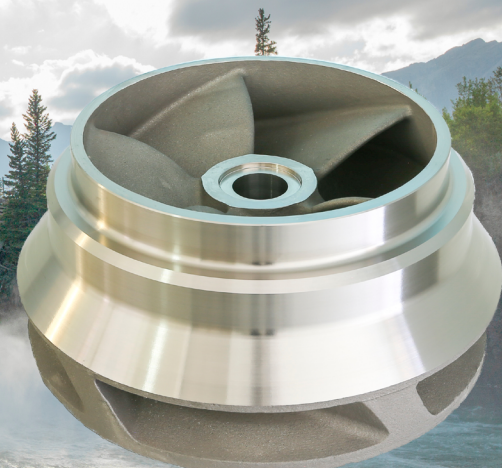


HYDRO POWER

Steel Castings That Unleash Energy



Power from castings – For sustainable hydropower solutions

Hydro Power factsheet EN | 07/2025

WATER IN MOTION – METAL IN PERFECTION!

Innovative casting solutions for hydro applications – precisely manufactured for maximum performance and minimal wear.

With decades of experience and the most modern metallurgical equipment, we are a reliable partner for international turbine manufacturers. Our cast components are used worldwide in Francis, Kaplan, and Pelton turbines as well as in pumped-storage power plants. Quality, durability, and precision are always our priorities. Count on casting solutions that reliably meet the demands of hydropower – even under extreme conditions.

Typical applications:

- » Runner (bi-block / monoblock), runner casing
- » Runner and guide vanes for Francis and Kaplan turbines
- » Pelton cups for high-pressure applications
- » Components for power plant turbines
- » Custom solutions for demanding flow conditions

ADVANTAGES



Increased efficiency

- » Complete service – from casting process to final machining and coating
- » Monoblock design to reduce joints and leakage risks



Quality

- » Highest dimensional accuracy through state-of-the-art manufacturing technologies
- » Robust materials with excellent corrosion and erosion resistance
- » Strict quality control and testing throughout the entire production process



Sustainability

- » Durable components for extended plant lifetimes
- » Resource-efficient production through optimized processes and recycled materials

fastlane®

By using the latest technologies and prioritizing production scheduling, we guarantee up to 60 % faster and reliable delivery times.

Our fastlane®-Service represents a significant advancement in casting production by increasing efficiency, improving quality, and simultaneously promoting sustainable practices.



TECHNOLOGY

» 3D Sand Printing (3DSP)

Our innovative 3D printing process enables the production of highly complex castings without the need for traditional patterns. This precise and efficient method for manufacturing custom sand molds is ideal for intricate and specialized cast components.

» Robot Welding

With our certified, fully automated MAG welding process, we set new standards in manufacturing. Advanced techniques like laser cladding, integrated into state-of-the-art robotic systems, are propelling production technology into a new era.

» Digital Foundry

Through our ongoing "Digital Foundry" program, we continuously enhance our processes - driving efficiency, precision, and innovation in casting production.



voestalpine Foundry Group

As an international player in the foundry industry, voestalpine Foundry Group, with its sites in Linz (AUT), Traisen (AUT) and the joint venture in China, has made a name for itself worldwide.

With a broad portfolio of steel castings, including nickel-based alloys, it offers customized solutions in areas ranging from energy production, such as hydro, offshore/wind or oil & gas, to machinery and railroad systems. By using state-of-the-art technologies and increasingly focusing on climate-friendly production processes, voestalpine Foundry Group is the first choice for cast products of the highest quality, in a weight range from a few kilograms to 200 tons.

CONTACT



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voestalpine

ONE STEP AHEAD.