The G225 LE “Mako” Compressor Package

Features:
- PSI HD 11.1 L Engine (228 HP)
- 3 Stage / 2 Throw
- High Speed Poppet Valves
- Flexible Process Pipe
- Can Move Up to 1.5 MMSCFD
- On Demand Cooling Through Programmable Interstage Temperature Control
- Programmable Cells-Auto/Manual Option
- Transportation Friendly
- Remote Monitoring Standard
- Power Transfer Using Drive Shaft
- Pressure and Temp Monitoring in/out of Each Cell

The G225 LE “Mako” unit is reshaping the compression industry. This compressor package has been designed to mirror the constant advancement of technology in the world today. PC3 Technologies and its partners, have engineered the G225 to have a revolutionary cooling system, engine model, interface/control system, flexible process gas line piping, and design for a natural gas compressor.
One of the most revolutionary aspects of the G225 LE is the Patent Pending design of the AERIS Cooling System which, allows for maximum flexibility that grants the user unprecedented control over the temperature of the gas. The purpose of the LE is to improve upon every facet of the industry standard small HP compressor. The design of the standard compressor package has remained relatively the same for decades. The LE will outperform these packages in all facets, including, but not limited to: weight, transportation, price, performance, and footprint.

<table>
<thead>
<tr>
<th>Height – 7’ 6”</th>
<th>Length – 18’ 6”</th>
<th>Width – 7’ 8”</th>
<th>Weight 15,800 lbs.</th>
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<tbody>
<tr>
<td>Frame – 7.250”/5.375”/3.125”</td>
<td>Cooling – 105 Ambient &amp; &lt;20 °F Approach</td>
<td>Driver – 225 BHP @ 1800 RPM</td>
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Light Weight Design:
- Estimated Weight: 15,800 lbs.
- Width/Length: 7’8” x 18’6”
- Height: 7’6”
- ~ 60% lighter than competition
- Removed ~100 ft of process pipe
  - Increases control and reduces pressure drop
- NOT a permit load

PSI 11.1L Engine:
- Inline 6-cylinder turbocharged
- 225 HP @ 1800 RPM
- ACES Engine Controls
- Rich Burn

NG Frame:
- 2 throw, 3 stage
- 7.250” x 5.375” x 3.125”
- 3” Stroke 21,000 lb. combined rod load
- Utilizing Hi-speed Poppet Valves
- Direct piping to valves
  - Increased efficiency

Roll-Off Design:
- Increased precision
- Safer design
- Can be rolling tail boarded or crane lifted

Controls:
- Murphy Gen 1 Control System
- Remote monitoring through Mastertrak (24/7)
- PV450 Display
- Pressure/temperature monitoring into and out of each stage
- Wiring harness

Flexible Pipe
- Controls pulsation
- Isolates vibration

Patent-Pending Cooling Design:
- Increased efficiency
- Temperature set points
- Increased operational control (liquids management)
- 105 Ambient & <20 degree approach
### Standard Equipment

**Compressor**
- NG MAKO 225 (2 throw, 3 stage)
- 3” Stroke 21,000 lb. combined rod load
- 7.250” DA Cylinder MWP 420 psig
- 5.375” SAHE Cylinder MWP 1050 psig
- 3.125” SAFE Cylinder MWP 1500 psig

**Engine**
- PSI 11.1L industrial engine rated 228 HP @ 1800 RPM
- Ratings- Elevation 3000 and 100 F Ambient
- Inline Six Cylinder Turbocharged 673 Cubic Inches
- ACES Electronic engine control system
- Industrial grade exhaust silencer
- Electronic governor controlled
- Standard 24V starter w/ battery/alternator system
- Rich Burn
- Engine-driven radiator

**Coolers - Fresco AC225**
- Air-cooled, forced draft, electric fan powered from engine alternator
- Programmable individual interstage temperature control
- Finned Tube type high efficiency
- Designed for 105F Ambient & <20 °F approach
- B31.3 process gas sections
- 1<sup>st</sup> Stage Intercooler section rated @ 1440 psig @ 350 F
- 2<sup>nd</sup> Stage Intercooler section rated @ 1440 psig @ 350 F
- After cooler section rated @ 1440 psig @ 350 F

**Vessels**
- Suction: Vertical 10” OD 425 psig MAWP @ 150 °F
- 1<sup>st</sup> Interstage: Vertical 10” OD 425 psig MAWP @ 150°F
- 2<sup>nd</sup> Interstage: Vertical 10” OD 900 psig MAWP @ 150°F
- Designed to ASME Section VIII, Division 1 Code Stamp with National Board Registration.
- Hydro tested to 1.3 times MAWP
- Automatic liquid level control system
- High level shutdown
- Manual drain valve

**Safety**
- Process safety valves (PSV) sized for maximum flow at design pressures.
- PSV relief piping to atmosphere above head height
- Package Inlet PSV connection provided. PSV by others
- 1<sup>st</sup> Interstage PSV set @ 425 psig
- 2<sup>nd</sup> Interstage PSV set @ 900 psig
- 3<sup>rd</sup> Interstage PSV set @ 1440 psig

### Process Gas Piping
- Designed to ANSI B 31.3
- Manual cold gas recycle valve
- Stainless-steel braided flexible piping for process gas

### Skid
- 7’8” X 18’6” Structural steel skid, partially concrete filled
- One-piece smooth steel deck plate
- All piping mounted on stand-offs for ease of cleaning
- Environmental rails around perimeter coming to four drain points
- Lockable battery box

### Control Panel
- Murphy GEN 1 Control System Evolution control panel
- Remote monitoring standard through Mastertrak Standard
- Shock mounted inner panel
- Shutdown interlocks and sensors:
  - Compressor:
    - High/low suction pressure
    - High/low interstage pressures (1<sup>st</sup> & 2<sup>nd</sup>)
    - High/low discharge pressure
    - High discharge temperature each stage
    - Compressor low lube oil pressure
    - Compressor no lube oil flow
    - Compressor low lube oil level
    - High scrubber liquid level
    - One spare set of contacts with terminal plug
  - Engine:
    - Engine low lube oil pressure
    - Engine low lube oil level
    - Engine high lube oil temperature
    - Engine high jacket water temperature
    - Engine over speed
    - Engine high/low intake manifold pressure
    - Excessive vibration
    - Emergency shutdown contact
    - Fuel gas pressure regulators included

### Surface Preparation and Painting
- Mechanical wash assembled unit
- Prime coat
- Standard is Gray and White. Custom Top coat colors may be available from Dealers

**Estimated Weight**
15,800 pounds