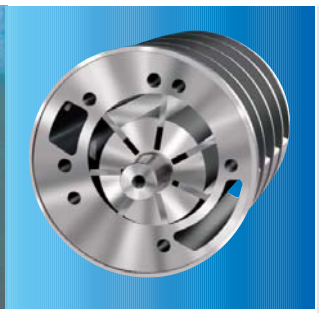


HTMD Dryers

mattei®
BEST SOLUTIONS IN COMPRESSED AIR

HTMD REFRIGERANT DRYERS

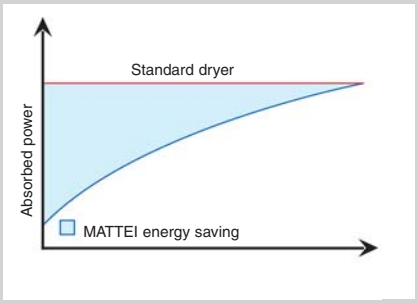
COMPRESSED AIR: A GREAT RESOURCE TO KNOW

Compressed air is a point of strength for modern industry, due to its easy and flexible use. However, when the air is compressed, moisture and other contaminants increase. If not removed from the air system, this corrosive mixture damages the pneumatic tools, resulting in expensive down times, product deterioration, and reduced life of the equipments.
The water vapour contained in the intake air is condensed inside the after coolers, due to temperature lowering, and then it enters the air distribution system, causing damages to the machine using compressed air and to pneumatic systems. **The installation of a Mattei dryer is essential** to eliminate condensate polluting the production process.

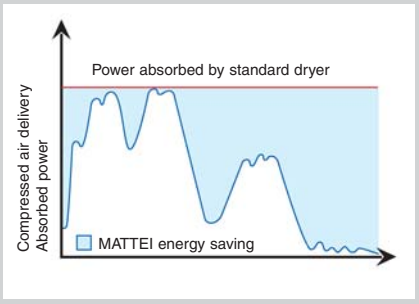
MANY ADVANTAGES

- **Energy saving:** the refrigerant compressor of HTMD dryers suits to the load demand, allowing up to 80% energy saving under normal operating conditions.
- **High reliability:** ensured by a simple refrigerant circuit and by thermostatically controlled dewpoint.
- **Sure quality:** remarkably low and constant dewpoint.
- **Ready to use:** unlike traditional thermal mass systems, HTMD dryers do not need pre-switching. They may be left 'on' without current leak.
- **Ecologically safe:** the silica thermal mass and the refrigerating gas are absolutely nontoxic and easy to dispose of.

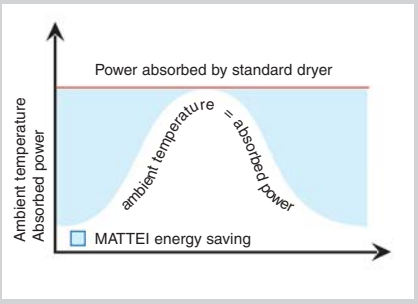
Reduced energy costs



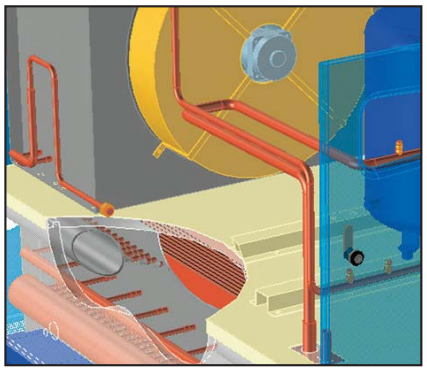
Savings depending on load



Reduced maintenance costs

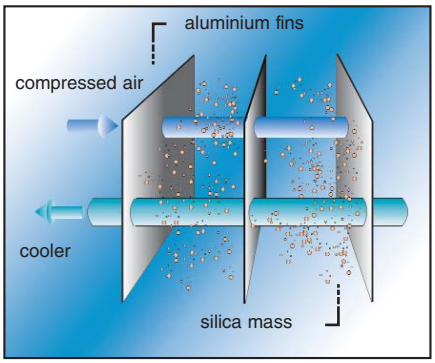


REDUCE CONSUMPTIONS UP TO 80%



HTMD dryers ensure a remarkable reduction of energy losses. This is made possible by a heat exchanger having a very compact thermal mass, by a wide exchange surface and a special thermal insulation.

TECHNOLOGY



The heat transfer from compressed air to the dryer occurs directly by means of aluminium connecting fins and indirectly through the silica thermal mass, in which the air and dryer pipes are immersed.

THERMAL MASS DRYERS

The large size circuit of this dryer ensures minimum pressure drops: reducing the pressure drop during compressed air treatment means reducing the energy needed to compress the air. It is possible to save between 5 and 8% energy with installation of an HTMD dryer.

CONTROL PANEL

All dryers are equipped with an effective and precise electro-mechanical control panel.

CONDENSER

Generous sizing of the condenser ensures maximum performance of the refrigerant circuit, even in case of wide fields of application or changing ambient temperatures. The R134a refrigerant ensures high overload capacities and being there no hot gas valve there are no freezing problems during winter.

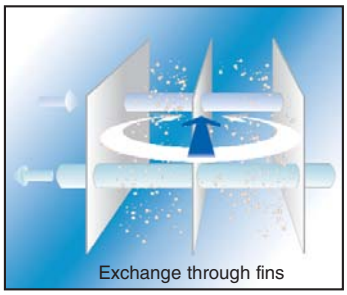
CONDENSATE DRAINER (Optional)

All models are arranged for installation of an external condensate drainer.

ENVIRONMENT PROTECTION

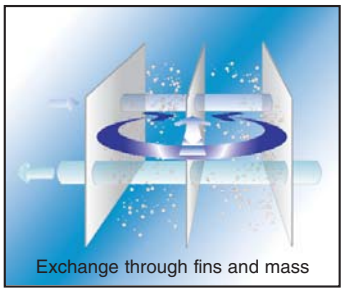
HTMD dryers use only silica and R134 ecological gas according to regulations in use.

FULL LOAD



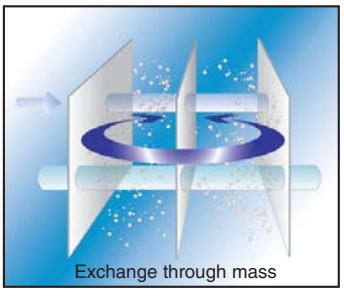
Under maximum operating conditions the best energy efficiency is obtained by direct cooling through the aluminium fins.

PARTIAL LOAD



Under a typical use, compressed air is cooled indirectly, allowing compressor start and stop cycles, based on the load conditions.

STAND-BY



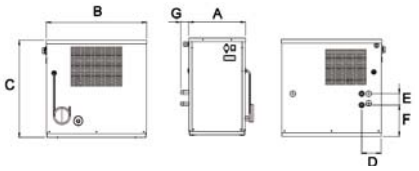
Under no load conditions the thermal mass is kept at the operating temperature. Consumption is reduced to the minimum and the dryer is ready to re-start immediately.

TECHNICAL FEATURES

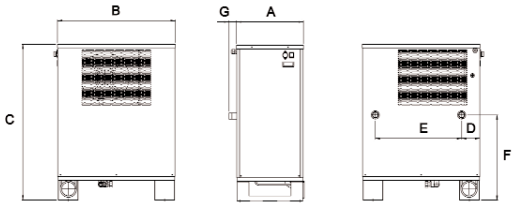
Model	Flow Rate	Absorbed Power		Coolant	Power Supply	Sound Pressure Level	Connections	Dimensions (mm)							Weight
HTMD	m³/min	kW (nom.)	kW (max.)	Tipo	V/Ph/Hz	dB(A)	Ø (IN-OUT)	A	B	C	D	E	F	G	kg
051	0,5	0,13	0,32	R134a	230/1/50	< 70	½"	300	530	510	103	60	165	41	36
081	0,8	0,14	0,32	R134a	230/1/50	< 70	½"	370	530	620	67	400	335	41	39
121	1,2	0,25	0,37	R134a	230/1/50	< 70	½"	370	530	620	67	400	335	41	41
201	2	0,28	0,44	R134a	230/1/50	< 70	¾"	370	650	860	100	476	470	41	65
251	2,5	0,42	0,72	R134a	230/1/50	< 70	¾"	370	650	860	100	476	470	41	67
321	3,2	0,44	0,72	R134a	230/1/50	< 70	1"	370	650	860	100	476	470	41	80
411	4,1	0,63	0,92	R134a	230/1/50	< 70	1"	370	650	860	100	476	470	41	80
641	6,4	0,75	1,1	R134a	230/1/50	< 70	1 ½"	740	780	960	84	608	468	71	170
771	7,7	0,95	1,6	R134a	230/1/50	< 70	1 ½"	740	780	960	84	608	468	71	190
1001	10	1,38	2,29	R134a	230/1/50	< 70	2"	1,020	870	1,100	102	656	447	71	260
1401	14	1,70	3	R134a	400/3/50	< 70	2"	1,020	870	1,100	102	656	447	71	265
1701	17	2,07	3,6	R134a	400/3/50	< 70	2"	1,020	870	1,100	102	656	447	71	300

Data refer to the following nominal conditions: ambient temperature 25 °C, with inlet air at 7 bar and 35 °C and with a pressure dewpoint of 3 °C.
Maximum working conditions: ambient temperature 50 °C, air inlet temperature 70 °C and maximum working pressure 16 bar.

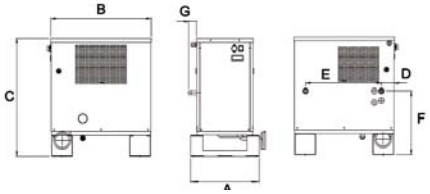
HTMD 051



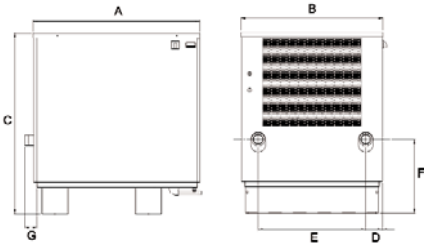
HTMD 201 ÷ 411



HTMD 081 ÷ 121



HTMD 641 ÷ 1701



CORRECTION FACTOR FOR WORKING PRESSURE CHANGES															
Inlet Air Pressure	bar	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Factor	K1	0.71	0.82	0.90	0.96	1.00	1.04	1.07	1.09	1.11	1.13	1.15	1.16	1.18	1.19

CORRECTION FACTOR FOR AMBIENT TEMPERATURE CHANGES							
Ambient Temperature	°C	20	25	30	35	40	45	50
Factor	K3	1.05	1.00	0.95	0.89	0.84	0.78	0.72

ORRECTION FACTOR FOR INLET AIR TEMPERATURE CHANGES									
Air Temperature	°C	30	35	40	45	50	55	60	65	70
Factor	K2	1.23	1.00	0.81	0.66	0.57	0.52	0.48	0.44	0.40

CORRECTION FACTOR FOR DEWPOINT CHANGES					
Dewpoint	°C	3	5	7	9
Factor	K4	1.00	1.12	1.24	1.38

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COMPANY WITH QUALITY MANAGEMENT SYSTEM CERTIFIED BY DNV
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