



Refrigerated Air Dryer



A refrigerated air dryer is the most commonly used, type of compressed air dryer / Gas Dryer for most plant applications for the drying of plant air and other utility gases like Seal gas , hydrogen gas for generator cooling , nitrogen Gas drying etc. where a dew point of (+2) Deg. C. at line pressure i.e. (-22)Deg. C. at atmospheric pressure) is an acceptable norm. This Type of dryer finds application in Fly ash conveying , Seal gas Drying . General plant air , hydrogen gas dryer used in generator cooling application & Pneumatic tools operation.

As much as 2300 gallons of moisture can be removed from a100 cfm pneumatic system operating at 100 psi in 12 months of 3 shift operation, moisture which without a refrigerant air dryer, would have passed through the delicate pneumatic equipments & instruments

FEATURES OF REFRIGERATED AIR DRYER

A full range of aircooled as well as water cooled refrigerant air dryers are available for moisture removal & to provide dry clean air to any size and type of compressed air & pneumatic systems

ENERGY EFFICIENT HEAT EXCHANGER

Power consumption reduced by upto 10% over conventional refrigerated dryer system.

ADVANCED DESIGN

Moisture Dirt and oil contamination is removed by either impaction or integral filtration-ensures maximum protection for pneumatic compressed air equipment at all times

CONTAMINANT REMOVAL DOWN TO 1 MICRON

Minimal additional filtration is required after the refrigerated dryer for most applications.

TRIED AND TESTED CONTROL SYSTEM

Ensures maximum reliability of the refrigerated air dryer at all times.

DEW POINT INDICATOR (AT LINE PR.)

At - a - glance monitoring of dryer performance thru an online digital dew point temperature indicator.

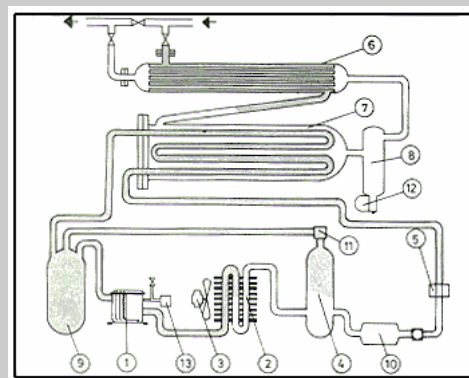
LOW NOISE LEVELS- 60 DB (A)

Suitable for location in indoor working environment

Wet Compressed air undermines efficiency of smallest to the largest pneumatic system. Therefore,moisture removal in compressed air system installation is a must. The drying of Compressed air by Mellcon Refrigerated Air Dryer is the most economical and reliable process of compressed air treatment. The incoming saturated, moist air is precooled in the Air - to - Air Heat Exchanger (6) by the outgoing dry chilled air. In the process, a greater part of Water Vapour gets condensed into liquid moisture. Further moisture separation takes place in the Freon -to- Air Heat Exchanger (7) where air is chilled to a temperature of +2 Deg. C. and moisture condenses. This temperature is termed as pressure 'Dew Point'. The Moisture Separator (8) removes the condensate by an Automatic Condensate Trap (12) i.e. auto drain.

- Refrigeration Compressor
- Refrigerant Condensor
- Electric Fan
- Liquid Receiver
- Thermostatic Expansion Valve
- Air-to-AirheatExchanger
- Freon-to-AirHeatExchanger
- Centrifugal Condensate Separator
- Accumulator
- Moisture Removal Filter
- By-PassValve
- Automatic Condensate Trap i. e. auto drain
- Press for Fan (AC only)

[SeePhotogallery](#)



The compressed dry air is reheated in Air -to- Air Heat Exchanger and fed to the point of application. As long as compressed air temperature remains above the +2 Deg. C., no further condensation will occur. The Dew Point of +2 Deg. C. is sufficient enough for the smooth and trouble free operation of most of industrial pneumatic / process applications. The refrigeration circuit is the conventional circuit comprising refrigerant Compressor (1), air or water cooled Condenser (2), Expansion Valve (5) etc. using Freon R-22 as refrigerant gas. Use of R-22 as a refrigerant is

permissible up to the year 2030 AD. as per Montreal Protocol. System with Ecofriendly Refrigerant like R-134 A, R-404 A, R-407C are also offered. Air Cooled (AC) models are available up to 2750 CFM and higher models are available with water cooled condenser.

TECHNICAL SPECIFICATION

MODELNO.	CAPACITY			PIPELINE SIZE (MM)	AIRCOOLED(AC) PowerConsumptionKW	WATER COOLED		Refrigerant
	CFM	M3 HR	NM3 HR			Powerconsumtion KW	WaterConsumption LPM	
RF-01	30	51	42	15	0.15	-	-	R-134A
RF-02	60	102	84	25	0.30	-	-	R-134A

RF-02	60	102	84	25	0.58	-	-	R-134A
RF-03	100	170	140	25	0.55	-	-	R-134A
RF-04	160	272	224	25	0.80	0.48	8	R-22
RF-05	200	340	280	40	1.14	0.61	10	R-22
RF-06	300	510	420	40	1.40	0.86	16	R-22
RF-07	400	680	560	40	1.88	1.00	20	R-22
RF-08	500	850	700	50	2.14	1.40	30	R-22
RF-09	600	1020	840	50	2.51	1.60	36	R-22
RF-10	700	1190	980	65	3.02	-	-	R-22
RF-11	750	1275	1050	65	-	1.94	45	R-22
RF-12	900	1530	1260	65	3.56	3.02	55	R-22
RF-13	1000	1700	1400	80	4.78	3.17	60	R-22
RF-14	1100	1870	1540	80	-	3.45	70	R-22
RF-15	1250	2175	1750	80	5.22	3.66	75	R-22
RF-16	1350	2295	1890	80	6.06	4.25	80	R-22
RF-17	1500	2550	2100	100	6.85	4.93	90	R-22
RF-18	1750	2975	2450	100	-	5.88	105	R-22
RF-19	1850	3145	2590	100	8.32	-	-	R-22
RF-20	2000	3400	2800	100	-	6.76	120	R-22
RF-21	2100	3570	2940	125	10.00	-	-	R-22
RF-22	2300	3910	3220	125	10.20	7.60	140	R-22
RF-23	2750	4675	3850	125	11.00	8.37	160	R-22
RF-24	3000	5100	4200	150	-	9.20	170	R-22
RF-25	3250	5525	4550	150	-	10.60	180	R-22
RF-26	3500	5950	4900	150	-	11.86	200	R-22
RF-27	3750	6375	5250	150	-	11.00	220	R-22
RF-28	4000	6800	5600	150	-	12.67	230	R-22
RF-29	4250	7225	5950	200	-	13.80	240	R-22
RF-30	4500	7650	6300	200	-	14.00	250	R-22
RF-31	4750	8075	6650	200	-	14.15	270	R-22
RF-32	5250	8925	7350	200	-	17.11	300	R-22

Above Ratings are at the following conditions :Inlet Air Temperature : 40 OC
 Inlet Air Pressure : 7.0 Kg/cm2g (0.7 Mpa)
 Pressure Dew Point : 2 OC

NOTE : Refrigerated Air Dryers based on eco-friendly refrigerants like R-134a / 404a / 407c are available on request. For a QUOT please [contact us](#)

HIGH PRESSURE REFRIGERATED TYPE AIR DRYER

SL.NO.	MODEL NO.	CAPACITY		PRESSURE KG / CM2G	PIPE LINE SIZE (MM)	APPROX. DIMENSIONS(MM)
		CFM	M3 / HR			
01.	RF-HPR-01	35	60	35	15	1000 X 800 X 1000
02.	RF-HPR-02	70	120	35	15	1000 X 800 X 1000
03.	RF-HPR-03	35	60	70	09	1000 X 800 X 1000
04.	RF-HPR-04	70	120	70	15	1000 X 800 X 1000

The above Refrigerated Air Dryer capacities are rated at an inlet temp. of 40°C, and at an outlet dew point of (+2)°C at line Pressure, Supply Voltage of 220 V-1 PH- 50 HZ or 415V-3PH-50 Hz.

For cost comparison of operating of a Heat of Compression Type Air Dryers Vs. Heated Type/Heatless/Refrigerated Type Air Dryers please clickhere.

Above data is only for estimation and can be changed without notice

OUR PRODUCT RANGES

Air / Gas Dryers	Refrigerated Equipments	Other Products
Heatless Compressed Air Dryer	Air Cooled Water Chillers	Hot Air Blowing Equipment / Air Heaters
Refrigerated Air Dryer	Water Cooled Chillers	Solvent / Liquid Dryer
High Pressure Air/Gas Dryer	Screw Chillers / Chilling Plants	
Blower Heat Regenerated Air Dryer (BHR)	Walk in Coolers / Cold Rooms Units	
Internal Heater Dryer (IHR)	Refrigerant Recovery System	
Heat of Compression Air Dryer (HOC)		Onsite Gas Generators
Split Flow-No Purge Loss Air Dryer (SFNL)		PSA Nitrogen Gas Generator
Custom Made Air Dryer	Storage Systems	PSA Oxygen Gas Generator
Packaged Mobile Dry Air Plant	Liquid CO2 Storage Tanks	
Pressure Regulating Stations ^{NEW}	LPG Storage Systems	Spare Parts
Hydrogen Gas Dryer ^{NEW}	CO2 Recovery Plant ^{NEW}	Spare part for Air Dryer
Instrument Air Quality Standard ^{NEW}	CO2 Vaporiser ^{NEW}	Air Receiver Tank For Compressed Air
		Auto Drain Trap
		Dew Point Apparatus
		Spare Parts for PSA Nitrogen Gas Generator

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