

Axco Generators for Cleaner Future

Series for hydropower turbines



AXCO MOTORS - THE MATCHING SOLUTION

Axco Generators up to 1 MW are highly efficient and robust machines tailored to meet your specific needs, especially in low-head hydropower plants (Kaplan and alike). They are designed to the working environment and space available, thus versatile and cost efficient in hydropower installations. Axco permanent magnet generators are either synchronized directly to the grid or equipped with a frequency converter providing a perfect choice for small direct-drive hydropower applications.

Axco technology benefits

■ When designed to the operating conditions and space available, an Axco Generator improves the overall efficiency of the power plant.

■ A permanent magnet generator, synchronized directly to the grid, reduces both the fault probability and the need for power electronics. In the case of multigenset application, one generator can be equipped with a power converter, while the others are directly connected to the grid. In such a case, overall efficiency can be optimized.

■ Unique performance

- Superior efficiency: Direct-drive permanent magnet technology offers a higher efficiency than a traditional induction generator with or without a gearbox
- No need for compensating capacitors: The power factor is about 1
- Superior versatility: The generator can be designed to fit in existing buildings and structures
- Superior reliability: Power electronic components kept to minimum
- Very low cogging torque and torque ripple for long life.

■ Consumer-specific approach

- Axco Generators are tailored to match the customer needs and challenging conditions
- Axco Generators are designed for a high efficiency to maximize the energy production
- Axco Generators give a true edge in the competitive business environment.

Highly competent engineering team => high-technology generators

Our technology team has an extensive scientific background and ongoing cooperation with internationally reputed research institutions in the field of electric drives. Our capability to engineer efficient and versatile applications with high precision is based on the state-of-the-art design tools, testing and practical experience. These results of our long-term development work are covered with a number of patents in the field.

Our team and technology are available for your specific needs. Cooperation with industrial turbine manufacturers and power converter manufacturers guarantees robust designs capable of working in tough conditions in various industries. Our technical support team is ready to help you choose the perfect solution for your individual requirements. Contact us for more information if you are looking for adaptable motors or generators to increase your energy production.

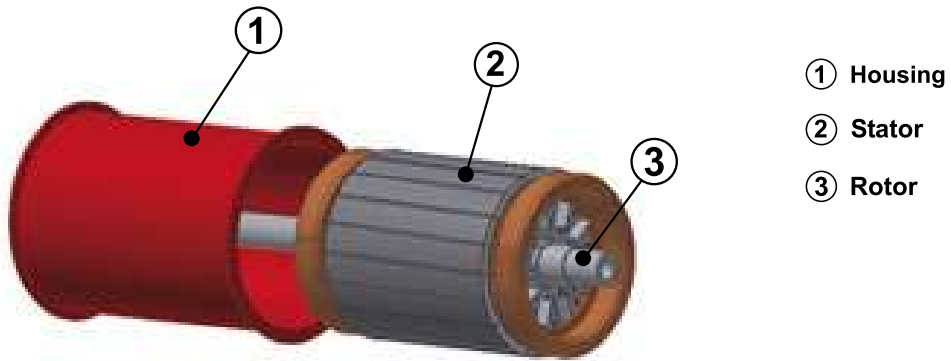
Easiness of applications

AXCO-Motors generators can easily be adapted to existing powerhouse buildings. They have advantages in terms of reliability, overall efficiency and maintenance cost. Furthermore, the compensation capacitor bank - which is generally required with traditional induction generator solutions - can be avoided. The mechanical structure of the generator is simple. Moreover, the field winding of a generator is not required, which improves efficiency and reliability of the generator. The phase voltage and current are pure sine wave, and torque ripple is low.

Axco Motors and Generators save energy and materials. It is truly a cleaner technology at a lower cost. Visit our websites and turn to our pragmatic and professional technical team!



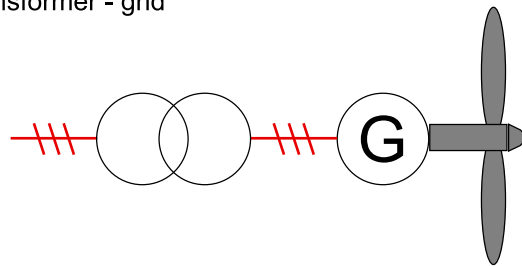
Constructions



Construction and technical performance make Axco Generator a perfect choice for hydropower turbine units.

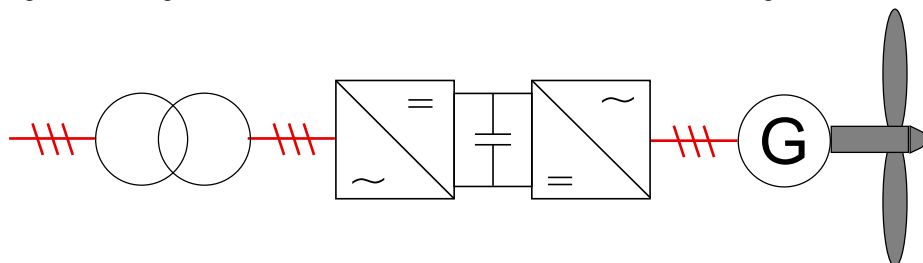
General connections

1) Turbine - generator - transformer - grid



Direct online generator, fixed speed - no gearbox required

2) Turbine - generator - generator converter - line converter - transformer - grid



Variable-speed drive, line converter connection - no gearbox required



■ **Shipping Address:**

Tuotantokatu 2
FI-53850 Lappeenranta
Finland

■ **Billing Address:**

Laserkatu 6
FI-53850 Lappeenranta
Finland

■ Tel: +358 5 624 3053

Fax: +358 5 624 3054

■ Email: info@axcomotors.com
firstname.lastname@axcomotors.com

■ www.axcomotors.com