

LUMMUS TECHNOLOGY

MOST BROAD, DIVERSIFIED TECHNOLOGY PORTFOLIO



Lummus Technology is not just a technology licensing company, we offer our customers fully integrated, end-to-end solutions .

McDermott's Lummus Technology is a leading technology master licensor of proprietary gas processing, refining, petrochemical, and coal gasification technologies as well as a supplier of proprietary catalysts, equipment and related engineering services.

These technologies are critical in the refining of crude oil into gasoline, diesel, jet fuel and lubes; the manufacturing of petrochemicals and polymers; as well as the gasification of coal into syngas.

Major Technology Execution Offices

- New Jersey
- Texas
- The Netherlands
- Germany
- India

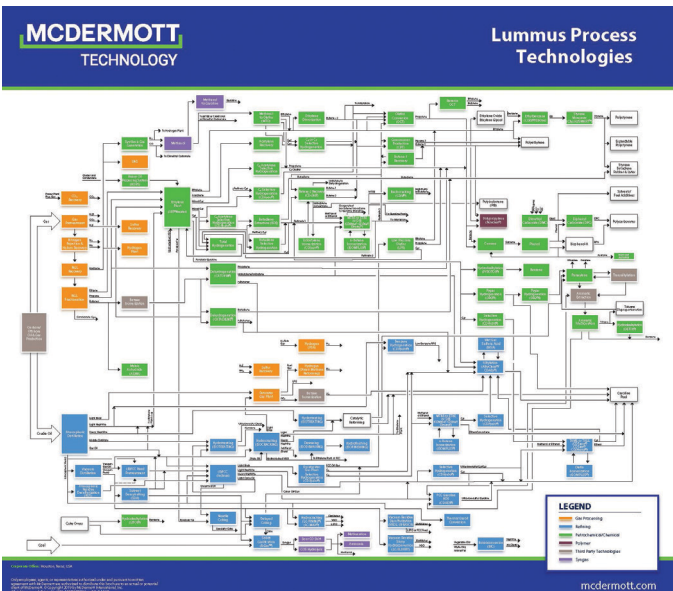
Lummus Technology is a premier provider of technology

- 120+ Licensed Technologies
- 3,000+ Patents, Patent Applications and Trademarks
- 850+ Global Technology Staff

Research and Development Centers

Research and development is a cornerstone of our success, whereby we actively create new and extended platforms and improve our technologies.

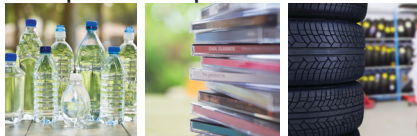
- **R&D Center/Technology Pilot Plant:**
Pasadena, Texas
- **Novolen Technology R&D Center:**
Ludwigshafen, Germany
- **Chevron Lummus Global R&D Center:**
Richmond, California



Petrochemicals

Our petrochemicals portfolio offers unique and commercially proven solutions for the production of olefins, aromatics and carbonates. Our portfolio allows customization to most clients' available feedstocks and desired products worldwide.

Examples of end-products:



Lummus Novolen Technology

Lummus Novolen® gas-phase process allows for the production of a full range of polypropylene resins. We offer a full range of polypropylene products as well as catalysts for the production of high margin specialties.

Examples of end-products:



Refining & Gasification

Lummus' state-of-the-art conversion processes (FCC, alkylation, etherification, hydrotreating, and isomerization) produce gasoline blendstocks and high value petrochemicals (propylene, butenes and high purity isobutylene). Our refining portfolio produces gasoline blendstocks that meet strict quality standards and high octane content required by modern high compression engines. Our portfolio also addresses crude to chemicals objectives with its high severity RFCC technology for both olefin and aromatics production (Indmax).

Examples of end-products:



Chevron Lummus Global

Chevron Lummus Global (CLG) is a market leader in hydrocracking, resid upgrading and lube base oils technologies. CLG licenses a wide array of innovative technologies for the hydroprocessing of middle distillates and lube base oils, as well as heavy oil upgrading. This portfolio breadth allows conversion of every drop in a barrel of crude oil into higher value products.



Engineered Products

Lummus Technology's Engineered Products business offers specialized equipment such as ethylene pyrolysis furnaces, process heaters and pre-heaters, waste heat boilers, steam reformers, and high-pressure and special shell and tube heat exchangers.



Lummus Consultants International

Lummus Consultants International offers technical advisory services and business knowledge to the power, oil & gas, petrochemical, refining and infrastructure segments (project finance, potential mergers and acquisitions). Lummus Consultants has more than 30 years of experience servicing the global financial sector and investment groups.



Master Licensor Services

As a master licensor, Lummus' broad technology portfolio enables our licensees anywhere in the world to utilize their local feedstocks to manufacture a desired product slate. The master licensor approach also includes other benefits such as a single pro-forma agreement, an optimized integrated complex with overall performance guarantees, and client support throughout the project life cycle.



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