

▶ MTD SERIES HIGH-CAPACITY TURBO DRYER

COMPRESSED AIR DRYERS ◀

Water in the pneumatic system can be problematic. While the air is compressed the moisture inside the air is also densified and this remaining water damages the system components in time. For that reason, compressed air treatments have been used for a very long time.

Mikropor brings an innovative approach to compressed air drying systems by producing Mikropor Turbo Dryer (MTD) units. It is tremendously effective to use this unit in the high- capacity drying process which is in the range of 10.000 Nm³/h - 30.000 Nm³/h. The large capacity drying system is often problematic and very expensive due to the lack of available space in the equipment room. Mikropor solved these problems with its new compact design of MTD series. In MTD series all components are placed in one unit. Even in a very large capacity compressed air system 3°C dew point achieved. In addition, with used thermal mass technology drying process can be done with energy-saving even in the fluctuating compressed air usage.

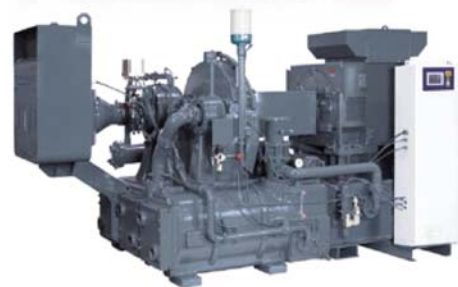


Working Principle

Wet compressed air enters the 3 in 1 aluminum heat exchangers. In the beginning, the wet compressed air, is pre-cooled by coming counter-current dried air in the air-to-air part of the heat exchanger. Then it comes across with the thermal mass to decrease the dew point up to 3°C with the bottom of the heat exchanger condensate water droplets are collected and drained. Heated thermal mass gets colder with cold refrigerant gas and send to the heat exchanger again. This circulation continued to sustain dry compressed air in the system.

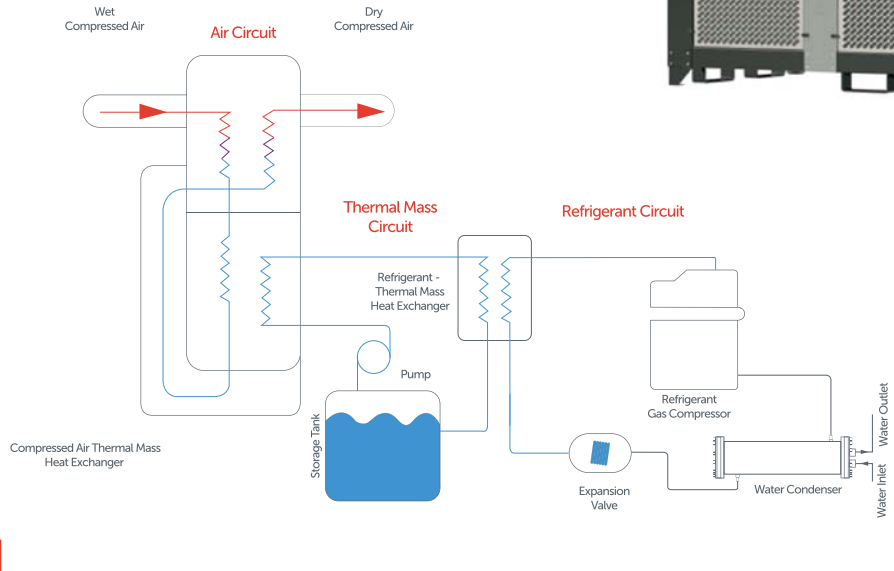
Standard Features

- 7" Touch Screen (MTD 25000 - 30000)
- 4.3" Touch Screen (MTD 10000 - 20000)
- Standard Modbus RS485 Communication
- High Strength Aluminium Design 3in 1 Heat Exchanger
- High Efficiency Scroll (MTD 10000 - 20000) and Screw (25000 - 30000) Refrigerant Compressor
- Stable Dew Point with Thermal Mass Technology
- Stainless Steel Cooling Components
Mass-Refrigerant Evaporator, Pump
- Compact Design
- 10 barg Maximum Working Pressure
- Water Cooled Condenser

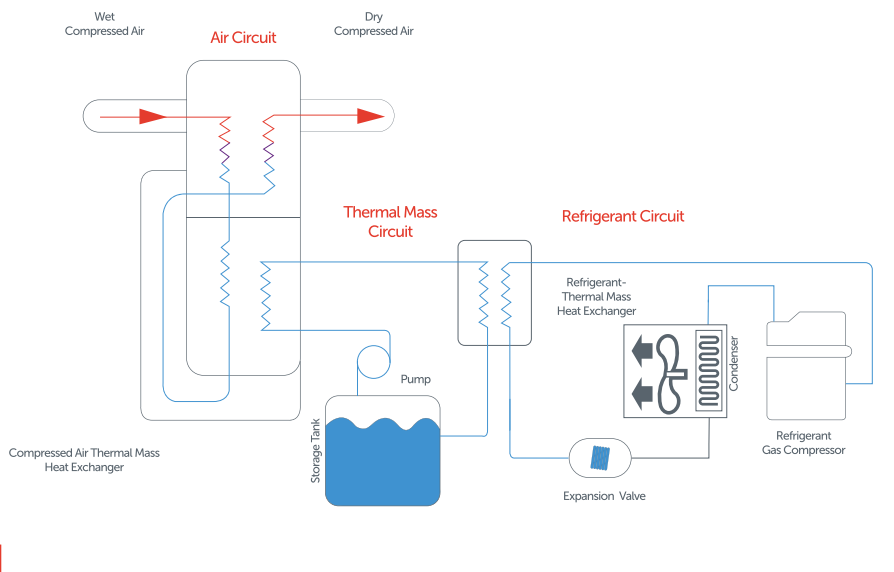


Optional Features

- Air-Cooled Condenser
- IP Communication with pCoWEB
- WebServer Feature
- BACNET, SNMP, MODBUS TCP/IP Communication



MTD Unit – Water Condenser



MTD Unit – Air Cooled

MTD Series - Technical Specifications

Model	Capacity (Nm ³ /h)	Pressure Drop (mbarg)	Power	Compressed Air Connection Size	Cooling Water Connection Size (For Water Cooled Units)	Drain Connection Size	Refrigerant	Water Cooled* Dimensions		
								Length (mm)	Width (mm)	Height (mm)
MTD 10000	10000	150	400V/3Ph/50 Hz	DN200 Flange	1 1/2"	1"	R410a	1362	2340	2341
MTD 12500	12500	150	400V/3Ph/50 Hz	DN200 Flange	1 1/2"	1"	R410a	1569	3438	2225
MTD 15000	15000	130	400V/3Ph/50 Hz	DN250 Flange	1 1/2"	1"	R410a	1579	3438	2335
MTD 20000	20000	150	400V/3Ph/50 Hz	DN300 Flange	DN50 PN10 Flange	1"	R410a	1578	3441	2362
MTD 25000	25000	150	400V/3Ph/50 Hz	DN300 Flange	DN50 PN10 Flange	1"	R407c	3292	2067	2375
MTD 30000	30000	130	400V/3Ph/50 Hz	DN350 Flange	DN65 PN10 Flange	1"	R407c	3292	2067	2397

Nominal Working Pressure	7 barg	Maximum Inlet Temperature	60°C
Maximum Working Pressure	10 barg	Minimum Inlet Temperature	5°C
Minimum Working Pressure	4 barg	Nominal Ambient Temperature	25°C
Nominal Inlet Temperature	35°C	Maximum Ambient Temperature	50°C
		Minimum Ambient Temperature	5°C

*All models have air cooled option.

MTD Series - Correction Factors

Inlet Temp. (°C)	F1	Ambient Temp. (°C)	F2	Pressure (barg)	F3
30	1.29	20	1.05	4	0.80
35	1	25	1	6	0.94
40	0.92	30	0.98	7	1
45	0.78	35	0.93	8	1.04
50	0.65	40	0.84	10	1.11
60	0.45	45	0.76	-	-
-	-	50	0.7	-	-

To determine the correct model, the compressor flow rate should be divided by the related F1, F2, and F3 values.

Example for Choosing the Correct Dryer

If an air compressor delivers 14 370 Nm³/h at 6 barg, the dryer inlet temperature is 45°C and ambient temperature is 30°C.

Please choose your dryer model as follows;

$14\ 370 / 0.94 / 0.78 / 0.98 = 19999\ \text{Nm}^3/\text{h}$. The correct dryer model for this application could be MTD 20000 Model.