



Heatless Compressed Air Dryer



Mellcon Engineers are the manufacturers of complete range of Heatless Compressed Air Dryer system (drier) and gas dryer system. These Compressed gas and air dryers (driers) find use in majority of Industrial compressed air system and applications. These air and gas dryer (drier) are also offered for High Pressure gas and air drying system and applications. Following is a brief description of the working of these compressed air dryer and gas dryer systems..

A Heatless compressed air dryer (drier) is the simplest form of desiccant type gas or air dryer (drier) for achieving a dew point of -40°C for compressed air systems and other gas and air dryer (drier) applications. Process- Wet incoming Compressed air after passing through prefilter passes through the slide piston valve assembly and is directed towards chamber I where the compressed air passes upward through the desiccant bed (Activated Alumina or Molecular Sieves). Compressed Air drying takes place by adsorption. Dry Compressed air from chamber I then passes through the Check valve assembly and then through the after-filter to the application or work area.

While Compressed air is drying in chamber I the desiccant in chamber II where the desiccant has been wetted in the previous cycle is being simultaneously regenerated. The chamber II is depressurised to atmosphere through the purge valve in the downward direction. A portion of the dry compressed air passes through the needle valve / orifice plate through the desiccant and flushes out the desorbed moisture.

When the regeneration is complete, the purge valve is closed and the tower is slowly repressurised to line pressure for a smooth changeover. A drying period of 5 minutes provides an efficient dew point of -40°C or better (at atmospheric pressure). In regeneration process approximately 60 seconds are required for repressurisation.

SPECIFICATIONS FOR HEATLESS COMPRESSED AIR DRYER

MODEL NO.	M ³ / HR	CFM	PIPE LINE SIZE (MM)	Approx. Space Requirement (mm)		
				L	W	H
MHL-01	15	10	15NB	600	600	750
MHL-02	35	20	15NB	600	600	1000
MHL-03	50	30	15NB	600	600	1200
MHL-04	85	50	25NB	700	700	1800
MHL-05	125	75	25NB	700	700	1800
MHL-06	170	100	25NB	800	800	1800
MHL-07	250	150	40NB	800	800	2200
MHL-08	350	200	40NB	1000	1000	2200
MHL-09	500	300	40NB	1200	1200	2400
MHL-10	700	400	50NB	1200	1200	2400
MHL-11	850	500	50NB	1400	1400	2400
MHL-12	1000	600	50NB	1400	1400	2400
MHL-13	1300	750	80NB	1500	1500	2500
MHL-14	1700	1000	80NB	1600	1600	2600
MHL-15	2125	1250	80NB	1600	1600	2600
MHL-16	2550	1500	100NB	2000	2000	3000
MHL-17	3400	2000	100NB	2000	2000	3000
MHL-18	4250	2500	100NB	2000	2000	3000
MHL-19	5100	3000	125NB	2000	2000	3000
MHL-20	5950	3500	150NB	2000	2000	3000
MHL-21	6800	4000	150NB	2000	2000	3000

- The above compressed air dryer and gas dryer capacities are rated at an inlet temp. of 40°C, 7Kg/cm² (g)pr. (0.7 Mpa) and at an outlet dew point of (-) 40°C - Supply voltage of 220V-50Hz - Single phase. - Above data is only for estimation and can be changed without notice. For special systems and higher capacities contact us.

HIGH PRESSURE COMPRESSED AIR / GAS DRYER

For various industrial applications where Compressed Air / Gas at high pressure in dry form is required, Mellcon offers High Pressure Heatless Compressed Air and Gas Dryers. High Pressure air and Gas Dryers are available in Heatless as well as refrigerated type. Some of the High Pressure Compressed Industrial Applications are. :-

- Pet Blowing Machine
- Air Circuit Breaker
- High Pressure Gas Filling
- High Pressure Pneumatics Testing of various equipment and components.
- High Pressure H₂ Gas Dryer for Turbine Cooling

- High Pressure Generator Compressed Air Starting
- High Pressure Process Gas Applications.

Standard Range of Mellcon High Pressure Compressed Air Dryers is given below. :-

HIGH PRESSURE HEATLESS COMPRESSED AIR DRYERS						
SL.NO.	MODEL NO.	CAPACITY		PRESSURE KG/CM2G	PIPE LINE	APPROX. SPACE REQUIREMENTS (MM)
		CFM	M3 / HR			
01	HL-HPR-01	35	6	35	15	600 X 600 X 900
02	HL-HPR-02	70	120	35	15	700 X 700 X 1500
03	HL-HPR-03	35	60	70	09	600 X 600 X 900
04	HL-HPR-04	70	120	70	15	700 X 700 X 1200

Above models are designed to give a constant Dew Point of -40 Deg. C. For other capacities, pressure, dew point requirement & heated type of dryers, please contact us

For cost comparison of operating of a Heat of Compression Type Air Dryers Vs. Heated Type/Heatless/Refrigerated Type Air Dryers please [click here](#).

For Higher Pressure upto 400 Bar Please [Click Here](#).

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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B - 297, Okhla Industrial Area, Phase - I, New Delhi - 110020, India

Phone : +91-11-26816103, 26811727, 26816530

Fax : +91-11-26816573

Mellcon Engineers pvt Ltd.

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