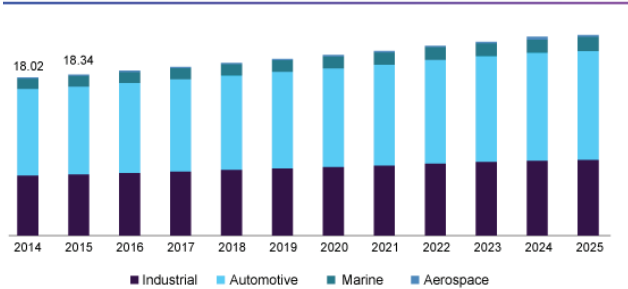


## Market Growth

- The global lubricants market is projected to grow at an annual rate of 2.5 percent between 2014 and 2019 and be worth \$162.3 billion by 2019.\*
- The market size was valued at \$118.89 billion in 2016.
- Constant innovation in the automotive industry, such as introduction of innovative rubber products that reduce the negative impact of waste landfills on the environment, is a key trend expected to propel demand in upcoming years.
- With ever stringent low sulfur regulations, lubricant usage has become critically important.

\* Source: Markets & Markets Report

U.S. lubricants market, by application, 2014 - 2025 (USD Billion)



### ABOUT PAC

PAC is a leading global manufacturer of advanced analytical instruments for laboratories in the Hydrocarbon Processing Industry. With a product portfolio of over 200 testing instruments, PAC serves its customers with innovative technologies that are easy to use, comply to regulations, have an unmatched quality with a worldwide support. PAC also complies with ISO 9001-2015 standards.

Our solutions are from industry-leading brands: AC Analytical Controls, Advanced Sensors, Alcor, Antek, Herzog, ISL, Cambridge Viscosity, PSPI, and PetroSpec. We are committed to delivering superior and local customer service worldwide with 13 office locations and a network of over 140 distributors. PAC operates as a unit of Indicor.

### AFTER SALES SUPPORT

PAC is dedicated to providing global service with local, personalized attention to customers wherever they are in the world. We offer field services for preventative maintenance, calibration, installation, as well as emergency site visits.

Our individualized instrument service programs help our customers ensure maximum quality and repeatability, while complying with standards and regulatory requirements.

PAC has Service Repair Centers located around the world. All our facilities have the technology and know-how necessary to inspect, repair and calibrate your equipment. All work is performed by our factory trained and certified technicians who use only approved spare parts to guarantee your instrument performance.















## Lubricants Solutions

PAC offers solutions to analyze a wide range of physical properties in lubricant oils. Lubrication oil impacts the reliability, fuel economy, emissions, and maintenance costs of a wide range of operating machinery. Oil degradation leads to higher operating costs and provides important early warnings of problems that can lead to premature and potentially catastrophic equipment failures.



Method-Compliant Lubricants Analysis Solutions

	Cloud Point	Pour Point	Viscosity		Sulfur	Carbon Residue	Density / API Gravity	Flash Point			NOACK	Distillation
ASTM	D2500	D97 D5950 D5949 D7346	D445 D446	D2270	D4952 D5453 D6667	D189 D524	D4052	D56 D1310	D92	D93	D5800	D86
ISO	3015	3016	3014	2909	20846	6615			2592	2719	CEC 40-L-93	3405
IP		15	71	226	336	13			36	34		123
DIN		3016	51:550	2907	38409	51:551			51:376	51:758		
GB/T	6989											
PAC INSTRUMENTS												
	OptiCPP	OptiCPP	HVU 481		ElemeNtS	MCRT 160	VIDA	OptiFlash Tag	OptiFlash COC	OptiFlash Pensky Martens	NCK2 5G	OptiDist
												
	OptiMPP	OptiMPP	HVM 472									
			Our instruments can be customized to your specific needs. Due to continuing product development, specifications are subject to change at any time without notice.									
	CPA-70Xi, PSA-70Xi PCA 70Xi, FCA-70Xi DFA 70Xi	PSA-70Xi, PCA 70Xi PFA-70Xi, PPA-70Xi DFA 70Xi										

Industry Trends Driving Growth

- Hybrid vehicles with internal combustion engines require synthetic engine oils
- New auto models favor synthetic oils for longer grain intervals
- High-performance biosynthetic oils production
- Co-branded oils growing worldwide between auto OEMs, heavy-duty equipment OEMs & industrial machinery producers
- Trend toward more lubricant distributor consolidation
- BRIC countries growing initiatives for local production

