

## Specification

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### General

The Powerex oil-less tank mounted system is designed to provide clean, dry air for industrial applications where the quality of the compressed air is critical (dryer option is required for the dry air application).

### Air Compressor System

The package shall include one or two oil-less reciprocating air compressor/s and associated equipment, one ASME air receiver, and one optional magnetic starter/alternating control panel. The only field connections required will be system discharge, power connection at the control panel and dryer, and condensate drain connection. All interconnecting piping and wiring shall be included and operationally tested prior to shipment. A desiccant or refrigerant air dryer system is optional.

### Oilless Reciprocating Compressor Pump

Each compressor shall be of the following design: belt driven, reciprocating type, single-stage (1-3 HP), or two-stage (5-15HP), single acting, air cooled, oil-less construction with absolutely no oil needed for operation. Pistons shall be manufactured of heat rejecting Composite Resin with PTFE rings. Aluminum pistons shall not be used. Compressor design shall also include stainless steel valves with PTFE coated aluminum die-cast valve plates, precision bore die-cast anodized aluminum cylinders, anodized inter-stage intercooler(s), ductile iron crankshaft with counterweight and oversized sealed ball bearings, and single piece connecting rods with sealed needle bearings. Compressors shall have a "Dual Cooling System" (2-15 HP) which includes a radial flow fan and flywheel fan, which are driven by the pump crankshaft. Each compressor shall be equipped with a check valve. Each compressor unit shall be capable of up to 145 psig continuous-duty operation.

### Motor

Each compressor shall be belt driven by a 1750 RPM, ODP NEMA construction motor. Motors operating at speeds higher than 1750 RPM shall not be acceptable. OSHA approved belt guards shall be provided. Motor shall not operate in the service factor. Optional motors include TEFC.

### Air Receiver

The system shall include an ASME rated air receiver, rated for 200 PSI MAWP. The tank shall be equipped with a pressure gauge, safety relief valve, discharge shut-off valve, and manual tank drain.

Optional drain valves include: 1) 115V "No-loss" type automatic tank drain, 2) 115V automatic solenoid timer drain, or 3) automatic float style drain.

### Optional Control Panel

#### Simplex

The system shall include a UL listed magnetic starter in a NEMA 1 enclosure with 3-leg overload protection, hour meter, and overload reset button. A NEMA 1 pressure switch shall control the start/stop operation of the compressor and shall operate in the range of 90-120 psig.

#### Duplex

The system shall include a UL listed magnetic starter in a NEMA 1 enclosure with full voltage motor starter with overload protection, an alternator, 120 volt transformer, fused primary and secondary circuits, elapsed time indicators, and maintenance switch (left/auto/right). Control panels shall be UL 508A listed and labeled. Two NEMA 1 pressure switches shall control the start/stop operation of the compressor and shall operate in the range of 80-120 psig.

### Operational Air-cooled Aftercooler

**NOTE:** Required for units with dryers.

Beltguard mounted aftercooler is provided for each compressor and sized for an approach temperature of 15°F. Units are constructed of copper tubing with metal headers. An optional moisture separator with an automatic drain valve is available for the beltguard aftercooler option.

### Optional Desiccant Air Dryer

Twin tower, heatless, desiccant air dryer is provided with .01 micron pre-filter and 1 micron after filter. Dryer is tank mounted simplex unit (up to 3HP only) and sized to provide a pressure dew point to meet NFPA standards. Desiccant dryer controls are to be powered from a separate supply, not through compressor controls.

### Optional Refrigerant Air Dryer

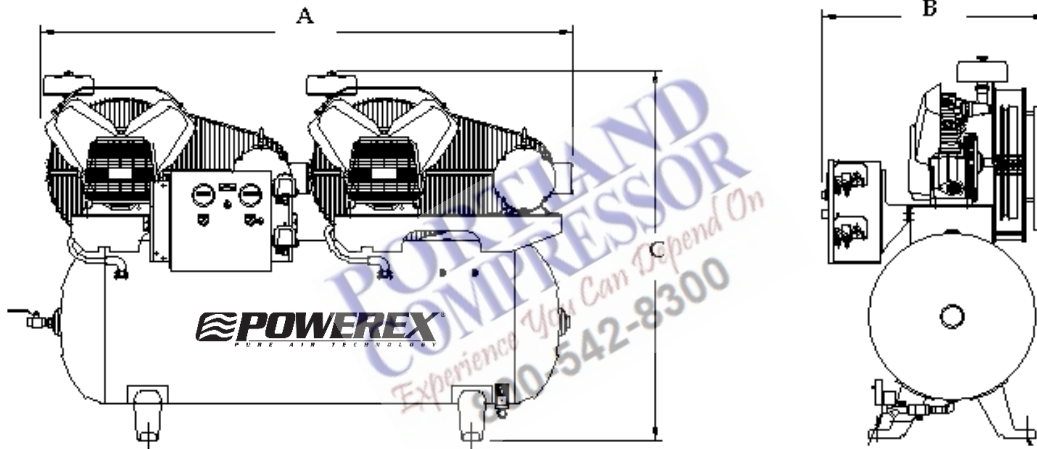
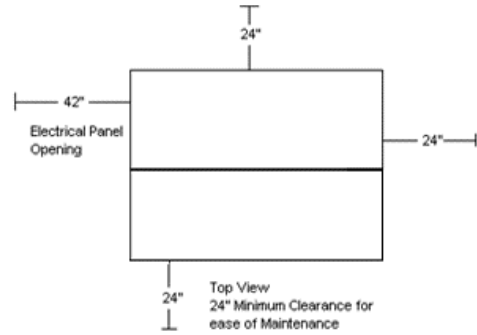
The refrigerated air drying system shall be tank mounted (up to 3HP only) with compressor, and shall provide air at a 35-38°F pressure dew point. The refrigerated compressed air dryer is non-cycling, direct expansion, using R-134a refrigerant (CFC free). A constant pressure expansion valve is provided to maintain a 35-38°F evaporator temperature. The dryer is self-regulating for large load swings, and includes a 3-micron filter/separator with automatic condensate drain. Refrigerated dryers are to be powered from a separate supply, not through the compressor controls. Option also includes a .01 micron after filter, a pressure regulator, an installed aircooled aftercooler for each pump and an installed automatic solenoid timer drain.

## Available Options

- Motor options
  - TEFC
- Air Receiver options
  - 30, 60, 80, 120 gal. (unit specific)
  - Electric drain
  - No loss drain
  - FDA approved tank lining
- Control Panel options
  - NEMA 4/12
  - High temperature
- Inlet filter options
  - Threaded for remote inlet
- Desiccant or refrigerant air dryer
- Motor slide base (per motor)
- 50 Hz operation

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COMPRESSOR**  
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Dimensions				
Model	Dim. A	Dim. B	Dim. C	Outlet
OTD1101	47"	24"	39"	1/2"
OTD0101	47"	24"	39"	1/2"
OTD1103	70"	25"	44"	1/2"
OTD0103	70"	25"	44"	1/2"
OTD1153	70"	25"	44"	1/2"
OTD0153	70"	25"	44"	1/2"
OTD1203	70"	27"	46"	1/2"
OTD0203	70"	27"	46"	1/2"



Tankmount Reciprocating Piston Air Compressors													
Model	Total System HP	Pump HP	Phase	SCFM @ 100 PSIG	Maximum Pressure (PSIG)	Tank Size (gal)	BTU/Hr	dB(A) Level	System F.L.A.				System Weight (lbs)
									115V	208V	230V	460V	
OTD1101	2	1 (2)	1	6.0	145	30	5,090	74	26.8	*15.2	13.8	-	272
OTD0101	2	1 (2)	3	6.0	145	30	5,090	74	-	*8.7	7.6	3.6	270
OTD1103	2	1 (2)	1	6.0	145	80	5,090	74	26.8	*15.2	13.8	-	432
OTD0103	2	1 (2)	3	6.0	145	80	5,090	74	-	*8.7	7.6	3.6	435
OTD1153	3	1.5 (2)	1	8.4	145	80	7,636	74	36	*19.4	18.4	-	439
OTD0153	3	1.5 (2)	3	8.4	145	80	7,636	74	-	*9.5	9.2	4.4	435
OTD1203	4	2 (2)	1	14.4	145	80	10,180	74	-	*25.7	24.4	-	504
OTD0203	4	2 (2)	3	14.4	145	80	10,180	74	-	*12.4	11.2	5.6	500

\*System is usable at 208 volts, but should not be used at any value below that voltage.