SALIENT CHARACTERISTICS

Requirement: Dual Rotary Screw Air Compressor System with Integrated Dryers (e.g., Two Kaeser Model AS 25T units or Equal) configured for redundant operation.

Overall System Requirement: The system shall consist of two (2) identical, stand-alone, single-stage rotary screw compressors. The system's control logic must allow for automatic lead-lag operation and alternation to ensure one unit may serve as a primary and the other as a fully operational backup.

<u>Specifications for EACH of the TWO Compressor Units:</u>

1. Performance Specifications (per unit)

Capacity (Flow Rate): Minimum 120 cfm (cubic feet per minute) at 125 psig
Operating/Discharge Pressure: Nominal 125 psig
Drive Motor Power: 25 hp
Electrical Requirements: 208-230/460V, 3-Phase, 60Hz
Sound/Noise Level: Maximum 69 dB(A)
Cooling System: Air-cooled package

2. Physical & Technical Characteristics (per unit)

Compressor Type: Single-stage, fluid-injected rotary screw compressor with a high-efficiency airend (Sigma Profile or equal).

Electric Motor & Drive Assembly:

Totally Enclosed, Fan-Cooled (TEFC) premium-efficiency drive motor.
Class F insulation, minimum 150% pull-up torque, and integrated thermal overload protection.
Equipped with an automatic tensioning belt-drive system.
Electrical Starter: Magnetic Wye-Delta reduced voltage starter in a NEMA 12-rated control panel.

Integrated Air Dryer:

Fully integrated, built-in refrigerated air dryer utilizing R-134a refrigerant or approved equivalent.
Must feature a built-in moisture separator and automatic demand drains (Eco-Drains).
Capable of delivering a pressure dew point as low as 38°F.

Air/Coolant System:

High-efficiency 1-micron air intake filter with a cleanable/replaceable element.
ASME-certified fluid separator tank with 3-stage separation (fluid carry-over limited to 1-3 ppm).

Enclosure & Vibration Isolation:

Soundproofed enclosure with lined, removable panels for maintenance access.
Heavy-duty powder-coated finish and a solid steel floor base with integrated anti-vibration mounts.

Salient Characteristics

Microprocessor Control System:
Each unit must have a PC-based controller (Sigma Control 2 or equal) with a real-time OS. Crucially, the control system must support two-unit sequencing and lead-lag operation to manage the dual-compressor setup for redundancy and balanced run-time.
System must log at least the last 100 system messages and support remote start/stop.

Safety & Maintenance Indicators:
Equipped with an emergency stop button, ASME safety pressure relief valve, and external sight glasses for fluid levels and belt tension.