MYCOND

MANUAL INSTRUCTION

DEHUMIDIFIER MYCOND DESS-80

1. GENERAL USE OF THE ADSORPTION DRYER

MYCOND DESS-80 adsorption dehumidifiers are normally used where dry air is essential for the various manufacturing processes for the chemical, pharmaceutical and food or confectionary industry or where a dry environment is needed for the storage and handling of moisture-sensitive products and raw materials. Tried and proven air drying by means of adsorption is highly flexible when it comes to remedying air humidity problems. It gives the user independent control of the air humidity, which makes it possible to achieve much lower dew points than refrigeration drying. The devices are intended for use in occupied and unoccupied indoor rooms. When used outdoors, the units must be protected against the effects of weather.

The dehumidifier works in a continuous process made up of two air flows with different flow rates (ratio of 3:1). The greater air flow (process air) is dried when it passes through the dehumidifier, while the smaller regeneration air flow is used to heat the rotor material and remove the adsorbed moisture from the desiccant. Moisture removed from the process air is transferred to the regeneration air by the slow turning of the rotor.

2. SETTING UP THE DEVICES

Note:

1. There are two handles on the side of the MYCOND DESS-80 as well as a handhold depression on the top. They are used exclusively for carrying the compressor.
2. The units must be secured against rolling away or slipping during transport. Never stack more than 3 dryers on top of each other.
3. When set-up close to stairs or ledges, the units must be secured against rolling away or tipping.
4. If possible, only put the units in rooms that are not constantly in use by people.
5. Prevent any tripping hazards caused by placement of the hoses. Consider hanging the hoses up in public areas.
6. The dryers must have a power supply with 16 A fuse protection. The use of a starting current limiter is recommended in old buildings in order to prevent premature triggering of fuses.
7. The electrical connection must be protected with a residual current operated circuit breaker (30 mA).
8. Under no circumstances is there to be an explosive atmosphere in the application area.

INSTALLATION

To exclude recirculation, care must be given during the installation to ensure that the emitted humid regeneration air or the dried air is not drawn in again by the dehumidifier. Cold process air with relatively high humidity can cause condensation inside the dehumidifier at the humid air outlet. Due to the high moisture content at the humid air outlet, condensation can occur inside the pipe. We recommending installing the pipe at the humid air outlet at an angle

so that condensate cannot flow back into the dehumidifier. If a rising air duct cannot be avoided, then a low point must be specifically equipped with drainage, and the exhaust air pipe should be insulated. Pipeline pressure losses affect the capacity of the dehumidifier. Lower pressure loss results in better capacity. The capacities for different static pressures and dimensions of the installed pipelines can be found in the datasheet.

Connection possibilities on the front of the device

Air outlet / dry air

Connection possibilities on the back of the device

Air inlet 1 / process air

Air inlet 2 / process air

Air outlet / humid air

Dehumidifier inside the room to be dehumidified

The outlet of the humid air is connected to the outside air. The process air inlet has two connecting pieces to create pressure equalisation between the room to be dehumidified and the ambient air. The right inlet connecting piece should be connected to the outside air with a pipe. The left inlet connecting piece can be left open if the dehumidified room is well sealed from the surroundings. If the room to be dehumidified is not adequately sealed from the outside air, then throttling should be installed on the left inlet connecting piece. If the inlet drawing air in from the room is throttled, the dehumidifier creates overpressure in the room, which prevents the outside air from flowing into the room to be dried. Make sure that the dry air can blow out freely.

Air humidifier outside the room to be dehumidified: The outlet for the dry air is connected via a pipe to the room to be dehumidified. If particularly low moisture content is required, then a process air inlet should also be connected to the room. If the room to be dehumidified is not sealed adequately, then overpressure should be created by throttling the operating air flow of the process air from the room to be dehumidified.

3. OPERATION

1. Check whether both air equalisation throttles are open, if they are present, and whether the air flows in the pipes are not obstructed in any way.
2. Make sure the filter is fitted properly.
3. Check whether the input fuse has the strength called for in the datasheet (16 A).
4. Plug in the connector into a 16 A power outlet protected with a residual current operated circuit breaker.
5. Before switching on, read the hours of operation as well as the energy meters in order to use them to prepare an invoice after the drying operation.
6. Start the dehumidifier by pressing switch B.
   You have a choice between permanent dehumidification operation (ON) and regulated operation via an external hygrostat sensor (accessory). If this is the case, set the function to “AUTO”.

A. Operating hours meter

B. On/Off/AUTO (main switch)

C. Power cord

D. Hygrostat connection

⚠ **Strong esslectricity!**
Do not touch it!!

E. Energy meter (kWh)

4. MAINTENANCE/SERVICE

⚠ ATTENTION

Always unplug the unit first before any maintenance, cleaning or work on the compressor.

1. Remove the cover from the housing and blow it out with compressed air. Do not work with water!When cleaning the outer panels with water, the entire panel must first of all be dried before switching the unit on.
2. Regularly check the cable fastening of the feed power outlets and the cable connectors. Cables and connectors that are not okay must be replaced
3. Installation and repair work should only be carried out by a specialised workshop. If this work is performed by third parties, then this voids the warranty and liability.

5. TECHNICAL SPECIFICATIONS

Type	**MYCOND DESS-80**
Dehumidification capacity kg/h (at 26°/60% r.H.)	3.4
Electrical connection (V/Hz)	230 / 50Hz
Power consumption (kW)	1.4
Current consumption (A)	6
Fuse protection for in-house installation (A)	16
Length / width / height (mm)	395 / 335 / 410
Weight (kg)	20.8
Loudness level at max. speed (3m) dBA	46
Protection class (IP)	IP 44
Humid volumetric flow rate (m^3/h)	50
Air volumes of process air (m^3/h)	330
Ambient temperatures (°C)	-20~60
Diameter of dry air connection (front side) (mm)	125
Diameter of air inlet connection for process air 1 (back side) (mm)	125
Diameter of air inlet connection for process air 2 (back side) (mm)	80
Diameter of air outlet connection for humid air 1 (back side) (mm)	80

⚠ ATTENTION

The technical data can change during the course of ongoing development without prior announcement. Some of the values are approximate values.

6. TROUBLESHOOTING

⚠ WARNING

All the maintenance work listed below must be carried out with the power switched off, i.e. with the plug removed.

PROBLEM	CAUSE	Execution	SOLUTION
Motor switches off during operation	Overheating of the fan unit	U	Possible overload (check connections and hoses)
		U	Ambient temperature too high (room temperature may be a max. of 40 °C)
		AST	Fan motor defective
Motor doesn't run	No current to the unit	U	Connect device; check fuse.
	Switch not switched on	U	Turn on the switch
	Turbine blocked	U	Eliminate the reason for the blockage
	Air inlet or outlet blocked	U	Switch off the machine and let it cool down; then check the connections and hoses
	Switch broken off	AST	Request a replacement switch from the dealer or Preair
	Wiring loose	AST	Check the wiring and tighten if necessary
Motor runs but impeller turns irregularly or scrapes	Defective rotor or motor	AST	Remove the impeller from the housing and then clean or repair it
Unit vibrates excessively	Accumulation of dirt on the impeller	U	Clean the impeller