



Gas Compressor Lubricants

Rotary Screw Applications



Put Our **Expertise to Work**

Gas compressor applications are different than your typical lubrication application. Finding the right lubrication is typically more complicated and the consequences for getting it wrong are typically larger.

Unplanned downtime is expensive. Governmental and social penalties for flaring gas or polluting the environment are increasing. Lead times for spare parts and new equipment are at the mercy of the overextended supply chain.

The days of simply using standard gas engine oil or 'low-tech' compounded cylinder oil are just about over. Summit's specialty lubricants succeed where conventional lubricants fail. Our customers have discovered that using specialty lubricants, backed by our experience and technical expertise, result in significant decreases in lubricant-related operating and maintenance costs.

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 compressor lubrication-related issues. And we're ready to solve yours.



**Gas
Compressor
Team**

Better Lubricants, **Better Results**

To compress natural or process gases is complex. When the oil absorbs the gas being compressed in an oil-flooded rotary screw compressor, it often results in a decrease in viscosity.

The degree of viscosity reduction of the lubricant selected depends on four things:

- 1 the gas composition
- 2 the discharge pressure and temperature
- 3 the oil injection temperature to the bearing
- 4 the base fluid solubility with compressed gases

To get the right lubricant into the right application 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.



Problem Solving **Lubricants**

Every gas stream is unique. Summit has developed a program to calculate the tendency of individual gases to be dissolved in lubricating oil. Summit can help you by recommending the proper gas compressor lubricant in many different industries.

Having **Issues?**

Lubricating oils in rotary screw compressors serve these primary functions:

- 1** Lubricating the rotors (70%), bearings, gears and seals (30%)
- 2** Sealing the gap between rotor and casing, and between the rotors
- 3** Removing heat of compression
- 4** Protecting against corrosion

Using a lubricant that is too thick or too thin causes a drop in compressor efficiency, shortens bearing life and could possibly result in a catastrophic failure. It is extremely important to select the correct initial viscosity for the compressor to make sure it is operating at optimal viscosity to the bearings and rotors after dilution takes effect.

Typical issues when using the incorrect product in a rotary gas screw compressor include:

Viscosity Dilution

Corrosion

Foaming

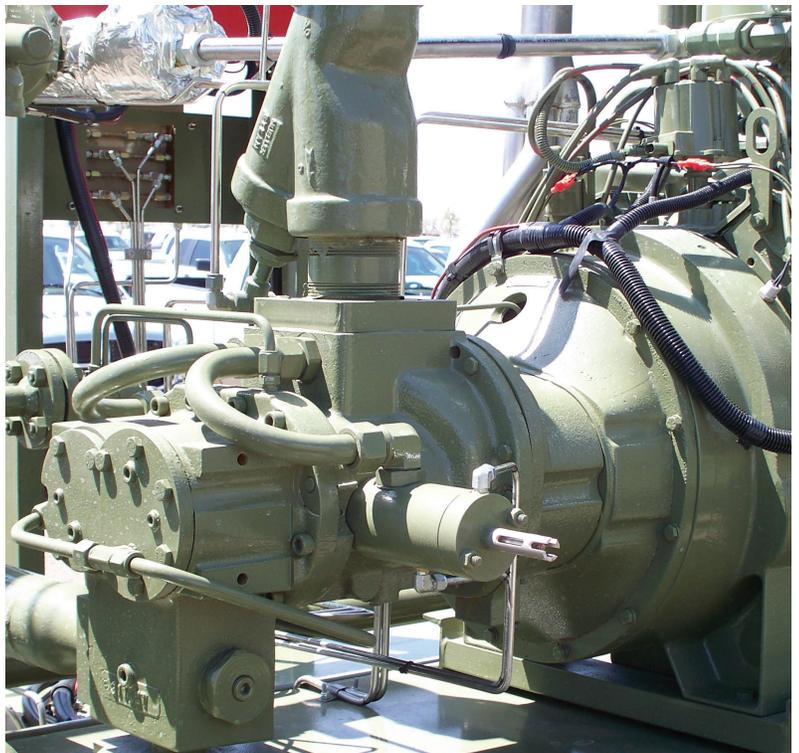
Gas Entrainment

Water Contamination

Chemical Reactivity

Increased Wear Rates

Cold Weather Flow



Many **Applications**

- ➔ Refinery
- ➔ Fertilizer Plant
- ➔ Chemical Plant
- ➔ Landfill
- ➔ Wellhead
- ➔ Offshore
- ➔ Fuel Gas
- ➔ Digester Gas
- ➔ Membrane Separation
- ➔ Biogas
- ➔ Vapor Recovery Units

Chemical **Resistance** and **Reliability**

Summit offers lubrication solutions for demanding conditions. Chemical resistance of lubricants to various process media used in production helps to attain long service intervals and high process reliability.

The use of optimum specialty lubricants offers many benefits:

- cost savings due to extended maintenance intervals
- improved efficiency resulting in higher throughput
- less downtime for more productivity
- optimum wear protection for longer service life of equipment

Because of the complexities of gas compression, a close relationship between the OEM, packager, end user and lubricant supplier is needed. Summit is considered a valued partner within this group.



Rotary Screw **Gas Compressor Lubricants**

Summit offers a full line of petroleum and synthetic lubricants to meet your gas compressor lubrication needs. Our range of products is as comprehensive as the many uses of rotary screw compressors in oil and gas industries. Our staff of professionals can assist you in choosing the right lubricant for your compressor.

NGP[®] Series

Highly refined petroleum based lubricant for light hydrocarbon gases in rotary screw compressor applications.

NGSH Series

Full synthetic, PAO based lubricant for light to heavy-medium hydrocarbon gases. High evaporation stability minimizes the oil carryover into the gas stream in comparison to standard petroleum oils.

PGS[®] Series

PGS series - Full synthetic, PAG based lubricant for flooded rotary screws with medium to heavy hydrocarbon gasses. It also has a high resistance to thinning out by hydrocarbon dilution.

PGI Series

PGI series - Full synthetic, water in-soluble, PAG based lubricant for hydrocarbon refrigerants (propane, propylene, etc.). Features reduced oil carryover compared to petroleum oils or PAO lubricants.

PGS 2[®]

PGS 2 - Full synthetic, PAG based lubricant for flooded rotary screws with heavy hydrocarbon gasses. PGS2 has a high resistance to thinning out by hydrocarbon dilution.

All Summit products are formulated to meet specific application requirements and contain additives to protect equipment from wear, rust and hydrogen sulfide corrosion. 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.

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.



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