

PURDAIR

ADVANCE IN COMPRESSED AIR TECHNOLOGY

COMPRESSED AIR PURIFICATION SYSTEM



COMPRESSED AIR DRYER (High Temperature)

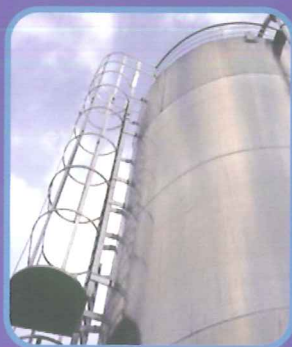
COMPRESSED AIR DRYER

Stable dew point is guaranteed by the dual automatic balance function building up with expansion valve and hot gas by-pass valve, and this also allows the operation load from zero to full adjustable.

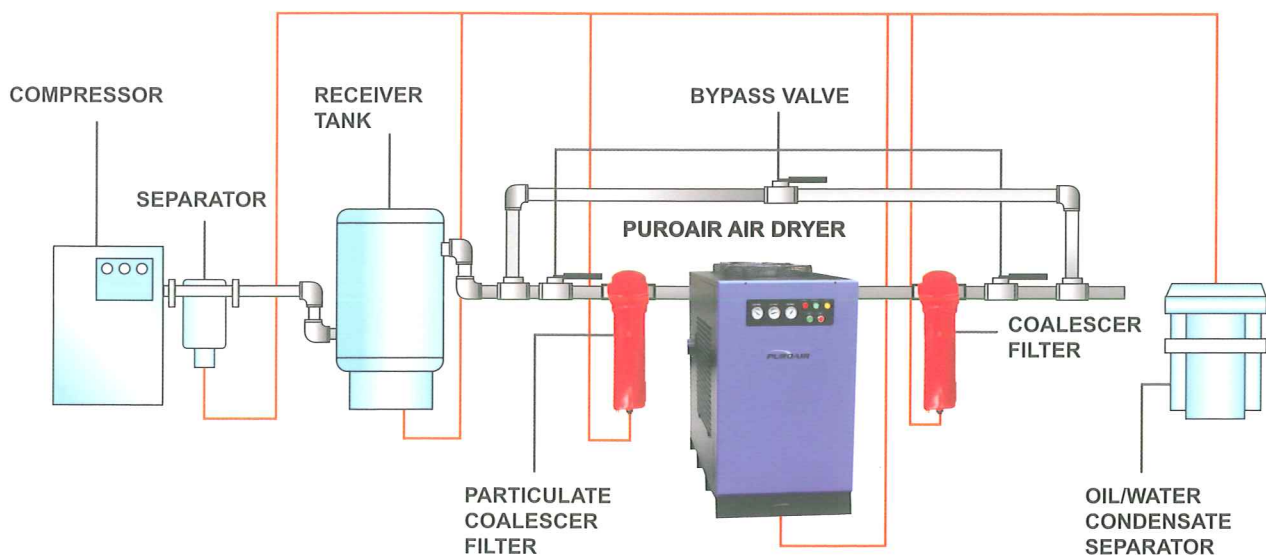
To ensure all PUROAIR dryers are running perfectly, various protection features has been installed, such as:- Refrigerant High pressure protection; Refrigerant low pressure protection; current overload protection; compressor overheating protection; only reliable parts are used in PUROAIR dryers to ensure low maintenance and minimization of downtime.

The intelligent control panel has multifunctional protection and monitor the whole dryer system. It shows various parameters of operation and minimize the possibility to open machine's panel for inspection. PUROAIR dryers are equiped with fully automatic control system and easy to use.

PUROAIR dryers are in fact divided into three systems: heat exchanging, refrigeration and electric control system. Compressed air enters to the air-air or air-water precoolers for removing heat content, then follow by to the air to air heat exchanger and being cooled down to a lower temperature before entering the evaporator. The air to refrigerant heat exchanger reduces the air temperature down to 2-5°C (Dew Point Temp), the moisture will be condensated into liquid, which will be separated by separator and be drained off by the solenoid drain valve. In the mean time, the dry, low temperature air passes through the air to air heat exchanger and then to dryer's air outlet.

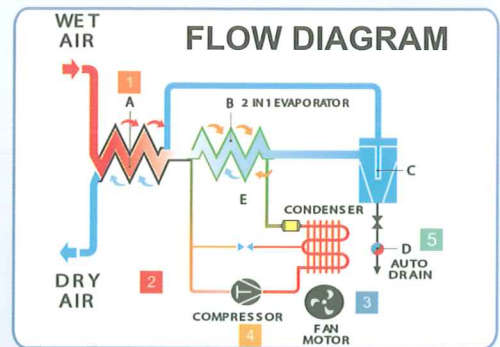


SYSTEM PROCESS FLOW DIAGRAM



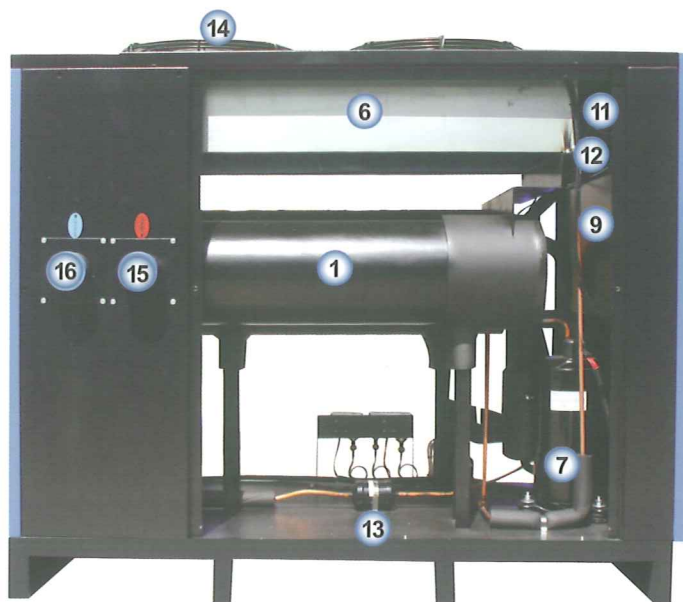
PUROAIR Refrigerated Dryer Features:

1. Corrosion-resistant heat exchangers reduce air flow limits, provide more efficient throughput, and reduce energy waste. A built-in stainless steel demister can effectively remove all moisture.
2. An easy-to-use graphical interface for microprocessor control allows you to adjust system parameters and manage effectively.
3. Reliable, fully enclosed compressors use variable speed fans to reduce power consumption.
4. The fully adjustable electronic drain valve helps minimize air loss.



PUROAIR air dryer provide design features that reduce energy consumption and improve reliability.

OPERATION SPECIFICATIONS



- 1 Air to Air Pre-exchanger*
- 2 Evaporator
- 3 Condensate Separator
- 4 Timer Auto Drain
- 5 Power Supply
- 6 Refrigerating Condenser
- 7 Freon Compressor
- 8 High/Low Pressure Switch
- 9 Switch Board
- 10 Fan Pressure Switch
- 11 Suction Refrigeration Pressure
- 12 Discharge Refrigeration Pressure
- 13 Filter Drier
- 14 Fan Set
- 15 Air Inlet
- 16 Air Outlet



Technical Specifications |

** R407C gas is also available upon request.

MODEL	FLOW RATE m ³ /min/cfm	PRESS. (BAR)	REFRI. (GAS)	CONN. (BSP)	DIMENSION (MM)			WEIGHT (KGS)
					L	W	H	
PTD-07AC	0.8 / 28	12 Max	R22	G ½"	680	300	650	49
PTD-10AC	1.3 / 45	12 Max	R22	G ¾"	740	300	700	54
PTD-15AC	1.8 / 63	12 Max	R22	G ¾"	740	300	700	54
PTD-20AC	2.6 / 91	12 Max	R22	G 1"	850	340	830	65
PTD-30AC	4.0 / 141	12 Max	R22	G 1½"	850	340	830	74
PTD-50AC	7.0 / 247	12 Max	R22	G 1½"	970	500	940	122
PTD-75AC	11.0 / 388	12 Max	R22	G 2½"	1140	640	1040	234
PTD-100AC	14.5 / 512	12 Max	R22	G 2½"	1370	640	1100	234
PTD-150AC	20.0 / 706	12 Max	R22	G 2½"	1370	640	1100	265
PTD-200AC	25.0 / 882	12 Max	R22	DN80/3"F	1540	770	1300	362
PTD-250AC	29.0 / 1059	12 Max	R22	DN80/3"F	1540	770	1300	370
PTD-300AC	36.5 / 1288	12 Max	R22	DN80/3"F	1780	790	1430	465
PTD-350AC	40.0 / 1415	12 Max	R22	DN80/3"F	1780	790	1430	475
PTD-400AC	45.0 / 1589	12 Max	R22	DN80/3"F	965	1820	1550	585

Purair reserves the right to modify, in any manner, technical details without notice.



Standard Specifications:-

Inlet Temperature	: 70°C (Max. 75°C)
Freon Type	: R22 / R407C
Ambient Temperature	: 35°C
Pressure Dew Point	: 3 to 10°C
Working Pressure (Max)	: 7 bar (Max. 12 bar)

Correction Factor

different working pressures											
bar	3	4	5	6	7	8	9	10	11	12	
Fc :1	0.73	0.83	0.85	0.93	1.00	1.06	1.11	1.15	1.18	1.20	

different ambient temperature						
°C	20	25	30	35	40	45
Fc :2	1.2	1.11	1.07	1	0.85	0.66

different inlet air temperatures:						
°C	50	55	60	65	70	75
Fc : 3	1.25	1.17	1.12	1.05	1.00	0.95

REAL FLOW RATE calculation = Nominal dryer flow rate x Fc1 x Fc2 x Fc3

COMPRESSED AIR FILTER

ADVANTAGE OF FILTER

- Shell adopts aluminum alloy die-casting, shell structure closely, all internal and external shell in before spraying, washing, degreasing and anodic oxidation. Increase durability and corrosion resistance.
- The advance design idea for element can make the cartridge filter smaller and compact.
- Easy installation; series connection between shell can be reduced the installation and maintenance of space.



MODEL	CONN. (BSP)	FLOW RATE (scfm)	DIMENSION (MM)			WEIGHT (KG)	ELEMENT	
			A	B	C		TYPE	PCS
PD 017*	G 1/2"	36	89	200	141	0.93	EPD 017*	1
PD 030*	G 3/4"	64	89	233	177	0.98	EPD 030*	1
PD 058*	G 1"	140	120	308	222	2.56	EPD 058*	1
PD 145*	G 1 1/2"	307	120	407	320	2.90	EPD 145*	1
PD 220*	G 2"	466	162	496	389	5.40	EPD 220*	1
PD 330*	G 2 1/2"	699	160	820	700	7.21	EPD 330*	1
PD 430*	G 3"	911	200	576	422	8.87	EPD 430*	1
PD 620*	G 3"	1,314	200	837	700	10.95	EPD 620*	1



*PF = 1 micron

*HF = 0.01 micron

*CF = Carbon

CORRECTION FACTOR UNDER DIFFERENT WORKING PRESSURE

- When the pressure is not 7kgf/cm² pressure, if need to determine the maximum velocity, and multiplied by the filter into the corresponding adjustment coefficient, not according to the pipe size, choose according to the pressure of filter.

Working Pressure	2	3	4	5	6	7	10	12	14	16	18	20	21
Correction Factor	0.38	0.5	0.62	0.75	0.87	1	1.37	1.62	1.86	2.11	2.36	2.61	2.73

COMPRESSED AIR QUALITY GRADE

ISO8573.1

Grade	Dust Micron	Water Vapor °C	Oil Vapor Mg/m ³
1	0.1	-70	0.01
2	1	-40	0.1
3	5	-20	1
4	15	3	5
5	40	7	25
6	—	10	—

FILTRATION GRADE EXPLANATION

X3 Pre-filter

- Removal filter more than 25 micron dust particles, including water and oil mist.

PF grade element remove oil and dirt

- Have the role of removing particle above 1 um, water efficiency at 95% residual oil are 0.5ppm @0.7Mpa, 21°C.

HF grade element remove oil odor

- Installed at the rear of OF level filter, filter out more than 0.01 um particles and water and oil vapor, residual oil are 0.01ppm @0.7Mpa 21°C.

AR grade remove dust

- Removal of dust particles than 0.01 microns.

AX super efficient filter

- Removal of dust particles than 0.01 microns, and water and oil mist, oil content does not exceed 0.01 mg/m³

CF grade carbon filter

- Removal of oil mist and odor, content drop to 0.003mg/m³. Respiratory system, at system configuration needs to be pre-installed in its HF class filter.

FILTER ELEMENT

PUROAIR FILTER ELEMENT

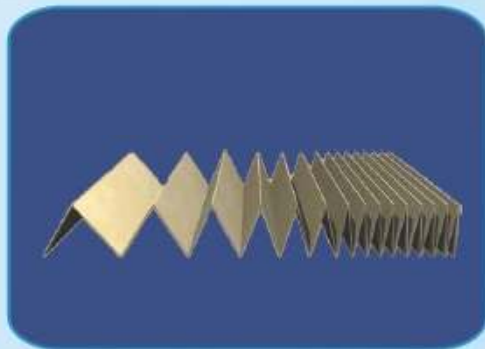
Compressed air contained harmful solid particles, liquid and vapour contaminations that can damage pneumatic equipment and instruments.

Removal of these contaminations is a must to sustain equipment lifespan and performance.

Rust, scale & decay within compressed air system piping & ambient air that contain gases and corrosive substances are also common factors that contribute to the damaging effect of compressed air quality.

Equip with latest innovation and technology, compatible filter element provides cost effective, high performance and highest quality assured for the industrial filtration system needs.

QUALITY & ADVANTAGES



Deep Bed Pleating

Pleated filter elements provide a greater filtration volume than non-pleated.

The large surface area and the low flow velocity, increase the space for holding contaminants, which reduce the differential pressure caused by retention of solid particles.

The service life increase with a result of lower running cost.

- Suitable for compressed air temperature up to 100°C
- Suitable for mineral & synthetic oil / oil free application.
- Silicon free – safe to use (for painting & surface coating application.
- Lower operation cost.

● End cap made of high grade aluminium or nylon plastic

● Pleated borosilicate glass fiber media



● Non – corrosive stainless steel support

● Polyester fiber drainage sleeve

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