

Specification

General

The Powerex Enclosed Scroll Air Compressor unit is designed to provide clean, dry air for industrial applications where the quality of the compressed air is critical. The standard unit is rated for a maximum of 115 PSIG. A higher pressure version (max. 145 PSIG) is also available. The unit is UL/CSA certified¹.

Air Compressor System

The package shall include one oil-less scroll air compressor, a 13 gal. tank, and associated equipment. The only field connections required will be system exhaust, power connection at the control panel, and condensate tank drain connection. All interconnecting piping and wiring shall be included and operationally tested prior to shipment. Single phase 3HP units require installation of an additional external 30 gal. tank and single phase 5HP units require installation of an additional external 60 gal. tank. Anti-corrosion tank lining is available. Package includes sound reducing enclosure.

Sound Reducing Enclosure

The system is constructed with an internal frame and steel base system with an individual vibration isolation mounted compressor module. The sound reducing enclosure has side access panels to allow service of the electrical controls. The enclosure has side cooling air intakes and all exhaust air leaves the enclosure from the right side.

Oilless Scroll Compressor Pump

Each compressor 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 10,000 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 10,000 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 shall have flexible connectors on discharge.

Each compressor pump shall be provided with an electric drive motor, discharge check valve, an air-cooled after-cooler, and a high discharge temperature shut down switch.

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. Three phase motors are EISA compliant and premium efficient.

¹With the exception of 5 HP single phase units, which only have a UL508A listed control panel.

Air Receiver

The system shall include an internal 13 gallon ASME air receiver rated for 175 PSI MAWP. The tank shall be equipped with a safety relief valve and a manual or optional automatic electronic tank drain with manual override. The tank will also have corrosion resistant FDA approved material tank lining if that option is selected.

System Controls

The system shall include a control panel with lighted on/off switch magnetic starter overload protection, hour meter, and high temperature shutoff switch.

Inlet Filters

The system shall include a single inlet filter system. The inlet filter system shall be located on the compressor pump.

Optional Desiccant Air Dryer

Each twin-tower desiccant dryer shall be sized for the peak calculated system demand to provide a pressure dew point of 0oF. Dryer controls shall include a re-pressurization cycle to prevent shocking of the desiccant bed prior to switching towers. An integral purge saving control system shall be provided and shall suspend the purge air loss during periods of low demand. When the dryer is in purge control mode, the tower switching valves shall not operate, and only one desiccant tower shall be on-line. Dryers that continue to operate the switching valves on a fixed cycle, while in purge control mode shall not be acceptable. Desiccant dryer controls are to be powered from a separate supply, not through compressor controls.

Optional Refrigerant Air Dryer

The refrigerated air dryer is non-cycling, direct expansion type, using R-134 A refrigerant (CFC free). A hot gas by-pass system maintains a consistent temperature at all load conditions. Heat exchangers are made of copper tube construction and fully insulated. Dryers shall have power on and high temperature lights, internal 3-micron filter/separator with stainless steel bowl, and timed electric condensate drain. Refrigerated dryers are to be powered from a separate supply, not through the compressor controls.

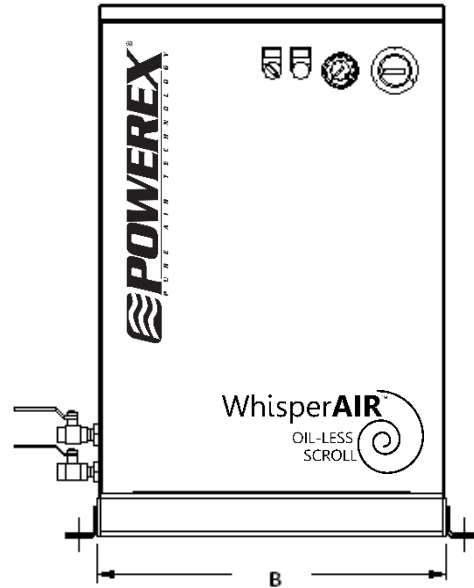
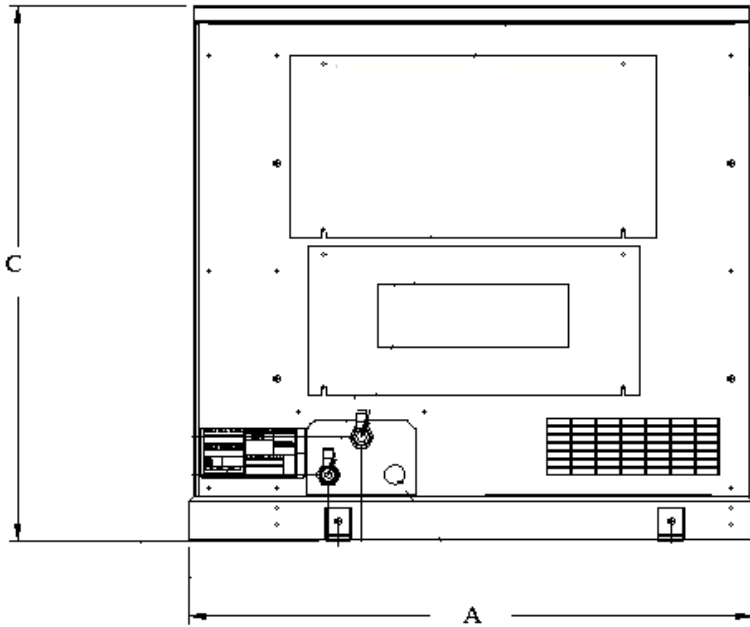
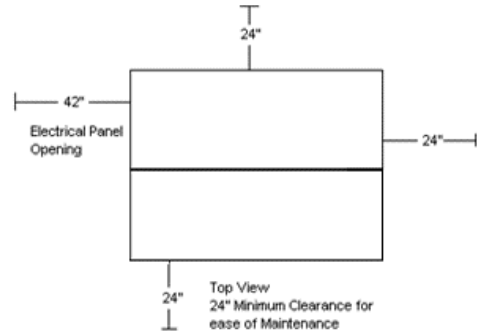
Optional Dewpoint Monitor

The system-integrated hygrometer shall be equipped with an LCD dew point display and high dew point alarm with dry contacts for remote monitoring. The sensor shall include an auto calibration feature to ensure the accuracy of the dew point measurement. Dew point monitor powered separately.

Optional Carbon Monoxide Monitor

The carbon monoxide (CO) monitor is provided in an enclosure with LCD display of CO concentrations. The monitor shall continuously display the CO content of the discharge air and shall provide audible and visual high CO alarms. High alarm is set at 10 ppm. Dry contacts are provided for remote monitoring of the high CO alarm. Carbon monoxide monitor powered separately.

Dimensions				
Model	Dim. A	Dim. B	Dim. C	Outlet
SES0308	34"	21"	33"	3/8"
SES1308	34"	21"	33"	3/8"
SES0508	34"	21"	33"	3/8"
SES1518	34"	21"	33"	3/8"



Enclosed Scroll Air Compressors										
Model ⁵	HP ¹	SCFM @ 100 PSIG ⁵	Maximum Pressure (PSIG)	Tank Size (gal) ⁶	BTU/Hr	dB(A) Level	System F.L.A.			System Weight (lbs)
							208V	230V	460V	
SES0308	3	8.8	116	13	7,635	49	9.0	8.1	4.2	310
SES0308HP	3	7.1	145	13	7,635	49	9.0	8.1	4.2	310
SES1308	3	8.8	116	13	7,635	49	-	13	-	336
SES1308HP	3	7.1	145	13	7,635	49	-	13	-	336
SES0508	5	15.2	116	13	12,725	51	14.5	13.1	6.6	335
SES0508HP	5	12.5	145	13	12,725	51	14.5	13.1	6.6	335
SES1518	5	15.2	116	13	12,725	51		23.4	-	345
SES1518HP	5	12.5	145	13	12,725	51		23.4	-	345

Notes:

- 1 – Actual BHP is less than rated name plate. Contact Powerex for BHP rating.
- 2 – 3 Year Limited Warranty
- 3 – Single Phase 3HP units will require installation of an additional 30 gal. external tank and 5HP units will require the installation of an additional 60 gal. external tank.
- 4 – UL/CSA Certified with the exception of 5 HP single phase units, which only have a UL508A listed control panel.
- 5 – HP after a model number indicates high pressure model. SCFM for high pressure units are @ 145 PSIG.
- 6 – Tank is located inside the enclosure