

ABB MOTION SERVICES

# ABB Hydropack. Solution for Mini Hydro Power Generation

## Service product description

ABB Hydropack is a modernization solution that increases the efficiency and performance of mini hydro plants. It consists mainly of a regenerative drive with an embedded specific control system, that allows the turbine to operate from fixed to variable speed and enables it to generate a wider range of flow rates, hence increasing the profitability of the installation.

### Value to customers

- Improves plant efficiency
- Power curve improvement
- Turbine efficiency improvement by expanding working ranges
- Improvement of mechanical performance with mechanical smoothness and avoiding water hammer
- Removal of mechanical parts. Couples a turbine directly to the generator
- Simplification of plant operations
- The drive is permanently connected to the network
- Reactive control. No compensation elements are required
- Optimization of drive electrical maintenance if the digitalization option is chosen

### Service includes

- Plant assessment to determine the feasibility of the project to identify the best solution and calculate the return on investment
- Standard electrical design including modifications
- Access to Condition-Based Maintenance service during the data collection period (one year after commissioning)
- Diagnostics report with recommendations from an ABB expert (during a collection period of one year)
- Regenerative ABB drive (ACS880-17/37) with embedded specific control software, HMI and ABB Ability™ Condition Monitoring for drives
- Replacement or refurbishment of existing generator if needed

- Replacement of power transformer if a different voltage is required
- Optional: continue the monitoring service with the Condition-Based Maintenance service for drives

### Service does not include

- All power plant control
- Mechanical and electrical plant modifications
- Master control power plant modifications
- Civil power plant works
- Connectivity to the customer's network
- Anything that is not mentioned

### Service coverage

- All types of permanent magnet and induction generators can be considered. The specific solution is provided case by case
- Power rates references: 140kW to 1MW; voltage range: 400 to 690V
- Solution available up to 6MW in Low Voltage. Medium Voltage plants are studied case by case. Conversion to Low Voltage can be applied

## Customer responsibilities

- Assigning skilled personnel to accompany the ABB engineer on-site and provide all necessary information
- Permitting ABB cloud connectivity for the data collection period (no need to connect to the customer network)
- Preparing and providing work permits, if necessary, and ensuring that the site is safe and conforms to local health and safety standards (or the ABB health and safety standard)
- Providing qualified personnel for electrical work, if necessary
- Installation of equipment and mechanical modifications if required

## Other terms

- As per the agreement between ABB and the customer

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For more information, please contact your local ABB representative or visit:

[abb.com/service/motion](http://abb.com/service/motion)  
[abb.com/channel-partners/search](http://abb.com/channel-partners/search)

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