

AFIM[®] DRY

500, 1000, 2000

Industrial
Dehumidifiers



*Dehumidifying capacity at
20°C with 60% RH
5 - 20 kg/h*

*Dry air flow
500 - 2,000 m³/h*

- Suitable for heavy industrial environments
- Ideal for the dehumidification of small (production) areas and as a stand-alone configuration
- Low maintenance costs by filters with up to 5 times higher dust holding capacity
- Suitable in the food and pharma industry and storage applications
- 15% More energy efficient than market standards
- Original Dutch design including option to 5 years warranty extension



All standard:

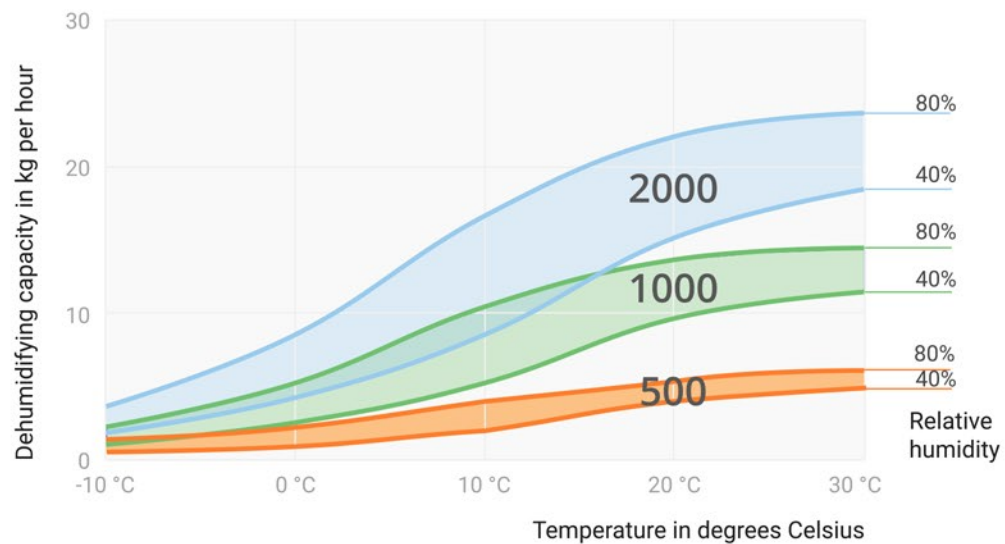
- Bag filters prepared for heavy industrial environments
- High flexibility due to integrated EC-fan technology with a 0-100% speed controlled process fan
- Suitable for very low dew points (up to -60°C dp)
- Onboard 2-step controller (suitable for 0-100% heater capacity) *
- Automatic restart function
- Operating hours counter

* Applicable to AFIM Dry 1000 – 2000

Optional:

- Filter alarm
- Stainless steel housing
- Online assistance

AFIM Dry - Dehumidification capacity



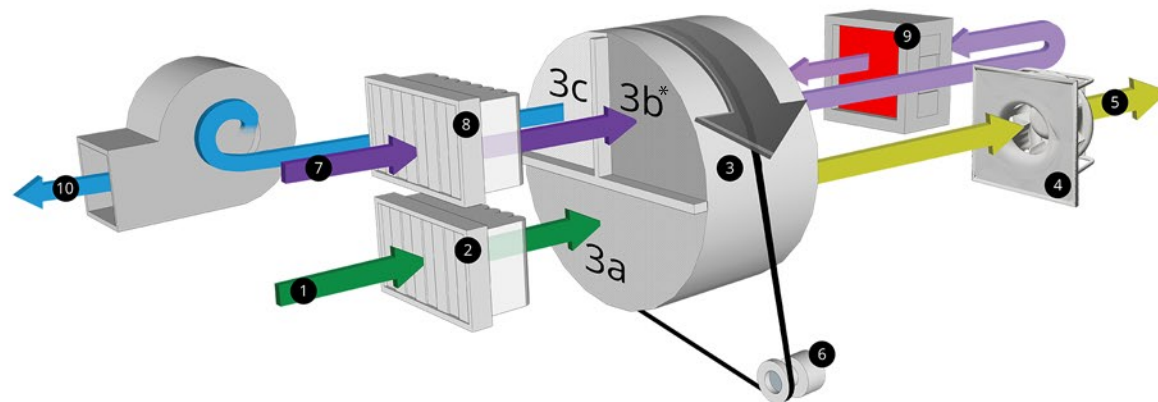
Industrial desiccant dehumidifier - Principles of operation

The process-air (1) is being sucked into the dehumidifier and blown through industrial bag filters (2). To guarantee a stable and continuous operation, these filters have a minimum overcapacity of 30%. After the process-air has been filtered, it continues through the process section of the rotor (3a). The surface of this rotor (3) is covered with small air channels that flow all the way through. These small channels contain a high amount of silica gel (>82% of the total surface). Because of the rotor's unique composition, the moisture in the processed air is being adsorbed by the silica gel. When the process-air leaves the rotor, it's completely dry. The process-air is pushed through the rotor due to negative pressure. This negative pressure is created by an industrial and energy efficient EC-fan (4). The dry air (5) is then expelled from the dehumidifier and ready for use. The rotor is continuously spun around slowly by the rotor motor (6). This way the rotor is always ready to pick up moisture.

The advantages of an industrial desiccant dehumidifier include that the drying process is continuous. The process is never interrupted by, for example: defrosting/de-icing. Furthermore, extreme low moisture levels can be reached with an industrial dehumidifier.

The regeneration-air (7) is being sucked into the dehumidifier and blown through industrial bag filters (8). To guarantee a stable and continuous operation, these filters have a minimum overcapacity of 30%. After the regeneration-air has been filtered, it continues through the heat recovery section of the rotor (3b)*. The heat recovery section recovers a minimum of 30% of the heat. That heat is being re-used for pre-heating the regeneration-air of the dehumidifier. After passing through the heat recovery section, the air is heated to over 100°C by the internal heater (9). The heated regeneration-air passes through the regeneration section of the rotor (3c). When the regeneration-air passes through the rotor, the air absorbs all the moisture contained by the rotor. The regeneration-air, also known as "wet air", is then expelled out of the dehumidifier (10).

- 1 Process-air
- 2 Filter class by ISO 16890: ePM1 50%
- 3 Rotor
- 4 Process fan (EC fan)
- 5 Dry air
- 6 Rotor motor
- 7 Regeneration-air
- 8 Filter class by ISO 16890: ePM1 50%
- 9 Heater
- 10 Wet air



* Applicable to AFIM Dry 1000 – 2000

Dehumidifier model	500	1000	2000
Nominal capacity ¹	5 kg/h	10 kg/h	20 kg/h
Dry air flow ²	500 m ³ /h	1000 m ³ /h	2000 m ³ /h
Static pressure at disposal	500 Pa	500 Pa	500 Pa
Wet air flow ²	200 m ³ /h	400 m ³ /h	700 m ³ /h
Static pressure at disposal	100 Pa	500 Pa	1000 Pa
Heater power	6 kW	13.5 kW	22.5 kW
Nominal electric consumption	8.25 kW	14.8 kW	26 kW
Maximum electric consumption	10.6 kW	17.0 kW	26.5 kW
Supply fuse 3x400 V, 50 Hz	16 A	32 A	50 A
Weight	330 kg	450 kg	475 kg

¹ Based on inlet condition 20 °C / 60% RH.

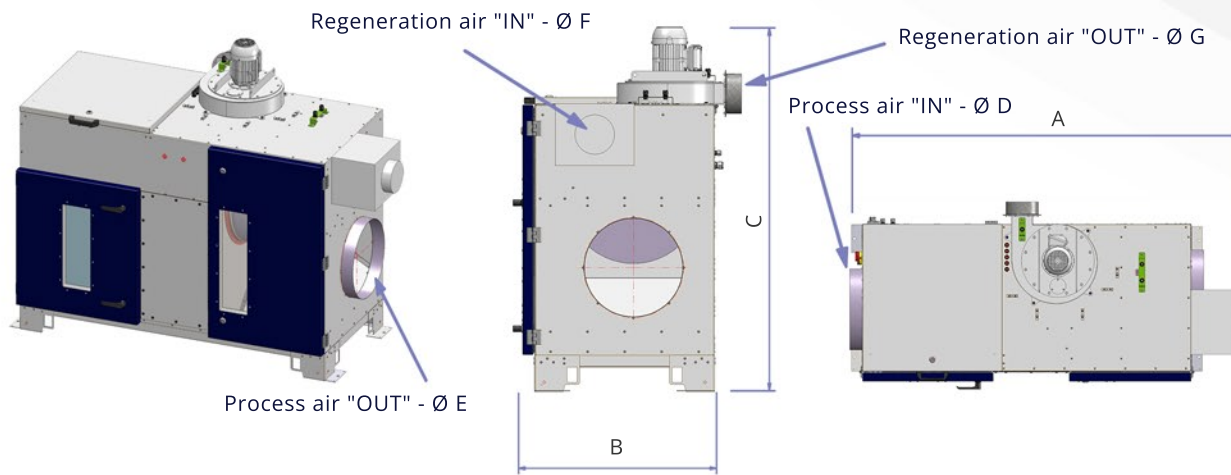
² Volume flow at a density of 1.20 kg/m³.

Model	500	1000	2000
A	1854	1780	1845
B	778	865	1065
C	1478	1470	1470
D	Ø 400	Ø 250	Ø 400
E	Ø 400	Ø 250	Ø 400
F	Ø 160	Ø 160	Ø 250
G	Ø 160	Ø 160	Ø 250

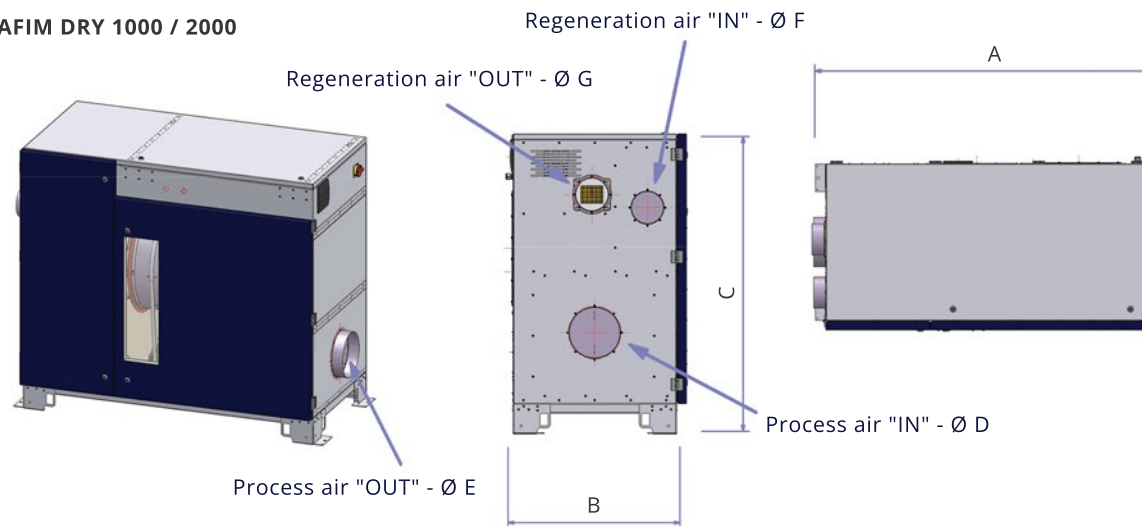
All dimensions are in millimetres.

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AFIM DRY 500

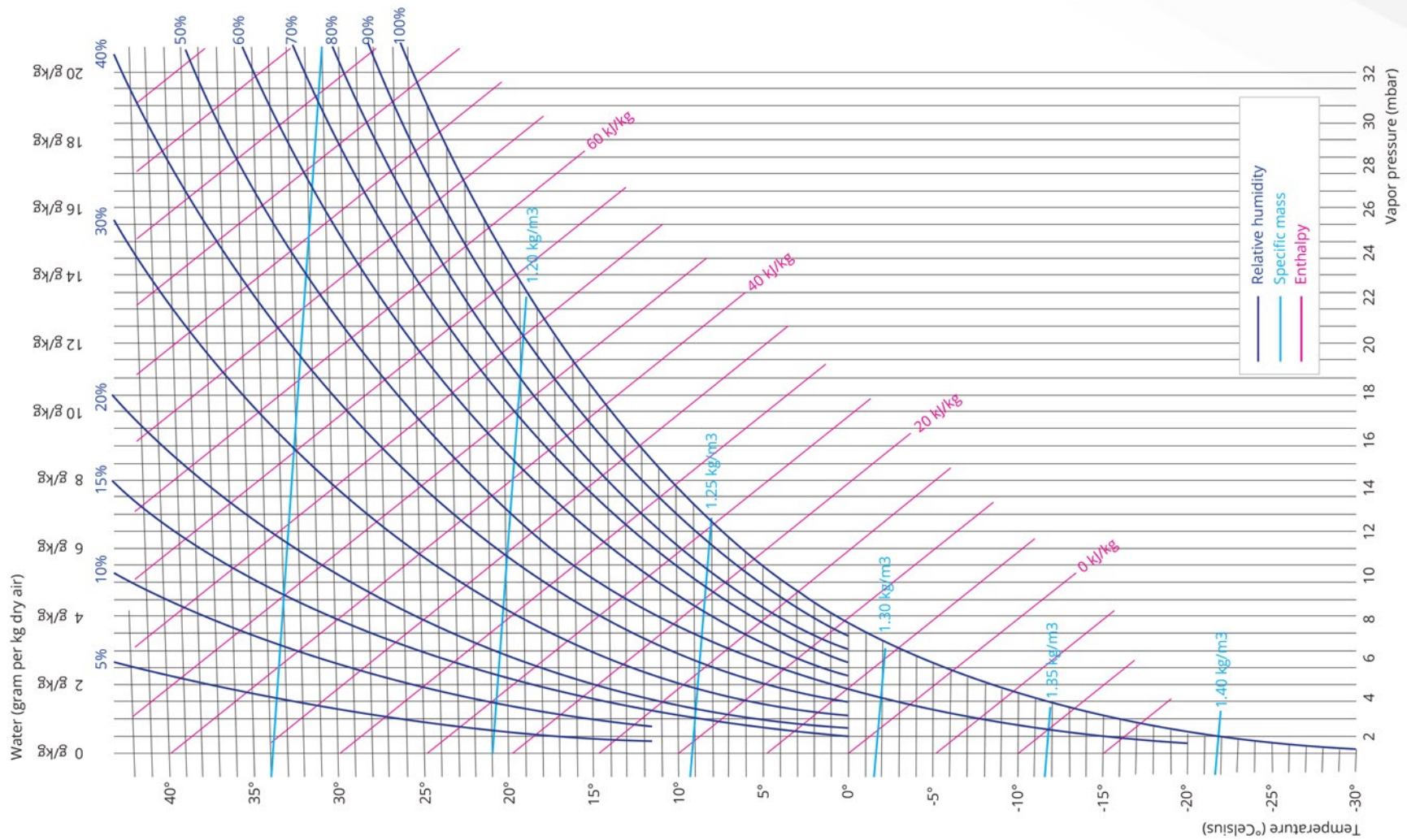


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Mollier diagram





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