PREMIER
AIR SYSTEMS

PRA Series

Refrigerated Compressed Air Dryers

10 – 2,000 scfm

- ***Removes Water and Contaminants***
- ***Economical Operation***
- ***Long, Reliable Service Life***

PRA Series Refrigerated Compressed Air Dryers

Maintain Compressed Air Productivity

PRA Series air dryers remove water and contaminants from compressed air before they cause damage to pneumatic valves, tools, air system piping, downstream processes, and finished product. The compression process itself causes air to become saturated with water, compressor lubricant aerosols, and other contaminants. If left untreated, rust and scale may form in air system piping and ice may build up inside air piping that passes through freezing ambient conditions.

Warm air at low pressure holds the most water in vapor form and the moisture holding capacity of air doubles with each 20°F increase in air temperature. When compressed to useful pressure of 80 – 100 psi, air becomes saturated with water making treatment necessary. A properly sized air dryer is essential for efficient removal of water before the air is used.

PRA Dryer Operation

PRA refrigerated dryers incorporate a non-cycling refrigeration system, heat exchanger, separator, and drain to provide treatment for clean and dry compressed air applications. The refrigeration system and heat exchanger are used to cool compressed air as it flows through the dryer. Cooling causes moisture in the saturated air to condense so it can be separated from the air, collected and discharged through a reliable drain. Air is clean and dry when it exits the dryer to flow downstream for use. All PRA dryer components are sized to provide high efficiency – even at full rated flow.

Superior Heat Exchanger Design

PRA heat exchanger assemblies are engineered exclusively for compressed air drying. They have a high heat transfer coefficient that provides optimum air treatment efficiency. Exchanger assemblies in 70 – 2,000 scfm models are made entirely of stainless steel for corrosion resistance and durability, and they include a unique multi-path internal flow pattern that reduces fouling potential. Low pressure drop in all PRA models keeps compressed air energy consumption low.

Installation Flexibility

PRA Series dryers are compact in size, requiring little floor space. Convenient electric service and condensate drain connections are provided along with common air system piping sizes for installation ease.

Following the air compressor, installation of a PRA Series dryer will provide reliable treatment for applications that require clean, dry compressed air and a steady dew point.

PRA TECHNICAL SPECIFICATIONS

Model	PRA10A	PRA18A	PRA24A	PRA35A	PRA50A	PRA70B	PRA100B	PRA125B	PRA160B	PRA200B
Flow Capacity* scfm	10	18	24	35	50	70	100	125	160	200
Pressure Drop psid	.5	1.3	2.1	1.7	3.3	1.4	2.0	2.2	3.0	5.0
Length** In.	14	14	14	20	20	21	21	21	21	21
Width** In.	13	13	13	16	16	14	14	14	14	14
Height** In.	15	15	15	23	23	31	31	31	31	31
Ship Weight Lbs.	70	70	70	90	105	140	255	255	270	270
Air Connection IN/OUT	½" FPT	½" FPT	½" FPT	¾" FPT	¾" FPT	1" FPT	1" FPT	1½" MPT	1½" MPT	1½" MPT
Drain Connection In.	¼ FPT	¼ FPT	¼ FPT	¼ FPT	¼ FPT	¼ FPT	¼ FPT	¼ FPT	¼ FPT	¼ FPT
Refrigeration HP	.2	.2	.4	.4	.7	.5	.8	.4	.5	.8
Max. Work Pres.† psig	250	250	250	250	250	230	230	230	230	230
Operating kW***	.41	.41	.69	.78	1.02	1.04	1.51	.81	1.04	1.51
Voltages	115-1-60	115-1-60	115-1-60	115-1-60	115-1-60	115-1-60 230/208-1-60	115-1-60 230/208-1-60	115-1-60 230/208-1-60	115-1-60 230/208-1-60	115-1-60 230/208-1-60

* Performance data obtained and presented in accordance with CAGI Standard No. ADF 100.
Pressure dew point calculated at 100psig inlet air pressure; 100ºF inlet air temperature; 100ºF ambient air temperature conditions

** Overall dimension

*** Average kilowatts per hour of dryer operation at full rated capacity

† Maximum Working Pressure is limited to condensate drain rating – see specific drain data. Actual dryer pressure rating is 300 psig.

- ***Economical Operation***
  Minimum electric energy consumption
- ***Fully Insulated Heat Exchanger***
  High efficiency and corrosion resistant
- ***Low Pressure Drop***
  Minimum compressed air energy cost
- ***Automatic Non-Cycling Operation***
  Continuous, stable dew point
- ***Compressed Air Precooler/Reheater***
  Eliminates pipe sweating (125-2,000 scfm models)
- ***Convenient Hot-Gas Bypass Setting***
  Easy access for seasonal adjustment
- ***Reliable Drain***
  Automatically discharges condensate from dryer
- ***Compact Size/Quiet Operation***
  Expands installation options

Standard Features

Models PRA10A-PRA50A: Galvanized steel cabinet; Automatic drain trap; 6' grounded electric power cord; FPT bulkhead pipe fittings; Refrigerant R22; Fully hermetic refrigeration compressor; Air-cooled refrigeration condenser

Models PRA70B-PRA200B: Stainless steel heat exchanger; Single piece powder-coated top/front panel with galvanized side panels; Suction pressure gauge; Automatic drain trap; ON/OFF switch with POWER ON light; 6' grounded electric power cord provided on PRA70B – PRA160B; Junction box provided on PRA200B; Refrigerant R404A; Fully hermetic refrigeration compressor; Air-cooled refrigeration condenser

Models PRA275B-PRA2000B: Stainless steel heat exchanger; Powder-coated top and front panel(s) with galvanized side panels; Suction pressure gauge; Timed electric drain; ON/OFF switch with POWER ON light; Junction box provided on all; Refrigerant R404A; Fully hermetic refrigeration compressor; Air-cooled refrigeration condenser

Optional Features

Models PRA10A-PRA2000B: (Field Installed) Pressure and Temperature gauge assembly for INLET or OUTLET dryer connection. Two assemblies are required to measure both INLET and OUTLET conditions; Water-cooled refrigeration condenser (PRA1250B-2000B only)

Models PRA10A-PRA24A: (Field Installed) Sturdy bracket for wall mounting

PRA1250B-PRA2000B

PRA650B-PRA1000B

PRA275B-PRA500B

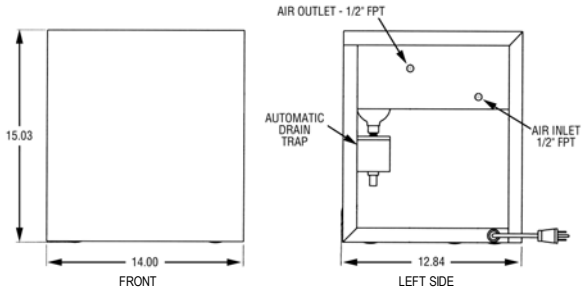
PRA70B-PRA200B

PRA10A-PRA50A

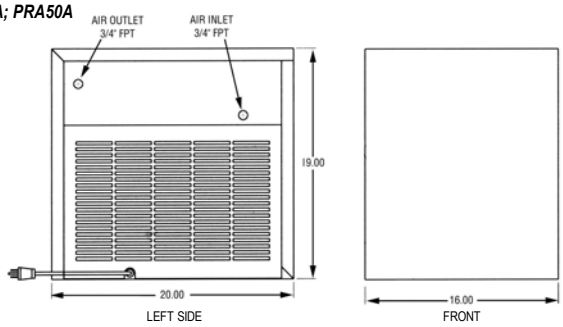
PRA275B	PRA325B	PRA400B	PRA500B	PRA650B	PRA800B	PRA900B	PRA1000B	PRA1250B	PRA1500B	PRA2000
275	325	400	500	650	780	910	1010	1250	1500	2000
3.6	4.2	3.4	4.7	4.9	3.7	4.1	5.0	3.5	5.0	5.0
31	31	31	31	40	40	40	40	76.38	76.38	76.38
28	28	28	28	40	40	40	40	32	32	32
40	40	40	40	62	62	62	62	69	69	69
410	430	450	490	770	890	890	900	1705	1710	1870
1½" MPT	1½" MPT	2" MPT	2" MPT	3" MPT	3" MPT	3" MPT	3" MPT	4" FLG	4" FLG	4" FLG
¼ FPT	¼ FPT	¼ FPT	¼ FPT	¼ FPT	¼ FPT	¼ FPT	¼ FPT	¼ FPT	¼ FPT	¼ FPT
1	1	1.5	2.5	2.5	3	3.5	4	5	6	8
230	230	230	230	300	300	300	300	220	220	220
1.6	1.6	2.1	3.5	3.6	4.5	5.38	5.6	6.2	7.58	9.87
230/208-3-60	230/208-3-60	230/208-3-60	230/208-3-60	230/208-3-60	230/208-3-60	230/208-3-60	230/208-3-60	230/208-3-60	230/208-3-60	230/208-3-60
460-3-60	460-3-60	460-3-60	460-3-60	460-3-60	460-3-60	460-3-60	460-3-60	460-3-60	460-3-60	460-3-60
575-3-60	575-3-60	575-3-60	575-3-60	575-3-60	575-3-60	575-3-60	575-3-60	575-3-60	575-3-60	575-3-60

PRA Series General Arrangements

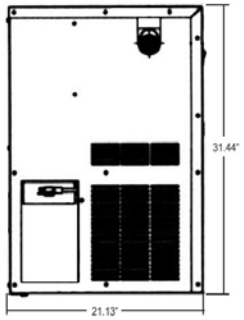
PRA10A; PRA18A; PRA24A

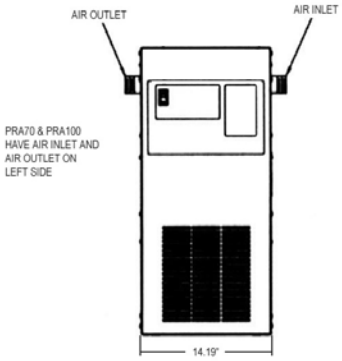


PRA35A; PRA50A

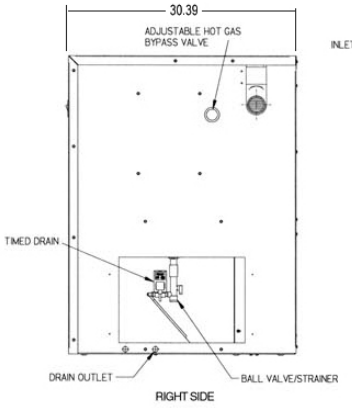


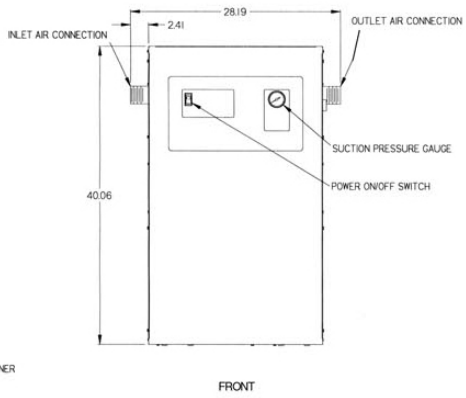
PRA70B; PRA100B; PRA125B; PRA160B; PRA200B



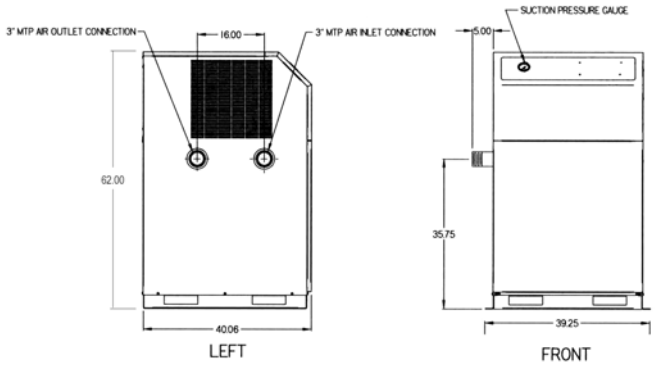


PRA275B; PRA325B; PRA400B; PRA500B

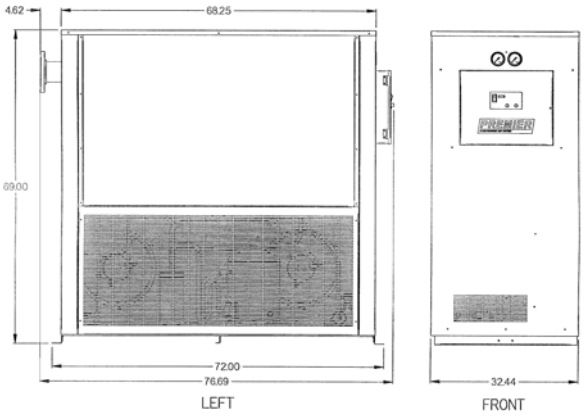




PRA650B; PRA800B; PRA900B; PRA1000B



PRA1250B; PRA1500B; PRA2000B



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