AES Group, Inc.

Sales ▪ Construction ▪ Service

BASE MODEL NUMBER:	LSQ05A4-AES-SPD-SPL
NFPA SYSTEM CAPACITY:	37.5 SCFM @ 145 PSIG – NOTE: 100 PSIG Delivery Pressure
Total System Capacity	50 SCFM @ 145 PSIG
HORSEPOWER:	20 HP Total (5HP x 4)
RECEIVER SIZE/CONFIGURATION:	120 Gallon – Vertical
ELECTRICAL:	208/230/460V, 3PH, 60Hz

(MUST SPECIFY VOLTAGE WHEN ORDERING.)
*System performance shown with (1) Compressor In Reserve
OSHD-HCAI - OSP

General

The Powerex Laboratory Open Scroll Air Compressor System is designed to provide clean, dry air for applications where the quality of the compressed air is critical. The **High-Pressure** unit is rated for a maximum of **145 PSIG**. Each system is completely tested before shipment and includes:

- Multiple oil-less scroll air compressors and associated equipment.
- Corrosion resistant air receiver.
- Desiccant air dryers with purge control.
- Control panel.
- Dew point monitor.
- Intended to Comply with NFPA99-2021 5.1.13.3.7 * Instrument Air Supply Systems
    - 5.1.13.3.7.5 “Instrument air compressors shall be permitted to be of any type capable of the output pressure needed for the intended line pressure and of providing air meeting the definition of Instrument Air 5.1.13.3.7.1”

Open Scroll Air Compressor System

The package shall include multiple oil-less scroll air compressors and associated equipment. The only field connections required will be system intake, exhaust, and power connection at the control panel. All interconnecting piping, wiring, and vibration isolation pads are included with the system.

Oil-less Scroll Compressor Pump

Each compressor shall be belt driven oil-less rotary scroll single stage, air-cooled construction with absolutely no oil needed for operation. Direct drive compressors shall not be used.

- The rotary design shall not require any inlet or exhaust valves and shall be rated for 100% continuous duty.
- Tip seals shall be of composite PTFE material and be rated for 5,000 hours operation for 2, 3, and 5 HP pumps, and rated for 8,000 hours operation for 7.5 and 10 HP pumps.
- Compressor bearings shall be external to the air compression chamber and shall be all serviceable for extended compressor life. Bearing maintenance shall not be required until 5,000 hours. Compressors with bearings that are not accessible for service have a limited life span and shall not be accepted. Compressors shall have an integral radial flow fan for cooling and shall not require any additional electric cooling fans.
- Each compressor shall have flexible connectors on intake and discharge, an electric drive motor, a discharge check valve, a fan-cooled aftercooler, a condensate separator* and a high discharge temperature shutdown switch.
- Each compressor module shall have an isolation valve and a moisture separator* with automatic drain.

Motor

Each compressor shall be belt driven by a 1750 RPM, ODP, NEMA construction motor. Motors running at speeds higher than 1750 RPM shall not be acceptable. OSHA approved belt guards shall be provided.

Air Receiver

The AMSE National Board registered 200 PSIG working pressure, vertical air receiver is provided with:

4330 Redwood Highway, Suite 100
San Rafael, CA 94903
Tel 415 507-9373 Fax 415 507-9376

- Pressure gauge
- Relief valve
- Sight gauge
- Manual and automatic electric zero loss drain
- External paint and internal lining to resist corrosion

Service Slide

The service slide enables easy maintenance access to each pump and motor base mount without having to remove them from the system.

- Unique maintenance friendly base mount slide design.
- Allows safe access to important system components necessary for improved pump life.
- Allows faster component replacement time.

Motor Slide Base

Maintenance feature designed for easy adjustment of belt tension from the motor slide on the base mount assembly.

- Robust single screw linear belt tension adjustment.
- Custom compact design.

PREMIUM NFPA CONTROL PANEL

The control system provides automatic lead/lag activation based on demand and automatic alternation of all pumps to equalize the amount of usage among the available pumps. The control panel shall include:

- A color touch screen panel which displays the operating status of the unit. The touch screen will display pump status, pump faults, pump run hours, system pressure, system alarms and service alert notifications for the pumps, dryers, and dew point monitor.
- Building automation communication gateway, with BacNet® protocol. Ethernet port for connection to BacNet® /IP server or direct connection to facility Ethernet for viewing of system operations and status via device IP-address.
- A PLC controller that includes logic programmed to appropriately manage start-stop, lead-lag, and other pump operations.
- UL508A listed control panel in a NEMA 12 enclosure.

AIR PURIFICATION SYSTEM

- Dual heat-less, automatic pressure swing regenerative desiccant air dryers
- Designed to produce a dew point of -40F
- Dual cyclonic water separators
- Dual .01 micron coalescing pre-filter with element change indicator and automatic condensate drain
- Dual 1 micron particulate after-filter with element change indicator
- Dual Combo .01 Micron/Activated Carbon Final Filter
- Dual pressure reducing valves
- Automatic dew point dependent switching to reduce purge frequency
- Purge muffler for quiet operation

MONITORING EQUIPMENT

- Dew point monitor with audible/visual alarms & dry contacts for remote alarm signal
- -22°F High Dew Point Alarm

SYSTEM CONNECTIONS

The system is shipped with a flexible connector for discharge. Isolation pads included.