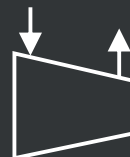


Hydrocarbon Gas Compressor Lubricants



Xaerus Performance Fluids

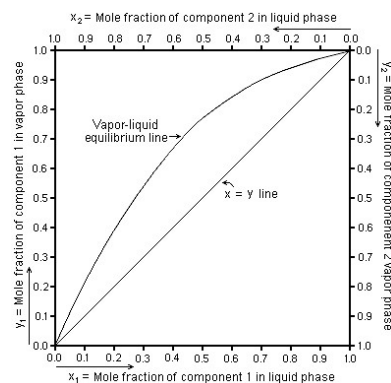
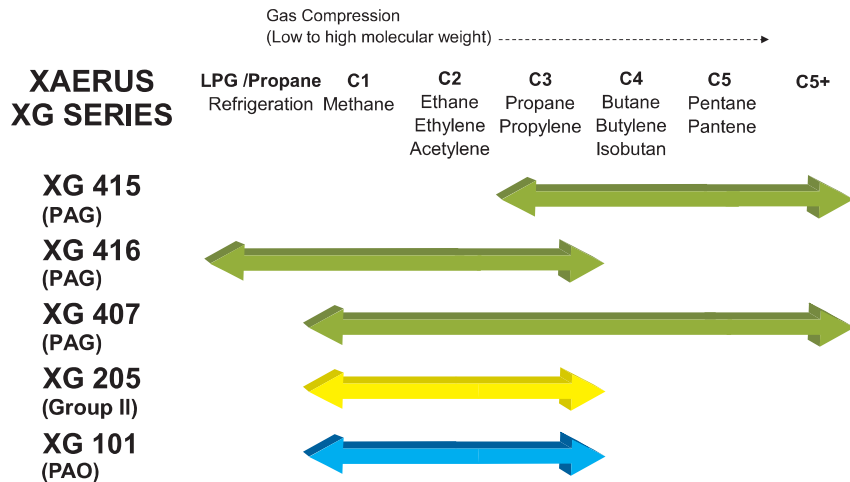
is the world leader in hydrocarbon gas compressor lubricant applications, with a global distribution and sales network in 35+ countries. We formulate and develop advanced compressor lubricants, based on over 30 years of knowledge and know-how. Our clients and end-user base include internationally recognized Gas Compressor OEMs, Gas Compressor Packagers, EPC Companies and major E&P oil companies.

Our products are developed with advanced formulation covering the following applications:

- Turbine Feed Gas Compressor
- Natural Gas Gathering and Processing
- Light Gas / Sour Gas Gathering
- Heavy Gas/ Sour Gas Gathering
- Propane Refrigeration Compressor
- CO / CO₂ Gas Processing
- Vapour Recovery System
- Hydrogen Gas Compression (Metal Free)



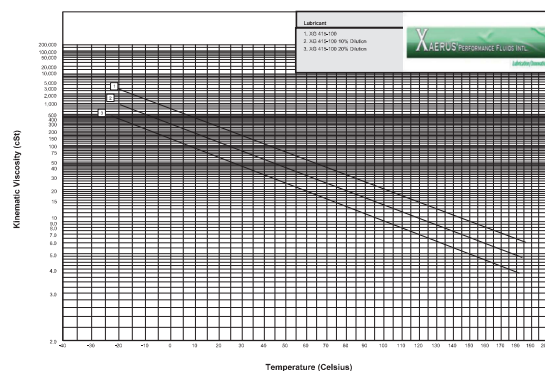
XAERUS GAS COMPRESSOR OIL APPLICATION SUMMARY



Soave-Redlich-Kwong phase equilibrium

- Hydrocarbon gas dilution of compressor lubricant is one of the most common lubrication related issues associated with gas compressor failures.
- At Xaerus, we have in-house modelling tool to accurately predict gas dilution effect on lubricant at operating condition, which otherwise would require expensive inline rheometer for indication.
- Xaerus works with compressor OEM, Engineering companies, and oil companies around the world and around the clock, to ensure that the lubrication requirement is fully analysed and supported.
- Xaerus gas compressor products have gone through stringent R&D to provide the best corrosion protection for compressor equipment.
- We develop products that have the capability to withstand severe corrosion conditions with high levels of H_2S and CO_2 during operations and shut-down situations.
- Xaerus products often outperform competition products during field trial and benchmark lab testing.

XG 415-100 Viscosity Temperature Curve With Hydrocarbon Dilution



Typical Applications	Type	Product	Viscosity cSt @ 40° C	Viscosity cSt @ 100° C	Density, lb/gal	Flash Point, °F/°C	Pour Point, °F/°C
Turbine Feed Gas	Rotary screw compressor	XG 101 Series	100.0	13.4	7.0	527/275	-40/-40
Carbon Dioxide	Rotary screw, Reciprocating and Carbon Dioxide Process, Carbon Monoxide & Refrigeration Compressors	XGF 124 Series	64.9	9.7	6.97	518/270	-60/-51
Light Natural Gas Sour	Rotary screw gas gathering compressors, Rotary scroll compressors, Light Hydrocarbon/-natural gas compressors and Digester gas compressors	XG 205 Series	103.4 and 147.3	11.7 and 14.9	7.32 and 7.23	510/265 and 518/270	-27/-33
Varying Gas or Conditions	Reciprocating and screw compressors, Vapor recovery compressors	XG 407 Series	62.4 and 114	10.9 and 16.7	9.27	460/238 and 379/193	-65/-54 and 20/-6
Heavy Hydrocarbon Gas Sour	Reciprocating and screw compressors	XG 415 Series	108.6 and 161.3	21.35 and 29.9	8.67 and 8.75	473/245 and 478/248	-38/-39 and -35/-37
Propane Refrigeration	Rotary screw, reciprocating and Hydrocarbon refrigeration and Natural Gas compressors	XG 415 Series	102.8 and 152.8	18.2 and 28.3	8.30 and 8.42	446/230 and 446/230	-49/-45 and -44/-42

Xaerus is one of the top-tier lubricant brands in the world, with particular expertise in the Synthetic Industrial Lubricants category. By offering the highest quality grade products that are accompanied with competitive pricing through a global distribution and sales network in 35+ countries, we continue to excel over our global competitors.

POTENTIAL BENEFITS

- Longer life of compressor parts including cylinders, bearings, rings and gears
- Effective lubrication in a wide range of hydrocarbon gas mixtures.
- Resists “washing off” cylinder walls of reciprocating compressors
- Decreases potential of free water and minimize corrosion during shutdown
- Better oil flow and less wear at start up
- Ability to start at low ambient temperatures
- Minimal vapor phase oil carryover to downstream equipment
- Longer filter life
- Longer oil life
- Good oil return from cold side of the refrigeration loop
- Wide operating temperature range
- Minimize maintenance costs

