

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 dessiccant 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. 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 dessiccant 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.

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. :-

1. Pet Blowing Machine
2. Air Circuit Breaker
3. High Pressure Gas Filling
4. High Pressure Pneumatics Testing of various equipment and components.
5. High Pressure H2 Gas Dryer for Turbine Cooling
6. High Pressure Generator Compressed Air Starting
7. 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/CM ² G	PIPE LINE SIZE (MM)	APPROX. SPACE REQUIREMENTS (MM)
		CFM	M ³ / 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.

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. 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.