



INNOVATING IN HYDRAULIC SOLUTIONS

WIND TOOLS





WIND TOOLS FOR THE INSTALLATION, OPERATION, AND MAINTENANCE OF WIND TURBINES

Based on decades of industry knowledge with special thanks to the company's in-house engineering team and global manufacturing capabilities, HINE develops and supplies the global wind industry with plug-and-play wind tools for the installation, operation, and maintenance of wind turbines.

We supply tooling solutions for installation and service for the entire value chain of our customers, whether you are looking for specialized standard products or a customized design tailored to your specific needs.

We work in a transparent way, adapting to the procedures and requirements of our customers. As a result of this teamwork, our solutions meet the most demanding requirements of the market.

*+50.000 MW installed with HINE
solutions all over the world.*



High-performance Tooling & Solutions for the wind industry





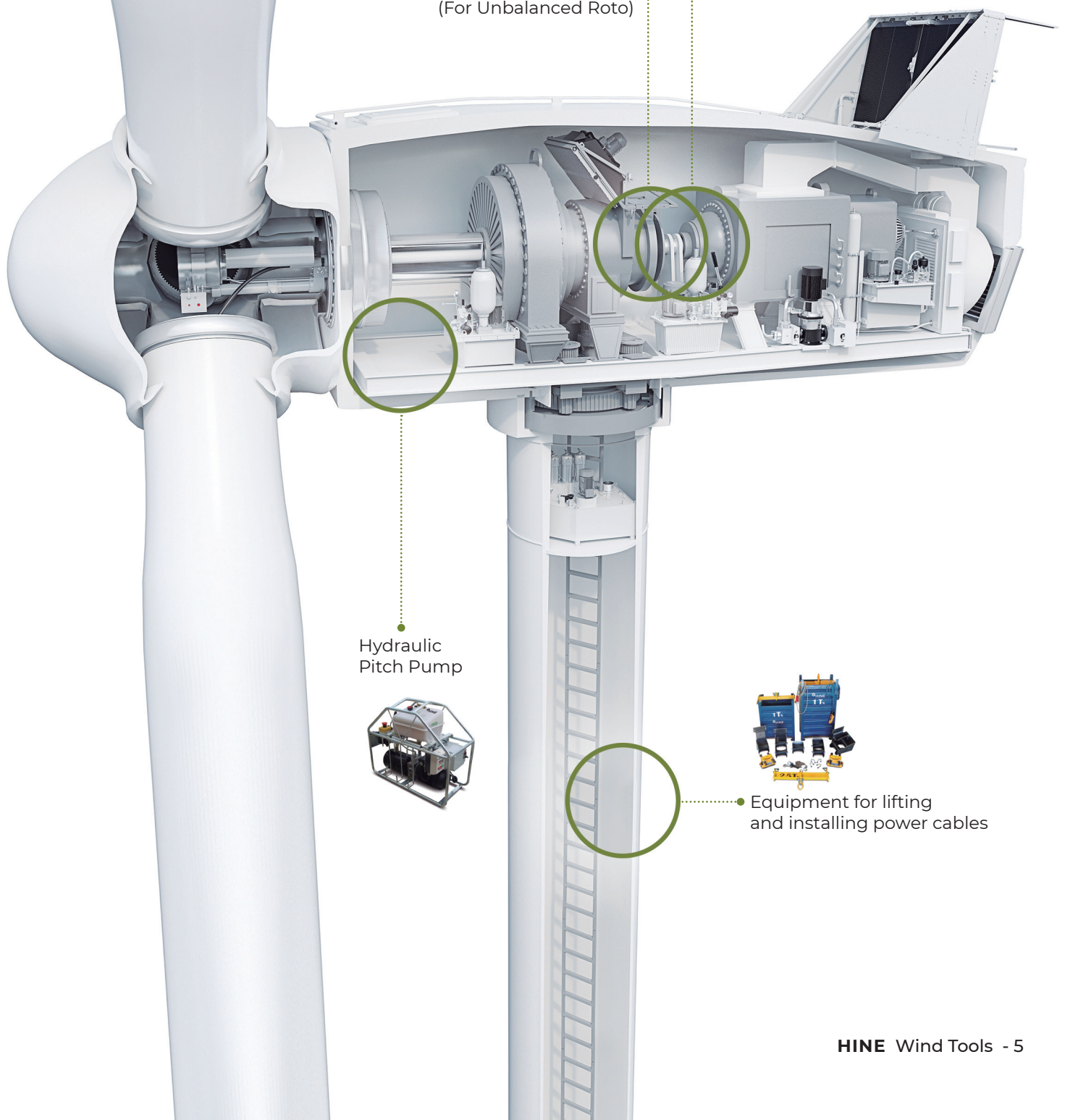
Equipment for Lifting And Installing Power Cables



Turn Gear
(For Unbalanced Roto)



Turner Rotor
(For Balanced Rotor)



Hydraulic
Pitch Pump



Equipment for lifting
and installing power cables

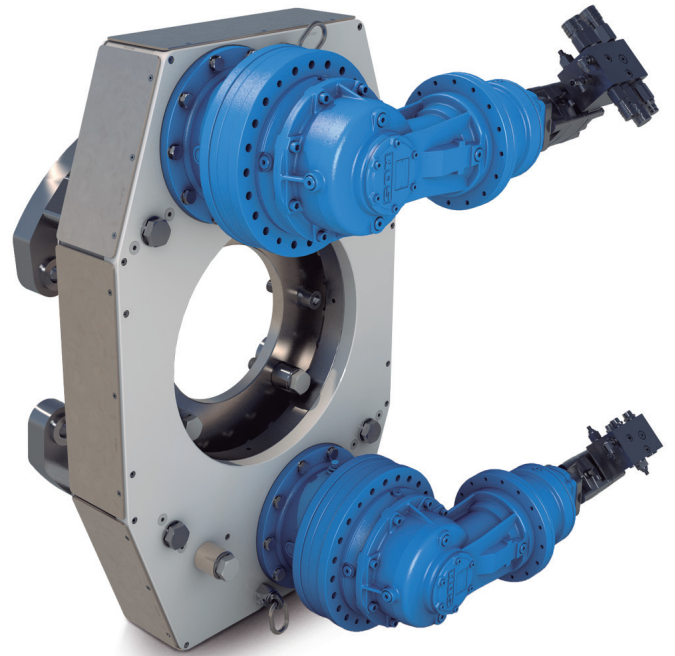
TURN GEAR FOR SINGLE BLADE INSTALLATION

(For Unbalanced Rotor)

Turning the wind turbine rotor for the installation of the blades is a critical operation that requires robust tools that offer safety, precision, and reliability to the process. HINE has more than 15 years of experience in the manufacturing and development of Turner Gears.

HINE supplies turning gear solutions to the world's leading wind turbine manufacturers, from 850 kW to 6 MW and new projects for larger capacity and power demands are in development.

Top Global OEM companies trust HINE to develop these tools for assembly operations.



Product specifications:

- . Advanced product: Powerful, robust, and reliable.
- . Top brand components.
- . Smart control Power Unit.
- . Flexibility: adapted to your needs (environment, performance, standards ...).
- . Options: control remote, noiseless hydraulic pump, lifting bags, customized kits.

Platforms:

SIEMENS Gamesa
RENEWABLE ENERGY

Vestas



SENVION
wind energy solutions

NORDEX

acciona
Windpower

* Please feel free to request solutions for additional platforms. Custom Solutions are available.



TURNER ROTOR FOR TURNING THE DRIVE TRAIN

(For Balanced Rotor)

The Turner Rotor allows rotation of the drive train and the rotor by turning the brake disk remotely. Performing this operation correctly and in compliance with all safety measures is essential to minimize the risk of accidents.

An integrated power unit and control system allows the entire turning process. It is necessary and mandatory for several operations, such as engagement and disengagement of the rotor locks and locking pins, gearbox inspection, and positioning the hatch to access to the rotor for maintenance.

Thank to the use of Turner Rotors, the accident rate during the O&M processes is reduced significantly.



Product specifications:

- Local manual operation or wireless by remote control.
- Quick assembly.
- Strong design for maximum durability.

Platforms:

SIEMENS Gamesa
RENEWABLE ENERGY

Vestas



NEG MICON®
Powerful Simplicity

* Please feel free to request solutions for additional platforms. Custom Solutions are available.

HYDRAULIC PITCH PUMP

At HINE, we develop our pitch pumps in collaboration with wind turbine OEMs and installation companies. The hydraulic pitch pump is an auxiliary element used to actuate the pitch cylinders for different operations such as blade engagement and emergency procedures.

Pitch pumps are available in different sizes and performance types depending on the application, so please do not hesitate to contact us in case you need to adapt it to your needs and installation procedures.



More than 1,000 Pitch Pumps have been manufactured and supplied globally.

Product specifications:

- Portable equipment for actuating the hydraulic pitch.
- The electric maneuver is carried out through a switch in the front of the equipment.
- Wireless remote control available.
- Quick connection kits included.

Platforms:



* Please feel free to request solutions for additional platforms. Custom Solutions are available.



KITS FOR GUIDING AND LIFTING POWER CABLES

HINE provides a roller system for the installation of power cables inside the wind turbine. Thanks to this equipment, several kilometers of cable have been installed and hundreds of turbines have been energized.

This technology is custom designed for each of our customers and allows us to perform this operation in a precise and safe manner.

These Kits enable fast and efficient installation of cabling.



Product specifications:

- Complete system for the safe lifting and guiding of power cable inside the wind turbine.
- The assembly is carried out independently of the wind turbine hoist.
- Includes: high-capacity electric chain hoist and specific lifting accessories.

Platforms:



Vestas

* Please feel free to request solutions for additional platforms. Custom Solutions are available.

EQUIPMENT FOR PROCESSES TO PRESERVE GEARBOXES

HINE's Equipment for Processes to Preserve Gearboxes allow our customers to easily maintain this high responsibility component in-house. Our solution allows the filling and emptying of the gearboxes rotation of the planetaries system for lubrication, reduce teeth tensions, and other critical operations basic for preservation.

It should be noted that HINE tooling is equipped with a particle counter to measure the quality of the oil and always maintain optimal conditions the gearbox.

Our gearbox preservation solutions perform maintenance on an important number of gearboxes per year and they make easier and reduce the time.

Product specifications:

- . It makes the process easier because our solution is located in the facility where the preservation is done, enabling the process to be carried out in a simple way.
- . For working in shopfloors and gearboxes warehouses.
- . Liter counter when oiling the gearbox.
- . Level control in the tank.
- . Temperature control of the tank.
- . Oil warmed by resistors.
- . Includes automatic system for turning gearboxes
- . Control and contamination registered by laser particle counter in accordance with ISO 4406.
- . Wheels for an easy displacement.
- . Different tools could be supplied adapted to your Gearbox model.







INNOVATING IN HYDRAULIC SOLUTIONS

Our Global Presence is your Advantage

For decades, HINE has supplied the wind industry with smart tool solutions for a competitive and rapid response to clients' needs. Our production sites are strategically distributed around the globe (Spain, China, India, USA, Brazil, México), so we can offer the highest manufacturing competitiveness.



ABOUT HINE

Founded in 1974, HINE is a leading supplier of hydraulic systems, hydraulic components, and cooling systems for industrial and renewable energy companies. The company's in-house engineering team, extensive R&D portfolio, and global manufacturing capabilities deliver competitive hydraulic solutions to customers worldwide. Our production sites in China, Spain, U.S., Brazil, India, and Mexico enable fast, reliable solution delivery so clients can accelerate project readiness. From production through post-sales support, Hine Group provides a comprehensive package of hydraulic products and services designed to give our customers a rapid response and outstanding service.

www.hinegroup.com