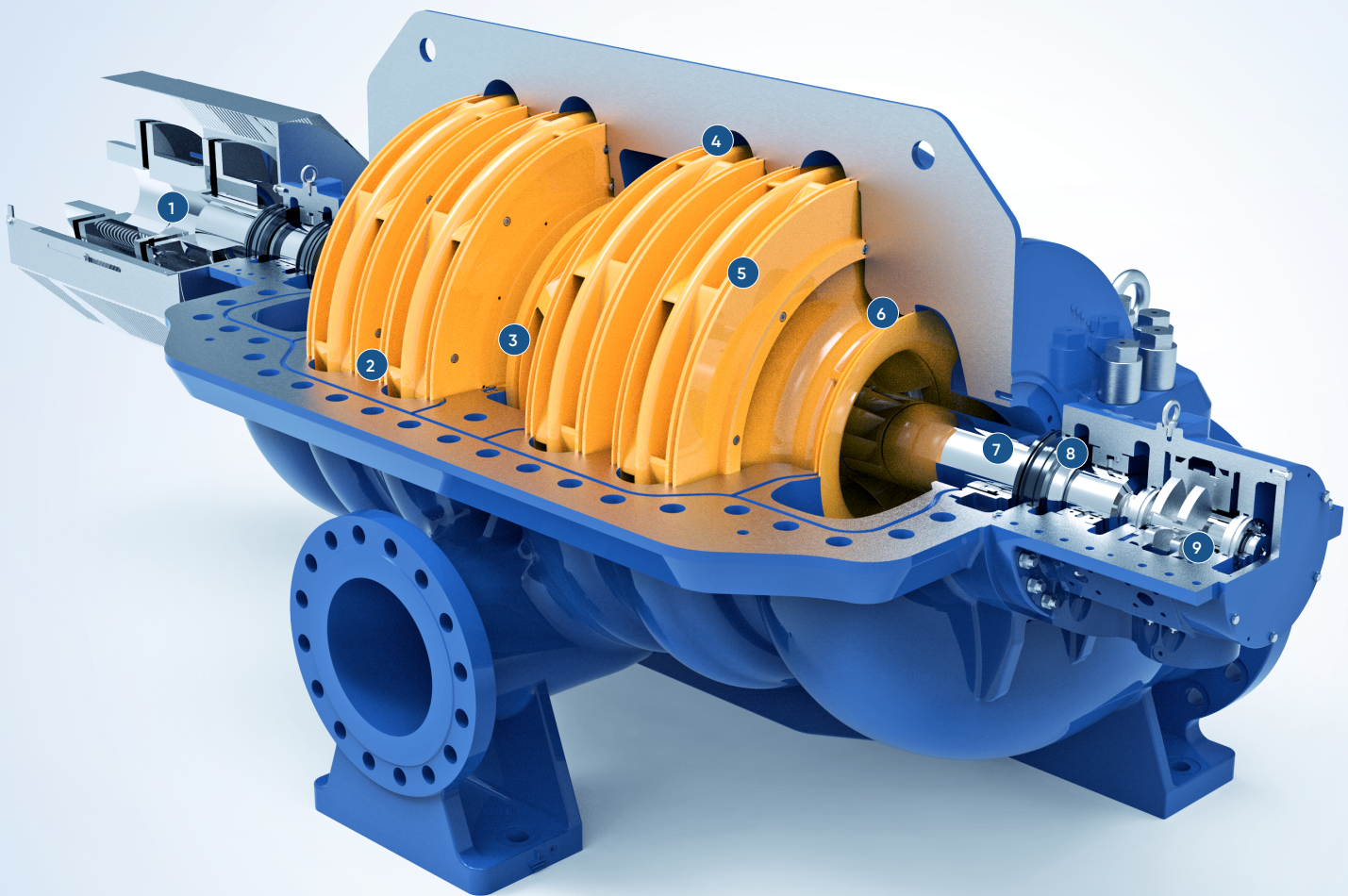
### 3S

Serial stage arrangements available up to 6 stages

# Material combinations

| ASPM SERIES        | GREY<br>CAST IRON | DUCTILE<br>CAST IRON | CARBON<br>STEEL | STAINLESS<br>STEEL | DUPLEX<br>STEEL | SUPER DUPLEX<br>STAINLESS STEEL | SYNTHETIC |
|--------------------|-------------------|----------------------|-----------------|--------------------|-----------------|---------------------------------|-----------|
| Casing             |                   | ■                    | ■               | ■                  | ■               | ■                               |           |
| Impeller           |                   |                      |                 | ■                  | ■               | ■                               |           |
| Guide/Return Vanes |                   |                      | ■               | ■                  | ■               | ■                               |           |
| Wear Ring          |                   |                      |                 | on demand          | on demand       |                                 | ■         |
| Linings            |                   |                      | ■               | ■                  | ■               | ■                               |           |
| Shaft              |                   |                      |                 | ■                  | ■               | ■                               |           |
| Bearing housing    | ■                 |                      |                 |                    |                 |                                 |           |
| Bushings           |                   |                      |                 | on demand          | on demand       |                                 | ■         |
| Shaft Sleeves      |                   |                      |                 | ■                  |                 | ■                               |           |
| Feather Keys       |                   |                      |                 | ■                  | ■               | ■                               |           |

| Material                     | European standard |                  | US standard    |        |
|------------------------------|-------------------|------------------|----------------|--------|
|                              | Number            | Name             | Grade          | UNS    |
| Grey cast iron               | 5.1301            | EN-GJL-250       | Class No. 35 B | F10007 |
| Ductile cast iron            | 5.3105            | EN-GJS-400-18    | Grade 60-40-18 | F32800 |
| Ductile cast iron            | 5.3200            | EN-GJS-500-7     | -              | F33500 |
| Carbon steel                 | 1.0619            | GP-240-GH        | Grade WCB      | J03002 |
| Stainless steel              | 1.4317            | GX4CrNi13-4      | Grade CA6NM    | J91550 |
| Stainless steel              | 1.4313            | X3CrNiMo13-4     | Grade F6NM     | S41500 |
| Duplex stainless steel       | 1.4474            | GX4CrNiMoN26-5-2 | Grade 3A       | J93370 |
| Duplex stainless steel       | 1.4462            | X2CrNiMoN22-5-3  | Grade S32205   | S32205 |
| Super duplex stainless steel | 1.4469            | GX2CrNiMoN26-7-4 | Grade 5A       | S32615 |
| Super duplex stainless steel | 1.4410            | X2CrNiMoN25-7-4  | Grade S32750   | S32750 |
| Synthetics                   | -                 | Vesconite        |                |        |
| Synthetics                   | -                 | PEEK             |                |        |



**1 BEARING**

- Roller and slide bearing with and without external oil supply

**2 BUSHING**

- Replaceable and interchangeable for all stages
- Reduced leakage between stages

**3 LAST STAGE IMPELLER**

- Specific impeller for double suction design
- In case of double volute compensation of radial load

**4 STAGE IMPELLERS**

- With excellent efficiency

**5 1<sup>ST</sup> STAGE IMPELLERS**

- Optionally suction impeller for even better NPSH values where needed

**6 WEAR RINGS**

- Replaceable and interchangeable wear rings for all stages
- Hydraulically optimized and made of Al-Bronze

**7 SHAFT**

- Robust design drive shaft made of high-quality stainless steel

**8 SHAFT SEALING**

- Single mechanical seal
- Other seal types on demand

**9 EXTERNAL BEARING HOUSING**

- For easy maintenance

# 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 simula-

tion 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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