



Shell Lubricants

SHELL OMALA S4 GX 320 IS APPROVED FOR USE IN A WIDE VARIETY OF GE WIND TURBINES

DESIGNED TO MEET CHALLENGES

Shell Omala S4 GX 320 has successfully completed multi-year field trials and is approved for use in a wide variety of 1.5–2.75-MW onshore wind turbines manufactured by GE Wind. Shell Omala S4 GX 320 is among the leading gear oils used in wind turbine applications and is designed to meet or exceed equipment manufacturers' specifications.



SPECIFICATIONS AND APPROVALS

Shell Omala S4 GX 320 has successfully completed multi-year field trials and is approved for use in a wide variety of 1.5–2.75-MW wind turbines manufactured by GE Wind. These include

- 1.x-MW wind turbines with gear drives from
 - Bosch Rexroth
 - Moventas
 - Winergy (models 4390.x, PEAB 4410.x, PEAB 4411.x, PEAB 4419 and PEAB 4431)
- 2.x-MW wind turbines with gear drives from
 - Bosch Rexroth
 - Winergy.

GE Wind is one of the industry leaders in wind turbine technology with more than 16,500 1.5- and 1.6-MW wind turbines installed globally. GE Wind manufactures, markets and installs a variety of wind turbine technologies, including the 1.5–2.75-MW onshore turbine series.

Wind energy production is growing at record levels in response to the need for the diversification of energy sources through the increasing global demand for electricity. Shell Lubricants can provide products and services for the entire wind value chain, from component manufacture and turbine assembly, through transportation, construction and installation to servicing.

AN ADVANCED, SYNTHETIC INDUSTRIAL GEAR OIL

Shell Omala S4 GX 320 is an advanced, heavy-duty-industrial synthetic gear oil offering outstanding lubrication performance under severe operating conditions, including reduced friction; long service life; and high resistance to micropitting for optimal gear protection in wind turbines. Shell Omala S4 GX has an impressive set of equipment manufacturers' credentials from a wide variety of component and wind turbine equipment manufacturers, including GE Wind, as well as approvals for pitch- and yaw-drive applications.

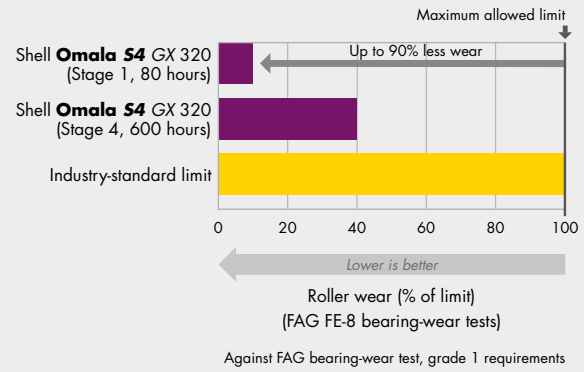


PERFORMANCE BENEFITS

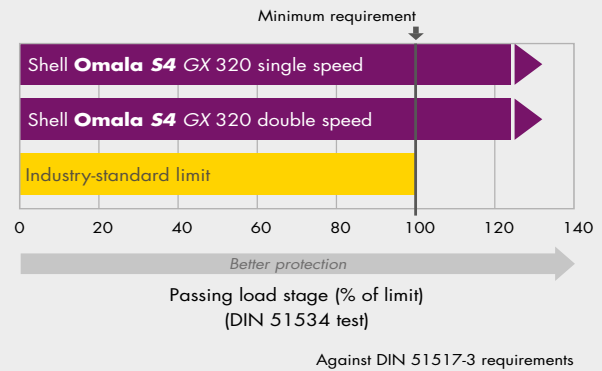
The key performance benefits of Shell Omala S4 GX include

- long oil life:** Maintenance-saving Shell Omala S4 GX is formulated using an advanced additive system in combination with specially selected synthetic base fluids to provide outstanding resistance to breakdown over long-duration and/or high-temperature operation. Shell Omala S4 GX offers the potential to significantly extend service intervals compared with conventional industrial gear oils.
- excellent wear and corrosion protection:** Shell Omala S4 GX is formulated to have excellent load carrying capacity and micropitting performance to provide long component life even under shock-load conditions. Shell Omala S4 GX also has excellent corrosion protection, even in the presence of contamination by water and solids.
- maintaining system efficiency:** Shell Omala S4 GX can help to maintain or enhance the efficiency of industrial gear systems through its improved performance at low temperature and lower friction in comparison with mineral-oil-based products. This provides better lubrication at low start-up temperatures.

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Shell Omala S4 GX oil provides up to 90% less bearing wear than standard FAG test limits.



Shell Omala S4 GX oil significantly exceeds the minimum gear protection requirements, even during double-speed testing.



WORKING WITH INDUSTRY

Because lubricants are critical machine components, we work with equipment manufacturers to make sure that our products help to lower your operating costs and increase machine availability. We have long-standing relationships with many of the leading equipment manufacturers, and work with them to design lubricants that meet the requirements of their equipment. In addition, Shell provides fluids and greases for all other wind turbine components, including hydraulic systems, yaw gears and bearings, as well as other related fluids such as transformer oils.

CONTACT US

For further technical information or to switch your wind turbine to Shell Omala S4 GX oil, contact your local Shell Lubricants representative or visit www.shell.com/home/content/lubes/industries/power.

SPEAK TO YOUR SHELL LUBRICANTS DISTRIBUTOR FOR MORE INFORMATION.



The term "Shell Lubricants" refers to the various Shell Group companies engaged in the lubricants business.

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