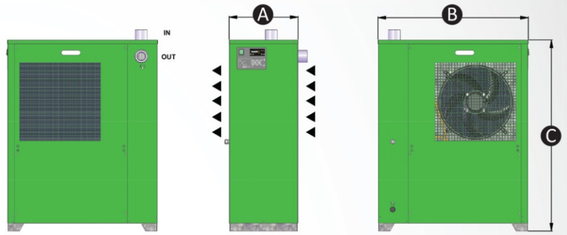
TECHNICAL FEATURES

Data refer to the following nominal conditions:
Ambient temperature 35°C, with inlet air at 7barg and 45°C. Pressure DewPoint as per class 5 – ISO standard 8573.1

Maximum working conditions:
Ambient temperature 50°C, inlet air temperature 70°C and inlet air pressure 14barg (16 barg for TFD6-22).



MODEL	Refrig.	Flow-Rate			Pressure Drop	Connections	Power Supply	Dimensions			Weight
	[type]	[m³/min]	[m³/h]	[scfm]	[bar]	IN-OUT [ϕ]	[Ph/V/Fr]	A [mm]	B [mm]	C [mm]	[kg]
TFD 6	R134.a	0.6	36	21	0.05	G 1/2" BSP-F	1/230/50	226	507	532	25
TFD 10	R134.a	1.0	60	35	0.10	G 1/2" BSP-F	1/230/50	226	507	532	27
TFD 15	R134.a	1.5	90	53	0.22	G 3/4" BSP-F	1/230/50	226	507	532	28
TFD 22	R134.a	2.2	132	78	0.48	G 3/4" BSP-F	1/230/50	226	507	532	30
TFD 30	R407C	3.0	180	106	0.35	G 1" BSP-F	1/230/50	304	694	907	52
TFD 45	R407C	4.5	270	159	0.25	G 1.1/4" BSP-F	1/230/50	304	694	907	57
TFD 60	R407C	6.0	360	212	0.45	G 1.1/4" BSP-F	1/230/50	354	776	987	61
TFD 72	R407C	7.2	432	254	0.23	G 1.1/2" BSP-F	1/230/50	354	776	987	67
TFD 85	R407C	8.5	510	300	0.32	G 1.1/2" BSP-F	1/230/50	354	776	987	69
TFD 100	R407C	10.0	600	353	0.11	G 2" BSP-F	1/230/50	483	1104	1040	135
TFD 120	R407C	12.0	720	424	0.16	G 2" BSP-F	3/400/50	483	1104	1040	138
TFD 150	R407C	15.0	900	530	0.27	G 2" BSP-F	3/400/50	483	1104	1040	140
TFD 180	R407C	18.5	1100	653	0.18	G 2.1/2" BSP-F	3/400/50	500	1204	1140	170
TFD 220	R407C	22.0	1320	777	0.25	G 2.1/2" BSP-F	3/400/50	500	1204	1140	181

On request models TFD with 60Hz power supply.

Edition October 2017

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

"Friulair reserves the right to make technical changes without prior notice, errors and omissions excepted"

FRIULAIR Dryers

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airdryer

ENVIROMENTALLY FRIENDLY

CERTIFIED QUALITY SYSTEM ISO 9001

FRIULAIR Dryers

TFD Series

TROPICAL FRIULAIR DRYERS
WITH **ALU-DRY** HEAT EXCHANGER TECHNOLOGY
FLOW RATE 0.6 TO 22.00 m³/min

TFD is the new refrigerant dryer series designed by FRIULAIR for the Asian market. **TFD** dryers are the result of continuous innovation and advanced design capability through extensive laboratory testing.

DMC 35 CONTROLLER

TFD dryers are equipped with an user-friendly DMC 35 electronic controller that allows the monitoring of working condition at a glance; DMC 35 displays the DewPoint digitally with 10 dots led, controls the condensate timed drainer and the condenser fan.

HOT GAS BY-PASS VALVE

The precise and accurate hot gas by-pass valve prevents the formation of ice inside the evaporator at any load condition and ensure a steady dew point. The valve is set during final test and no further adjustments are necessary.

CONTROL AND PROTECTION DEVICES

All **TFD** dryers includes DMC35 controller featuring:
- Condenser fan control via temperature probe (**TFD6-22**);
- Condenser fan control via pressure transducer (**TFD30-220**);
- Sensors failure alarm;
- Dewpoint too high indication;
- Dewpoint too low indication;
- Total operating hours.

TFD 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 (**TFD60-220**);
- Manual re-set high refrigerant pressure cut-out (**TFD100-220**);
- Low refrigerant pressure cut-out (**TFD100-220**).

CONDENSER

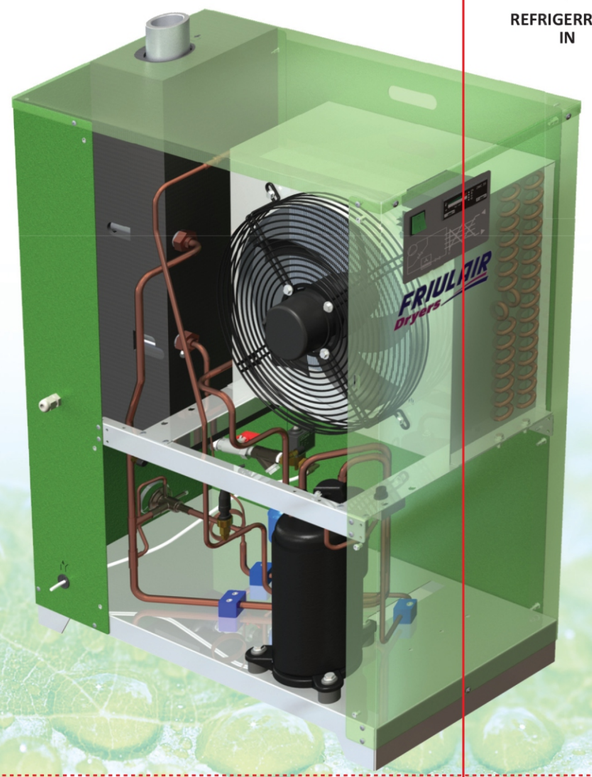
Generously sized to ensure maximum performance of the dryer and ability to operate at Tropical conditions

COMPRESSOR

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

TFD6-22
Equipped with reciprocating compressors

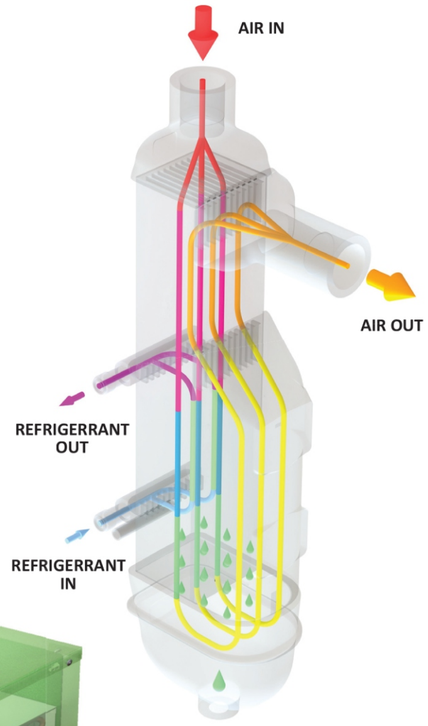
TFD30-220
Equipped with rotary compressors



FRIULAIR Dryers

ALU-DRY HEAT EXCHANGER (PATENTED)

TFD series refrigerated dryers are equipped with ALU-DRY MODULE heat exchanger that has direct effect on reducing energy consumption. This well compact module includes the economizer, evaporator, 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.

CONDENSATE DRAINER

TFD models are fitted with an electronic system to drain the condensate interfaced with DMC 35 controller. Discharge and pause times are adjustable. Drainage group includes also a ball isolation valve and a strainer.

EASY MAINTENANCE

FRIENDLY MAINTENANCE

The TFD 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 sustem, facilitate the operator when carrying out the standard controls.