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# **RENEWABLES**

## SMALL WIND



# About us

## Profile

ATB Group, an industrial group based in Italy and operating in over 20 countries with more than 1.500 employees, is a leading player with worldwide experience and expertise in the following sectors:

- **Hydro Mechanical Equipment** and Penstocks Main contractor for hydropower plants
- **Heavy Equipment** manufacturer for Oil & Gas and Power Generation industries
- **Construction** of industrial complexes, **infrastructure** works and the **management** of full-cycle iron and steelmaking plants
- Electromechanical equipment for **small hydropower** plants and **small wind** turbines supplier

## History

The activity began in 1981 when Sergio Trombini, sole shareholder and Chairman of ATB Holding S.p.A, established his first company. In 1990, the group expanded his activities in the Civil Constructions & Industrial Services, through the establishment of Semat Spa, now present in six European Countries with consolidated references as reliable partner specialized in the construction of industrial complexes, infrastructure works and the management of full-cycle steel plants.

In 2003, the Group has formed ATB Riva Calzoni through the acquisition and merging the decades-long of technical skills and facilities of Acciaieria e Tubificio di Brescia (ATB) and Riva Calzoni Impianti. Since their establishment, between the mid-18th and the early 20th centuries, ATB and Riva Calzoni have excellent results at worldwide levels in the construction of major energy projects and manufacture of components for power generation and Oil & Gas Industries.

In 2016, the group has acquired Hydro Energia, an Italian company recently renamed ATB Riva Calzoni Rinnovabili, with more than 30 years of experience and references and with a proprietary expertise for the design and manufacturing of hydroelectric turbines and Water to Wire packages.



**AN  
INTERNATIONAL  
PLAYER  
FULLY  
FOCUSED  
ON  
ENERGY**

**ATB Group operates today in the following business sectors:**

RENEWABLES

HEAVY  
EQUIPMENT

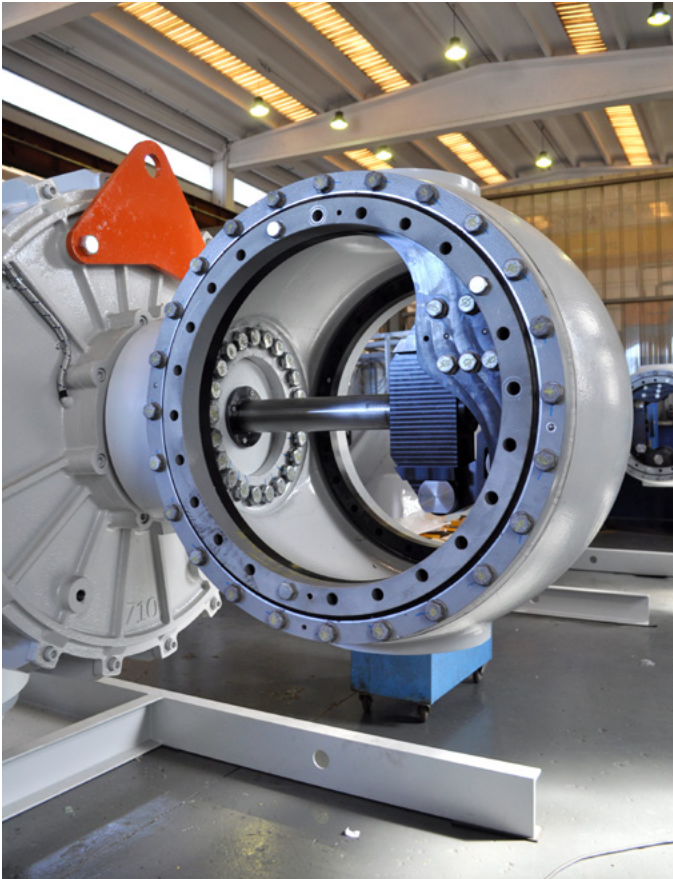
HYDRO  
MECHANICAL  
EQUIPMENT

CIVIL  
CONSTRUCTION





# Wind Turbines



ATB 60.28 DD

ATB Group's history in the wind industry can be traced back to the 80's when Riva Calzoni, in collaboration with the German company MBB (Messerschmitt-Bolkow-Blohm), developed one of the first Wind Turbine Generators in Italy. Since then we've always retained the interest, the passion and enthusiasm that drove us, in 2011, to re-enter the market for under MW wind turbines by acquiring shares in the German company S&G Engineering GmbH, well-known for its **wind turbine technology**.

## ATB Wind Turbine Technology

With a state-of-the-art pitch control system, an oversize rotor to capture more energy at lower wind speeds, and the latest breakthroughs in wind turbine design efficiency, each ATB model fulfills the demand for a reliable and high performing wind turbine.

## Products Platforms

All ATB wind turbines have been designed according to IEC 61400. We have 2 different product platforms:

- a **50 to 100 kW** direct drive wind turbine with a permanent magnet generator.
- a **500 kW to 850 kW** geared wind turbine with a permanent magnet generator

ATB wind turbines are built according to the concept of variable speed synchronous generator with full converter system and hydraulic pitch control. That concept is characterized by maximum energy yield and high efficiency.

The sophisticated power converter concept allows powerful and rapid active and reactive power control, and thus creates the conditions to maintain network stability.

Furthermore, the system has excellent properties when passing through voltage dips during grid faults (fault ride-through).



**TOP OF THE MARKET  
from 50 KW  
to 850 KW  
WIND TURBINES**



## High Efficiency

Every ATB wind turbine is built to the highest standards of engineering, performance and quality. ATB has developed highly efficient wind turbine technology reaching the rated output power at lower wind speed than most available models and allow ATB wind turbines to be known as "best-in-class" in the sector.

## Reliability

Engineering excellence and exhaustive testing are the cornerstones of our wind turbine design, production and deployment process. Throughout initial design and subsequent revisions, all of our models are manufactured to ensure our customers can count on their turbines over a 20-year lifespan.

## Advanced Pitch Control

ATB wind pitch control system automatically adjusts synchronously the pitch to optimize efficiency. The blade adjustments are made extremely quickly, reacting to changes in wind conditions in around a 10th of a second.

## Remote Monitoring

The remote control allows users to remotely monitor the turbine's operational status, live energy production, wind speed and power output.

The operating parameters data stored in the control unit of the wind turbine are constantly monitored and automatically adjusted during operation. The parameters are tuned to each site to ensure the safe and automatic operation of the wind turbine in all situations.

## Safety

When the turbine control system detects any fault, such as high wind or a grid power loss, the pitch system activates, rotating the blades and safely stopping the turbine. In addition a mechanical parking brake supports the aerodynamic brake and brings the rotor to a standstill until the condition is cleared.



## Bankable and Investment Ready

In a continuously changing market, **strength of covenant and manufacturer warranties and service** have become key to finance wind energy projects. ATB provides an end to end service in the manufacture, construction, operations and maintenance of ATB turbines, providing complete accountability and a high degree of reliability with its ATB Wind Service lifetime plan.

Technical excellence and customer focused support, put our products at the top of the market sub-megawatt.

## Warranties and O&M services

ATB offers for all wind turbines a standard 5-year warranty on parts and labor and a 95% Warranty on Power Curve.

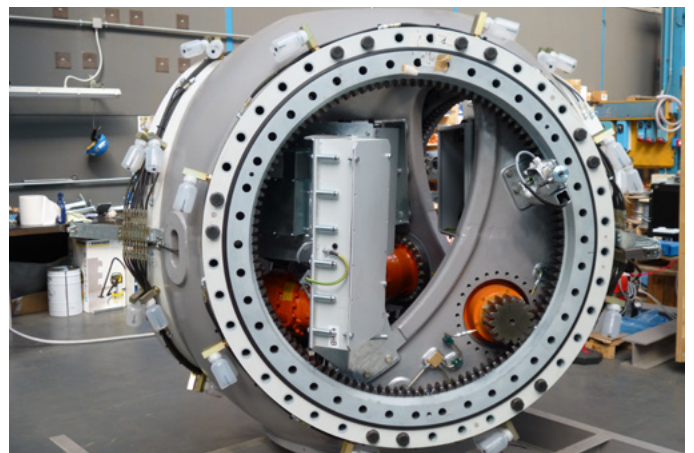
In addition, ATB guarantees the 95% technical availability with a fully comprehensive operations and maintenance contract, providing operations and maintenance cover for the expected lifetime of each ATB wind turbine.



ATB 750.54



ATB 60.28 DD



ATB 500.54



## Product applications

ATB Wind Turbines are well-suited for both On Grid & Off Grid application such:

- ***Self-consumption***
- ***Net-metering***
- ***Community projects***
- ***Islands or Remote areas***
- ***Hybrid renewable systems***



## ATB Wind Service Contract includes:

- 95% Technical Availability Warranty
- 95% Warranty on Manufacturer's Power Curve
- Preventative, proactive and reactive maintenance in line with ATB optimum maintenance and operation procedures
- Service contract up to 5 years

ATB 60.28 DD assembly operations on site.



# ATB Group world presence



## Facilities



150'000 sqm - Roncadelle - Italy



24'000 sqm - Marghera - Italy



8'500 sqm - Artogne - Italy



9'000 sqm - Girardota - Colombia



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