AES Group, Inc.

Sales ▪ Construction ▪ Service

Powerex Laboratory Compressed Air System - Specification

BASE MODEL NUMBER:	LSP15A6-AES-SPL
SYSTEM CAPACITY:	187.5 SCFM @ 145 PSIG
HORSEPOWER:	75 HP Total (15HP x 5 Modules)
RECEIVER SIZE/CONFIGURATION:	240 Gal - Vertical
ELECTRICAL:	208/230/460V, 3PH, 60Hz

(MUST SPECIFY VOLTAGE WHEN ORDERING.)

**System performance shown with all pumps running*

GENERAL DESCRIPTION

The Laboratory Scroll System is a skid mounted design consisting of multiple oil-less scroll compressors; dual air dryers with purge control, dual filtration system, dew point monitor, wired control panel, and corrosion resistant air receiver. The Laboratory Scroll System shall be modular in design and minimizes overall footprint. It shall be provided with single point connections for intake air (remote), electrical discharge air, and condensate drains. All scroll pumps are rated ISO 8573-1 Class Zero and the dryers produce a dew point of -40F.

DETAILED PRODUCT DESCRIPTION:

OIL-LESS SCROLL COMPRESSOR PUMP

The compressors shall be belt driven oil-less rotary scroll single stage, air-cooled oil-less construction with absolutely no oil needed for operation. The rotary design shall not require any inlet or exhaust valves and shall be rated for 100% continuous duty. Direct drive compressors shall not be used. Tip seals shall be of a composite PTFE material and be rated for 5,000 hours operation. Compressor bearings shall be external to the air compression chamber, and shall all be serviceable for extended compressor life. Bearing maintenance shall not be required until 5,000 run 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 to be equipped with the following components:

- Isolation, check, and safety valve (1 for each base mount unit)
- ODP electric motor, belts & belt-guard (1 for each base mount unit)
- Air-cooled aftercooler with separator (1 for each base mount unit unless a 10 HP unit, which has one separator for two pumps)
- T.M.P.D. (Thermal malfunction protection device) (1 for each base mount unit)
- Pumps can have all major maintenance performed by only removing the fixed scroll side

MAINTENANCE-FRIENDL MOTOR/PUMP BASE-MOUNTS

Patented base-mount service slide provides safe, easy access to common maintenance items. Also include an adjustable slide base under ach motor for ease of belt replacement and tensioning.

RECEIVER TANK

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

- Pressure gauge
- Relief valve
- Sight gauge
- Manual and automatic electric timed tank drain
- 3-valve bypass plumbing

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- External paint and internal lining to resist corrosion

PREMIUM NFPA CONTROL PANEL (65kAIC SCCR)

The control system provides automatic lead/lag activation based on demand and automatic alternation of all pumps in order 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 -40°F
- 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 pressure reducing valves
- Automatic dew point dependent switching to reduce purge frequency and save energy
- Purge muffler for quiet operation

MONITORING EQUIPMENT

- Dew point monitor with audible/visual alarms & dry contacts for remote alarm signal

SYSTEM CONNECTIONS

The system is shipped with a flexible connector for the discharge.