



FTS SERVICE PROGRAM – TAILOR-MADE FOR YOU

At PETRONAS, we believe success is made by close partnerships. It is that very belief that drives us to work together with you in overcoming the challenges you face – from demands of higher productivity to operating under intense, severe conditions.

That's why we present to you our **Fluid Technology Solutions™** Service Program – a tailor-made range of services designed to maximise your business performance. From specialised on-site analysis to emergency support for operational recovery, we are committed to assisting you in every possible situation.

Partner with us and take your business to the next level.

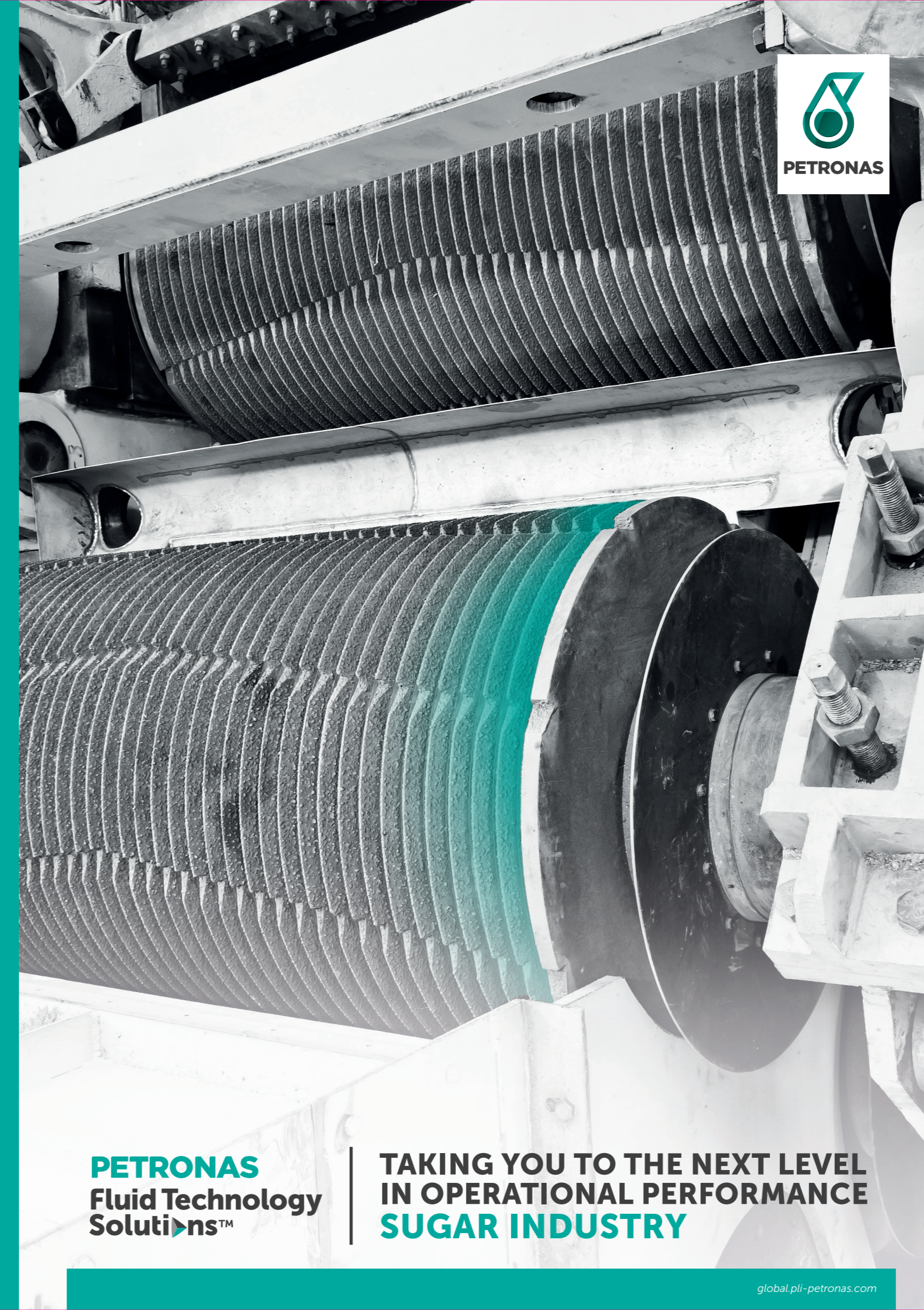
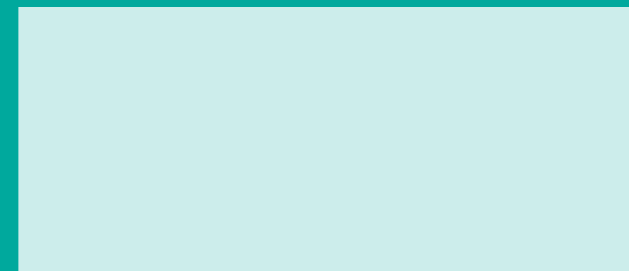


PROVEN EXPERTS, ALWAYS READY TO HELP!

At the heart of our services, our experts strive to give you the peace-of-mind you're looking for.

Partner with us and take your business to the next level.

For more information, please contact:



PETRONAS
Fluid Technology
Soluti>ns™

**TAKING YOU TO THE NEXT LEVEL
IN OPERATIONAL PERFORMANCE
SUGAR INDUSTRY**

global.pli-petronas.com

PETRONAS Fluid Technology Soluti>ns™

YOUR PARTNER FOR PROGRESS

PETRONAS Lubricants International (PLI) is the global lubricant division of PETRONAS, one of the most successful petrochemical companies in the world.

Our mission is to deliver proven product technology and related services benefitting from our 100 years of experience. We believe in maximising your productivity with value-added products and services that are global, yet personal – our presence in 128 countries ensures our technical expertise reaches you wherever you are.

PLI's differentiator is product excellence, developed by world-class Technology Centres and brought to your market with local expertise. Our passion for performance improvement makes us an obvious choice for key OEMs and delivers success in Formula One Motorsport. Now, it has translated into a comprehensive industrial product range and tailor-made services for you.



Together, let's take your operational performance to the next level.

YOUR CHALLENGES, OUR EXPERTISE

Today, the global sugar industry faces numerous challenges, such as volatility of commodity prices, increasing production costs and growing competition due to the easing of trading agreements. Therefore, efficient and reliable production is essential to maintaining profitability.

Machinery for sugar production presents a difficult operating environment for lubricants, exposing them to moisture, high temperature and pressure, dust and organic matter, which is why modern, high quality lubricants are vital to help prevent unexpected breakdowns and lost production.

As the preferred strategic partner and provider of lubrication solutions to major

sugar producers worldwide, we have gained a thorough understanding of the lubrication requirements and challenges facing your business.

With a holistic approach in mind, we have developed **Fluid Technology Solutions™**, an intelligent approach to your fluid requirements that maximises your business performance through tailor-made product offerings and expert services. It is designed to help your business reach new levels in productivity and profitability by enabling improved efficiency and quality.

With PETRONAS on board, you can be assured of a reliable partner for progress.

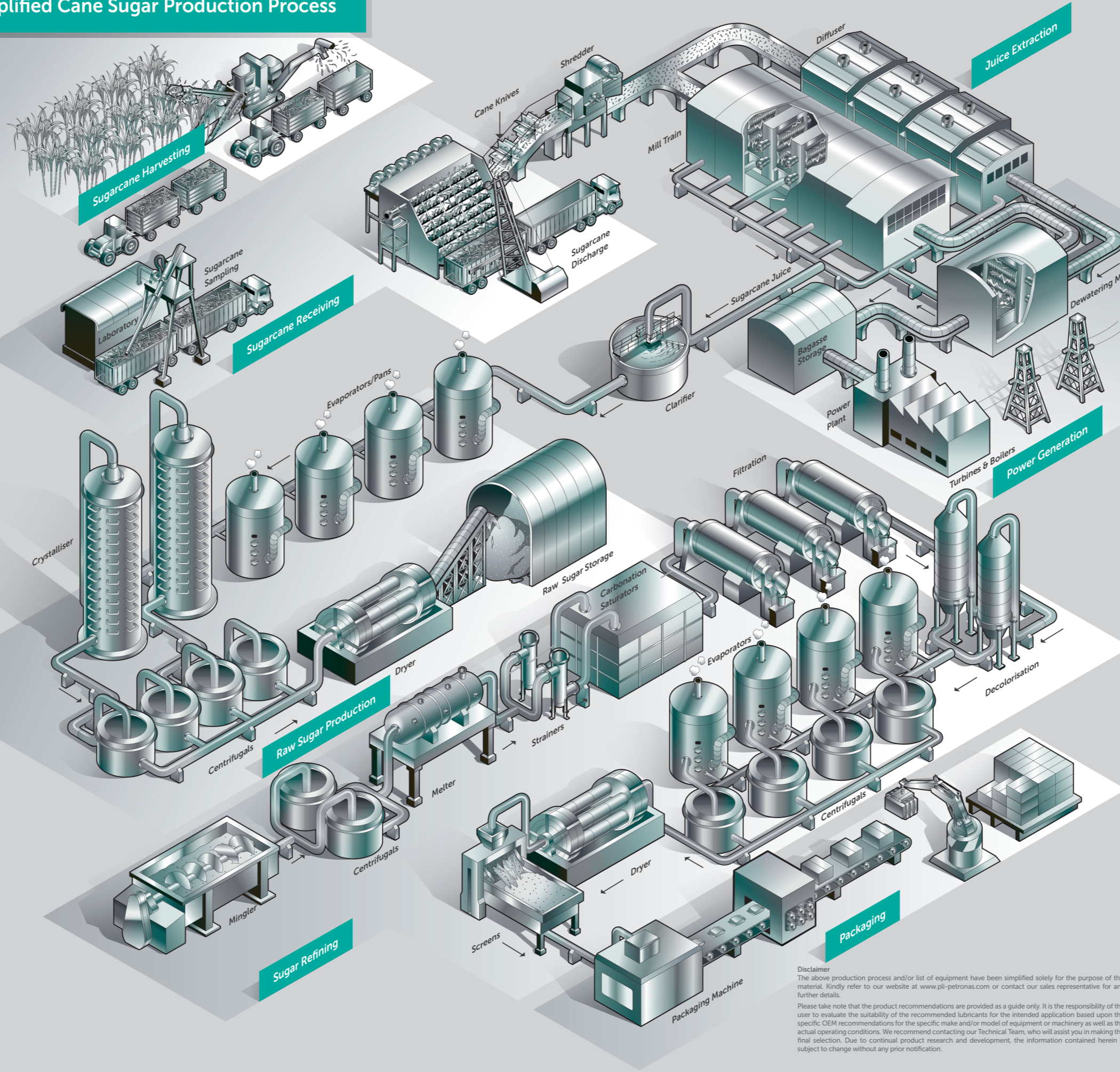


YOUR KEY TO MAXIMISING PERFORMANCE

By focusing our expertise and utilising the latest advances in lubrication technology, we have developed a comprehensive range of state-of-the-art lubricants that meets the needs of all sugar production equipment. Choose the correct lubricant for equipment requirements and watch your productivity accelerate to the next level.



Simplified Cane Sugar Production Process



PRIMARY PROCESS	EQUIPMENT	LUBRICATION PARTS	LUBRICANT	STANDARD	PREMIUM	SUPREME
Sugarcane Harvesting	Harvester	Cooling System	Coolant Fluid	PETRONAS Paraflu 11	PETRONAS Paraflu Up Ready	
		Engine	Engine Oil	PETRONAS Urania LD 7	PETRONAS Urania 5000E	PETRONAS Urania 7000E
		Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP ¹¹	PETRONAS Gear FL	PETRONAS Gear Syn PAO
		Grease Fittings	Grease	PETRONAS Grease LIX MEP	PETRONAS Grease LiCa MG HL	PETRONAS Grease LiCa MG XHL
		Hydraulic System	Hydraulic Fluid	PETRONAS Hydraulic	PETRONAS Hydraulic HV	PETRONAS Hydraulic ESF
	Tractor	Transmission and Axel	Transmission Fluid	ARBOR MTF 10W30		
		Cooling System	Coolant Fluid	PETRONAS Paraflu 11	PETRONAS Paraflu Up Ready	
		Engine	Engine Oil	PETRONAS Urania LD 7	PETRONAS Urania 5000E	PETRONAS Urania 7000E
		Gearbox / Reducer and Bearings	Transmission Fluid	ARBOR MTF 10W30		
		Grease Fittings	Grease	PETRONAS Grease Li EP 2	PETRONAS Grease LIX 2/170	PETRONAS Grease LIX Syn 2/200
Trucks	Tractor	Hydraulic System	Hydraulic Fluid	PETRONAS Hydraulic	PETRONAS Hydraulic HV	PETRONAS Hydraulic ESF
		Transmission and Axel	Transmission Fluid	ARBOR MTF 10W30		
		Converter	Transmission Fluid	PETRONAS Powertrans T4 30W		
		Cooling System	Coolant Fluid	PETRONAS Paraflu 11	PETRONAS Paraflu Up Ready	
		Engine	Engine Oil	PETRONAS Urania LD 7	PETRONAS Urania 5000E	PETRONAS Urania 7000E
	Trucks	Final Drive	Transmission Fluid	PETRONAS Powertrans T4 50W		
		Grease Points	Grease	PETRONAS Tutela WB	PETRONAS Grease LIX 2/170	PETRONAS Grease LIX Syn 2/220
		Hydraulic System / Steering	Transmission Fluid	PETRONAS Powertrans T4 10W		
		Transmission	Transmission Fluid	PETRONAS Powertrans T4 30W		
		5th Wheel	Grease	PETRONAS Grease LiCa GEP 2.5		
Sugarcane Receiving	Sugarcane Sampling Unit	Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
		Hydraulic System	Hydraulic Fluid	PETRONAS Hydraulic	PETRONAS Hydraulic HV	PETRONAS Hydraulic ESF
	Discharging Unit	Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
		Planetary Reduction Gear	Gear Oil	PETRONAS Gear MEP ¹¹	PETRONAS Gear FL	PETRONAS Gear Syn PAO
	Feed Table	Steel Cable	Grease	PETRONAS Grease LiCa GEP 2.5		
Axel Bearing		Grease	PETRONAS Grease LIX MEP	PETRONAS Grease LiCa MG HL	PETRONAS Grease Lica MG XHL	
Juice Extraction	Cane Knives	Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
		Gearbox / Reducer	Turbine Oil	PETRONAS Jenteram	PETRONAS Jenteram G	PETRONAS Jenteram Syn
		Shaft Support Bearings	Grease	PETRONAS Grease Li EP 2	PETRONAS Grease LIX EP 2/380	PETRONAS Grease CaSx
	Shredder	Turbine Bearings	Turbine Oil	PETRONAS Jenteram	PETRONAS Jenteram G	PETRONAS Jenteram Syn
		Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
	Mill / Dewatering Mill	Gearbox / Reducer	Turbine Oil	PETRONAS Jenteram	PETRONAS Jenteram G	PETRONAS Jenteram Syn
		Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
	Diffuser	Main Drive Gearbox / Bottle Screw Reducers	Gear Oil	PETRONAS Gear MEP ¹¹	PETRONAS Gear FL	PETRONAS Gear Syn PAO
		Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
		Support Bearings	Grease	PETRONAS Grease LIX 2/380	PETRONAS Grease LiCa MG HL	PETRONAS Grease LiCa MG XHL

PRIMARY PROCESS	EQUIPMENT	LUBRICATION PARTS	LUBRICANT	STANDARD	PREMIUM	SUPREME
Raw Sugar Production	Clarifier	Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
		Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP ¹¹	PETRONAS Gear FL	PETRONAS Gear Syn PAO
		Grease Points	Grease	PETRONAS Grease LIX EP 2/380		PETRONAS Grease LIX Syn 2/220
	Evaporators / Pans	Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
		Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP ¹¹	PETRONAS Gear FL	PETRONAS Gear Syn PAO
		Grease Points	Grease	PETRONAS Grease LIX EP 2/380		PETRONAS Grease LIX Syn 2/220
	Crystaliser	Pump Bearings	Grease	PETRONAS Grease LIX EP 2/380		PETRONAS Grease LIX Syn 2/220
		Pump Bearings (Oil)	Circulating Oil	PETRONAS Circula		PETRONAS Circula Syn
	Centrifugals	Axial Bearing	Grease	PETRONAS Grease LIX EP 2/380		PETRONAS Grease LIX Syn 2/220
		Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
Dryer	Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU		
	Fans Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU		
	Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP ¹¹	PETRONAS Gear FL	PETRONAS Gear Syn PAO	
Sugar Refining	Mingler	Support Bearings	Grease	PETRONAS Grease LIX EP 2/380	PETRONAS Grease CaSx	PETRONAS Grease LIX Syn 2/220
		Bearings	Grease	PETRONAS Grease LIX EP 2/380		PETRONAS Grease LIX Syn 2/220
	Centrifugals	Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
		Hydraulic System	Hydraulic Fluid	PETRONAS Hydraulic	PETRONAS Hydraulic HV	PETRONAS Hydraulic ESF
	Melter	Bearings	Grease	PETRONAS Grease LIX EP 2/380		PETRONAS Grease LIX Syn 2/220
		Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
	Strainers / Rotary Auto Filter / Filter Press	Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP ¹¹	PETRONAS Gear FL	PETRONAS Gear Syn PAO
		Bearings	Grease	PETRONAS Grease LIX EP 2/380	PETRONAS Gear FL	PETRONAS Grease LIX Syn 2/220
		Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU	
	Carbonation Saturators	Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP ¹¹	PETRONAS Gear FL	PETRONAS Gear Syn PAO
Pump (Oil)		Circulating Oil	PETRONAS Circula		PETRONAS Circula Syn	
Decolorisation	Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU		
	Grease Points	Grease	PETRONAS Grease LIX EP 2/380		PETRONAS Grease LIX Syn 2/220	
	Pump Bearings (Oil)	Circulating Oil	PETRONAS Circula		PETRONAS Circula Syn	
Evaporators / Pans	Bearings	Grease	PETRONAS Grease LIX EP 2/380	PETRONAS Gear FL	PETRONAS Grease LIX Syn 2/220	
	Grease Points	Grease	PETRONAS Grease LIX EP 2/380		PETRONAS Grease LIX Syn 2/220	
	Pump Bearings (Oil)	Circulating Oil	PETRONAS Circula		PETRONAS Circula Syn	
Granulators / Dryers	Bearings	Grease	PETRONAS Grease LIX EP 2/380	PETRONAS Grease PU		
	Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU		
Sugar Screens	Fans Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU		
	Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP ¹¹	PETRONAS Gear FL	PETRONAS Gear Syn PAO	
Packaging	Bearings	Grease	PETRONAS Grease LIX EP 2/380	PETRONAS Gear FL	PETRONAS Grease LIX Syn 2/220	
	Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU		
	Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP ¹¹	PETRONAS Gear FL	PETRONAS Gear Syn PAO	
Boiler	Blowers	Circulating Oil	PETRONAS Circula		PETRONAS Circula Syn	
	Compressor	Compressor Oil	PETRONAS Compressor A M2	PETRONAS Compressor A M4	PETRONAS Compressor A Syn PAO	
Power Turbines	Electric Motor Bearings	Grease	PETRONAS Grease Li 2	PETRONAS Grease PU		
	Grate Bearing	Grease	PETRONAS Grease LIX MEP	PETRONAS Grease LiCa MG HL	PETRONAS Grease LiCa MG HL	
	Grate Gearbox / Reducer	Gear Oil	PETRONAS Gear MEP ¹¹	PETRONAS Gear FL	PETRONAS Gear Syn PAO	

Disclaimer: The above production process and/or list of equipment have been simplified solely for the purpose of this material. Kindly refer to our website at www.ppi-petronas.com or contact our sales representative for further details. Please take note that the product recommendations are provided as a guide only. It is the responsibility of the user to evaluate the suitability of the recommended lubricants for the intended application based upon the specific OEM recommendations for the specific make and/or model of equipment or machinery as well as the actual operating conditions. We recommend contacting our Technical Team, who will assist you in making the final selection. Due to continual product research and development, the information contained herein is subject to change without any prior notification.

¹¹ Premium Product