

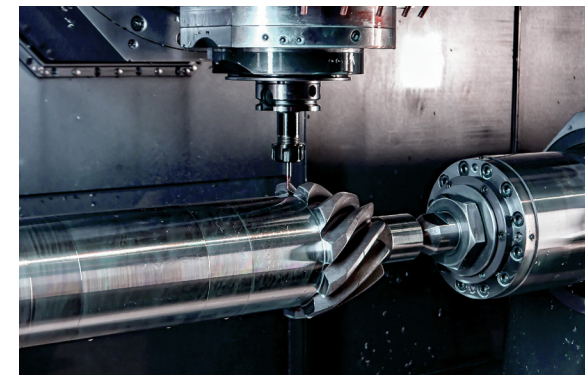
Product	Key Benefits	Key Application	Fluid Technology	Performance Levels
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### Industrial enclosed spur / helical / bevel / planetary gears / worm gears

<b>PETRONAS Gear Syn PAG</b>	<ul style="list-style-type: none"> <li>Excellent micropitting, extreme pressure and anti-wear protection</li> <li>Up to 5x longer oil life**</li> <li>High Viscosity Index</li> <li>Excellent performance including energy saving</li> </ul>	Industrial Spur / Bevel / Helical / Planetary gears. Industrial Wormgears optional	Synthetic PAG	David Brown Type G lubricant; DIN 51517 Part III; Flender BA T 7300 A+B.
<b>PETRONAS Gear Syn mPAO</b>	<ul style="list-style-type: none"> <li>Excellent extreme pressure and anti-wear protection</li> <li>Up to 3x longer oil life**</li> <li>High Viscosity Index</li> <li>Excellent performance including energy saving</li> </ul>	Industrial Spur / Bevel / Helical / Planetary gears	Synthetic mPAO	AGMA 9005-F16 AS; DIN 51517-3: 2018-09 CLP; GB 5903-2011 L-CKD; ISO 12925-1: 2018-01 CKD; ISO 12925-1: 2018-01 CKSMP; Siemens MD Approval for Flender Gear drives - Revision 16 T 7300 Table A-c
<b>PETRONAS Gear Syn PAO</b>	<ul style="list-style-type: none"> <li>Excellent extreme pressure and anti-wear protection</li> <li>Up to 3x longer oil life**</li> <li>High Viscosity Index</li> <li>Excellent performance including energy saving</li> </ul>	Industrial Spur / Bevel / Helical / Planetary gears	Synthetic PAO	AGMA 9005-E02 Cincinnati Machine P-74 David Brown S1.53.106 DIN 51517 Part III GE approval: GED50E35 Siemens MD Revision 15 T 7300 Table A-c U.S. Steel 224
<b>PETRONAS Gear Syn WTS</b>	<ul style="list-style-type: none"> <li>Excellent protection against corrosion, wear &amp; shock loading</li> <li>Significantly less micropitting</li> <li>Wider operating temperatures</li> <li>Anti-foam protection</li> </ul>	Wind turbine main gear box, yaw & pitch gear	Synthetic WTS	David Brown Type G lubricant DIN 51517 Part III SIEMENS MD (Revision 15) Table T 7300 A – HANSEN (HP1, HP2, HPP, P4 and M4ACC) Siemens MD Revision 15 T 7300 Table A-g
<b>PETRONAS Gear Syn</b>	<ul style="list-style-type: none"> <li>Excellent micropitting resistance</li> <li>Excellent extreme pressure protection</li> <li>Up to 2x longer oil life**</li> <li>High Viscosity Index</li> <li>Excellent resistance to sludging</li> </ul>	Wind turbine gear drives Mining – gear drives requiring additional protection such as conveyer belts, shaft winder gear drives, mills, crushers, separators and other processing units Steel and cement heavy duty industrial gear drives Power generation gear drives such as mills and heavily loaded gear drives	Synthetic	David Brown Type G lubricant DIN 51517 Part III SIEMENS MD (Revision 15) Table T 7300 A – HANSEN (HP1, HP2, HPP, P4 and M4ACC) Siemens MD Revision 15 T 7300 Table A-g
<b>PETRONAS Gear FL</b>	<ul style="list-style-type: none"> <li>Excellent micropitting, extreme pressure and anti-wear protection</li> <li>Up to 1.6x longer oil life*</li> <li>Excellent performance</li> </ul>	Industrial Spur / Bevel / Helical / Planetary gears	Mineral	AGMA 9005-E02 David Brown S1.53.101 DIN 51517 Part III Fives Cincinnati Machine Gear GM LS 2 EP Gear Oil ISO 12925-1 CKC/CKD U.S. Steel 224 Siemens MD Revision 15 T 7300 Table A-a
<b>PETRONAS Gear MEP</b>	<ul style="list-style-type: none"> <li>Excellent extreme pressure and anti-wear protection</li> <li>Up to 1.5x longer oil life*</li> <li>High performance</li> </ul>	Industrial Spur / Bevel / Helical / Planetary gears	Mineral	AGMA 9005-E02; David Brown S1.53.101; DIN 51517 Part III; Fives Cincinnati Machine Gear; GM LS 2 EP Gear Oil; ISO 12925-1 CKC/CKD; US Steel 224.

### Industrial open gears

<b>PETRONAS Gear Syn OG</b>	<ul style="list-style-type: none"> <li>Lubricants light color prevents the need for gear cleaning prior to inspections, helping to reduce maintenance time and costs</li> <li>Excellent extreme pressure performance</li> <li>Excellent anti-wear protection</li> <li>Excellent oxidation stability</li> </ul>	Sugar mill bearings Highly loaded slow speed roller bearing applications Open gear applications where there are slush pans to accommodate open gear lubricants Gear drives subjected to extreme heavy loads, low speeds and shock loading Open gears which are operated under a wide range of different environmental conditions where water and solid contamination occurs	Synthetic	
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# INDUSTRIAL GEAR OILS

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# Get the most out of your gear drive systems

Evolving equipment and gearbox designs require effective lubrication to minimize wear over extended periods. Original Equipment Manufacturers (OEMs) today offer higher output gear speeds under greater loads, but they're also constructed from cutting-edge materials.

**PETRONAS Industrial Solutions** offers high-quality, anti-wear gear oils for a variety of gear drives operating under normal to extremely heavy conditions. The **PETRONAS Gear Series** is ideally suited with everything from worm gear drives to wind turbines. They also work efficiently in standard fully enclosed gearboxes to large heavily loaded open gears like those used in mining, sugar refineries, power, and steel processing plants.

By partnering with you to solve the problems you face today and tomorrow, we can help you move ahead and develop your business. Together with our insight-driven services, we'll help you improve reliability, reduce your operating costs and free up your potential – all because we share your goals and priorities.



# Strengthening progressive businesses from within

As the world comes together to tackle the climate crisis, businesses need strong partners to help them develop the resilience they need to progress and grow in sustainable ways. **PETRONAS Industrial Solutions** works as one with our customers to strengthen your operation from within, developing a deep understanding of your needs and delivering against them with innovative services and energy-efficient solutions that set a clear path to a carbon neutral future. Together, we drive industrial resilience and deliver sustainable performance.

## Your key to maximizing performance

We've developed a comprehensive portfolio of industrial gear oils that serves every type of industrial gearbox application. Choose the right product for your needs and take your gear drive systems to the next level.

	Industrial enclosed spur / helical / bevel pose / planetary gears / worm gears	Industrial open gears
Increasing performance and protection Improving uptime and lowering maintenance costs	<b>SUPREME</b>	<b>PETRONAS Gear Syn PAG</b> <ul style="list-style-type: none"> <li>⬢ Excellent micropitting, extreme pressure and anti-wear protection</li> <li>⬢ Up to 5x longer oil life**</li> <li>⬢ High Viscosity Index</li> <li>⬢ Excellent performance incl. energy saving</li> </ul>
	PREMIUM	<b>PETRONAS Gear Syn mPAO</b> <b>PETRONAS Gear Syn PAO</b> <ul style="list-style-type: none"> <li>⬢ Excellent extreme pressure and anti-wear protection</li> <li>⬢ Up to 3x longer oil life**</li> <li>⬢ High Viscosity Index</li> <li>⬢ Excellent performance including energy saving</li> </ul>
		<b>PETRONAS GEAR SYN WTS</b> <ul style="list-style-type: none"> <li>⬢ Excellent protection against corrosion, wear &amp; shock loading</li> <li>⬢ Significantly less micropitting</li> <li>⬢ Wider operating temperatures</li> <li>⬢ Anti-foam protection</li> </ul>
		<b>PETRONAS Gear Syn</b> <ul style="list-style-type: none"> <li>⬢ Excellent Micropitting resistance</li> <li>⬢ Excellent extreme pressure protection</li> <li>⬢ Up to 2x longer oil life*</li> <li>⬢ High Viscosity Index</li> <li>⬢ Excellent resistance to sludging</li> </ul>
		<b>PETRONAS Gear FL</b> <ul style="list-style-type: none"> <li>⬢ Excellent micropitting, extreme pressure and anti-wear protection</li> <li>⬢ Up to 1.6x longer oil life*</li> <li>⬢ Excellent performance</li> </ul>
STANDARD	<b>PETRONAS Gear MEP</b> <ul style="list-style-type: none"> <li>⬢ Excellent extreme pressure and anti-wear protection</li> <li>⬢ Up to 1.5x longer oil life*</li> <li>⬢ High performance</li> </ul>	
BASIC	<b>Gear MEP IND</b> Kindly consult PETRONAS sales and technical services for recommendations.	

\* vs. minimum requirements of industrial gear oils to pass the viscosity increase test (ISO 4263-4 @95°C)  
\*\* vs. conventional mineral gear oils



# Helping you develop resilience for sustainable growth

PETRONAS Lubricants International is part of the PETRONAS Group. Our approach to fluids is to focus on whole system performance and prolong the working life of your vehicle or machine's system. Our world class technologists strive to develop lubricants that lead the field and earn the all important endorsements of leading OEMs. We're passionate about helping our customers stay focused on their progress no matter what and provide the services and support needed to overcome the challenges of today and tomorrow.

