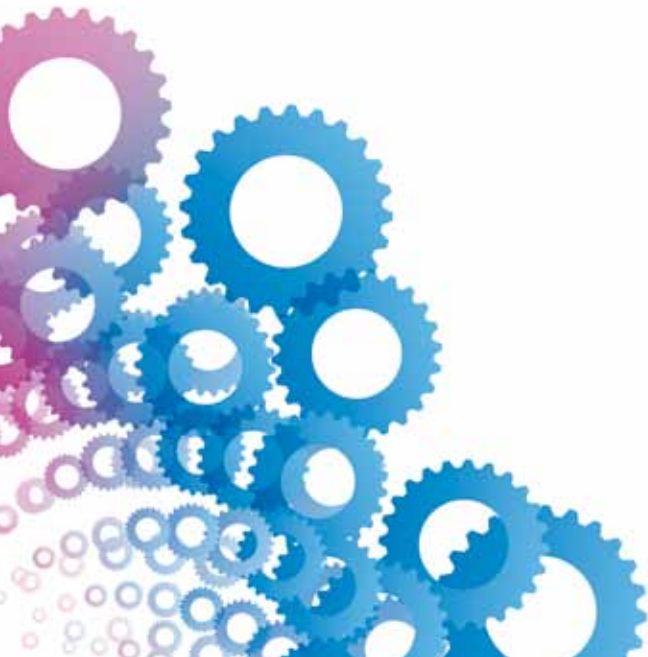




Professional services  
for wind turbine gears



**moventas** | GEARED FOR  
NEW ENERGY

# Decades of experience

A unique insight into our customers' operations and needs.

## ADDING VALUE

Being proactive lies at the heart of Moventas' drive services, which cover the entire life cycle of power transmission equipment, from design, engineering, and maintenance to overhauls and modernizations. The broad scope of our approach to service and condition management means that we can help customers keep their operations running reliably at peak performance, and lengthen the service life of their turbines. Service like this enables our customers to exceed their operational expectations, and increases the value of their business.

## THINKING AHEAD

We stay ahead of potential problems using sophisticated condition management and remote diagnostics tools. These enable us to plan maintenance just when it is needed, not too soon, and never too late – keeping our customers satisfied and keeping all of us ahead.





1. Moventas' gear experts can determine the overall status of a gear unit and suggest how the system can be improved to enhance your overall mechanical drive train.

---

2. CMaS, Moventas' condition management system, improves the reliability of gear unit and other drive train components, and generates valuable cost savings as part of a scheduled maintenance program. Moventas can overhaul a wind turbine's entire mechanical drive train.

---

3. Moventas offers comprehensive overhaul and maintenance services.



# Lifecycle points

Care throughout the entire life cycle of a gear unit

## REPLACEMENT UNITS

Moventas' replacement service helps customers reduce their inventories of spare units. We replace your existing unit – one of ours or one supplied by a major OEM supplier – with an overhauled, upgraded, or a brand new gear unit.



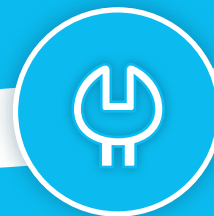
## FIELD SERVICE

Our field service covers all aspects of mechanical drive train systems. We handle overall maintenance, minor overhauls, and component changes, as well as mechanical inspections and adjustments on site at your wind farm.



## UPGRADES

A gear unit upgrade will increase the reliability and functionality of a wind turbine and e.g. minimize noise and vibration. Moventas' service experts always use the latest technology to deliver better efficiency and improved performance, and our product development and engineering people are hard at work producing new, advanced spare parts for existing gear units.



## OVERHAUL AND MAINTENANCE

We use the latest drive technology developments and know-how in our overhaul and maintenance operations. All serviced drives are tested in our certified service centers before delivery to ensure trouble-free operations.

#### CONDITION MANAGEMENT SYSTEM, CMAS

Moventas has developed a sophisticated condition management system to improve the reliability of a gear unit and other drive train components. Using Moventas CMAS, customers can monitor the operation and condition of their drive online whenever and wherever they want. For maximum flexibility, the system can be integrated into new turbine designs or retrofitted to existing installations.



#### TRAINING

We offer training throughout the entire service life of power transmission equipment, tailored to your specific needs. Packages can include methods training and/or benchmarking, for example.



#### TESTING, ANALYZING AND AUDITING

Customized test and analysis packages are used to support maintenance and trouble-shooting, and increase operational efficiency. Based on comprehensive measurements, inspections, and interviews, Moventas' experts provide customers with technical reports covering operating data, test results, analyses, and suggestions for recommended improvements and actions.



#### SPARE PART SERVICES

Our experts can help you define your need for spares and optimize your overall inventory management. Good planning plays a key role in improving cost efficiency here, which is why we have made inventory management an integral part of our proactive service philosophy.

# Always available

Portland



You can always rely on being able to reach Moventas service professionals around the clock and around the globe. In addition to our specialized wind service centers in Finland and the USA, you can contact us through our extensive worldwide sales and service network.

## PORTLAND, OREGON, USA

The Portland, OR Service Center provides factory standard gear services for North America, and can handle all type of gear units, originally produced by Moventas or some other manufacturers. To guarantee continuous development and further improve quality, the center has a full load test run facility for kW- and MW-class units. Moventas replacement units are available with a complete set of drive train components between the hub and the generator, including main shaft, brake system assembly, oil cooler, and shrink element, for example. Send us a mechanical drive train system and we will take care of the entire package, from inspection to upgrading and testing – and supply a factory warranty to top it all off.



Jyväskylä



#### JYVÄSKYLÄ, FINLAND

The Moventas Service Technology Center in Jyväskylä provides factory standard gear service and also focuses on developing advanced technologies to further improve our customer service. These include areas such as proactive drive services, condition management, and other advanced drive maintenance technologies. The new, modern facilities at the center are ideal for groundbreaking product and method development.

Moventas has decades of experience in engineering and manufacturing gear units. We have been producing wind turbine gear units in Jyväskylä for as long as wind turbines have been in production.

1. All overhauled gear units are test-run at full load at our certified service centers.
2. Moventas offers you comprehensive support services, including installation and start-up support services, modernization and rebuild audit services, training services, troubleshooting services, and consultancy.
3. Moventas provides replacement units for all major OEM wind turbines.



**FINLAND****Moventas Wind Oy**

P.O. Box 158, Vesangantie 1  
 FI-40101 Jyväskylä  
 Tel. +358 20 184 7000  
 Fax + 358 20 184 7001

**SWEDEN****Moventas AB**

Norra Långebergsgatan 4  
 S-421 32 Göteborg  
 Tel. +46 31 710 20 50  
 Fax +46 31 710 20 60

**GERMANY****Moventas GmbH**

Otto-Hahn-Strasse 51  
 D-42369 Wuppertal  
 Tel. +49 202 24 14 0  
 Fax +49 202 24 14 200

**USA****Moventas Inc.**

8823 N Harborsgate St.  
 Portland , OR 97203  
 Tel. +1 503 205 7930  
 Fax +1 503 205 7972

**Moventas Inc.**

604 North Owens Street  
 Big Spring, TX 79720  
 Tel. & Fax +1 423 517 4072

**Moventas Inc.**

57-A Pelham Davis Circle  
 Greenville , SC 29615  
 Tel. +1 864 627 1700  
 Fax +1 864 627 1705

**CANADA****Moventas Ltd.**

P.O.Box 20100 / 1615 Bishop Street North  
 Cambridge , Ontario N1R 8C8  
 Tel. +1 519 621 6390  
 Fax +1 519 621 7660

**CHINA****Moventas Wind Oy**

Room 1108, Xiandaibaili Building  
 No.12 Dongsanhuanzhonglu  
 Chaoyang District, Beijing 100022, PRC  
 Tel: +86 139 103 961 92

**SPAIN****Moventas Oy**

Centro de Negocios "Parque Oeste"  
 C/Estambul N° 22 - 28922 -, Of.n°10.  
 Alcorcon, Madrid 28922  
 Tel +34 662 65 0934

Moventas is one of the largest manufacturers of wind turbine gears in the world. The company also manufactures power transmission solutions for industry use and provides services for their overhaul and maintenance. Majority of the products' end use is connected with renewable energy. In 2009 Moventas generated net sales of EUR 237 million. The company has approximately 1200 employees in 8 countries globally with a world-wide partner network. European private equity investor IK Investment Partners holds the majority of the shares in Moventas.  
[www.moventas.com](http://www.moventas.com)

FINLAND | SWEDEN | GERMANY | USA | CANADA | CHINA

**moventas**

