ANDRITZ Hydro

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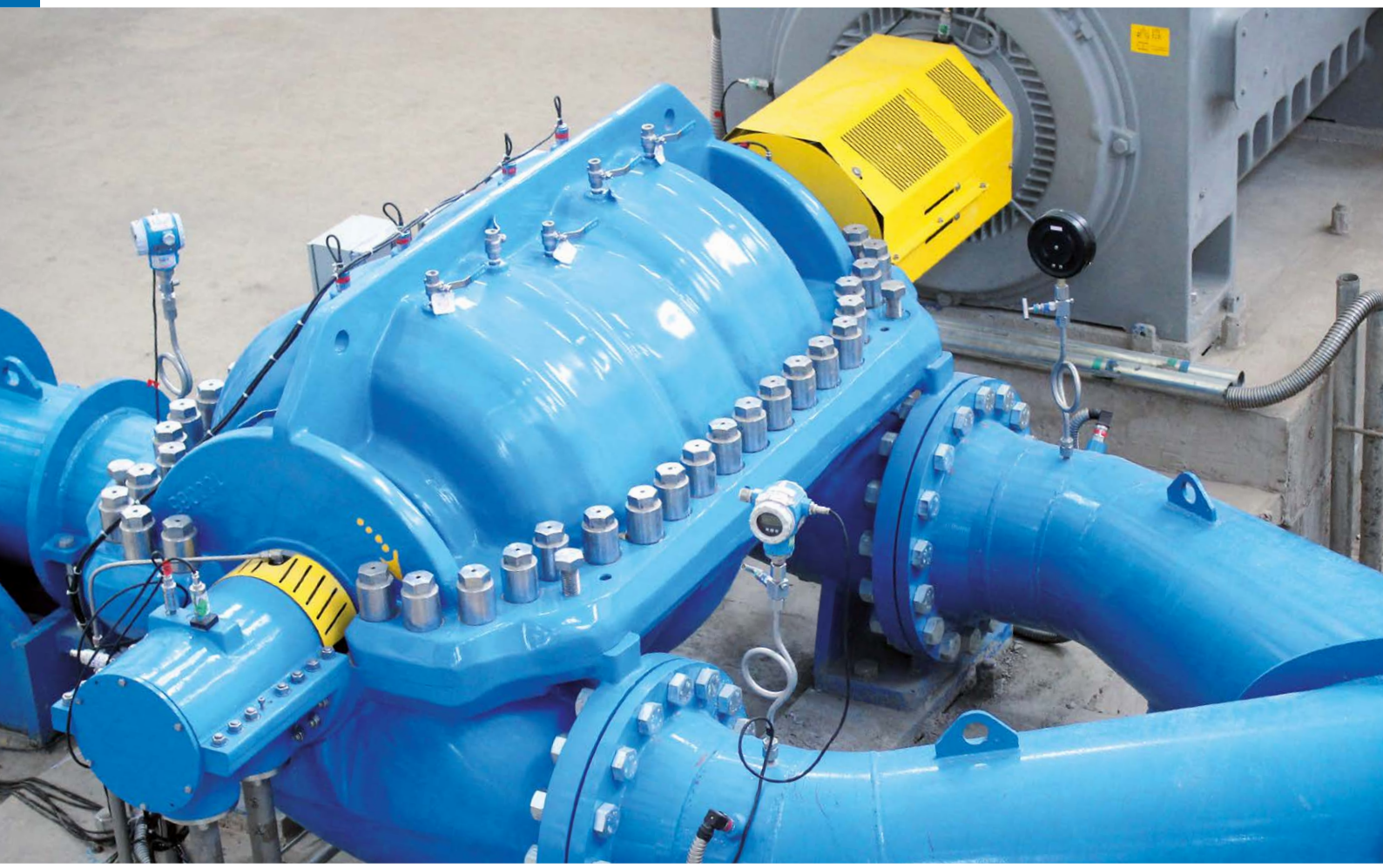
Axially split multi-stage pump (ASPM)



www.andritz.com/pumps

Hydraulic competence with tradition

The first centrifugal pump was built by ANDRITZ more than 130 years ago. The systematic advancement of our pumps is founded on our comprehensive experience in pulp and paper engineering. ANDRITZ pumping systems are operating successfully all over the world, and their outstanding advantages are rugged design, wear resistance and highest efficiency.

Introduction

The ASPM pump has a multi-stage impeller arrangement that can be combined in different ways to fulfill different application needs.

This is a highly engineered pump designed to customers' specific requirements and at the same time based on a modular design concept.

Applications

The machine is used for continuous use for the pumping of clean liquids in water supply projects, power station projects and desalination plants.

Peak efficiencies 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. The design is rigid, the machine is calculated and designed to withstand all load cases which might occur during the lifetime of the pump.

Facts

- Nominal diameter (DN)
  150 to 1600
- Flow rate
  up to 30,000 m³/h
- Head
  up to 800 m
- Power
  up to 20 MW
- Efficiency
  up to 91%
- NPSH values significantly
  below industry standard

ASPM Design

Multi-stage axial split case pumps with various impeller arrangements in single or double flow design.

Special benefits

In-line casing design; horizontal installation, the motor can be placed on the left, right or in double drive; lower civil engineering costs due to lower NPSH requirements.

1st stage impellers

- Optionally suction impeller for even better NPSH values where needed

Wear rings

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

Shaft sealing

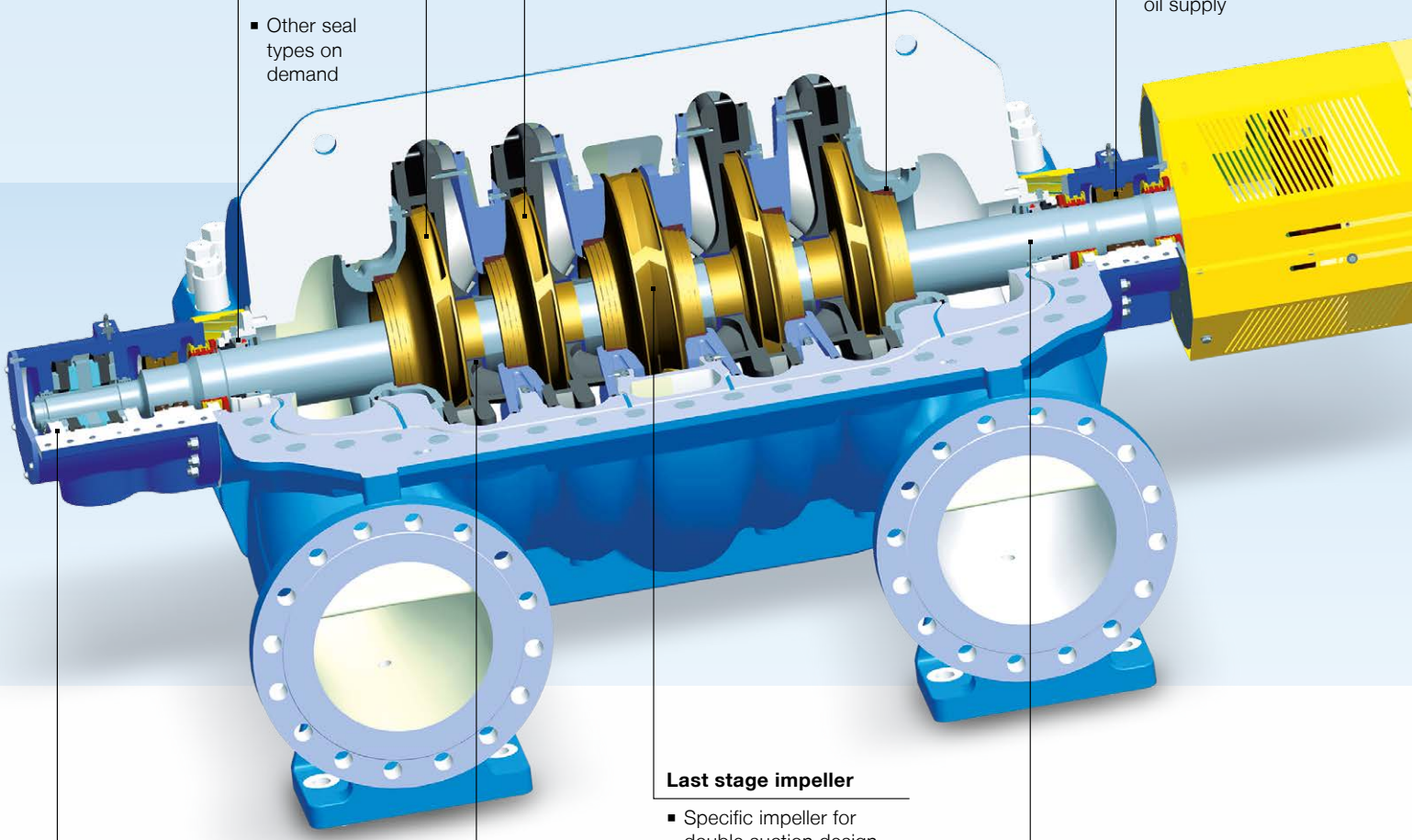
- Single mechanical seal
- Other seal types on demand

Stage impellers

- With excellent efficiency

Bearing

- Roller and slide bearing with and without external oil supply



Last stage impeller

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

External bearing housing

- For easy maintenance

Shaft

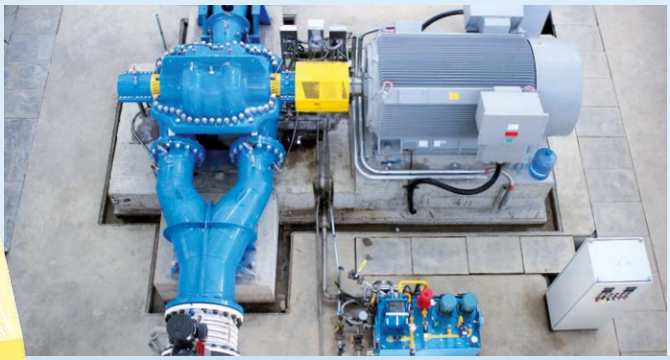
- Robust design drive shaft made of high-quality stainless steel.

Bushing

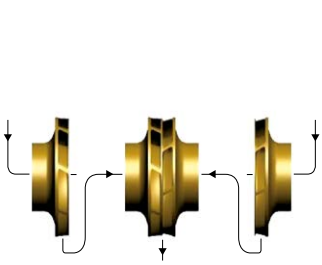
- Replaceable and interchangeable for all stages
- Reduced leakage between stages

Impeller design

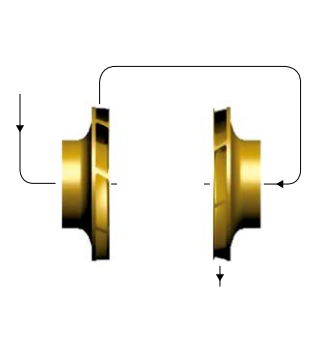
Single or double flow closed radial impellers with optimum efficiency and very good NPSH values.



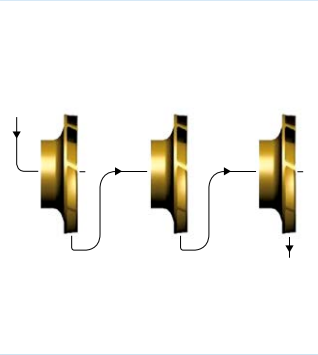
Impeller arrangements



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 single-suction impellers arranged back to back; also available as 2S+2S

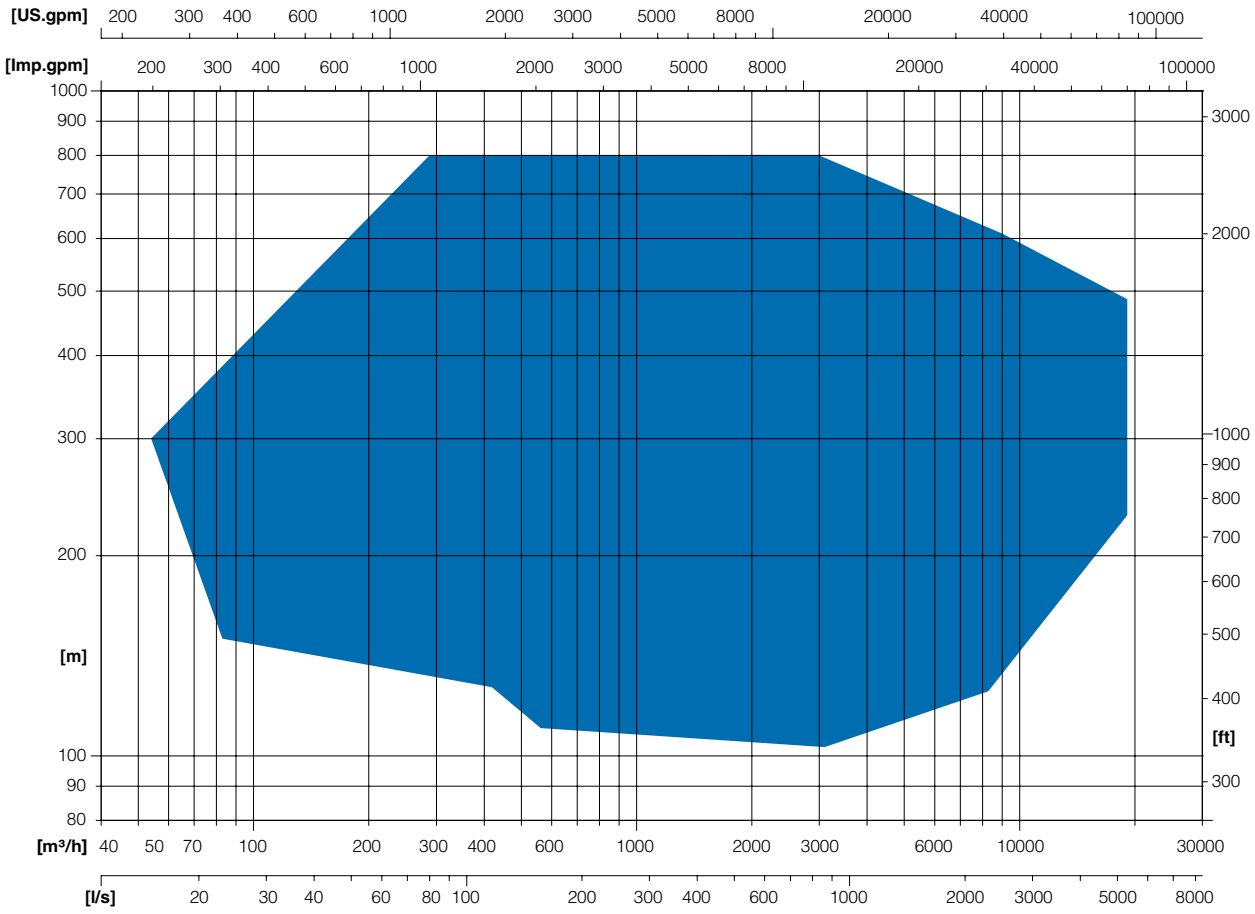


3S Serial stage arrangements available up to 6 stages

Characteristic curves

Axially split multistage pump (ASPM)

Type spectrum



Material combinations

	stainless steel version (water)	stainless steel version (salt water)	cast iron version
Volute casing	1.4317 (ZG06Cr13Ni4Mo)	1.4469 (GX2CrNiMoN26-7-4) PREN 42	EN-JS1015 - EN-JS1083
Impeller	1.4460 (X3CrNiMoN27-5-2)	1.4469 (GX2CrNiMoN26-7-4) PREN 42	1.4460 (X3CrNiMoN27-5-2)
Guide/ Return vanes	1.4317 (ZG06Cr13Ni4Mo)	1.4469 (GX2CrNiMoN26-7-4) PREN 42	EN-JS1015 - EN-JS1083
Wear ring	Al-Bronze (ZCuAl9Fe4Ni4Mn2)	Al-Bronze (ZCuAl9Fe4Ni4Mn2)	Al-Bronze (ZCuAl9Fe4Ni4Mn2)
Linings	1.4317 (ZG06Cr13Ni4Mo)	1.4469 (GX2CrNiMoN26-7-4) PREN 42	EN-JS1015 - EN-JS1083
Shaft	1.4462 (X2CrNiMoN22-5-3)	1.4469 (GX2CrNiMoN26-7-4) PREN 42	1.4462 (X2CrNiMoN22-5-3)
Bearing housing	EN-JL1040	EN-JL1040	EN-JL1040
Bushings	Al-Bronze (ZCuAl9Fe4Ni4Mn2)	Al-Bronze (ZCuAl9Fe4Ni4Mn2)	Al-Bronze (ZCuAl9Fe4Ni4Mn2)
Shaft sleeves	1.4408 (GX5CrNiMo19-11-2)	1.4469 (GX2CrNiMoN26-7-4) PREN 42	1.4408 (GX5CrNiMo19-11-2)
Feather keys	1.4462 (X2CrNiMoN22-5-3)	1.4469 (GX2CrNiMoN26-7-4) PREN 42	1.4462 (X2CrNiMoN22-5-3)

Close to our customers

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