

# LIFECYCLE SERVICE SOLUTIONS



moventas

# GEARED FOR NEW ENERGY

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Moventas is the undisputed innovation & technology leader in the wind gearbox industry. As a pioneer in the segment with closer to **40 years of** global service experience and an own installed base of **over 15,000** gearboxes, we will make the difference in your gearbox service. Benefit of the largest multibrand service portfolio in the industry, **lower your LCoE**, and keep your assets running reliably.



# OUR SERVICE PROFESSIONALS ARE AVAILABLE AROUND THE WORLD.

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Gain a competitive edge with the Moventas digital service solutions. Get real-time data to improve your productivity and profitability.

## Remote condition management

Condition Management System (CMaS®) is a state-of-the-art service installed thousands of units worldwide. Minimize downtime and costs while maximizing the lifetime of the wind turbine drivetrain.

### Key features:

- CMaS® provides a real-time health condition of your drivetrain.
- Installation onsite or in workshop service.
- 24/7 global online accessibility with the remote diagnostics service.

Dedicated diagnostic engineers monitor the equipment to identify any evolving issues. This allows for a quick response and can initiate corrective actions before any unforeseen downtime.

## Expert service inspections

Standard preventative maintenance such as boroscopic inspections, vibration measurements, oil analysis, and portable CMaS® solutions are the cores of our lifecycle solutions. Receive detailed reports with clear and specific maintenance recommendations leading to lowering your O&M costs.



## UP-TOWER SERVICE

# LOOKING BEYOND THE HORIZON

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Up-tower solutions - Global Presence, Agility and Speed combined with local expertise.

Moventas is setting the industry benchmark in up-tower service solutions. Smart and fast up-tower repairs are based on Moventas' deep and diverse technology heritage, independent of any OEM.

Our innovative Up-tower repair solutions have an immediate benefit of decreasing O&M costs and operational risks while increasing reliability and availability.

With tailored working methods, special built tools and professionally trained field service experts Moventas can complete most complex up-tower repairs within a couple of days.

Critical parts for the up-tower repair will be supplied from our global workshop network allowing for minimum lead times and local supply of the highest quality.







Our extensive know-how and almost 40 years of experience means industry innovation in up-tower service - with over 1000 completed jobs.

## Smart Up-Tower Repair Features:

- Ready to go kits including all required components.
- Geared components are manufactured from Moventas clean steel which improves gear root and surface safety as well as eliminates tooth fractures.
- Tailored tools for each gearbox's up-tower service needs.

## WORKSHOP SERVICE

# GOING BEYOND STANDARDS

Moventas' high density of global workshops and service centres allow the shortest turnarounds at industry leading quality standards.

Extend gearbox lifetime with innovative repairs and upgrades. Gearboxes will be fully assessed from root cause analysis and innovative performance enhancing through to low cost component refurbishment techniques. Our tailored solutions are proven to be fit for purpose.

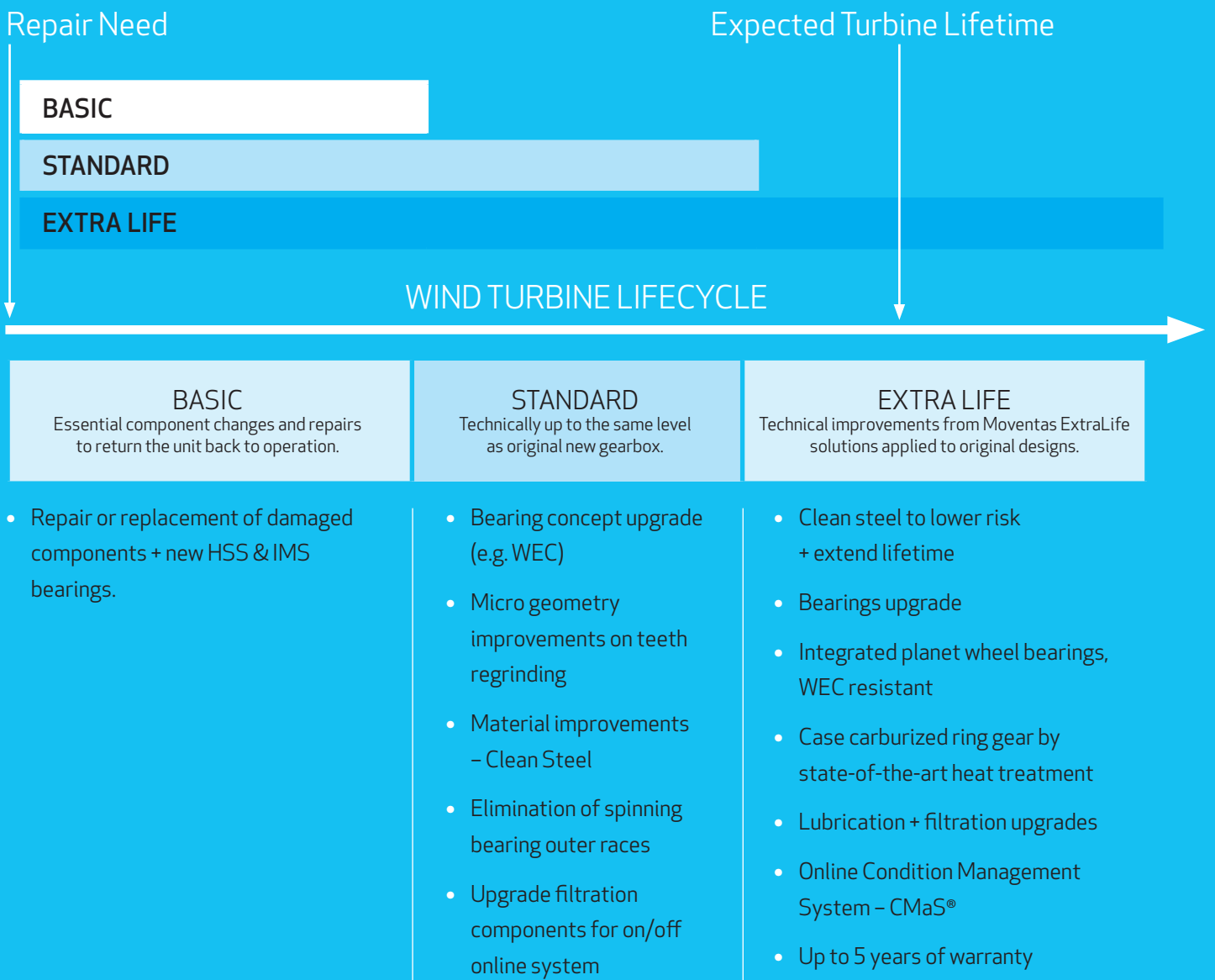
Our multi MW load testing capabilities across the global workshop network offers quality reassurance and this physical validation ensures reliable operation. At the same time, it quantifies the benefits of our advanced design upgrades.

### Key Benefits

- instant access to a new or refurbished gearbox
- Reduced downtime due to quick turnaround times
- No additional crane and service team required for installation
- Single source supplier reduces the risk of damaged or contaminated accessories



# MOVENTAS WORKSHOP SERVICE PROCESSES CONTAIN:



## REPLACEMENT GEARBOX

# FAST AND EASY LIFETIME EXTENSION

### Instant access to new and refurbished gearboxes

Replacement gearboxes will lead to the shortest downtime increasing productivity and injects the latest gearbox technologies extending lifetime.

Brand new or refurbished gearbox which is ready to be shipped from the gearbox inventory.

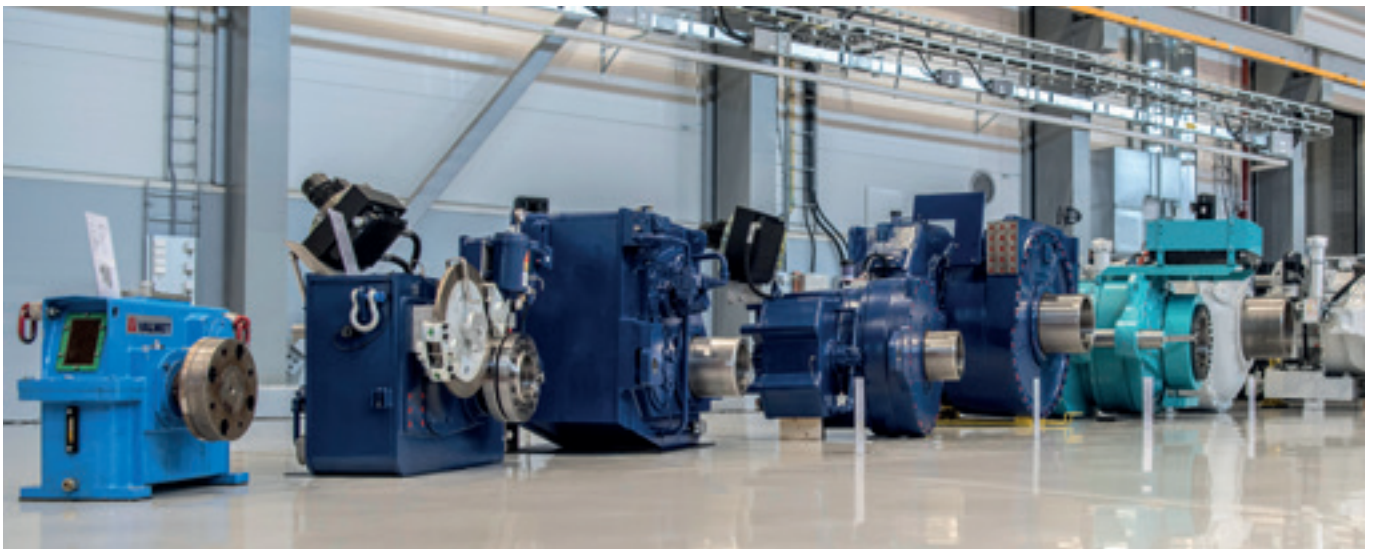
### New replacement gearboxes

Moventas' new replacement gearboxes represent the latest in drivetrain technology, designed to meet the challenging demands of today's wind turbine operations. Practical expertise, state-of-the-art solutions, research

A result of years of evolution featuring

- Wear-free case carburized ring wheel
- Optimized casted components
- Integrated 2-row planet wheel bearings
- Helical gears
- Optimized gearbox parameters

and development provide you with reliable gearboxes. New replacement units are full-load tested considering static, dynamic and extreme load conditions.

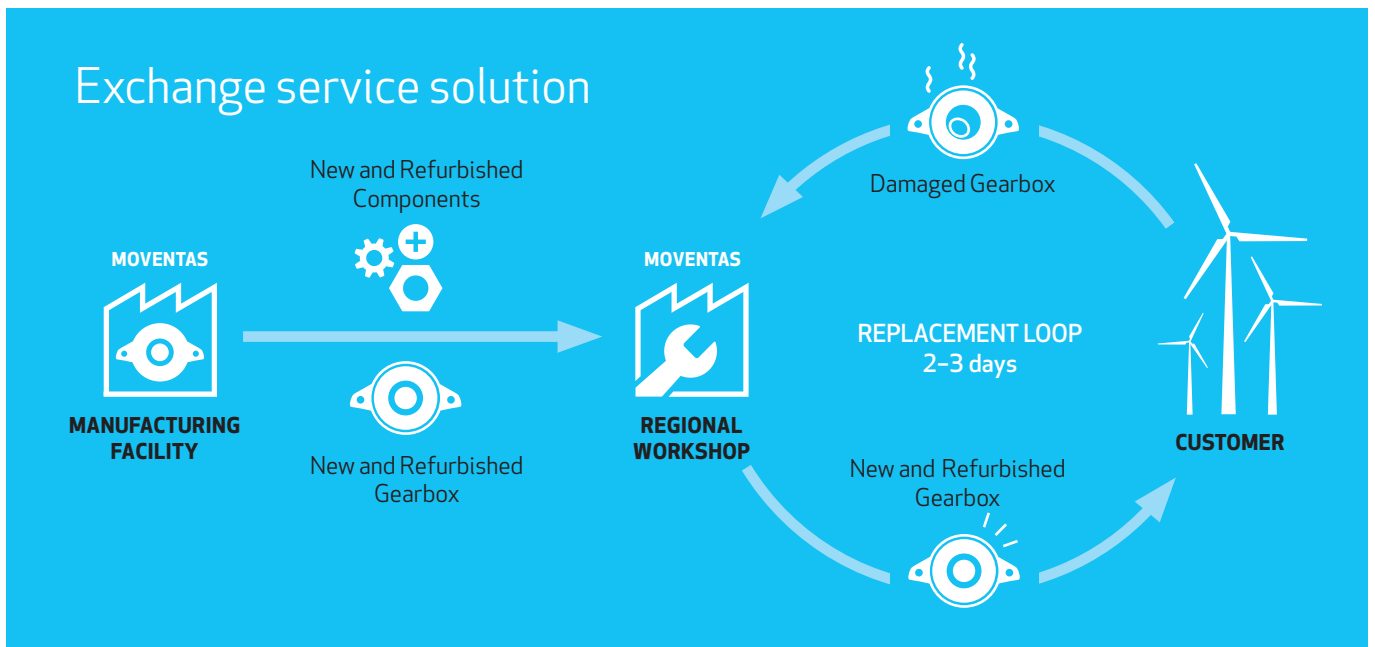




# Refurbished replacement gearboxes

Moventas offers a comprehensive gearbox pool and exchange service. A refurbished gearbox gives you an economic alternative to a new gearbox by only

upgrading impacted components. Known generic failure modes are eliminated resulting in higher availability and reliability.



# SPARE PARTS READY TO GO

Genuine Moventas spare parts  
– high quality, short lead time,  
24/7 available.

Moventas sources and supplies spare parts worldwide for most common OEMs. Availability of parts through online ordering, local inventories and quick response times leads to savings in your O&M structure.

Maximize your uptime and revenue generation with Moventas spare parts.

## Spare parts from Moventas

- Genuine gearbox OEM spare parts
- Components and spare parts for Acciona, GE, Bonus, DeWind, Gamesa, Nordex, Senvion, Suzlon, Siemens, Vestas and WinWind turbine platforms
- Thousands of high quality spare parts in stock available for fast delivery
- OEM inspected and refurbished spare parts in original configuration or upgraded to latest available solution.



Turbine Make*	Turbine Type	WORKSHOP SERVICES				Replacement Gearboxes	Spares	FIELD SERVICES				Expert Services
		Workshop Repairs			HSS			Uptower Repairs				
		Basic	Standard	ExtraLife				IMS	LSS	Planetary Swap		
Acciona	AW1500	m w	m w	m	m	Available	m	m	m	-	ANY BRAND	
	AW3000	m	m	m	m		m	-	-	-		
Gamesa	G39	m z w	m z	m	m		m z w	-	-	-		CMaS portable - periodic monitoring
	G4x	m z w	m z w	m	m z		m z	-	-	-		
	G5x	m z	m z	m	m		m z w	-	-	-		
	G8x-2000	m z w	m z w	m	m		m z w	m z w	-	-		
GE	1.5	m w ei z	m w	m w	m		m z w	m w	m ei	m w z		Vibration measurement & analysis
TVOHDA	N60	w ei	w ei				m ei					
	N80/N90	m w ei	m w ei				ei					
SENVION	MM82	m w ei	m w ei	m	m		m ei	m ei				Endoscopic inspections
	MM92	m w ei	m w ei	m	m		m ei	m ei				
	XM104	m	m		m		m	m				
SIEMENS	SWT-2.3	w z	w	w			w z	w	w	w		Oil sampling and analysis
	SWT-3.6	w	w	w			w					
SUZLON	S88/S9X	m w	m w	m	m	m w	w	w				
	S11X	m	m	m	m	m						
Vestas	V39	m z w	m z	m	m	m						
	V4x	m z w	m z w	m	m z	m z w						
	V52	m z	m z	m z	m	m z						
	V66	z w	w			w						
	V80	m z w	m z w	m z w	m	m z w	m z w	m z w				
	V82	z	z			z						
	V90	m z w	m z w	m z w	m z	m z w	m z w	m z w				
	V100	m	m		m	m	m					

**m** moventas / Metso / Valmet / Santasalo

**z** ZF / Bosch Rexroth / Hansen

**w** Winergy / Flender

**ei** Eickhoff

CMaS • Condition Management System	Service Agreements & Special Projects
<b>ANY BRAND</b>	
Diagnostics and analysis services	Preventive maintenance agreements
CMaS can be installed to any turbine and gearbox brand either uptower or in our factory	Tailored service projects

# moventas

Moventas is a new energy technology expert and multi-brand service provider. Moventas' technology strives to lower the cost of energy across the lifecycle of renewable energy generation, from superior gearbox design and manufacture to extensive after sales service for most gearbox brands. Moventas is part of the Clyde Blowers.

Read more at

**[www.moventas.com](http://www.moventas.com)**

Follow us on Twitter, LinkedIn and Facebook



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