



**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



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 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.

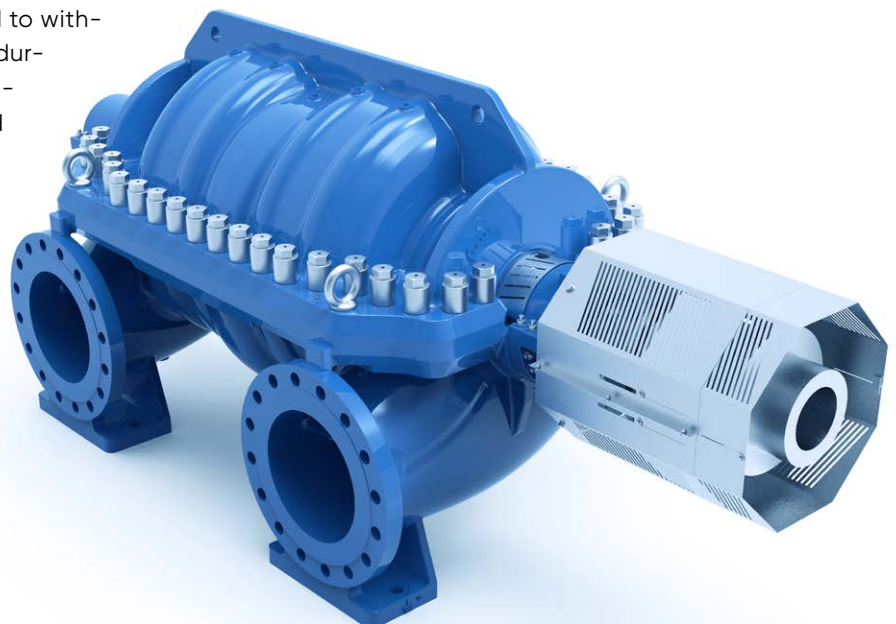
## FIELDS OF APPLICATION

- 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

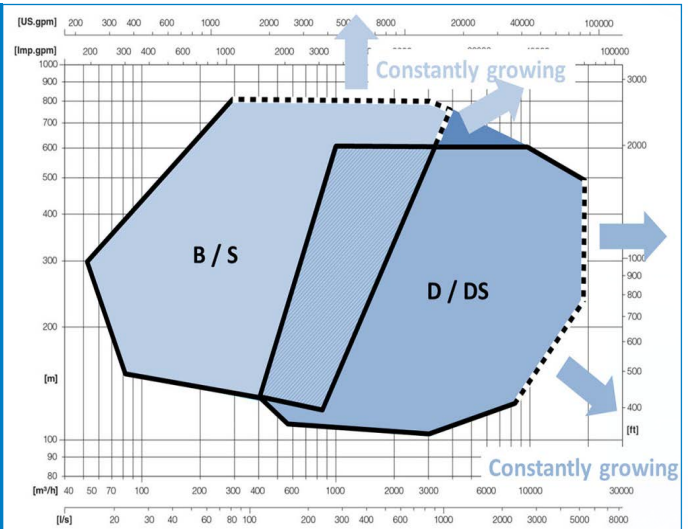
\*These values are guidelines and may differ depending on project requirements



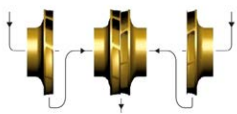
# ANDRITZ multi-stage axial split case pump (ASPM)

## 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

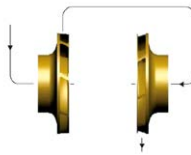


## IMPELLER ARRANGEMENT



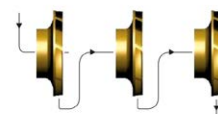
### 2D

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



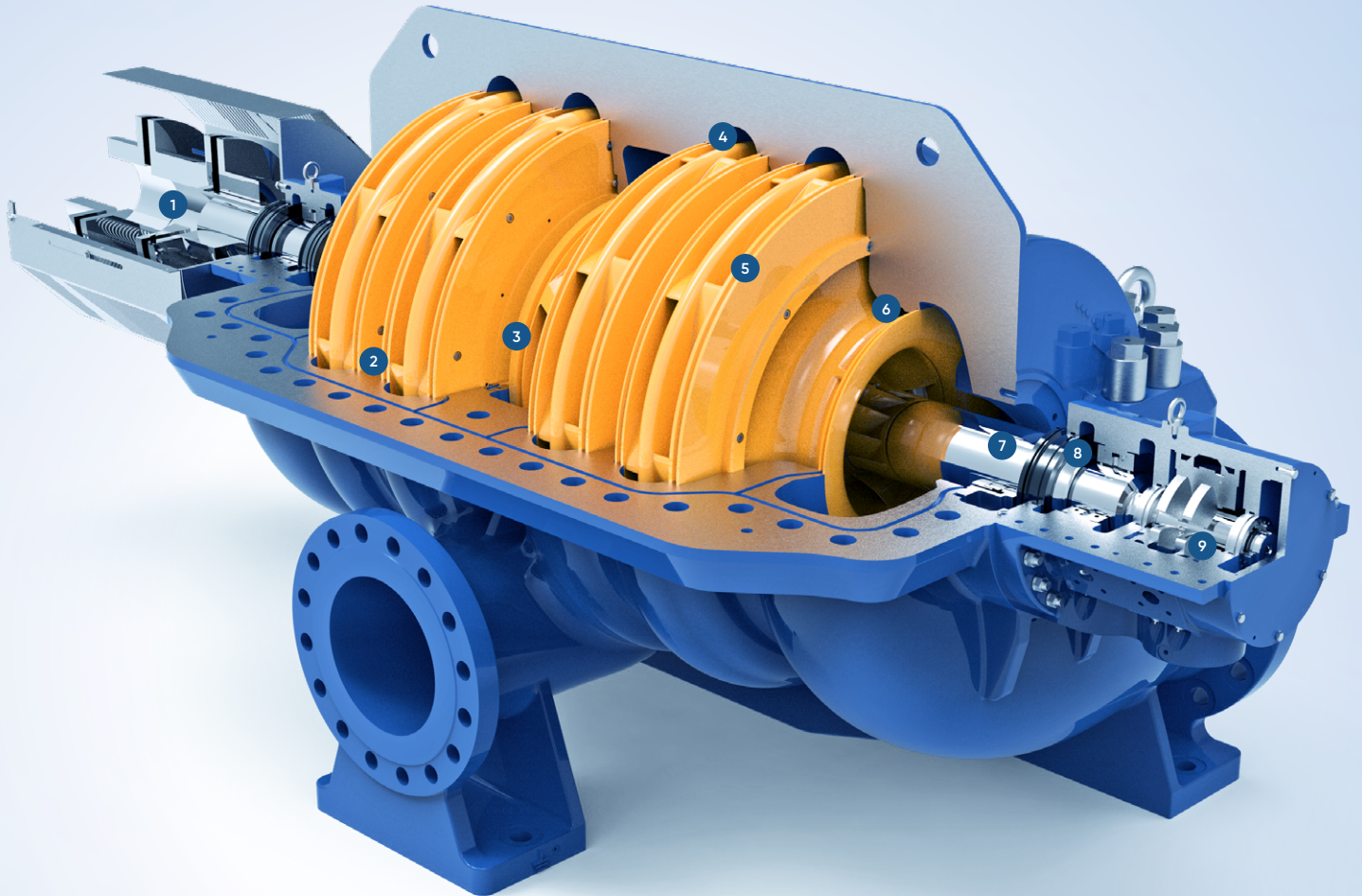
### 3S

Serial stage arrangements available up to 6 stages

## MATERIAL COMBINATIONS

	STAINLESS STEEL VERSION (WATER)	STAINLESS STEEL VERSION (SALT WATER)	CAST IRON VERSION
<b>Volute casing</b>	1.4317 (ZG06Cr13Ni4Mo)	1.4469 (GX2CrNiMoN26-7-4) PREN 42	EN-JS1015 - EN-JS1083
<b>Impeller</b>	1.4460 (X3CrNiMoN27-5-2)	1.4469 (GX2CrNiMoN26-7-4) PREN 42	1.4460 (X3CrNiMoN27-5-2)
<b>Guide/Return vanes</b>	1.4317 (ZG06Cr13Ni4Mo)	1.4469 (GX2CrNiMoN26-7-4) PREN 42	EN-JS1015 - EN-JS1083
<b>Wear ring</b>	Al-Bronze (ZCuAl9Fe4Ni4Mn2)	Al-Bronze (ZCuAl9Fe4Ni4Mn2)	Al-Bronze (ZCuAl9Fe4Ni4Mn2)
<b>Linings</b>	1.4317 (ZG06Cr13Ni4Mo)	1.4469 (GX2CrNiMoN26-7-4) PREN 42	EN-JS1015 - EN-JS1083
<b>Shaft</b>	1.4462 (X2CrNiMoN22-5-3)	1.4469 (GX2CrNiMoN26-7-4) PREN 42	1.4462 (X2CrNiMoN22-5-3)
<b>Bearing housing</b>	EN-JL1040	EN-JL1040	EN-JL1040
<b>Bushings</b>	Al-Bronze (ZCuAl9Fe4Ni4Mn2)	Al-Bronze (ZCuAl9Fe4Ni4Mn2)	Al-Bronze (ZCuAl9Fe4Ni4Mn2)
<b>Shaft sleeves</b>	1.4408 (GX5CrNiMo19-11-2)	1.4469 (GX2CrNiMoN26-7-4) PREN 42	1.4408 (GX5CrNiMo19-11-2)
<b>Feather keys</b>	1.4462 (X2CrNiMoN22-5-3)	1.4469 (GX2CrNiMoN26-7-4) PREN 42	1.4462 (X2CrNiMoN22-5-3)





**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

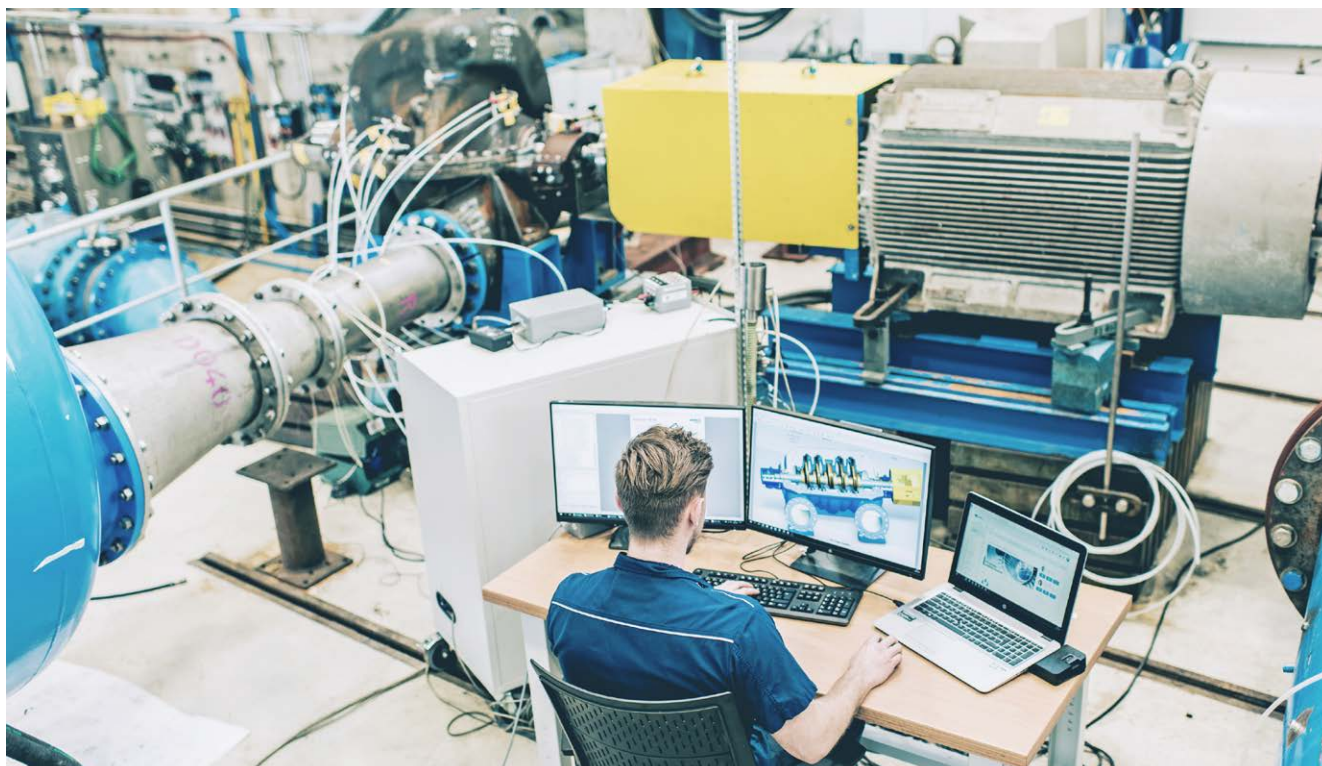
# Always a flow ahead - Research and development

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

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