



**Compressors  
& Equipments**

**DRYER**



**MR**  
Air for Ever



## FUNCTIONING PRINCIPLE OF THE DRYER

The dryers of the MRD series are basically made by two different circuits. A compressed air circuit divided into two heat exchangers and a refrigerating circuit. The hot and humid input compressed air passes through the air to air exchanger and then reaches the evaporator (air-Freon exchanger), where it is cooled by the refrigerating circuit until it reaches the present dew point, thus condensing the humidity it contains. In the moisture separator the condensed humidity is then separated removed by auto drain.

The advantages of such a system are essentially two, first of the air input is pre-cooled. So the refrigerating system can be sized in order to guarantee a more limited thermal jump, with an energy saving of about 40-50% and secondly no cold air is conveyed through the compressed airline, thus preventing overall the information of the external surface or the piping.

## TECHNICAL DETAILS & DIMENSIONS OF DRYERS

### REFRIGERANTS TYPE R134A, R22

Model	Flow Rate		Connection	Dimensions (mm)							Weight (KG)
	(Nm3/h)	(Scfm)		A	B	C	D	E	F	G	
MRD 10	20	12	1/2"BSP-F	480	355	410	25	255	-	-	28
MRD 20	34	20	1/2"BSP-F	480	355	410	25	255	-	-	30
MRD 30	51	30	1/2"BSP-F	480	355	410	25	255	-	-	31
MRD 60	102	60	3/4"BSP-F	660	510	690	60	360	4800	544	50
MRD 80	138	80	1"BSP-F	660	510	690	60	360	480	544	60
MRD 100	170	100	1"BSP-F	790	560	700	60	390	530	584	85
MRD 150	245	150	1"BSP-F	800	660	810	65	490	630	694	120
MRD 200	340	200	1.1/2"BSP-F	976	826	1076	100	650	788	944	190

## WORKING CONDITIONS

1. Max Ambient temperature +35c
2. Minimum ambient temperature +1c
3. Maximum inlet air temperature +50c
4. Nominal inlet air pressure 7 Bar
5. Maximum inlet air pressure : 16Bar
6. Outlet air pressure drop  $\Delta P$ : 0.2 Bar
7. Noise level <70 dbA
8. At nominal compressed air pressure 7 bar, ambient temp 35c & inlet temperature of 50c

## CONDITIONS – ACHIEVED PRESSURES DEW POINT + 3C/ADP - 22C

Correction factor according to working pressure															
Bar	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Fact	0.54	0.67	0.77	0.85	0.93	1.00	1.06	1.11	1.15	1.18	1.21	1.23	1.25	1.27	1.28

Correction factor according to ambient temp			
Ambient Temperature C	38	40	42
Factor	1	0.9	0.8

Correction factor according to ambient temp			
Inlet Air Temperature C	45	50	55
Factors	1	0.85	0.75



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