



Refrigeration Dryers

ISO8573-1 class 5
with pressure dew point 7°C

M-PLUS Friendly Dryer | MFD

Flow-rate up to 22 m³/min (777 scfm)

Friendly & Suitable for all purpose.



บริษัท นิวแม็ค จำกัด | แพนค AIR COMPRESSOR

107/1 Chaloem Phrakiat R.9 Rd., Pravet, Bangkok 10250, Thailand.
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LARGE CAPACITY | LOW PRESSURE DROP



MFD series refrigerated dryers are equipped with ALU-DRY MODULE heat exchanger that has direct effect demister and a large capacity separator.

AIR/AIR HEAT EXCHANGER

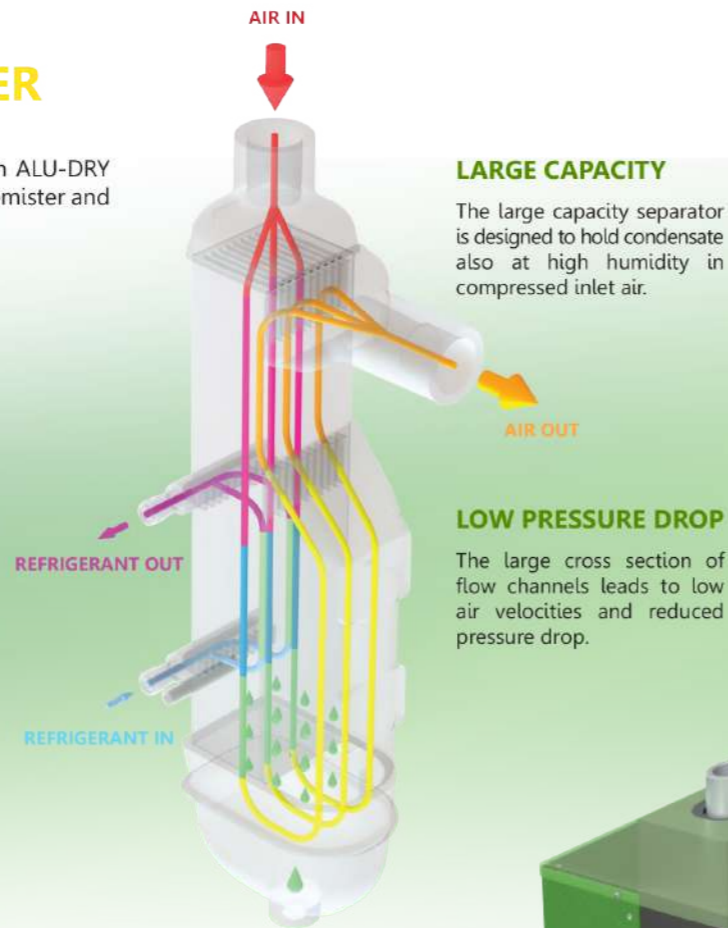
Or economizer, pre-cools the air entered into the dryer, in order to reduce the cooling power required when the air subsequently passes into the evaporator. The air exiting the dryer is heated in the same way in order to prevent condensation from forming in the factory pipes.

EVAPORATOR

The generous dimensions of the air-to-refrigerant heat exchanger plus the counter flow gas streams allow full and complete evaporation of the refrigerant (preventing liquid returning to the compressor).

DEMISTER TYPE CONDENSATE SEPARATOR

The high efficiency condensate separator is located within the heat exchanger module. No maintenance is required and the coalescing effect results in a high degree of moisture separation.



LARGE CAPACITY

The large capacity separator is designed to hold condensate also at high humidity in compressed inlet air.

LOW PRESSURE DROP

The large cross section of flow channels leads to low air velocities and reduced pressure drop.



CONTROL AND PROTECTION DEVICES

All MFD dryers includes:

- Condenser fan control via temperature probe on MFD6-22.
- Condenser fan control via pressure transducer on MFD30-220.
- Sensors failure alarm
- DewPoint too high indication
- DewPoint to low indication
- Total operating hours

MFD are equipped with specific protection devices:

- Compressor overload protector
- Manual re-set high temperature cut-out, which stops the refrigerating compressor when discharge temperature is too high (MFD60-220) and manual re-set high refrigerant pressure cut-out (MFD100-220)
- Low refrigerant pressure cut-out (MFD100-220)



DMC35 CONTROLLER

MFD dryers are equipped with a user-friendly DMC35 electronic controller that allows the monitoring of working condition at a glance; DMC35 display the DewPoint 10 digits led, control the condensate timed drainer and the condenser fan.



HOT GAS BY-PASS VALVE

The precise and accurate hot gas by-pass valve, which prevents the formation of ice inside the evaporator at any load condition, is a recent development unavailable in the past. The valve is set during final test and no further adjustments are necessary.

USER FRIENDLY DRYER



All materials used in the constructions of MFD dryers have a high recycling factor and in compliance with the M-PLUS by FRIULAIR environmental policy, only environmentally friendly refrigerants are used. Components conform with 2002/95/CE "RoHS" (Restriction of Hazardous Substances) and 2002/96/CE "WEEE" (Waste Electrical and Electronic Equipment) European Directives. Moreover, all our packing materials are also totally recyclable.



EASY MAINTENANCE

The MFD series has been designed and built to facilitate any inspection and maintenance operations that may prove necessary. The hoods are easily removed and offer immediate access to all parts of the dryer. The clear layout of the components, the simple composition of the refrigerant circuit and the numbering of wires in the electrical system, facilitate the operator when carrying out the standard controls.

CONDENSATE DRAINER

MFD models are fitted with an electronic system to drain the condensate interfaced with DMC35 controller. Discharge and pause times are adjustable. Drainage group includes also a ball isolation valve and a strainer.

CONDENSER

Generously sized to ensure maximum performance of the dryer and ability to operate at tropical conditions

COMPRESSOR

MFD dryers are fitted with the most high energy efficient, reliable refrigerant compressor from well-known international manufacturer.

RECIPROCATING TYPE - For models MFD6-22 are fitted with reciprocating compressors sourced from major producers.

ROTARY - For models MFD30-220 (with single-phase power supply). This is a new technology applied to refrigerants as an alternative to the traditional piston compressor. Compression of the refrigerant is achieved by way of interaction between a cylindrical stator and a rotating eccentric nucleus. In this method, the parts which come into contact with one another are wear-resistant and therefore more reliable.



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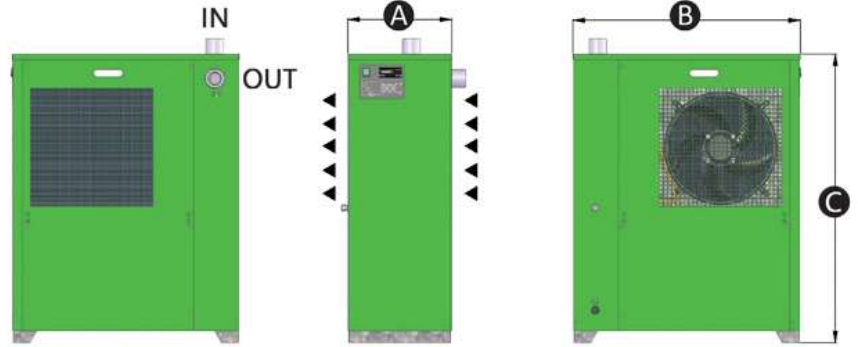
TECHNICAL FEATURES

Nominal conditions:

Inlet Pressure	Ambient Temp.	DewPoint (PDP)	Inlet Air Temp.
0.7MPa	35 °C	7 °C	45 °C

Maximum working conditions:

Inlet Air Pressure		Ambient Temp.	Inlet Air Temp.
1.6MPa (MFD6-22)	1.4MPa (MFD30-220)	50 °C	70 °C



MODEL	Refrig.	Flow-Rate			Connections	Power Supply	Dimensions [mm]			Weight [kg]
	[type]	[m³/min]	[m³/h]	[scfm]	IN-OUT [Ø]		A	B	C	
MFD 6	R134.a	0.6	36	21	G 1/2" BSP-F	1Ph/230V/50Fr	226	507	532	25
MFD 10		1.0	60	35	G 1/2" BSP-F		226	507	532	27
MFD 15		1.5	90	53	G 3/4" BSP-F		226	507	532	28
MFD 22		2.2	132	78	G 3/4" BSP-F		226	507	532	30
MFD 30	R407C	3.0	180	106	G 1" BSP-F		304	694	907	52
MFD 45		4.5	270	159	G 1.1/4" BSP-F		304	694	907	57
MFD 60		6.0	360	212	G 1.1/4" BSP-F		354	776	987	61
MFD 72		7.2	432	254	G 1.1/2" BSP-F		354	776	987	67
MFD 85		8.5	510	300	G 1.1/2" BSP-F		354	776	987	69
MFD 100		10.0	600	353	G 2" BSP-F		483	1104	1040	135
MFD 120		12.0	720	424	G 2" BSP-F		483	1104	1040	138
MFD 150		15.0	900	530	G 2" BSP-F		483	1104	1040	140
MFD 180		18.5	1100	653	G 2.1/2" BSP-F	500	1204	1140	170	
MFD 220		22.0	1320	777	G 2.1/2" BSP-F	500	1204	1140	181	

MODEL SELECTION

TEMPERATURE CORRECTION FACTOR

Ambient Temperature [°C]		≤30			35			40			45			50		
PDP [°C]		5	7	10	5	7	10	5	7	10	5	7	10	5	7	10
Inlet Air Temperature [°C]	≤40	1.03	1.26	1.45	0.99	1.21	1.39	0.94	1.15	1.32	0.87	1.06	1.22	0.78	0.96	1.10
	45	0.85	1.04	1.20	0.82	1.00	1.15	0.78	0.95	1.09	0.72	0.88	1.01	0.65	0.79	0.91
	50	0.69	0.84	0.97	0.66	0.81	0.93	0.63	0.77	0.88	0.58	0.71	0.82	0.52	0.64	0.74
	55	0.59	0.72	0.83	0.57	0.69	0.79	0.54	0.66	0.75	0.50	0.61	0.70	0.45	0.55	0.63
	60	0.51	0.62	0.72	0.49	0.60	0.69	0.47	0.57	0.66	0.43	0.53	0.61	0.39	0.47	0.55
	65	0.46	0.56	0.65	0.44	0.54	0.62	0.42	0.51	0.59	0.39	0.48	0.55	0.35	0.43	0.49
	70	0.43	0.52	0.60	0.41	0.50	0.58	0.39	0.48	0.55	0.36	0.44	0.51	0.32	0.40	0.45

PRESSURE CORRECTION FACTOR

Inlet Air Pressure [barg]	2	3	4	5	6	7	8	10	12	14
Factor	0.49	0.66	0.77	0.86	0.93	1.00	1.05	1.14	1.21	1.27



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