

## **GENERAL**

The Powerex vacuum system is designed provide vacuum for applications such as laboratories, molding, packaging, printing and other similar facilities.

## **VACUUM SYSTEM**

The package shall include one or two vacuum pumps and associated equipment, one ASME tank and one control panel. Each pump is factory piped to a common intake manifold. The system shall be completely tested prior to shipment. Vibration isolation pads for installation between the system mounting feet and the floor shall be included with the system.

## **ROTARY VANE VACUUM PUMP**

The vacuum pumps shall be of the rotary vane air-cooled design. Each vacuum pump shall be direct-driven through a shaft coupling by a TEFC electric motor. Belt drives shall not be permitted. Each vacuum pump shall be air-cooled and have absolutely no water requirements. Each vacuum pump shall have an end (ultimate) vacuum of 29.3" Hg (15 torr). Lubrication shall be provided by an integral, fully re-circulating oil supply that is filtered by an automotive-type, spin-on oil filter. Non-re-circulating (once-through) or partial re-circulating oil supply systems shall not be permitted. Each vacuum pump shall be capable of operation with standard SAE 30 weight oil. The oil separation systems shall be integral and shall consist of no less than three stages of internally installed oil and smoke eliminators through which the exhaust gas stream must pass. This system shall consist of bulk separation, oil mist elimination, and smoke elimination, and shall be capable of removing 99.9+ percent of all oil and smoke particles from the exhaust gas stream. Each vacuum pump shall include a built-in, anti-suck-back valve, mounted at the pump inlet, and three sliding vanes. Each vacuum pump shall be equipped with a 10 micron inlet filter for removal of particulates. The vacuum pumps shall be mounted on vibration isolators. The system shall also include a supplementary check valve between the inlet filter and the pump.

## **MOTOR**

The motor is EISA compliant, continuous duty, NEMA rated, C-face, TEFC, suitable for 208-230, or 460V, 3 phase, 60 hertz electrical operation.

## **RECEIVER**

The system shall include an ASME rated receiver rated for full vacuum. The tank shall be equipped with a vacuum gauge and a manual drain.

## **CONTROL PANEL**

The system shall include a UL listed control panel in a NEMA 1 enclosure in simplex or duplex configurations utilizing a 120V control transformer with fused primary and secondary protection. The control panel also includes the following accessories for each pump:

Run time indicator, magnetic starter with 3-leg overload protection and Hand/Off/Auto selector switch. Standard features shall also include minimum run timers via a PLC or time delay relay for each pump and timed lead/lag pump alternation to maintain even run hours on each pump. The lag vacuum pump shall be able to start automatically if the lead vacuum pump fails to operate.

## **AVAILABLE OPTIONS**

- High discharge air temperature shutdown alarm with visual and audible indicators and dry contacts
- Internal tank lining for corrosion resistance
- Tank Sight Gauge
- Exhaust flex hose with drip leg and valve