Reciprocating Simplex and Duplex Tank Mount Compressor Systems

Rev. 08/23/12

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 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" 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.

MOTORS
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. A NEMA 1 pressure switch shall control the start/stop operation of the compressor and shall operate in the range of 80-120 psig.

OPERATIONAL AIR-COOLED AFTERCOOLER (Required for unit with Desiccant Dryer)
Beltguard mounted aftercooler is provided for each compressor and sized for an approach temperature of 15 degrees 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.

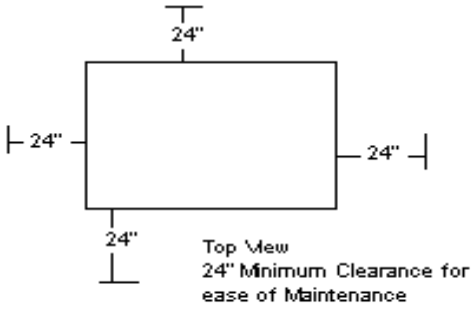
OPTIONAL REFRIGERANT AIR DRYER
The refrigerated air drying system shall be tank mounted with compressor, and shall provide air at a 35-38 degree F pressure dew point. The refrigerated compressed air dryer is non-cycling, direct expansion, using R-134a refrigerant (CFC free). A constant pressure expansion valve is provided to maintain a 35-38 degree 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.

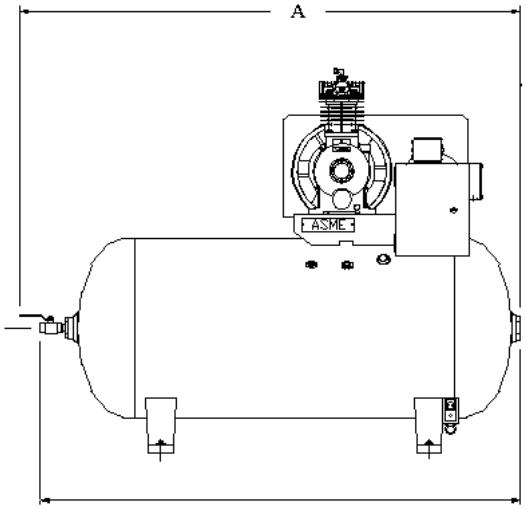
AVAILABLE OPTIONS
- Motor options
  - TEFC
- Air Receiver options
  - 30, 60, 80, 120 gal. (unit specific)
  - Electric drain
  - No loss drain
  - FDA approved tank lining
- Control Panel options
  - NEMA 4/12
  - High temperature
- Inlet filter options
  - Threaded for remote inlet
- Desiccant or refrigerant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

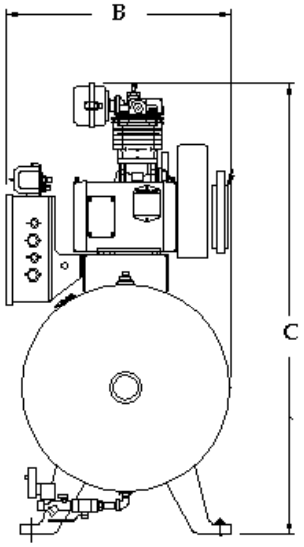
Oil-less Tankmount Simplex
1-2 HP

Rev. 10/12/12

DIMENSIONS				
MODEL	DIM. A	DIM. B	DIM. C	Outlet
OTS1101	48"	21"	39"	1/2"
OTS1102	56"	22"	43"	1/2"
OTS0101	48"	21"	39"	1/2"
OTS0102	56"	22"	43"	1/2"
OTS1151	48"	21"	39"	1/2"
OTS1152	56"	22"	43"	1/2"
OTS0151	48"	21"	39"	1/2"
OTS0152	56"	22"	43"	1/2"
OTS1202	56"	24"	45"	1/2"
OTS0202	56"	24"	45"	1/2"







Oil-less Tankmount Simplex												
MODEL[3]	HP[1]	Phase	Tank (Gal.)	SCFM @ 100 PSIG	Max. PSIG	BTU/HR	dB(A) Level	SYSTEM F.L.A. 115V	208V	230V	460V	SYSTEM WT. (LBS)[2]
OTS110	1	1	30/60	3.0	145	2,545	71	13.4	*7.4	6.7	-	231/312
OTS010	1	3	30/60	3.0	145	2,545	71	-	*4.1	3.6	1.8	231/312
OTS115	1.5	1	30/60	4.2	145	3,818	71	18	*9.5	9	-	230/327
OTS015	1.5	3	30/60	4.2	145	3,818	71	-	*4.5	4.4	2.2	230/317
OTS1202	2	1	60	7.2	145	5,090	71	24	*12.6	12	-	350
OTS0202	2	3	60	7.2	145	5,090	71	-	*5.95	5.8	2.9	343

Notes:
1- Actual BHP is less than rated name plate. Contact Powerex for BHP rating.
2 - The first weight listed reflects the unit with a 30 gal. tank and the second reflects a unit with a 60 gal. tank.
3 - OTS 1HP and 15 HP models are available with either a 30 or 60 gal. tank. Please add -1at the end of the model number to indicate a 30 gal. tank or a -2 at the end of the model number to indicate the 60 gal. tank.
*System is usable at 208 volts, but should not be used at any value below that voltage.

Powerex - 150 Production Dr. - Harrison, OH 45030 - Phone: 888-769-7979 - Fax: 513-367-3125

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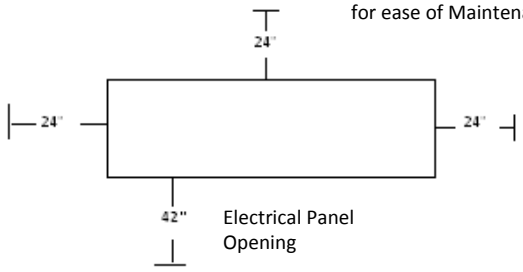
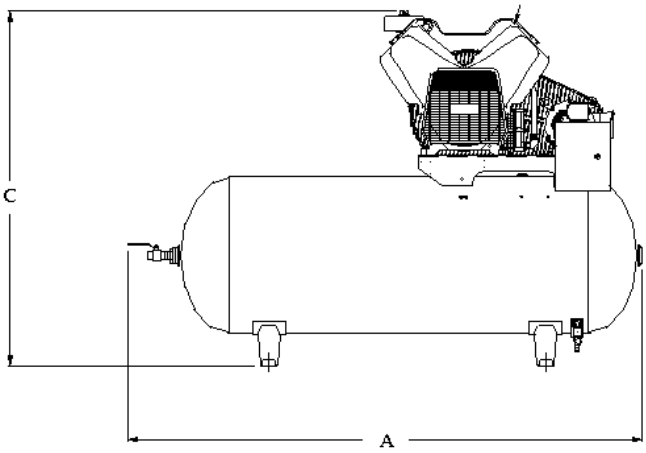
Oil-less Tankmount Simplex
3-15 HP

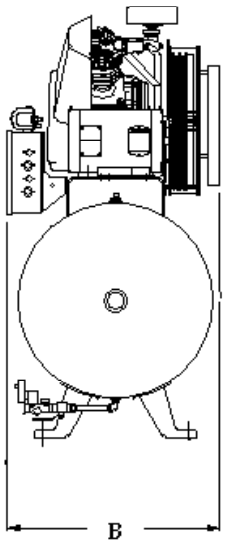
Rev. 7/25/12

DIMENSIONS				
MODEL	DIM. A	DIM. B	DIM. C	Outlet
OTS1303	70"	24"	46"	1/2"
OTS0303	70"	24"	46"	1/2"
OTS1513	71"	26"	49"	3/4"
OTS1514	78"	26"	54"	3/4"
OTS0503	71"	26"	50"	3/4"
OTS0504	78"	27"	54"	3/4"
OTS0753	72"	30"	53"	3/4"
OTS0754	77"	31"	54"	3/4"
OTS1004	77"	31"	54"	3/4"
OTS1504	77"	31"	54"	3/4"

Top View
24" Minimum Clearance
for ease of Maintenance







Oil-less Tankmount Simplex											
MODEL	HP	Phase	Tank Size (Gal.)	SCFM @ 100 PSIG	Max. PSIG	BTU/HR	dB(A) Level	SYSTEM F.L.A. 208V	SYSTEM F.L.A. 230V	SYSTEM F.L.A. 460V	SYSTEM WT. (LBS)
OTS1303	3	1	80	10.1	145	7,635	71	*16.8	16	-	485
OTS0303	3	3	80	10.1	145	7,635	71	8.98	8.12	4.06	479
OTS1513	5	1	80	18.2	145	12,725	75	24	23	-	550
OTS1514	5	1	120	18.2	145	12,725	75	24	23	-	716
OTS0503	5	3	80	18.2	145	12,725	75	14.2	12.8	6.41	536
OTS0504	5	3	120	18.2	145	12,725	75	14.2	12.8	6.41	702
OTS0753	7.5	3	80	28.4	145	19,088	76	19.97	18.1	9.03	599
OTS0754	7.5	3	120	28.4	145	19,088	76	19.97	18.1	9.03	765
OTS1004	10	3	120	35.4	145	25,450	76	27	24.4	12.2	790
OTS1504	15	3	120	45.2	145	38,175	79	44.1	37.2	18.6	910

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

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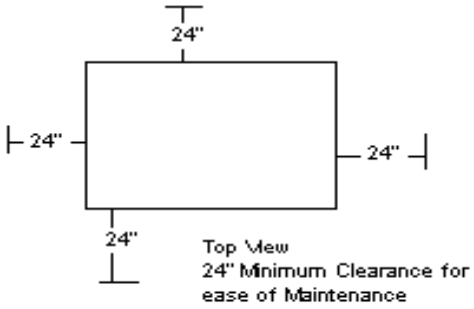
SR4491 07/12

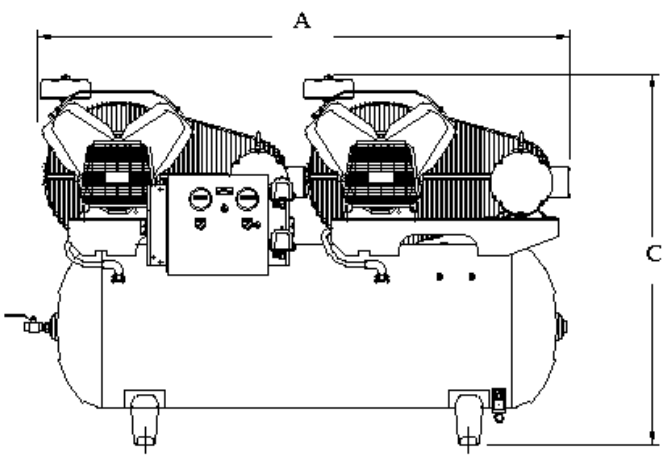
Oil-less Tankmount Duplex
1-2 HP

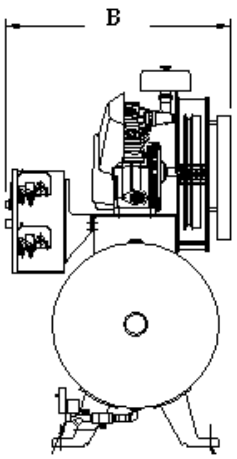
Rev. 7/25/12

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"



Top View
24" Minimum Clearance for ease of Maintenance





Oil-less Tankmount Duplex												
MODEL	HP[1]	Phase	Tank Size (Gal.)	SCFM @ 100 PSIG	Max. PSIG	BTU/HR	dB(A) Level	SYSTEM F.L.A.				SYSTEM WT. (LBS.)
								115V	208V	230V	460V	
OTD1101	1 (2)	1	30	6.0	145	5,090	74	26.8	*15.3	13.8	-	272
OTD0101	1 (2)	3	30	6.0	145	5,090	74	-	*8.7	7.6	3.8	270
OTD1103	1 (2)	1	80	6.0	145	5,090	74	26.8	*15.3	13.8	-	432
OTD0103	1 (2)	3	80	6.0	145	5,090	74	-	*8.7	7.6	3.8	435
OTD1153	1.5 (2)	1	80	8.4	145	7,636	74	36	*19.5	18.4	-	439
OTD0153	1.5 (2)	3	80	8.4	145	7,636	74	-	*9.5	9.2	4.6	435
OTD1203	2 (2)	1	80	14.4	145	10,180	74		*25.7	24.4	-	504
OTD0203	2 (2)	3	80	14.4	145	10,180	74	-	*12.4	12	6	500

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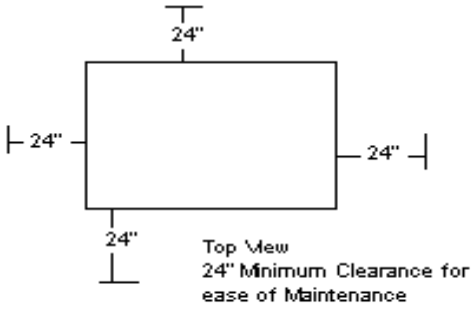
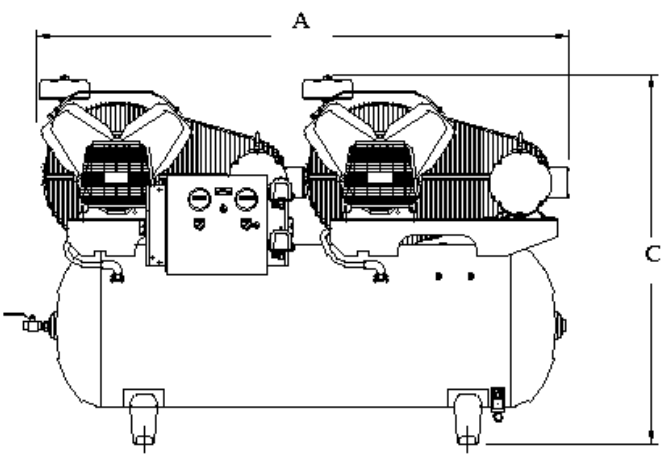
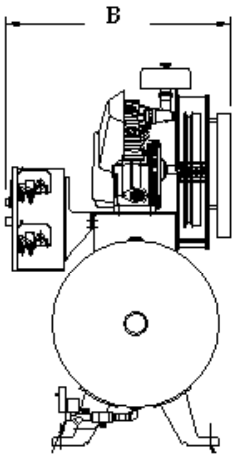
Oil-less Tankmount Duplex
3-5 HP

Rev. 7/25/12

MODEL	DIM. A	DIM. B	DIM. C	Outlet
OTD1303	70"	27"	46"	1/2"
OTD0303	70"	27"	46"	1/2"
OTD1304	77"	28"	50"	1/2"
OTD0304	77"	28"	50"	1/2"
OTD1514	78"	30"	55"	3/4"
OTD0504	78"	30"	55"	3/4"







Oil-less Tankmount Duplex											
MODEL	HP	Phase	Tank Size (Gal.)	SCFM @ 100 PSIG	Max. PSIG	BTU/HR (total)	dB(A) Level	SYSTEM F.L.A.			SYSTEM WT. (LBS.)
								208V	230V	460V	
OTD1303	3 (2)	1	80	20.2	145	15,270	74	*34.1	32.4	-	658
OTD0303	3 (2)	3	80	20.2	145	15,270	74	18.4	16.7	8.3	650
OTD1304	3 (2)	1	120	20.2	145	15,270	74	*34.1	32.4	-	788
OTD0304	3 (2)	3	120	20.2	145	15,270	74	18.4	16.7	8.3	780
OTD1514	5 (2)	1	120	36.4	145	25,450	78	*48.5	46.4	-	941
OTD0504	5 (2)	3	120	36.4	145	25,450	78	28.9	26	13	930

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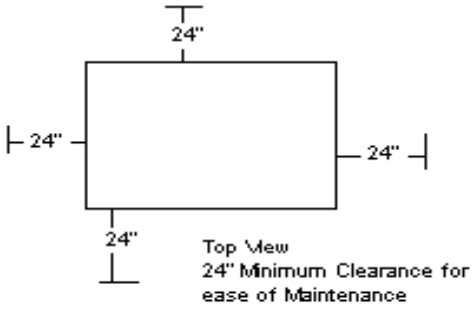
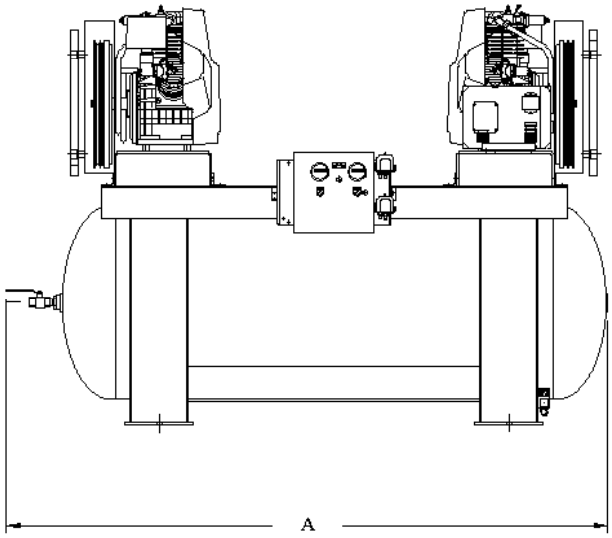
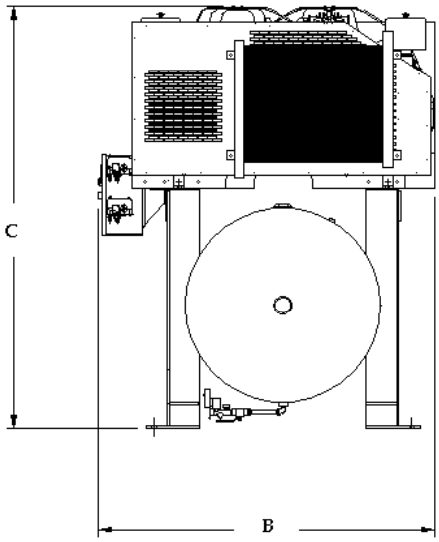
Oil-less Tankmount Duplex
7.5-15 HP

Rev. 7/25/12

DIMENSIONS				
MODEL	DIM. A	DIM. B	DIM. C	Outlet
OTD0756	93"	52"	65"	1"
OTD1006	93"	52"	65"	1"
OTD1506	93"	52"	65"	1"







Oil-less Tankmount Duplex										
MODEL	HP	Phase	SCFM @ 100 PSIG	TANK SIZE (Gal.)	BTU/HR (total)	dB(A) LEVEL	SYSTEM F.L.A.			SYSTEM WT. (LBS.)
							208V	230V	460V	
OTD0756	7.5(2)	3	56.8	240	38,176	79	20.5	36.63	18.3	1,430
OTD1006	10 (2)	3	70.8	240	50,900	79	54.6	49.23	24.6	1,510
OTD1506	15 (2)	3	90.4	240	76,350	82	82.7	74.83	37.4	1,620

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