

Product	Benefits	Technology	ISO viscosity grades	Specifications and approvals <small>(Full details of approvals for all products can be obtained from your Shell representative; approvals and claims will vary by viscosity grade.)</small>
Shell Corena S4 R	<ul style="list-style-type: none"> ■ Extra long life and improved efficiency ■ Severe applications ■ Rotary air compressors 	Synthetic, advanced ashless	32, 46, 68	Approved by: Shell Corena S4 R 68 is approved by ABB for use in VTR turbochargers with a maximum oil-drain interval of 5,000 hours (HZTL 90617, list 3a) Industry standards: ISO 6743-3A DAJ
Shell Corena S4 P	<ul style="list-style-type: none"> ■ Extra long life and improved efficiency ■ Severe applications ■ Reciprocating air compressors 	Synthetic, advanced additive system	68, 100	Industry standards: ISO 6743-3: 2003 DAB (severe duty); DIN 51506 VDL/DP 6521-L-DAB (medium duty); EN 12021
Shell Corena S3 R	<ul style="list-style-type: none"> ■ Long life ■ Improved efficiency ■ Rotary air compressors 	Conventional, advanced additive system	32, 46, 68	Industry standards: ISO 6743-3A DAH, DAJ
Shell Corena S2 R	<ul style="list-style-type: none"> ■ Reliable protection ■ Standard life applications ■ Rotary air compressors 	Conventional, detergent	46, 68	Industry standards: ISO 6743-3A DAH
Shell Corena S2 P	<ul style="list-style-type: none"> ■ Reliable protection ■ Standard life applications ■ Reciprocating air compressors 	Conventional	68, 100, 150	Industry standards: ISO 6743-3A DAA (normal duty)
Speciality compressor oils				
Shell Refrigeration Oils	A range of specialised oils suitable for use in carbon dioxide, ammonia and hydrofluorocarbon refrigeration systems			Contact your Shell representative for details
Shell Gas Compressor Oils	A range of specialised oils suitable for use in hydrocarbon and chemical gas compression applications			Contact your Shell representative for details



FULL PRODUCT AND SERVICE PORTFOLIO

Shell Lubricants is named the market leader in lubricants [Kline & Company, 2009] and has a 60-year history of innovation. We are constantly investing to develop better lubrication solutions, as demonstrated by

- Shell Omala S4 GX synthetic gear oil – for long life in demanding environments
- Shell Tellus S4 ME synthetic hydraulic oil – for long life and energy saving.

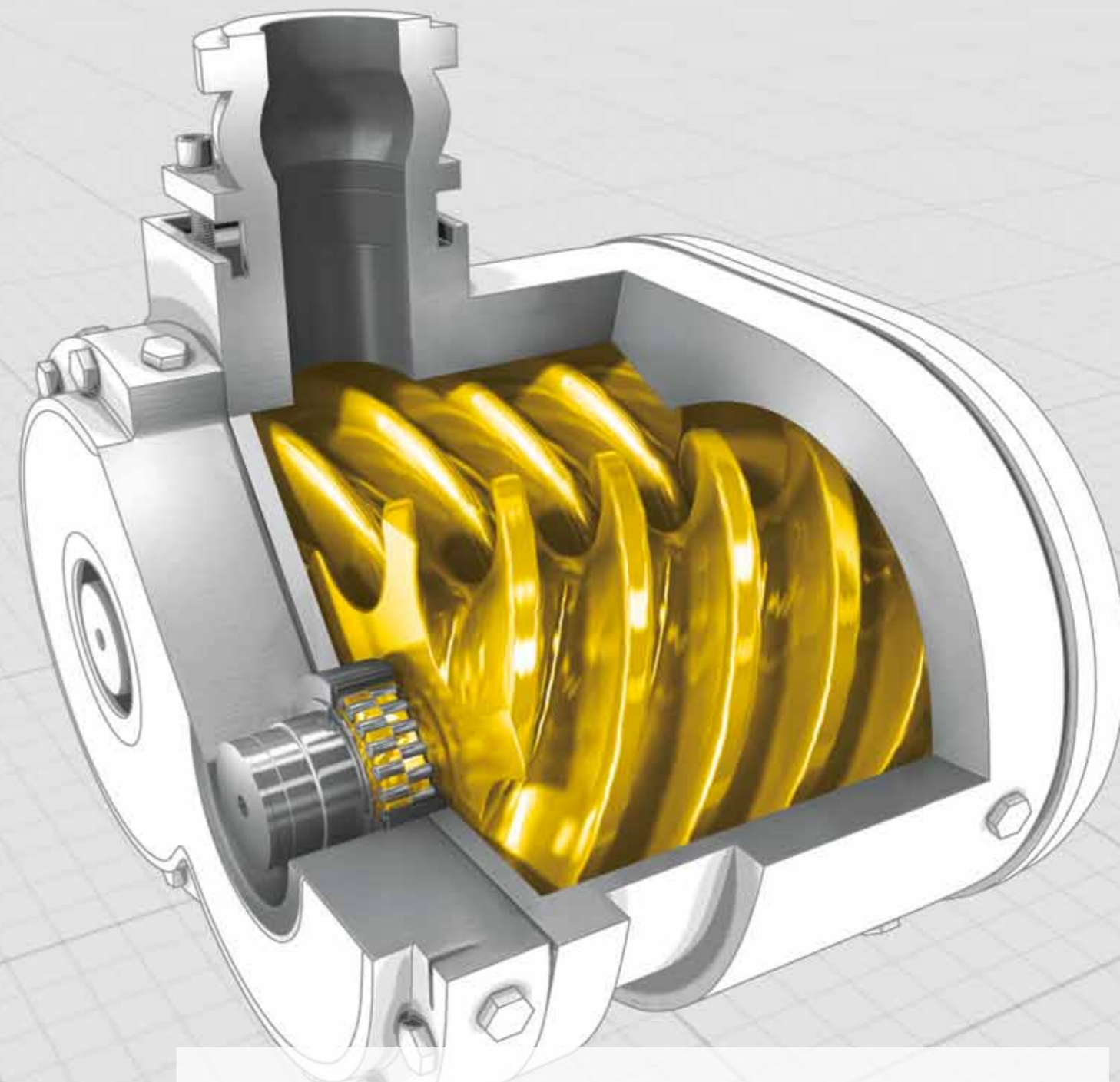
In addition, Shell provides the excellent Shell LubeAnalyst oil condition monitoring service, which is designed to help improve your business performance.

Whatever your needs or application, Shell can provide a full range of oils and greases, including synthetic, high-performance products and additional services.

Shell Lubricants refers to the various Shell companies engaged in the lubricants business.

For more information, please contact

shell.com/lubricants



**DESIGNED TO ENHANCE
PRODUCTIVITY**

**JUST LIKE OUR COMPRESSOR
OILS – SHELL CORENA.**

DESIGNED TO MEET CHALLENGES



EVERY PART OF YOUR MACHINE OR PROCESS HAS BEEN METICULOUSLY ENGINEERED, SO YOU WANT TO BE SURE THAT YOU CHOOSE A LUBRICANT THAT HAS BEEN DESIGNED TO ENSURE THAT YOUR EQUIPMENT IS WELL PROTECTED AND WORKS EFFICIENTLY.

The Shell Corena range of air compressor oils has been developed to enable equipment operators to select the oil designed to deliver optimum value to their operations through enhanced wear protection, long oil life and high system efficiency.

WEAR PROTECTION

Excess wear can seriously compromise an air compressor's life and efficiency. The Shell Corena range includes dedicated rotary compressor oils designed to control vane and screw wear, and oils for reciprocating compressors specifically to help control cylinder, piston-ring and valve wear.

Whatever your technical needs and operational conditions, there is a Shell oil that is designed to help you get the most from your equipment investment. The Shell Corena range includes the latest synthetic oils for enhanced wear protection in high-temperature conditions and for extended operations.

OIL LIFE

The longer an oil's life, the less fluid maintenance your equipment requires, so it can continue to operate with less interruption. The Shell Corena range enables you to best match oil life to your operational needs.

From mainstream oils for standard life applications to advanced synthetic oils that can last for up to three years, the Shell Corena range enables you to choose the right oil for your needs.

SYSTEM EFFICIENCY

Pressure loss in worn compressors can reduce operational efficiency and increase costs. Shell Corena oils are designed to promote system efficiency by suppressing foaming, releasing trapped air and rapidly separating out condensed water. The oils are also developed to help to reduce wear, which helps to keep your compressors working as their designers intended.

A RANGE OF AIR COMPRESSOR OILS DESIGNED TO MEET YOUR NEEDS

To meet the challenges of a wide range of air compressors and applications, Shell has designed a portfolio of oils that enables you to choose a product to match your needs.

PRODUCT NAME SUFFIX KEY

- P** = High pressure/reciprocating (piston) air compressors
- R** = Rotary vane and screw air compressors

APPLICATION ICON KEY

- High temperature
- Mobile compressors
- Rotary vane and screw air compressors
- Factory/machine applications
- Reciprocating (piston) air compressors

THE SHELL CORENA "R" RANGE

Rotary vane and screw air compressor oils for use in stationary and mobile air compressors

THE SHELL CORENA "P" RANGE

Reciprocating (piston) air compressor oils for safe and reliable operation in demanding high-pressure applications



Shell Corena S4 R

SYNTHETIC

- Extra long life
- Improved efficiency
- Severe applications



Better protection, longer oil life and better system efficiency

Shell Corena S3 R

- Long life
- High efficiency



Better protection, longer oil life and better system efficiency

Shell Corena S2 R

- Reliable protection
- Standard life applications



Shell Corena S4 P

SYNTHETIC

- Extra long life
- Improved efficiency
- Severe applications



Better protection and longer oil life

Shell Corena S2 P

- Reliable protection
- Standard life applications



PERFORMANCE YOU CAN COUNT ON

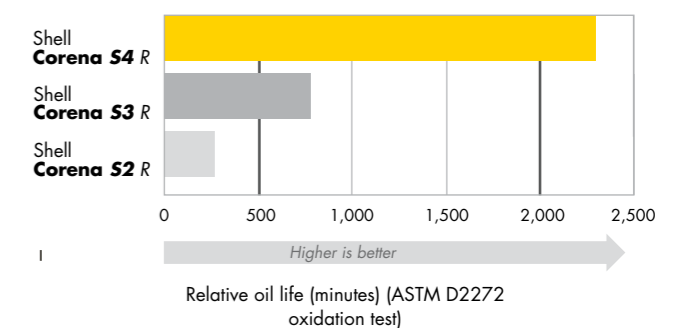
Shell's air compressor oils are developed in close co-operation with customers and equipment makers. The Shell Corena range is well known to equipment makers, and its performance has been demonstrated in real-life applications to help reduce the possibility of your equipment letting you down.

REAL-WORLD VALUE DELIVERY

Users of Shell Corena oils across a wide range of industries are benefiting from proven lubrication performance that adds value to their operations. For instance, by switching to Shell Corena S4 R, some customers are enhancing production and cutting maintenance costs by

- increasing oil-drain intervals by 100% compared with conventional oils
- extending equipment service life: one cement company is running its compressors for three times longer between overhauls
- reducing the high operating temperatures caused by thickening of the original oil, which prevented the oil valves from working efficiently.

Shell Corena S4 R – For the longest oil life in the Shell range

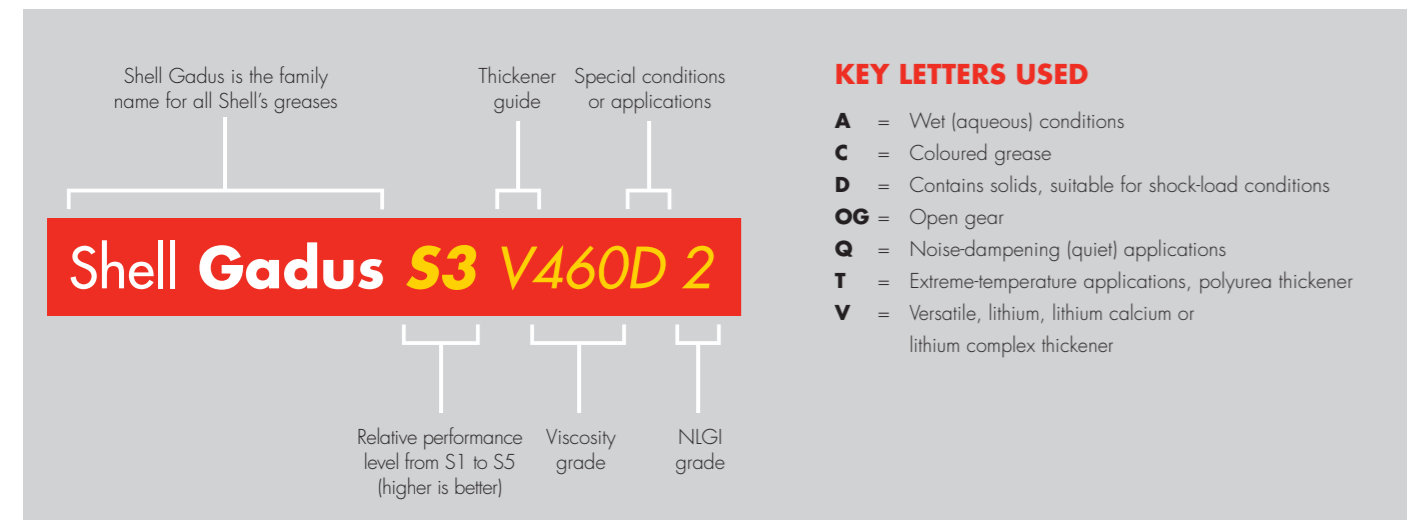


HELPFUL PRODUCT NAMES

There are at least four properties that you should look for when selecting a grease:

- thickener type
- oil viscosity
- operating conditions and application
- NLGI grade (consistency).

Shell's Gadus greases have names based on these properties that aim to help you select the right products for your needs.



FULL PRODUCT AND SERVICE PORTFOLIO

Shell Lubricants is the number-one finished lubricants supplier² and has a 60-year history of innovation. It constantly invests to develop better lubrication solutions, including advanced synthetic technologies such as

- Shell Tellus S4 ME synthetic hydraulic oil – for long life and energy saving
- Shell Corena S4 R air compressor oil – for up to 12,000 hours of protection.

In addition, Shell provides the world-leading Shell LubeAnalyst oil condition monitoring service, which is designed to help improve your business performance.

Whatever your needs or application, Shell can provide a full range of oils and greases, including synthetic, high-performance products and additional services.



Product	Benefits	Technology (Thickener, base oil and key properties)	ISO viscosity grade	NLGI grade	Specifications and approvals (Ask your Shell representative for full approval details. Approvals and claims vary by viscosity grade.)
Shell Gadus "V" range					
Shell Gadus S5 V100	<ul style="list-style-type: none"> ■ Long life ■ Improved efficiency ■ Lithium complex 	Lithium complex, synthetic	100	2	Approved: Vestas Wind Systems Listings: ABB, CH Schäfer Getriebe, FLSmidh, Hegenscheidt/MFD and perma Schmier-systeme
Shell Gadus S3 V220C	<ul style="list-style-type: none"> ■ Extra protection ■ High temperature ■ Red lithium complex 	Lithium complex, mineral, EP	220	1, 2	Specification: Meets ASTM D4950-08 GC1B. Approved: Aichelin, Dexter Axle, Ser-Norge Aluminium and Willy Vogel Listings: Listed by over 20 major companies from a wide variety of industries.
Shell Gadus S3 V460D	<ul style="list-style-type: none"> ■ Heavy-duty protection ■ High temperature ■ Lithium complex 	Lithium complex, mineral, EP, solid EP additive (MoS ₂)	460	2	Specification: Meets Caterpillar, Liebherr and P&H Mining Equipment Approved: Bucyrus International, CMI FPE Ltd, Gebr. Pfeiffer perma Schmier-systeme, Rothe Erde, SMS Meer and Voith Listings: BE (certified), Bucyrus International, CMI Groupe, Dieffenbacher, Gebr. Pfeiffer, Hitachi, Konecranes and Komatsu Mining
Shell Gadus S2 V100	<ul style="list-style-type: none"> ■ Reliable protection ■ Multipurpose ■ Lithium 	Lithium, mineral	100	1, 2, 3	Approved: Approved by 18 major companies from a wide variety of industries. Listings: Listed by over 60 major companies from a wide variety of industries.
Shell Gadus S2 V220	<ul style="list-style-type: none"> ■ Reliable protection ■ Multipurpose ■ Lithium 	Lithium, mineral, EP	220	00, 0, 1, 2, 3	Specification: Meets ASTM D4950-08 LB Approved: Approved by 24 major companies from a wide variety of industries. Listings: Listed by over 100 companies from a wide variety of industries.
Shell Gadus S2 V220AD	<ul style="list-style-type: none"> ■ Heavy-duty protection ■ Water resistant ■ Lithium calcium 	Lithium calcium, mineral, EP, solid EP additive (MoS ₂)	220	1, 2	Approved: Sandvik (endorsed) and Xiamen XGMA Machinery Listings: Listed by 12 major companies from a wide variety of industries.
Shell Gadus S2 V220AC	<ul style="list-style-type: none"> ■ Heavy-duty protection ■ Water resistant ■ Red lithium calcium 	Lithium calcium, mineral, soluble EP additive	220	0, 1, 1.5, 2, 3	Approved: Willy Vogel Specification: Meets ASTM D4950-08 LB Listings: David Brown, Danieli, Eirich, Harburg-Freudenberger Maschinenbau, Maschinenfabrik Gustav Eirich, New Zealand Steel, Ondrives, Power Jacks Group, Tetra Pak International, ZZ-Antriebe
Shell Gadus speciality ranges Contact your Shell representative for details					
Shell Gadus "Q" greases for noise-dampening (quiet) applications					
Shell Gadus automotive greases for automotive components, from door-lock motors to steering systems and constant-velocity joints					
Shell Gadus "OG" lubricants for mobile and stationary open-gear applications requiring spray or fluid bath lubrication					
Shell GadusRail greases meet European and American railway specifications, especially for railway applications, including axle journal bearings, traction motor bearings and curve rails					
Shell Tactic EMV automatic single-point lubricators – available with a selected range of high-performance Gadus greases					
Related products Contact your Shell representative for details					

FOR MORE INFORMATION, PLEASE CONTACT

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

¹Saving reported by one customer. Actual savings may vary, depending on the application, the current oil used, the maintenance procedures and the condition of the equipment.

²Source: Kline & Company, "Competitive Intelligence for the Global Lubricants Industry, 2008-2018."



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**DESIGNED TO DO MORE.
JUST LIKE OUR GREASES
– SHELL GADUS.**

DESIGNED TO MEET CHALLENGES



SHELL GADUS IS A COMPREHENSIVE FAMILY OF GREASES DESIGNED TO MEET YOUR NEEDS.

Shell Gadus is a comprehensive family of greases designed to meet your needs. The Gadus ranges include multipurpose greases that are designed to help simplify your product inventory, as well as speciality greases, including advanced polyurea synthetic products designed for the most severe extreme-temperature and long-life applications, and a range of open-gear lubricants.

Whether you need greases for steel production, mining, construction, power generation, general or automotive manufacturing, other applications or your vehicles, Shell has a grease designed to best meet your challenges.

The Shell Gadus range has been developed to deliver optimum value through

- enhanced wear protection
- long grease life
- system efficiency.

WEAR PROTECTION

Equipment wear can reduce system efficiency and service life. Protecting components from wear is fundamental for getting the most out of your investments through prolonging asset life and preventing production losses through breakdowns.

The Shell Gadus range of greases offers protection across a wide range of applications. The range includes Shell's latest extreme-temperature "T" polyurea synthetic greases, which can help to protect bearings under extreme temperatures, heavy loads and contaminated conditions.

LEADING TECHNOLOGY

Shell's international research and development team works in close co-operation with customers and equipment makers to create the latest advanced-technology greases. These greases are designed to outperform conventional greases by combining a wide range of thickener technologies, which keep the grease in place under different conditions, with innovative oils that provide efficient lubrication and protection.



GREASE LIFE

The longer your grease lasts, the longer your components last and the less lubrication maintenance your equipment needs. Shell Gadus greases are designed to help your equipment continue to operate without interruption. The comprehensive product range enables you to select a grease with a life that meets your operational needs.

Customers using Shell Gadus extra-long-life synthetic technologies are doubling grease life for some applications. Others prefer to take advantage of cost-effective, reliable, multipurpose Shell Gadus greases for standard life applications.

SYSTEM EFFICIENCY

To help your equipment perform to its design standards, you need a grease that stays in place and provides effective protection and lubrication where you need it.

Shell Gadus greases are designed to help maintain or even improve the efficiency of your systems. From greases that offer reliable performance for standard applications to specialist low-noise, high-temperature and heavy-load greases, there is a Shell Gadus product that can help to optimise your system's efficiency and costs of operation.

A WIDE RANGE OF THICKENER TECHNOLOGIES

Different applications and conditions require different thickeners. The Shell Gadus range uses a wide range of thickener technologies, each with relative benefits.

Thickener guide	Thickener	Temperature	Water resistance	Shear and vibration stability
T	Polyurea	✓✓✓✓	✓✓✓	✓✓✓✓
V	Lithium complex	✓✓✓✓	✓✓✓	✓✓✓✓
V	Lithium calcium	✓✓	✓✓✓✓	✓✓✓
V	Lithium	✓✓	✓✓	✓✓✓
A	Calcium	✓	✓✓✓	✓✓✓
U	PTFE	✓✓✓✓	✓✓✓✓	✓✓✓✓
U	Clay	✓✓✓✓	✓✓	✓✓✓

- T** = Extreme-temperature performance using Shell polyurea thickeners
- V** = Versatile, multipurpose application using lithium and lithium complex thickeners
- A** = Thickeners for wet (aqueous) conditions
- U** = Unusual non-melting thickeners or other applications

SHELL'S ADVANCED POLYUREA "T" THICKENER

Shell's research teams have developed superior greases using advanced polyurea thickener technology. These products are designed to outperform conventional greases in extreme-temperature applications, such as electric motors and automotive constant-velocity joints. In one example, a global steel manufacturer reported that it reduced bearing failure rates by 75% and grease consumption by 30% through switching to Shell Gadus S3 T100 polyurea technology grease.

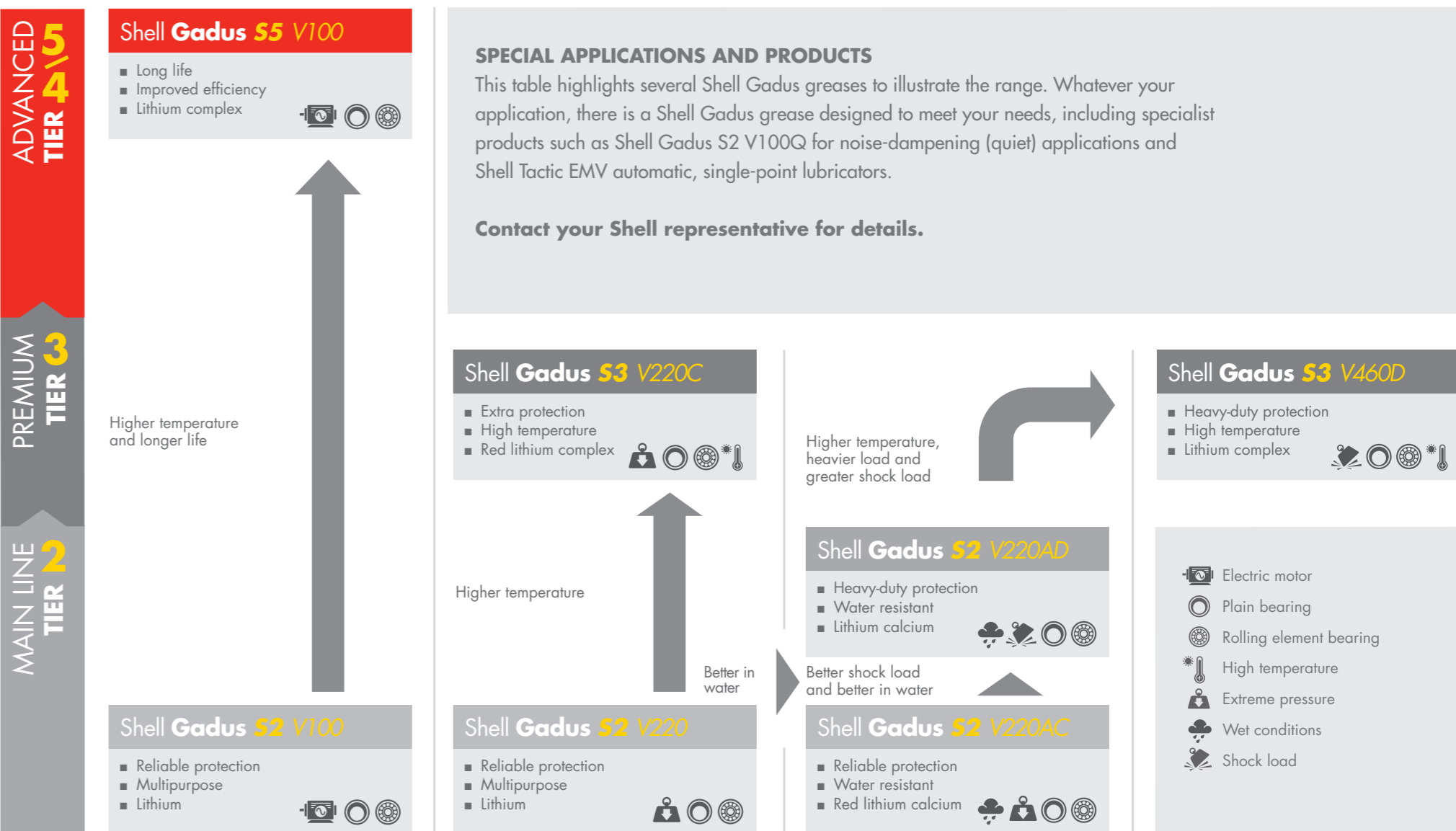
FIT-FOR-PURPOSE PROTECTION

Using the right grease for your needs can deliver significant savings. For example, a construction company reports saving \$3.8 million¹ a year through changing to Shell Gadus S3 V460D 2 grease, which provided the protection needed for performing heavy-duty work. The grease is extending excavator component life by 40%, reducing downtime and maintenance costs, and increasing equipment availability.

A RANGE OF GREASES TO MEET YOUR NEEDS

MULTIPURPOSE		MULTIPURPOSE EXTREME PRESSURE (EP)		HEAVY-DUTY MULTIPURPOSE
Bearings carrying low loads at higher speeds		Bearings carrying medium loads at medium speeds		Bearings carrying heavy loads at lower speeds and shock loads
Auxiliary industrial equipment, including electrical motors and fans, and lightly loaded roller element or plain bearings		Roller element or plain bearings for industry and transport		Large roller element or plain bearings for industry and transport
DRY ENVIRONMENTS		WET ENVIRONMENTS		
GREASE BASE OIL VISCOSITY	100	220		460

INCREASINGLY EFFICIENT PROTECTION



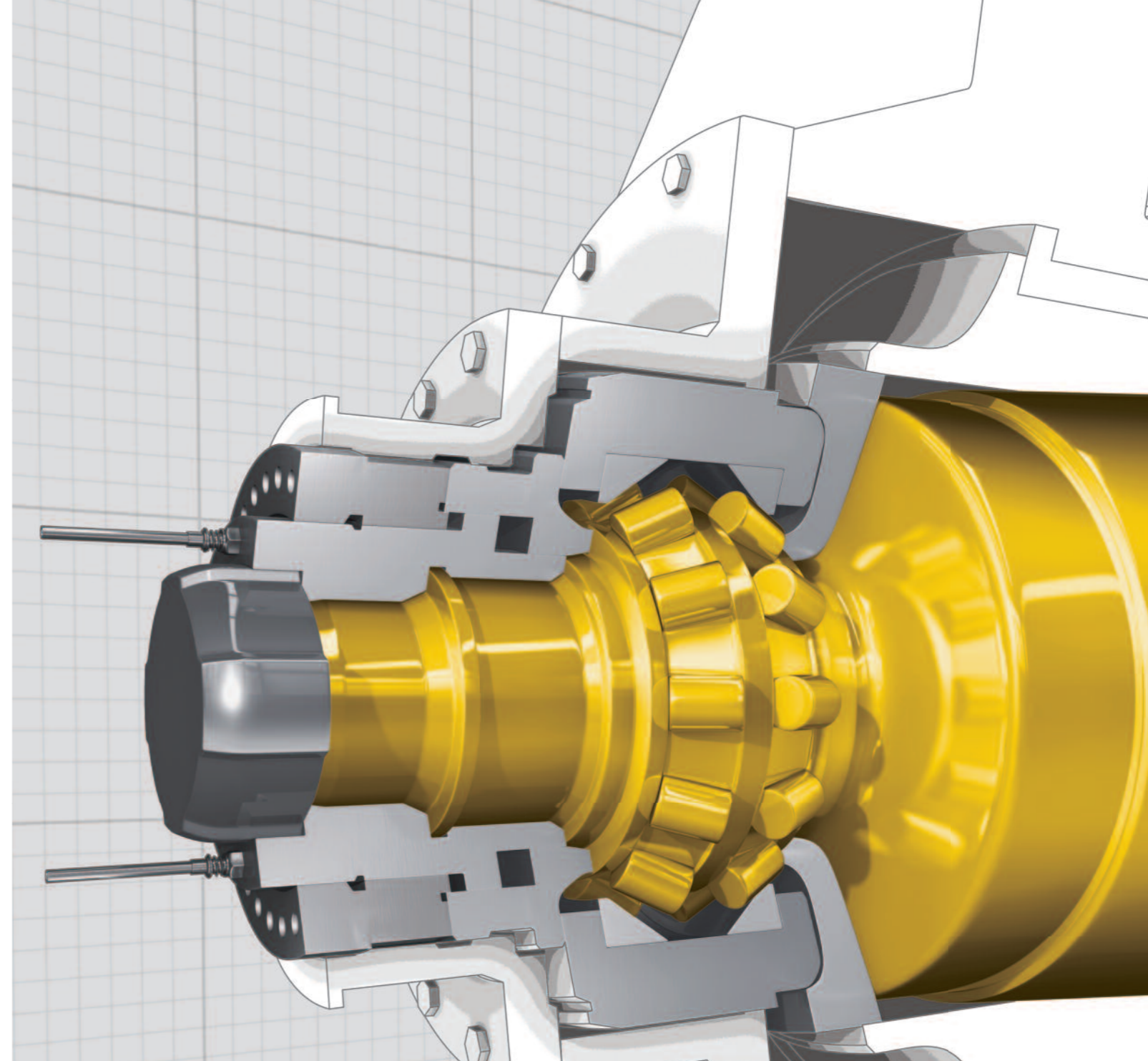
PERFORMANCE THAT YOU CAN RELY ON

The way a grease is made has a huge impact on its performance. Shell manufactures grease in a highly controlled and systematic way, from precisely specifying the ingredients to detailing how it is packaged, shipped and delivered. This quality process ensures that every batch you receive, no matter where in the world it is made, gives you the same high performance levels.

NEED EXPERT ADVICE?

Shell has on-the-ground grease specialists, supported by a global network of technicians, who can help to design a complete lubricant solution for your needs or work with you to solve a specific lubrication problem.

Product	Benefits	Technology	ISO viscosity grades	Specifications and approvals <small>(Full details of approvals for all products can be obtained from your Shell representative; approvals and claims will vary by viscosity grade.)</small>
Shell Morlina S4 B	<ul style="list-style-type: none"> ■ Extra long life ■ Extra protection ■ Severe applications 	Synthetic, mild EP	220, 320	Approved by or meets Alfa Laval Group D (gearboxes), Aerzener Maschinenfabrik (blowers), Baltimore Aircoil (gearboxes), Cincinnati Machine, David Brown and many other equipment manufacturer approvals and listings Industry standards: ISO 12925-1 type CKS; ISO 150 VG
Shell Morlina S2 B	<ul style="list-style-type: none"> ■ Versatile protection ■ Industrial applications 	Conventional, non-EP	68, 150, 220	Approved by or meets: Morgan Margoil® – New Oil (Rev. 1.1); and Danieli Standard Oil 6.124249.F (ISO 100-460) Industry standards: DIN 51517-2 type CL
Shell Morlina S2 BL	<ul style="list-style-type: none"> ■ Reliable protection ■ High-speed applications 	Low-viscosity base oils, non-EP	5, 10	Approved by or meets Cincinnati Machine P-65 (ISO 2); Cincinnati Machine P-62 (ISO 5, 10); and Cincinnati Machine P-45 (ISO 22)
Shell Morlina S1 B	<ul style="list-style-type: none"> ■ Reliable protection ■ Special applications 	Conventional, non-EP	100, 150, 220, 320, 460, 680	Approved by or meets Morgan Margoil® – New Oil (Rev. 1.1) Industry standards: DIN 51517-1 type C



DESIGNED TO KEEP PRODUCING RESULTS.

JUST LIKE OUR BEARING AND CIRCULATING OILS – SHELL MORLINA.

DESIGNED TO MEET CHALLENGES



FULL PRODUCT AND SERVICE PORTFOLIO

Shell Lubricants is named a global leader in lubricants (Kline & Company 2009) and has a 60-year history of innovation. We are constantly investing to develop better lubrication solutions, as demonstrated by

- Shell Omala S4 GX synthetic gear oil – for long life in demanding environments
- Shell Corena S4 R air compressor oil – for up to 12,000 hours of protection.

In addition, Shell provides the excellent Shell LubeAnalyst oil condition monitoring service, which is designed to help you improve your business performance.

Whatever your needs or application, Shell can provide a full range of oils and greases, including synthetic, high-performance products and additional services.

For more information, please contact



EVERY PART OF YOUR MACHINE OR PROCESS HAS BEEN METICULOUSLY ENGINEERED, SO YOU WANT TO BE SURE THAT YOU CHOOSE A LUBRICANT THAT HAS BEEN DESIGNED TO ENSURE THAT YOUR EQUIPMENT IS WELL PROTECTED AND WORKS EFFICIENTLY.

The Shell Morlina range of bearing and circulating oils has been developed to enable equipment operators to select the oil that will deliver optimum value to their operations through enhanced wear protection, long oil life and high system efficiency.

WEAR PROTECTION

Lubrication systems for industrial equipment differ considerably across industries in size, loading, operating conditions, temperatures and exposure to contamination. But whatever your application, bearings, gears and oil pumps must be well protected from wear and corrosion for long machine life.

That is why Shell offers a range of bearing and circulating oils ranging from robust, reliable products to fully synthetic products fortified with extreme-pressure (EP) additives. There are also speciality products designed to cope with hot, wet or dusty environments, or high-precision operations.

OIL LIFE

The longer the oil life, the less fluid maintenance is required to help your equipment to operate for longer without interruption. The Shell Morlina range of bearing and circulating oils enables you to match the oil life of the fluid to your operational needs. This includes the fully synthetic Shell Morlina S4 B, which offers the longest oil life in the Shell range under severe conditions, and speciality products that continue to function even when very contaminated with water, dust or dirt.

SYSTEM EFFICIENCY

Efficient systems are characterised by their ability to operate at or beyond their original design parameters. Consistent and reliable lubrication, whatever the operating conditions, is key. As every application brings specific challenges, the Shell Morlina range is designed to provide a choice of oils that can help to optimise system efficiency.







A RANGE OF BEARING AND CIRCULATING OILS DESIGNED TO MEET YOUR NEEDS

To meet the challenges of a wide range of equipment designs and applications, Shell has designed a portfolio of oils that enables you to choose a product to match your technical and operational needs.

PRODUCT NAME SUFFIX KEY

- B** = Bearings
- L** = Low load

APPLICATION ICON KEY

-  Roller bearing
-  Enclosed gear
-  High load
-  Extreme high temperature
-  Plain bearing
-  Factory/machine applications

THE SHELL MORLINA "B" RANGE

Bearing and circulating oils with a range of protection and performance levels for a wide range of industrial applications

THE SHELL MORLINA "BL" RANGE

Extra-low viscosity grades for use in high-speed machine spindle applications



OUR EXPERTISE, YOUR REASSURANCE

Shell Morlina oils have been designed and developed in close co-operation with customers and equipment makers, and have a proven track record in real-life applications. They are recommended or approved by leading equipment makers and users around the world so you can be assured that they will not let you down.

RESPONDING TO YOUR NEEDS – SHELL MORLINA S4 B

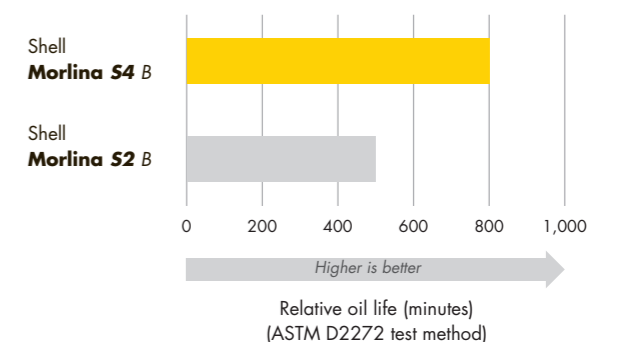
Using fully synthetic bearing and circulating oils, such as Shell Morlina S4 B, can bring significant savings to operators of heavy industrial equipment or where operating conditions are hot and severe. For instance, by switching from a conventional product, one customer reports

- increasing oil life by 400%
- reducing bearing damage
- increasing the value of production output by over \$80,000¹ a year.

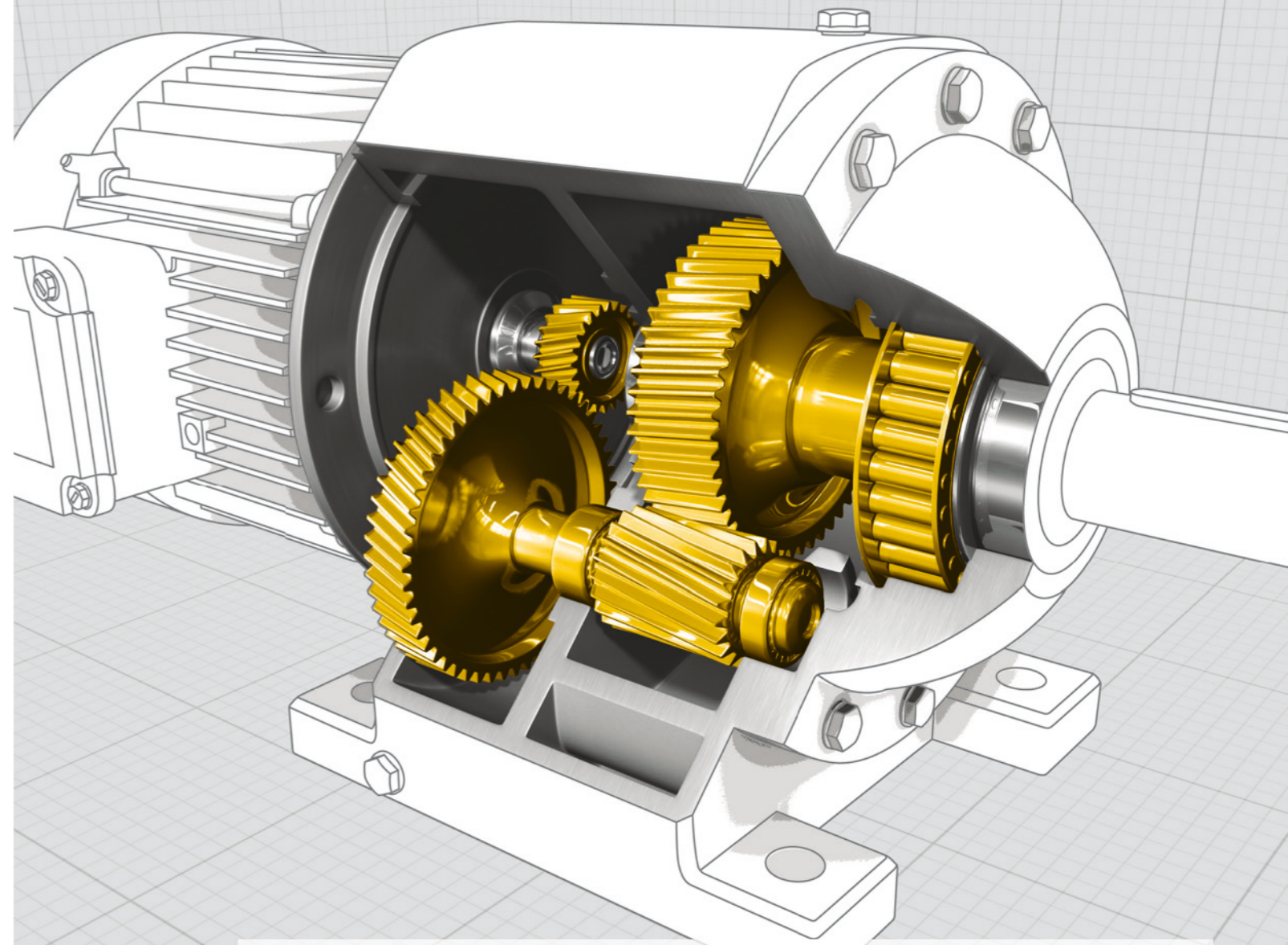
¹Shell Lubricants* refers to the various Shell companies engaged in the lubricants business.

¹Saving reported by one customer. Actual savings may vary, depending on the application, the current oil used, the maintenance procedures and the condition of the equipment.

Shell Morlina S4 B – For the longest oil life in the Shell range



Product	Benefits	Technology	ISO viscosity grades	Specifications and approvals <small>(Full details of approvals for all products can be obtained from your Shell representative; approvals and claims will vary by viscosity grade.)</small>
Shell Omala 54 GX	<ul style="list-style-type: none"> ■ Extra protection ■ Extra life ■ Special applications 	Synthetic (advanced extreme-pressure, EP, system)	150, 220, 320, 460	Approved by or meets David Brown, GE (wind turbines), Gamesa and many other equipment manufacturers Industry standards: ANSI/AGMA 9005-E02 (EP); ISO 12925-1 CKD; DIN 51517-3 (CLP); US Steel 224
Shell Omala 54 VVE	<ul style="list-style-type: none"> ■ Extra protection and life ■ Energy saving ■ Worm drives 	Synthetic (polyalkylene glycol)	150, 220, 320, 460	Approved by or meets Bonfiglioli, David Brown and many other equipment manufacturers Industry standards: ANSI/AGMA 9005-E02 (EP); ISO 12925-1 CKE
Shell Omala 52 G	<ul style="list-style-type: none"> ■ Extra protection ■ Standard applications 	Conventional (EP)	68, 100, 150, 220, 320, 460, 680, 1000	Approved by or meets David Brown, Cincinnati Machine, and many other equipment manufacturers Industry standards: ANSI/AGMA 9005-E02 (EP); ISO 12925-1 CKD; DIN 51517-3 (CLP); US Steel 224
Shell Omala 51 W	<ul style="list-style-type: none"> ■ Reliable protection ■ Worm drives 	Conventional (compounded fatty oil)	460	Industry standards: AGMA 9005-E02 (CP)
Speciality gear oils				
Shell Spirax oils	A range of automotive gear, axle and transmission oils to meet the needs of on- and off-highway vehicles			Contact your Shell representative for details



FULL PRODUCT AND SERVICE PORTFOLIO

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- Shell Tellus S4 ME synthetic hydraulic oil – for long life and energy saving
- Shell Corena S4 R air compressor oil – for up to 12,000 hours of protection.

In addition, Shell provides the excellent Shell LubeAnalyst oil condition monitoring service, which is designed to help improve your business performance.

Whatever your needs or application, Shell can provide a full range of oils and greases, including synthetic, high-performance products and additional services.

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³Source: Kline & Company, "Competitive Intelligence for the Global Lubricants Industry, 2008–2018."

For more information, please contact

shell.com/lubricants

DESIGNED TO COPE WITH HEAVY DEMANDS.

JUST LIKE OUR INDUSTRIAL GEAR OILS – SHELL OMALA.

DESIGNED TO MEET CHALLENGES



EVERY PART OF YOUR MACHINE OR PROCESS HAS BEEN METICULOUSLY ENGINEERED, SO YOU WANT TO BE SURE THAT YOU CHOOSE A LUBRICANT THAT HAS BEEN DESIGNED TO ENSURE THAT YOUR EQUIPMENT IS WELL PROTECTED AND WORKS EFFICIENTLY.

The Shell Omala range of industrial gear oils has been developed to enable equipment operators to select the oil that will deliver optimum value to their operations through enhanced wear protection, long oil life and high system efficiency.

WEAR PROTECTION

Protecting machine gears from wear and corrosion is important for prolonging asset life and preventing breakdowns.

The Shell Omala range of industrial gear oils offers protection across a wide range of applications: from the extreme-pressure rolling contacts in spur gears to the sliding contacts in worm gears. It includes Shell's latest synthetic oils such as Shell Omala S4 GX, which offers exceptional long-life performance under extreme loads and temperatures.

OIL LIFE

The longer an oil's life, the less fluid maintenance your equipment requires, so it can continue to operate without interruption. The Shell Omala range enables you to match oil life to your operational needs.

Customers using Shell's standard products, such as Shell Omala S2 G, are extending oil-drain intervals by up to 200% for some applications. Customers are trading up to synthetic oils, such as Shell Omala S4 GX, for even longer oil life and other benefits.

SYSTEM EFFICIENCY

Shell Omala oils can help to maintain or improve system efficiency by protecting against the impact of oil ageing and contamination for efficient lubrication. Advanced synthetic oils such as Shell Omala S4 WE can offer additional benefits by providing improved energy efficiency compared with conventional oils.

A RANGE OF INDUSTRIAL GEAR OILS DESIGNED TO MEET YOUR NEEDS

To meet the challenges of a wide range of gear types and applications, Shell has designed a portfolio of oils that enables you to choose a product to best match your technical and operational needs.

PRODUCT NAME SUFFIX KEY

- E** = Energy saving, high efficiency
- G** = Gears – spur and helical
- W** = Worm drive
- X** = Extra/extreme performance

APPLICATION ICON KEY

- Factory/machine applications
- Enclosed gears
- High temperature
- Extreme load
- Long life
- Worm gear



THE SHELL OMALA "G" RANGE

Enclosed industrial spur and bevel gear applications from standard to demanding high-load and extended-duty applications

THE SHELL OMALA "W" RANGE

Industrial worm-drive applications from standard to demanding high-load and extended-duty applications

Shell Omala S4 GX

SYNTHETIC

- Extra protection
- Extra life
- Special applications

Better protection, longer oil life and better system efficiency

Shell Omala S2 G

- Extra protection
- Industrial applications

Shell Omala S4 WE

SYNTHETIC

- Extra protection and life
- Energy saving
- Worm drive

Better protection, longer oil life and better system efficiency

Shell Omala S1 W

- Reliable protection
- Worm drive



PERFORMANCE YOU CAN COUNT ON

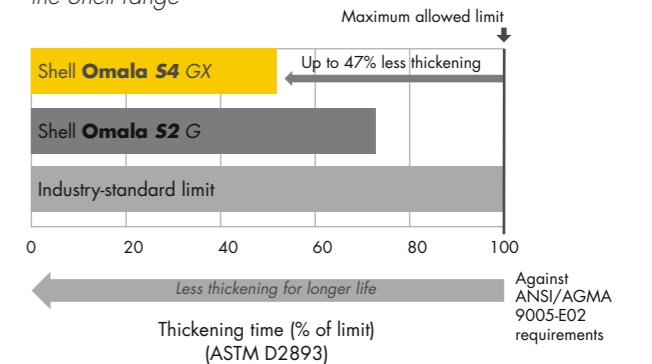
Shell's industrial gear oils are developed in close co-operation with customers and equipment makers. The Shell Omala range is approved or listed by hundreds of equipment makers, and its performance has been demonstrated in real-life applications to help reduce the possibility of your equipment letting you down.

REAL-WORLD VALUE DELIVERY

Users of Shell Omala oils across a wide range of industries are benefiting from proven, robust and reliable lubrication that adds value to their operations. For instance, by switching to Shell Omala S4 GX, some customers are

- increasing equipment protection: one customer reports virtually eliminating gearbox failures and saving over \$50,000 a year
- extending oil-drain intervals. Some equipment manufacturers approve Shell Omala S4 GX for four-year drain intervals, and some customers have extended their oil-drain intervals by up to five times.
- enhancing operational efficiency. Wind-turbine operators have increased turbine availability by reducing shutdowns due to foaming, high temperatures and filter blocking.

Shell Omala S4 GX – For the longest oil life in the Shell range





HELPING IMPROVE EFFICIENCY WITH NEXT-GENERATION TURBINE OILS



WHEN COMPARED TO TYPICAL TRADITIONAL GROUP II/III BASE OILS*

SHELL GTL BASE OIL

A high-quality base material used in Shell's premium finished lubricants



Higher viscosity index



Better additive response



Lower volatility



Better oxidation stability when additivated

WHY GTL?

Base oil produced from purified natural gas at a molecular level results in a significantly more consistent and stable product than conventional base oils



BENEFITS OF USING TURBINE OILS WITH GTL BASE OILS**



Enhanced system efficiency



Enhanced protection



Longer oil & equipment life



Less equipment wear

TODAY'S TURBINES NEED TO WORK HARDER THAN EVER BEFORE



- Greater demand for less downtime, extended oil-drain intervals and efficiency improvements
- Turbine sump volumes are shrinking in size while handling the same or increased power
- Cyclic operating conditions are placing more stresses on turbines
- Increased operating temperatures drive requirements for greater component protection
- Increased load on gearboxes

BENEFITS OF THE SHELL TURBO S4 RANGE OF TURBINE OILS

EXTENDED OIL LIFE

Exceptional resistance to degradation



- To help keep your turbine working for longer. In tests, Shell Turbo S4 X performed twice as well as the industry standard.

EXCELLENT EQUIPMENT PROTECTION

Long-term resistance to formation of sludge & varnish



- To help reduce the risk of bearing temperature issues and control valve positioning problems.

EXCELLENT SYSTEM EFFICIENCY

Rapid air release, rapid water separation, foaming resistance



- For effective lubrication over a wide temperature range and reduced opportunity for corrosion to occur.

ALL HELPING TO MAKE TURBINE OPERATION MORE EFFICIENT

*There are five technical groups of base oil defined by the American Petroleum Industry (API) based on saturates and sulphur levels, and viscosity index, namely API, I, II, III, IV, V

** When tested against market representative products