



Gas Compressor Lubricants

Reciprocating Applications



Put Our **Expertise to Work**

Reciprocating compressors are critical equipment in a plant, but lubricating them properly is a unique challenge. There are often many moving parts, diverse gas streams, high pressures and high temperatures.

This is an industry that requires a combination of great products and technical expertise. You need to predict how the oil will react to its conditions and that requires years of learned expertise. Summit has a global team solving gas compressor

issues every day, all over the world.

We do much more than offer cross references for products. We make specific recommendations for your application that will extend the life of your machine and help you solve specific problems both in your equipment and downstream.

Unplanned downtime is expensive, governmental and social penalties for flaring gas or polluting the environment are increasing, and

lead times for spare parts and new equipment are at the mercy of an overextended supply chain, making getting it right extremely important.

We're experienced, we deliver high-quality product quickly and we love to help customers. Let us know how we can help you.



**Gas
Compressor
Team**

Our Lubricants **Solve Problems**

Summit is recognized as an industry leader in synthetic lubricant technology, with plants, sales offices and distributors around the world. Summit personnel work with gas compressor OEMs, packagers, operators and end users in various industries to solve reciprocating gas compressor lubrication-related issues. Our research staff is constantly evaluating new synthetic-base stocks and additives to provide customers with the best lubricants technically available, as well as finding solutions to unique lubrication problems.

To get the right lubricant
into the right application
it requires **experience and
expertise. Summit has both.**

Q: **What sets Summit apart?**

We're looking to do much more than just sell lubricants. We pride ourselves in being expert problem solvers. At Summit, we know that our success hinges directly on your success, and that knowledge drives the way we do business. In everything we do -- from product development, to hiring, to plant visits, phone calls, technical support, oil analysis, training seminars and everything in between -- we are looking to answer the question: "Does this help us to better serve our customers?" We want to be a full-service lubrication resource for your business.



Our field-tested experts are ready to
solve your gas compressor problems.

Application Points

Each gas compressor application has its own unique set of operating parameters and issues. Summit offers a variety of base stocks to meet the requirements of the various systems. We offer our expertise in each of the following applications:

Upstream

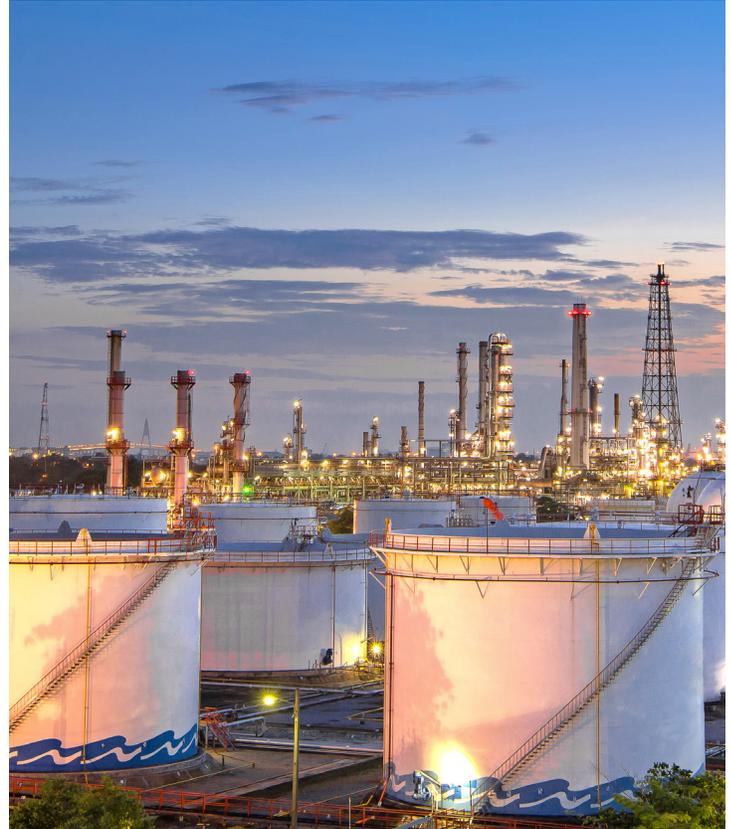
- Natural Gas Gathering
- Shale
- High Pressure Gas Injection
- Enhanced Oil Recovery (EOR)
- Offshore

Midstream

- Gas Transmission & Storage
- FPSO
- Liquefied Petroleum Gas (LPG)
- Landfill & Biogas
- Vapor Recovery Units (VRU)

Downstream & Refinery

- Compressed Natural Gas (CNG)
- Hydrogen Compression
- Refining, Petrochemical & Industrial Gas Industries



Proven Expertise

Every gas stream is unique. Summit has specifically developed the technology to determine the tendency of individual gases to be dissolved in lubricating oil. We can help you by recommending the proper compressor lubricant for the following gases:

Carbon Dioxide

Helium

BioGas

Propane

Hydrogen Sulfide

Hydrogen Chloride

Landfill

Ammonia

Ethylene

Sulfur Dioxide

Hydrocarbon

Hydrogen

Natural Gas

Nitrogen

Product **Benefits**

- ➔ Reduced Friction Leading to Improved Lubrication
- ➔ Minimum Lubricant Consumption
- ➔ Resistance to Gas Dilution
- ➔ Low Oil Carryover Rates
- ➔ Eliminate Downstream Issues
- ➔ Optimum Viscosity for All Stages
- ➔ Eliminate Cold Weather Flow Issues



Problems **We Solve**

Issues with the cylinder lubrication system are a common problem that causes unscheduled shutdowns. The reliability of this system can directly affect the reliability of valves, pressure packing, piston rings and rider bands. In all these areas, choice of gas compressor lubricant plays a major role.

Typical issues when using petroleum oil to lubricate cylinders in a reciprocating compressor include:

- Washing of Lubricant off Cylinder Walls
- Incompatibility with Platforming Catalyst
- Water Contamination Producing Emulsion
- "Hydraulic" of packing
- Plugging of Injectors
- High Oil Feed Rates
- Part Failures
- Low Flow
- Poor Lubricity
- Deposit on Valves
- High Oil Carryover
- Corrosion



Reciprocating Gas Compressor Lubricants

To determine which lubricant is right for your application, please send us all relevant data for the gas stream in your compressor and the operating conditions.

NGP® Series

Highly refined petroleum based lubricant for reciprocating compressor cylinders and frames.

Applications: Light Hydrocarbon Gas, Gas Gathering, Sour Gas

NGSH Series

Full synthetic, Polyalphaolefins (PAO) based lubricant for reciprocating compressor cylinders and frames. Preferred by many OEMs over petroleum based oils.

Applications: Light hydrocarbon Gas, Gas Gathering, Sour Gas

NGL® Series

Full synthetic, Polyglycol (PAG) based lubricant for reciprocating compressor frames and cylinders

Applications: Heavy Hydrocarbon Gas, Enhanced Oil Recovery, Compressed Natural Gas

DSL®-XM Series

Full synthetic, ester based lubricants for hydrogen reciprocating compressors.

Applications: Hydrogen Production

DSL®-1220

Full synthetic, ester based synthetic lubricants with a specialized additive package for dry nitrogen compression.

Applications: Nitrogen Compression

Let us prove it to you.

Summit wants to be your specialty lubrication partner the world over. We believe that specialty lubricants are an integral part of the design of gas compressors and pay for themselves. Let us prove it to you.





Quality. Service. Expertise.



Klüber Lubrication NA LP
9010 CR 2120 • Tyler, TX 75707
1.800.749.5823
www.klsummit.com

a brand of
 **FREUDENBERG**