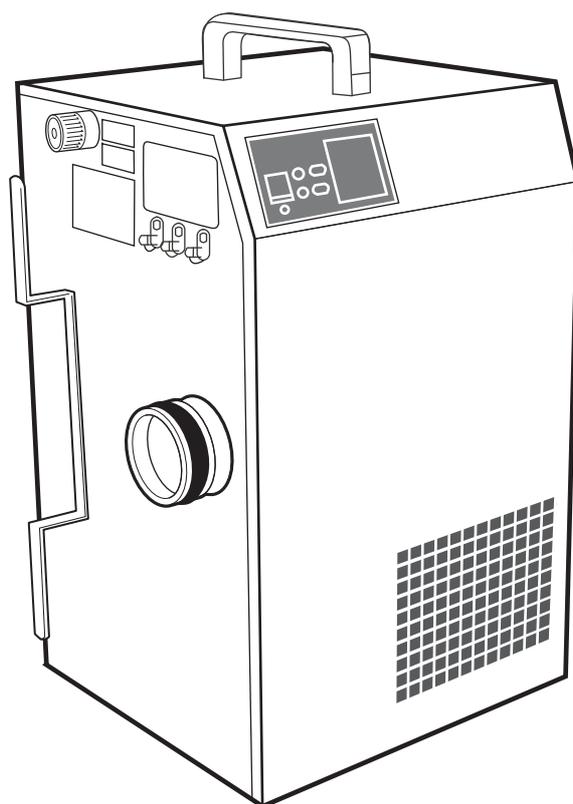


Original instructions

User's manual

MH270



Desiccant dehumidifier

Applies to all units manufactured
from week 50, 2009

190TGB-1012-A1006

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 **Munters**

Important user information

Intended use of equipment

Munters dehumidifiers are intended to be used for the dehumidification of air. All other uses of the equipment, or use which is contrary to the instructions given in this manual, can cause personal injury and/or machine damage

Warranty and obligations

The warranty period is 24 months from the date the equipment left our factory, unless otherwise advised in writing. The warranty is limited to a free exchange including free freight of the faulty unit or components, which have failed as a result of faulty quality or defects in manufacture. Munters guarantees that the unit supplied has undergone thorough testing to ensure that it meets the specifications given here. All warranty claims must include proof that the fault has occurred within the warranty period and that the unit has been used in accordance with the specifications. All claims must specify the unit type and manufacturing number. This information is stamped on the unit identification plate, see the section Marking.

Note!

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Safety

In this publication hazardous activities are indicated and preceded by the common hazard symbol.



WARNING!

is used in this publication to indicate a possible danger that could lead to personal injury. An instruction is normally given, followed by a short explanation, plus the possible effects if the instruction is not followed.



CAUTION!

is used in this publication to indicate a possible danger that could lead to damage to the machine or other equipment and/or cause environmental damage. An instruction is normally given, followed by a short explanation, plus the possible environmental effect if the instruction is not followed.

NOTE! *Used to accentuate supplementary information that is required for problem-free use or optimal use of the unit.*

Conformity with directives and standards

We Munters Europe AB declare that the dehumidifier is in conformity with the essential health and safety requirements of the Machinery Directive 2006/42/EC, the Low Voltage Directive 2006/95/EC and the EMC Directive 2004/108/EC. The dehumidifier is manufactured by an ISO 9001:2008 accredited manufacturing organisation.

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1 Introduction

1.1 About this manual

This manual is written for the user of the dehumidifier and describes installation, operation, maintenance and basic fault tracing. The manual is divided into numbered chapters and sections. The list of contents on page iii provides an overview. The different chapters can be used independently. Figures and tables are numbered in accordance with the chapters. Example: Figure 1.3 is figure 3 in chapter 1.

1.2 Safety and Cautions

The contents of this manual include suggestions for bestworking practices and procedures. These are given as guidance only and are not intended to replace individual responsibility and/or local safety regulations. During installation and operation of this equipment, it is always each individual person's responsibility to consider:

- The safety of yourself and others.
- The safe use of the dehumidifier through the correct use of the equipment in accordance with the descriptions and instructions given in this manual.

The dehumidifier is designed to meet the safety requirements, directives and standards listed in the EC Declaration of Conformity. We recommend that the user learns the use of safety symbols in this manual by reading the *Important User Information* on page ii. Safety information is listed in the beginning of each chapter when required.

1.3 Marking

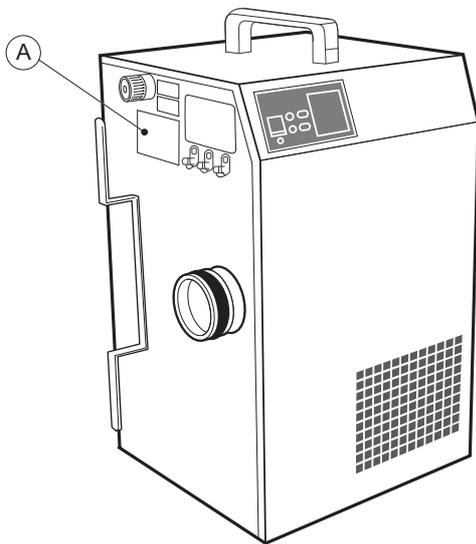


Figure 1.1 Identification label position (A)

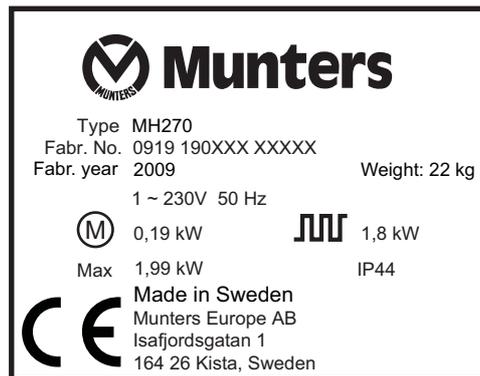


Figure 1.2 Identification label

1.4 Scrapping

The dehumidifier must be handed in for scrapping in accordance with valid regulations. Contact the local authorities.

2 Product design information

2.1 Product description

The MH270 desiccant dehumidifier is designed to efficiently dehumidify air. It is designed for extended periods of operation and has a common fan for both process and reactivation airflows (i.e. a three hole unit). It contains a distribution chamber with isolated sections that provide a precise balance for dehumidification, purge, reactivation, and heat recovery airflows. Its rugged formed metal frame and access panels are produced from corrosion resistant ALUZINK®. The electrical control system conforms to EN 60204-1 standards and the electrical components are assembled behind the control panel. The MH270 dehumidifiers conform to both harmonised European Standards and to CE marking specifications.

2.2 Principle of operation

The unit's rotor is exposed in sectors to different airflows. The airflow that is to be dehumidified is called **process air** and passes through the largest sector of the rotor. The moisture in the process air is deposited into the rotor structure and process air will then leave the rotor as **dry air**. While the rotor rotates slowly the incoming process air always meets a dry rotor structure, thus creating a continuous dehumidification process. The desiccant rotor structure comprises of a large number of narrow and parallel air channels, processed to a composite material that is highly effective at attracting and holding water vapour. Simultaneously, a portion of the process air is used as reactivation air and is directed through the pre-purge and heat recovery sectors in the rotor. This air is then heated and is used to evaporate the moisture from the reactivation sector of the rotor. The **wet air** (warm, moist air) is then vented outside.

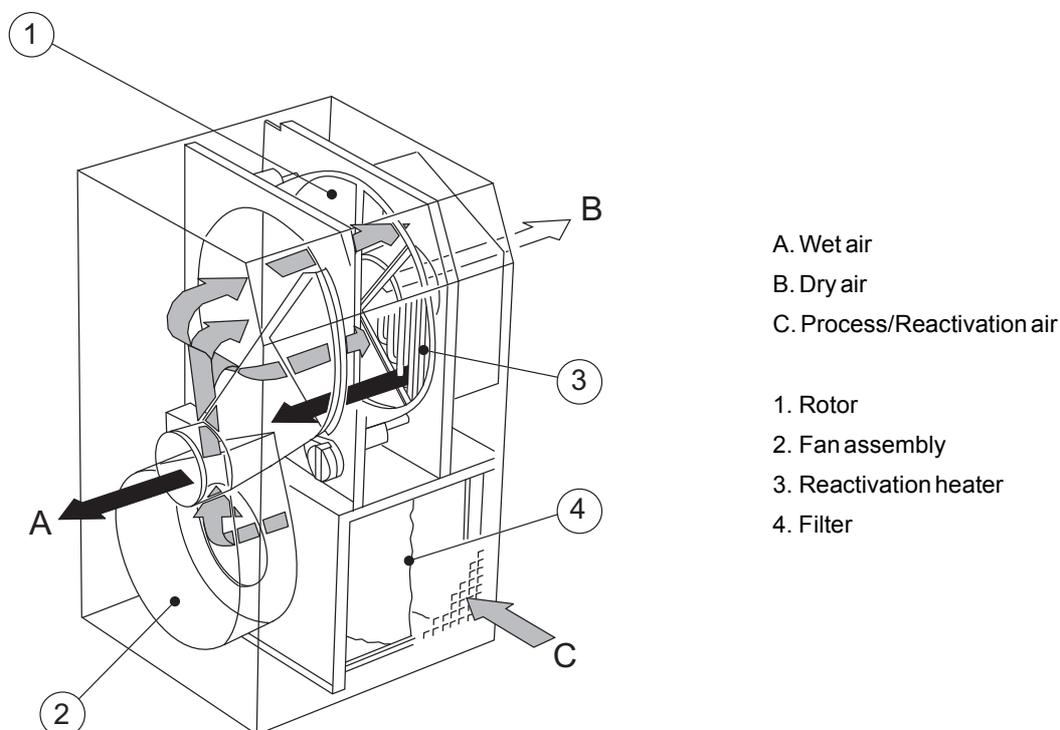


Figure 2.1 Function overview

2.3 Dimensions and service space

Scaled and dimensioned AutoCAD drawings are available in Munters' DryCAD program (can be ordered at your nearest Munters office).

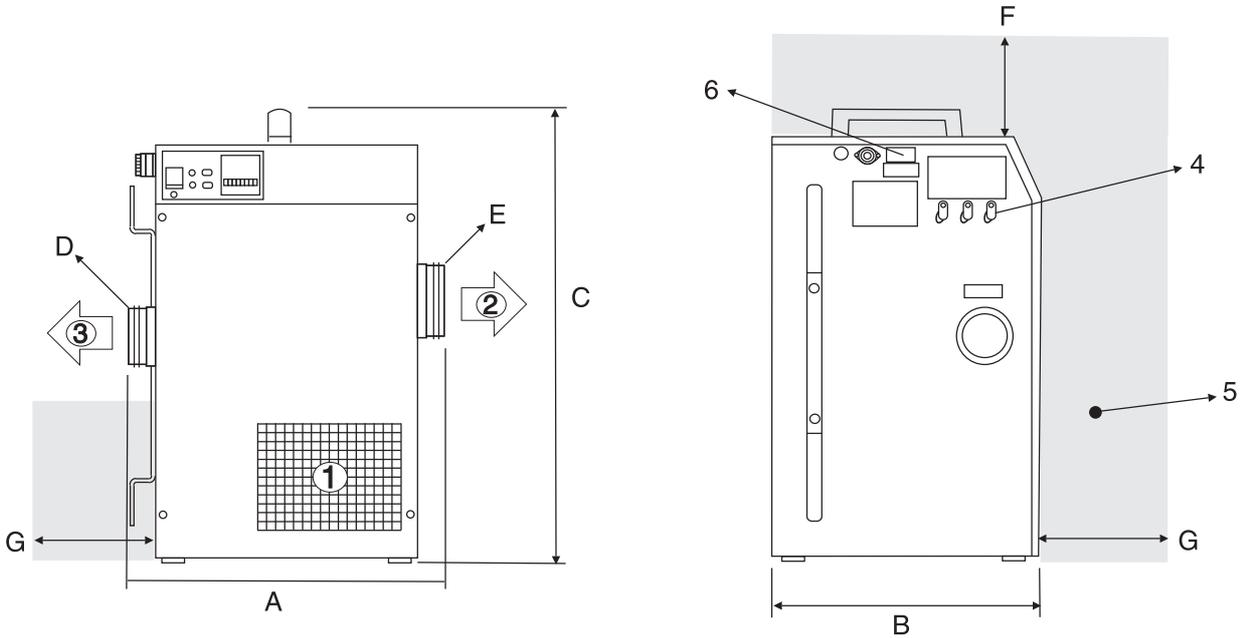


Figure 2.2 Dimensions

- 1. Process/Reactivation Air Inlet
- 2. Dry Air Outlet
- 3. Wet Air Outlet
- 4. Airflow Test Points
- 5. Service Access
- 6. Mode Switch

Width (A)	Depth (B)	Height (C)	Diam. (D)	Diam. (E)	Service Space (F)	Service Space (G)	Weight
430 mm	335 mm	620 mm	Ø80	Ø100	450 mm	250 mm	22 kg

Table 2.1 Dimensions and weight

3 Installation

3.1 General

The MH270 is intended for indoor installation. The unit shall be placed in an upright position on a level surface. If the unit is stored prior to installation, place it in a roofed area, on a level surface where it is protected from impact, dust, frost, rain or aggressive contaminants.

3.2 Safety



WARNING!

The unit is not intended for use in classified areas where explosion safety equipment is required.



WARNING!

The unit must not be splashed with, or immersed in water.



WARNING!

Do not cover the unit or obstruct the air vents.



WARNING!

Do not operate the unit if the power plug or cord is damaged.



WARNING!

The unit must not be connected to a power source other than that specified on its identification plate.



WARNING!

The unit should be connected to an earthed electrical socket.



WARNING!

All electrical equipment connections must be carried out in accordance with local regulations and by qualified personnel.



WARNING!

Do not operate the unit near any heat-generating devices, or near flammable and hazardous material.



WARNING!

Do not insert fingers or any other objects into the air vents.



WARNING!

Do not try to repair, dismantle or modify the unit.



WARNING!

The unit must not be opened by anyone other than trained and qualified personnel.

**CAUTION!**

Do not sit, stand, or place any objects on the unit.

**CAUTION!**

If there is a risk for freezing temperatures, the wet air ducting must be insulated.

3.3 Packaging and delivery inspection

1. Check the delivery against the packing list, consignment note or other delivery documentation and check that everything is included and nothing is damaged.
2. Contact Munters immediately if delivery is not complete in order to avoid installation delays. Any visible damage must be reported in writing to Munters within five days and prior to unit installation.
3. If the unit is to be put into storage prior to installation, see section 3.5, *Storing the equipment*.

NOTE! *If the installation is not to be carried out immediately after the arrival of the equipment it is advisable to leave the packaging material in place on the dehumidifier, or to re-use the packaging material to provide temperature protection for the unit during later transport to installation site and during installation.*

3.4 Transport

Use the handle when lifting the dehumidifier. If possible, use a pallet loader to move the dehumidifier. It is recommended to use the original packaging when shipping the dehumidifier.

3.5 Storing the equipment

The following is important if the dehumidifier is to be stored prior to installation:

- Place the dehumidifier on a horizontal surface.
- Protect the dehumidifier from physical damage
- Store the dehumidifier under cover and protect it from dust, frost, rain and aggressive contaminants

3.6 Site requirements

The dehumidifier is only intended for indoor installation. The unit should be placed in an upright position on a level floor, or platform. Avoid installing the dehumidifier where there is a risk of water entering the unit, or in a very dusty environment. Refer to Munters for advice if in doubt.

For unit and service dimensions, see section 9, *Technical specification*.

NOTE! *It is important that the intended installation site meets the requirements in order to achieve the best possible performance and trouble-free operation.*

3.7 Duct/hose connections

3.7.1 General

NOTE! *Noise reduction can be achieved by connecting ducts to the dehumidifier.*

Follow the instructions below when attaching ducts or flexible hoses to the unit's air connections.

- Duct length should be kept as short as possible to minimise static pressure loss.
- All duct and hose connections must be air tight and vapour tight to ensure full performance.
- Ensure that access for operation and servicing is not restricted when designing and installing ducting.
- To retain the correct airflow for reactivation air, an air damper must be installed. This damper is to be installed in the wet air outlet ducting, see *Figure 3.2* and *Figure 3.3*. For adjustment of airflow, follow the instructions in section 3.10, *Airflow set-up data*.
- Ducting for wet air shall be installed at a downward incline to enable condensate to drain. The wet air ducting should be provided with suitable drainage at low points to prevent the collection of condensation water. Alternatively, condensation can be avoided by insulating the duct with at least 25 mm of suitable insulating material.
- Cover the duct opening with mesh to prevent birds and rodents from entering the unit. Position the opening so that rain and snow cannot enter the lines.
- The wet air duct or hose must be corrosion resistant and able to withstand temperatures up to 70 °C.
- The minimum distance between the dry or wet air outlet and a wall is 0.5 m.
- Where the ducts exceed the maximum lengths specified in the following table, the ductwork design must include dampers in the dry and wet air outlet ducts for balancing airflows:

Outlet	Duct diameter	Max. duct length
Wet air	80 mm	10,0 m
Dry air	100 mm	15,0 m

Table 3.1 Duct lengths

NOTE! *Where long ducts are fitted, the dampers must be used to balance the proportion of dry air to reactivation air. The correct balance is essential to maintaining the operating efficiency of the unit. For airflow adjustment details refer to section 3.10, Airflow set-up data.*

Connections for rated airflow

The wet air restrictor plate (supplied with the dehumidifier) must be fitted over the wet air outlet (as shown in *Figure 3.1*) when:

- The unit is operating in the freeblowing mode.
- A dry air duct is connected to the unit (length <15 m) and the wet air outlet is freeblowing.
- A wet air duct is connected to the unit (length <10 m) and the dry air outlet is freeblowing.

The restrictor plate is needed in order to maintain the drying capacity.

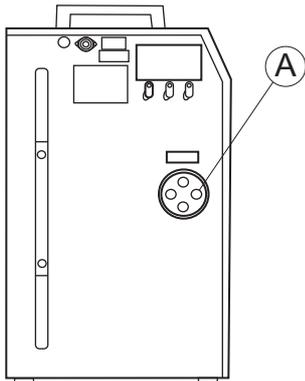


Figure 3.1 Restrictor plate (A)

Duct system for wet air

- Ducting for wet air should be corrosion resistant and be able to withstand temperatures of up to 70°C.
- Ducting for wet air should be installed at a downward incline to enable condensate to drain. The wet air ducting should be provided with suitable drainage at low points to prevent the collection of condensed water. Alternatively, condensation can be avoided by insulating the duct with at least 25 mm of suitable insulating material.
- The wet air shall normally be transported outdoors. At large sites, where the dehumidifier is placed outside of the space to be dehumidified, the wet air can be discharged in the vicinity of the unit. Place the outlet so that the wet air does not blow towards moisture sensitive objects.



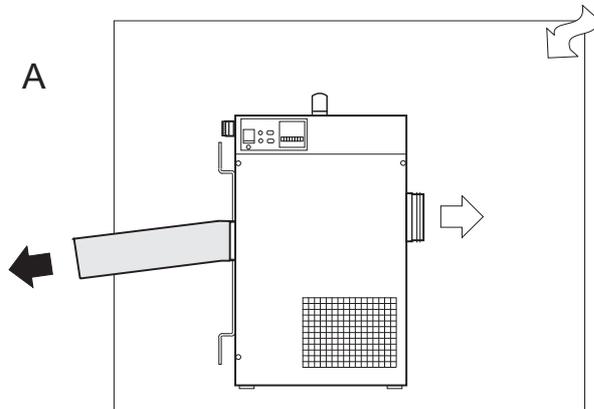
CAUTION!

If there is risk for freezing temperatures, the wet air ducting must be insulated.

3.7.2 Installation examples

Closed airflow system

The closed airflow system is mainly used where the room to be dehumidified contains little or no ventilation, and is partially sealed.



A. Room/space to be dehumidified

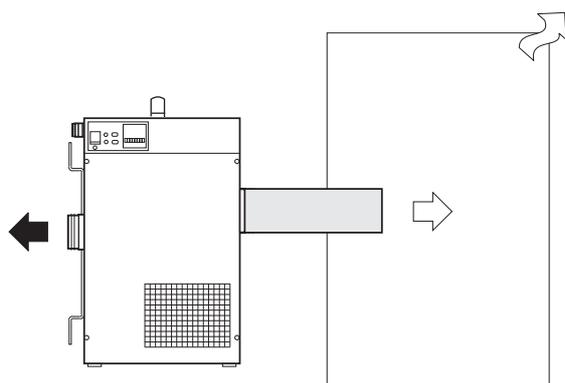
The wet air restrictor plate must be fitted over the wet air outlet when a wet air duct is connected to the unit (length <10 m) and the dry air outlet is freeblowing.

Figure 3.2 Installation in a closed airflow system.

Open airflow system

Open airflow systems can be utilised in place of closed systems to overcome the following problem areas:

- Dust or corrosive particles in the room.
- Harmful gases or vapours which must not be recirculated.
- Problems arranging air recirculation where several rooms are served by the same dehumidifier (specifically where recirculated air must not be mixed).
- A pressurised environment is desired to prevent uncontrolled infiltration of humid air, particularly where low relative humidity is required.



The wet air restrictor plate must be fitted over the wet air outlet when a dry air duct is connected to the unit (length <15 m) and the wet air outlet is freeblowing.

Figure 3.3 Installation in an open airflow system

When an open airflow system is installed, all leaks in the airflow system and room must be controlled within an acceptable tolerance.

3.8 Electrical connections

3.8.1 General

Included with delivery is a 2.5 m long power cable with a plug for connection to an earthed outlet. The voltage and frequency are specified on the unit's identification plate.

3.8.2 Safety



WARNING!

The unit must be connected to an earthed electrical outlet.



WARNING!

The unit must not be connected to other mains than specified on the unit's identification plate

3.9 Connecting the humidistat

3.9.1 General

The connection socket for the humidistat is located on the left side (wet air) of the unit, see *Figure 3.4*.

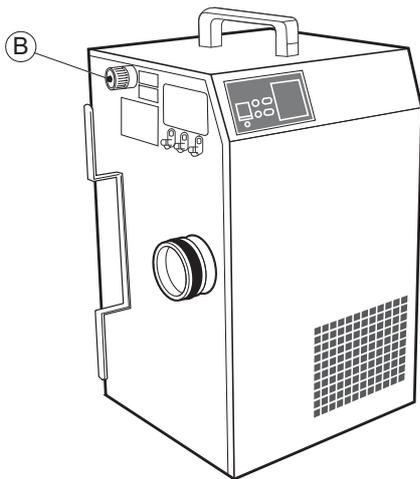


Figure 3.4 Connection socket for humidistat (B)

The humidistat should be mounted 1 – 1,5 m above the floor and positioned so that it is not exposed directly to dry air from the unit or incoming moist air from opening and closing doors. It may not be placed close to a heat source or so that it is exposed to direct sunlight. The humidistat shall be a single stage humidistat and connected so that the controlling circuit closes as relative humidity increases. The connecting cable shall be screened and have copper conductors with a minimum cross-section area of 2 x 0,75 mm².

3.9.2 Humidistat connection kit

Follow the instructions below to assemble and connect the humidistat connection kit.

1. Connect the leads to pins 1 and 2, and the screen to the earth pin.

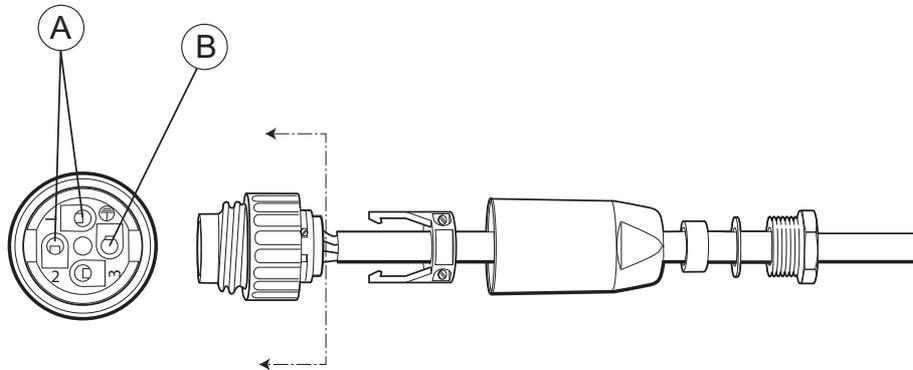


Figure 3.5 Connection of leads

A. Lead connections

B. Screen connections

2. Affix the terminal (2) to the plug (1).
3. Tighten the terminal screws (3).
4. Affix the cover (4) to the plug (1).
5. Affix the flange (5) to the cover (4).

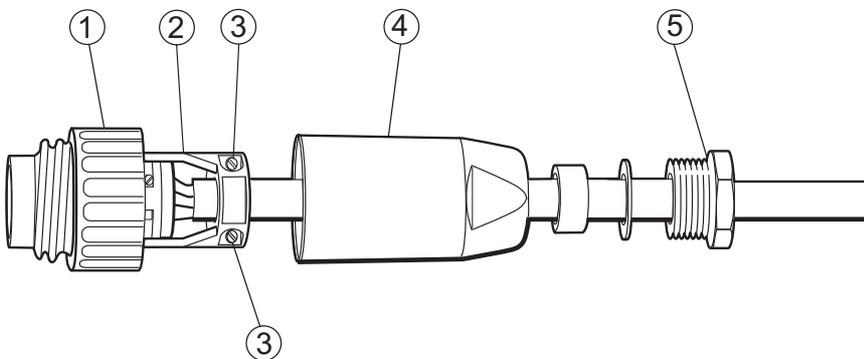


Figure 3.6 Humidistat connection kit assembly

3.10 Airflow set-up data

Where ducts exceed the maximum lengths specified in the following table, the dry and wet air dampers must be used to balance the proportion of wet air to dry air. The correct balance is essential to maintain the operating efficiency of the unit.

Outlet	Duct diameter	Max. duct length
Wet air	80 mm	10,0 m
Dry air	100 mm	15,0 m

Table 3.2 Maximum duct lengths

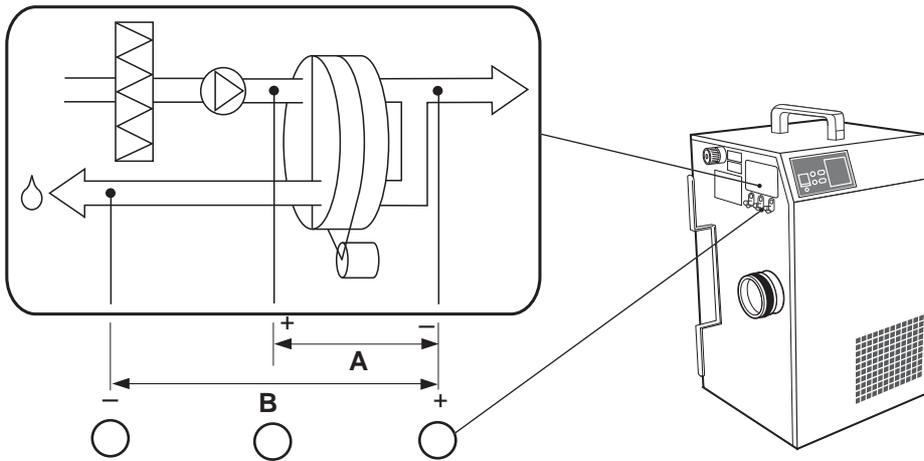


Figure 3.7 Dry and wet airflows/ Test points position

A. Dry airflow differential pressure

B. Wet airflow differential pressure

Use the built in test points to measure the pressure difference for “A” and “B” respectively, see *Figure 3.7*. By using the graph on page 12, the required dry airflow is achieved at the same time as checking the wet airflow. Follow the below instructions to balance the airflows to the required amount:

1. Set the mode switch to the **MAN** position and the mains switch to the \rightarrow position, the dehumidifier will then start (see chapter 3.11, *Operation*).
2. Set the dry and wet air dampers to the fully open position.
3. Adjust the dry air damper and at the same time measure the value for “A” (using the test points). When the value “A” corresponds to the required dry airflow, mark the value on the graph in accordance with the example.
4. Draw a horizontal line from value “A” to the additional scale to the right of the graph, value “B” as shown by the dotted line in the example.
5. Adjust the wet air damper and at the same time measure the value for “B” (using the test points). When the value “B” corresponds to the marked value for “B” on the graph, the wet airflow is in balance with the dry airflow.

NOTE! Adjustments of the wet air damper will have an impact on the dry airflow. Measure once again the value for "A" and "B" respectively and make required adjustments until the wet air is in balance with the required dry airflow.

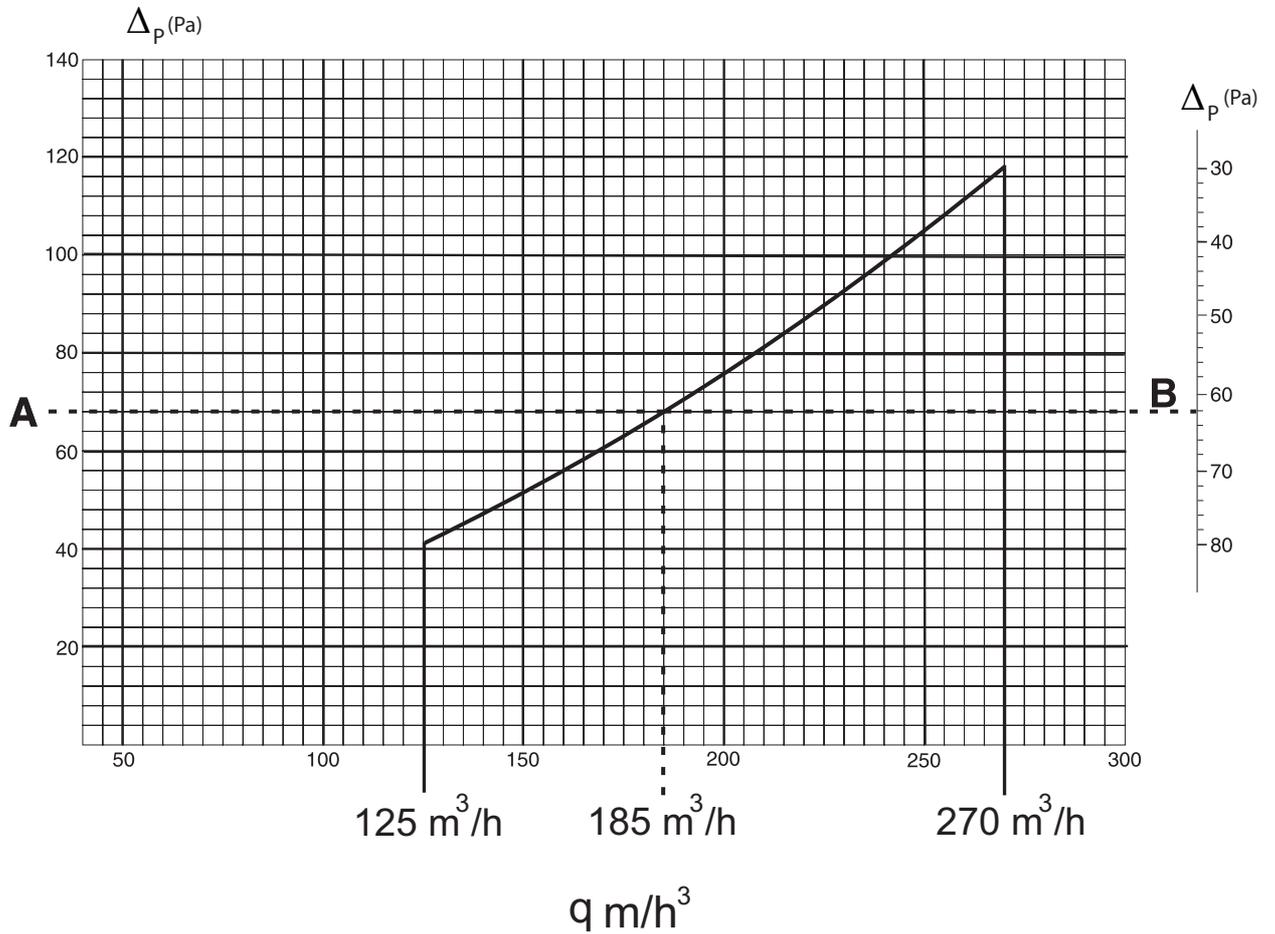


Figure 3.8 Example of required differential pressure curves.

q: Dry airflow (m³/h)

3.11 Operation



WARNING!

The mains cable must be extended to its full length before switching on the dehumidifier. The unit must not be operated with the mains cable still wrapped around the cable stowage.

3.11.1 Starting up

Before starting the dehumidifier for the first time, carry-out the following checks:

1. Check that the unit has been correctly connected to the mains supply, by reference to the identification plate (see section 1.3, *Marking*) and has been correctly connected to the supply. If a fused circuit breaker has been fitted, check that the fuse rating in the isolator is correct.
2. If a humidistat has been installed, check that it has been correctly positioned in the room and has been properly connected to the unit (see section 3.9, *Connecting the humidistat.*)

3.11.2 Quick stop

Stop the unit pulling by out the plug from the wall outlet, or if it is permanently connected to the mains supply, by operating the externally mounted circuit breaker.

3.12 Start

3.12.1 Manual operation

1. Set the mode switch to the **MAN** position and the mains switch to the position \rightarrow , the dehumidifier will then start (see *Figure 3.9*).
2. Allow the unit to run for approximately 15 minutes to ensure that the operating conditions have stabilised and check that the reactivation heater is operating (heater indicator lit) and that the desiccant rotor is rotating (to see the rotor rotating look through the dry out outlet).
3. Check that the run-time indicator is recording the unit running time.

NOTE! *The run-time indicator does not stop when the unit is switched off. The unit must be disconnected from the mains Circuit breaker to stop the counter.*

4. Switch the mains switch to the position \odot and check that the heater indicator goes out, and the fan has stopped (after approx. 1 min).

3.12.2 Automatic operation

NOTE! *For the unit to operate in the Automatic Mode, an optional single-stage humidistat must be installed and correctly connected to the unit.*

1. Set the mode switch to the **AUT** position and adjust the humidistat set-point to the minimum relative humidity (RH) value.
2. Set the mains switch to the \rightarrow position, the dehumidifier will then start.
3. Slowly increase the humidistat set-point and check that the heater indicator goes out and the fan stops after approx. 1 min (dehumidifier stops) when the set-point matches the RH in the room where the humidistat is installed.

NOTE! Depending on the position of the link on the control PCB, the fan may continue to run when the reactivation heater has been switched off. For details see section 3.15, Continuous Fan Operation.

4. Slowly decrease the humidistat set-point and check that the dehumidifiers switches on (heater indicator and fan on) when the set-point value is below the RH in the room where the humidistat is installed. Allow the unit to run for approximately 15 minutes to ensure that the operating conditions have stabilised.
5. Adjust the humidistat set-point to the desired RH value.
6. Switch the mains switch to the position  and check that the heater indicator goes out, and the fan has stopped (after approx. 1 min).

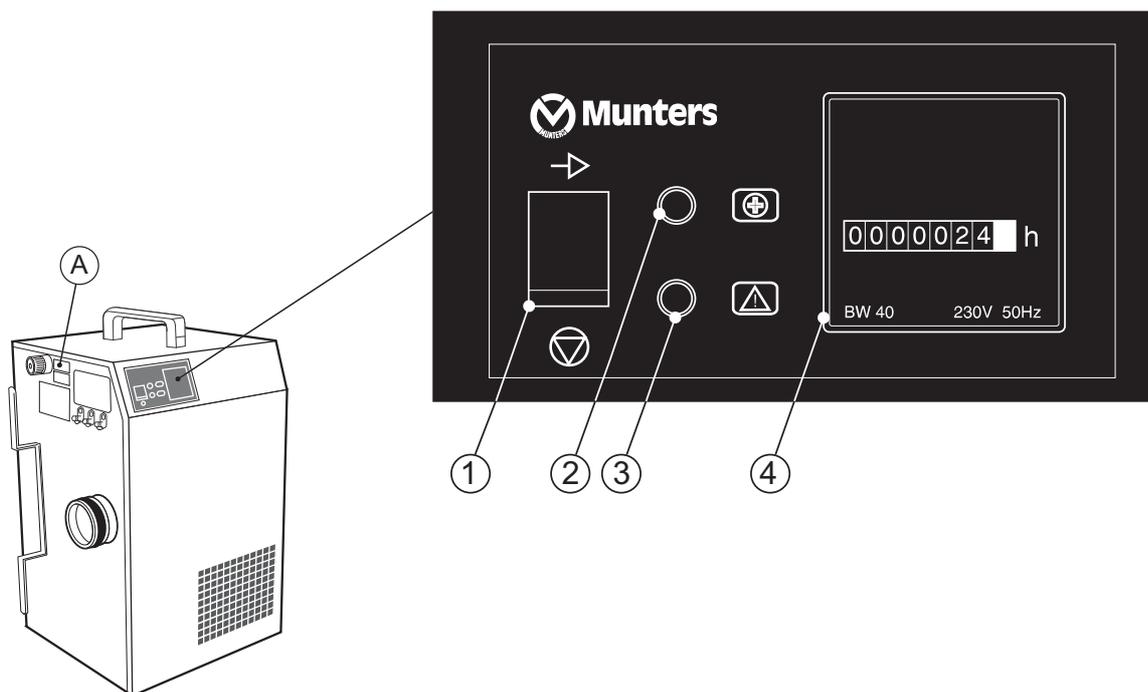


Figure 3.9 Mode switch position and control panel functions.

1. Mains ON/OFF switch

2. Heater Indicator

3. Fault Indicator

4. Run-time indicator

3.13 Options

3.13.1 Remote alarm

A Remote alarm device can be wired directly to the control PCB (see figure *Figure 3.10*). The alarm output comprises of a volt-free relay contact (max. load 240 V, 10 A) which is closed when the unit has shut-down due to the overtemperature cut-out operating.

3.14 Stop

Switch the units mains switch to position .

3.15 Continuous Fan Operation

A link on the control PCB (see see figure *Figure 3.10*) can be pre-selected to control the fan as follows:

Link Position	Description
A	Process and reactivation fans are running all the time that the unit is switched on. This facility is useful for maintaining air circulation during periods of low demand or if a pressurised environment is desired to prevent uncontrolled infiltration of humid air.
B	Process and reactivation fans are controlled by the humidistat and are switched on and off in conjunction with the reactivation heater. This is the default position for the link.

Table 3.3 Continuous fan link positions

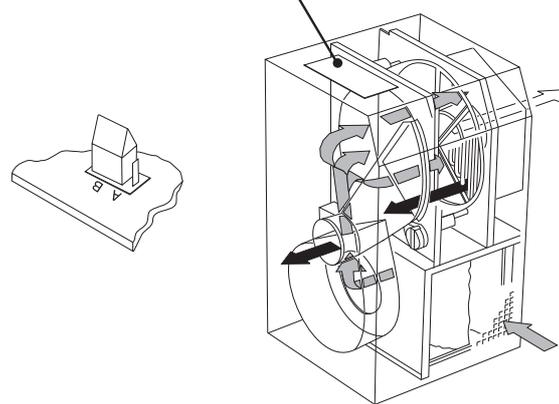
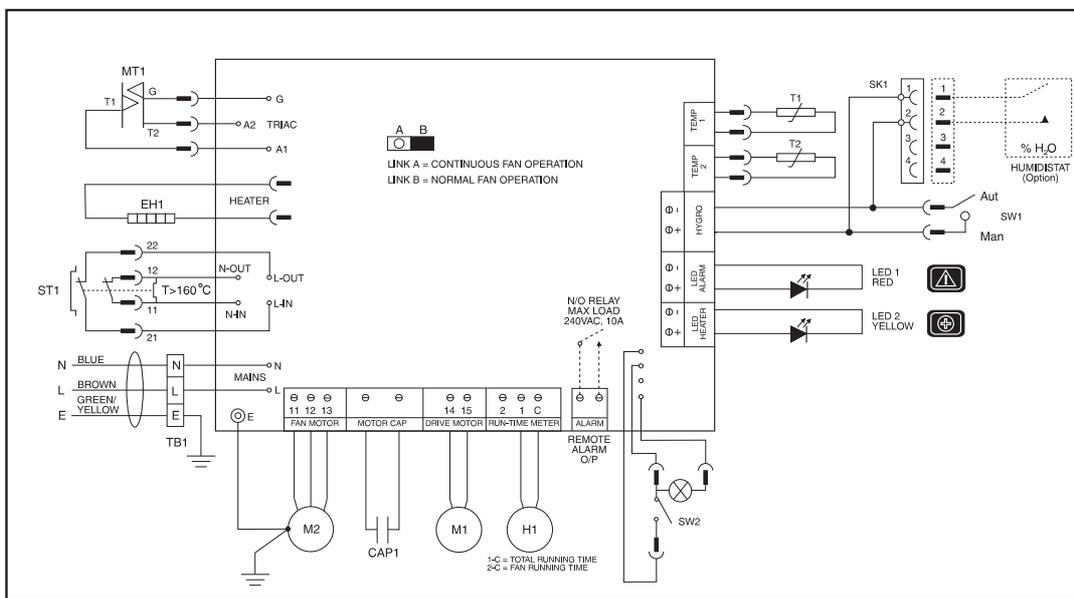


Figure 3.10 Circuit diagram and PCB location

Link B = Normal fan operation

Link A = Continuous fan operation

4 Maintenance

4.1 General

The dehumidifier is designed for long, continuous operation with minimum attention. Under normal operating conditions, requirements for maintenance are minimal. Maintenance interval lengths are primarily determined by operating conditions and the environment in which the unit is installed. When in doubt, consult Munters' product service department. See addresses for Munters representatives on the back cover of this manual.

4.2 Safety



WARNING!

Always unplug the dehumidifier before any maintenance or repair work is carried out. In case of a fixed installation where the plug is being replaced by a circuit breaker, the power must be switched off and the circuit breaker locked.



WARNING!

Adjustments, maintenance and repairs must only be carried out by trained and qualified personnel.



WARNING!

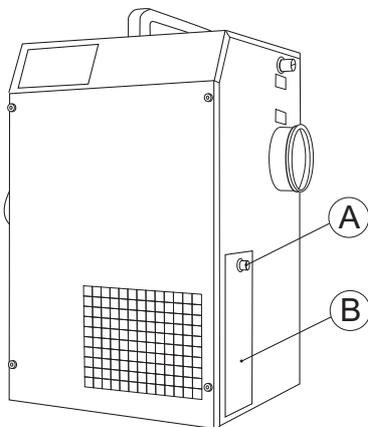
Due to the risk of electrical shock, the unit must not be opened by anyone other than trained and qualified personnel.

4.3 Maintenance schedule

The following maintenance schedule is recommended by Munters and covers procedures for inspection and maintenance as well as suggested time intervals for a unit that operates under normal operational and environmental conditions. If the process air has a high dust content, preventative scheduled maintenance should be performed at shorter intervals than what is specified below.

Component	Inspection/Maintenance	
	3-6 Months	12 Months
Filter (see <i>Figure 4.1</i>).	Clean the filter, retainer and housing. Replace filter if dirty	Replace the filter. Clean the filter retainer and housing.
Unit housing	Check for physical damage and clean unit exterior if necessary.	Check for physical damage and clean unit exterior if necessary. If ducted, check duct connections and test-points for signs of air leaks and for incorrect fitting.
Humidistat	N/A	Check sensor function and calibrate or replace if necessary. Contact your Munters' product service department as required.

4.4 Filter replacement



- A. Plastic screw
- B. Cover

Figure 4.1 Filter removal

1. Unscrew the plastic screw (A) and remove the cover (B).
2. Remove the filter retainer from the housing.
3. Clean filter retainer and housing and replace the filter.

NOTE! Ensure that the filter is positioned in front of the filter retainer.

4. Remount filter retainer and cover. Tighten the plastic screw.

5 Fault tracing

5.1 General

This chapter is intended to facilitate basic fault tracing and provide instructions on actions to remedy problems.

5.2 Safety



WARNING!

Always unplug the dehumidifier before any maintenance or repair work is carried out. In case of a fixed installation where the plug is being replaced by a circuit breaker, the power must be switched off and the circuit breaker locked.



WARNING!

The unit must not be connected to other mains than specified on the units identification plate.



WARNING!

Adjustments, maintenance and repairs must only be carried out by trained and qualified personnel.



WARNING!

Due to the risk of electrical shock, the unit must not be opened by anyone other than trained and qualified personnel.

5.3 Fault tracing list

Go through the following fault tracing list below before contacting Munters' product service department. The list provides help in identifying types of faults that are easy to remedy without the assistance of specially trained personnel

Fault symptom	Possible Cause	Corrective action
Unit has stopped.	On-off switch turned off by mistake.	Place the on-off switch in the on position and check that dehumidifier starts.
	No mains power to unit.	Check power supply to the unit.
	Dehumidifier switched to automatic mode by mistake with no humidistat connected.	Set the operating mode to manual mode and check that the dehumidifier starts.
	Humidistat fault (automatic modes).	Set the operating mode to manual mode and check that the unit starts. If the unit starts, the humidistat is probably defect. Check the humidistat by seeing if the dehumidifier starts when the humidistat setpoint is reduced. Reset the humidistat setpoint after the check. Calibrate the humidistat if necessary, or replace.
Fault indication is illuminated.	High temperature cut-out has tripped (see <i>Figure 5.1</i>).	Check that the filter and ducts are not blocked and reset the cut-out when the unit has cooled down. The major causes of the high temperature cut-out tripping are:
		- Reactivation airflow failure
		- Blocked filter or duct
		- Fan impeller obstructed
Dehumidifier appears to be operating correctly - but is not controlling humidity.	Reactivation temperature too low.	Check the operation of the heater element.
	Reactivation airflow is incorrect. Check the ductwork (if fitted) and filter for blockages or signs of leaks. Check that the test-points are not leaking.	Check the ductwork (if fitted) and filter for blockages or signs of leaks. Check that the test-points are not leaking.
		Adjust the process and reactivation airflows using the dry and wet air dampers.
	Rotor drive failure.	Check rotor drive belt and drive motor..
Humidistat not functioning correctly	Check the operation and calibration of the humidistat in accordance with the manufacturers recommendations.	

Table 5.1 Fault tracing list

5.4 Resetting High Temperature Cut-Out

To reset the high temperature cut-out, remove (unscrew) the black cover and press in the reset button.

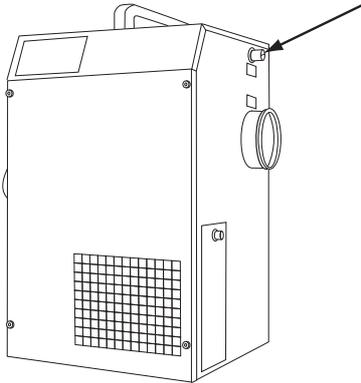


Figure 5.1 High temperature cut-out

6 Capacity diagrams

Approximate capacity in kg/h. For detailed information, please contact your nearest Munters office or refer to Munters' DryCap program.

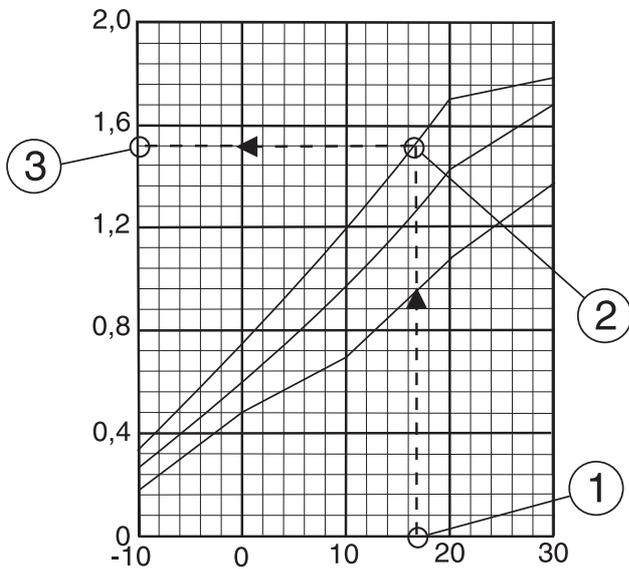


Figure 6.1 Capacity diagram - rated airflow

1. Process air temperature (°C)
2. Process air relative humidity (%RH)
3. Dehumidification capacity (kg/h) (moisture removal kg/hour)

7 Fan diagrams

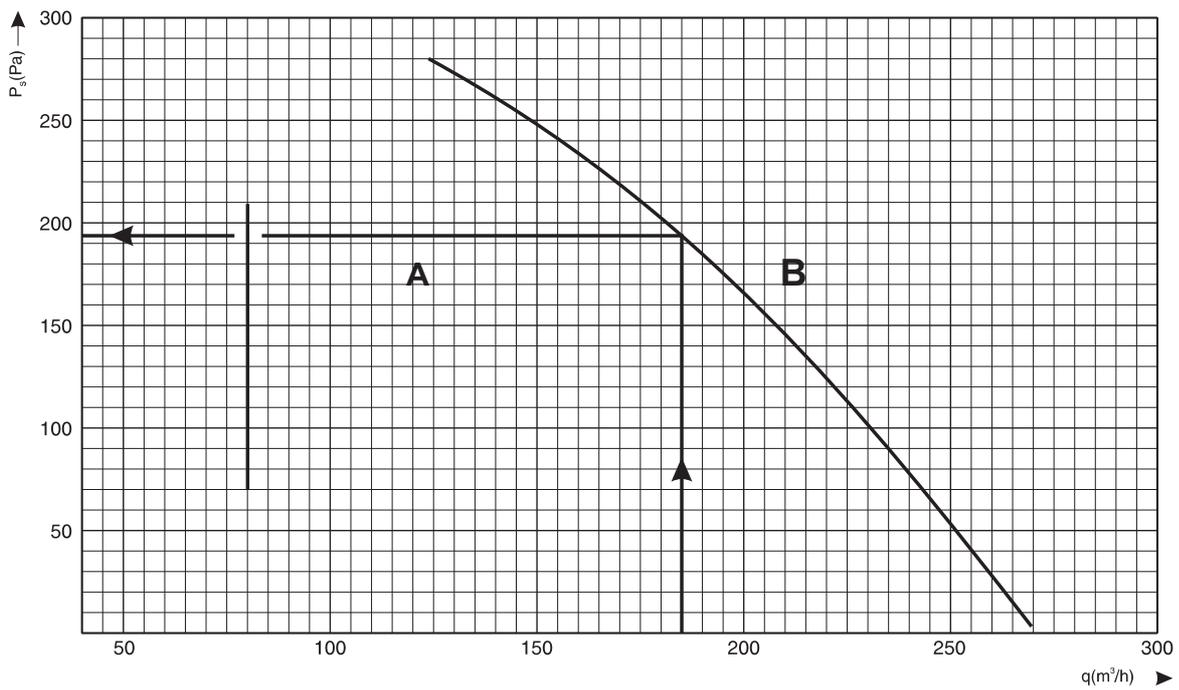


Figure 7.1 Fan performance guidelines

A. Wet airflow

B. Dry airflow

Δp . Differential pressure (Pa)

q . Airflow (M³/h)

8 Sound data

See *Figure 3.2* for closed airflow system example.

Noise Path	*dB(A)	L _{wt} dB	Correction of K _{OK} at ISO-band No./Center Frequency (Hz)							
			1/64	2/125	3/250	4/500	5/1000	6/2000	7/4000	8/8000
A	67	71	-24	-9	-4	-7	-11	-10	-14	-17
B	67	71-24	-21,5	-9	-2	-8	-12	-11	-15	-1

Table 8.1 Sound data (115/230V, 50 Hz)

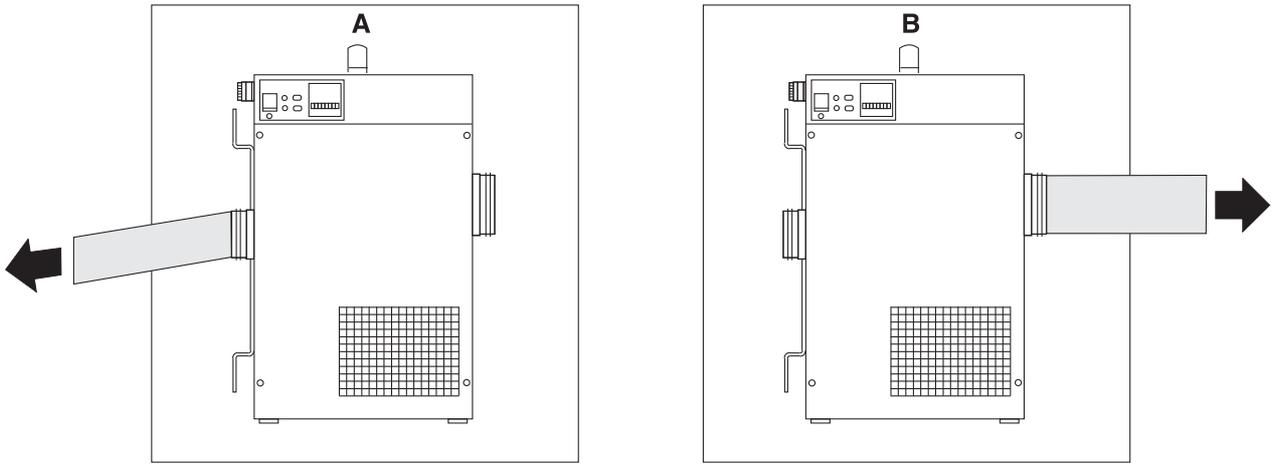


Figure 8.1 Noise Path

Symbols	Noise Path
L _{wt} : Total Noise level dB (Rel. 10 ⁻¹² W)	A: Process Air Inlet Open, Dry Air Outlet Open, Wet Air Outlet Duct connected
L _w : Noise Power level in Octave Band dB (Rel. 10 ⁻¹² W)	B: Process Air Inlet Open, Dry Air Outlet Duct Connected (3 m long), Wet Air Outlet Open
K _{OK} : Correction for Calculation of L _w (L _w = L _{wt} + K _{OK})	
*Equivalent sound absorption area, 10 m ² .	

9 Technical specification

Technical data	Model: MH270
Process air ⁽¹⁾	
Rated airflow (m ³ /h)	270
Reduced airflow with ducting (m ³ /h)	185
Minimum available static pressure (Pa)	190
Fan motor power (kW)	0,186
Reactivation air ⁽¹⁾	
Reduced airflow with ducting (m ³ /h)	80
Minimum available static pressure (Pa)	175
²⁾ Fan motor power (kW)	–
Total power, voltage and current (amps/phase)	
Total power (kW)	1,96
230V 1~50Hz (A)	8,5
240V 1~50Hz (A)	8,2
Reactivation heater	
Reactivation heater, power (kW)	1,8
Temperature increase across heater (°C)	85
Filter	
Filter kit EU3 (Article No.)	128002/16
Other data	
Operating temperature (°C)	-20 to +40
Drive motor power (W)	12
Maximum sound level without ducting (dBA)	53,5
IEC protective class (unit)	IP44
IEC protective class (electrical panel)	IP54
High temperature cut-out (°C)	160 ± 5
Amperage rating, remote alarm relay	2A, 250VAC (max)
Total unit weight (kg)	22
¹⁾ The specified figures are nominal values based on inlet temperatures at the fans of 20 °C and an air density of 1,2 kg/m ³ .	
²⁾ Common motor for process and reactivation fans.	

Table 9.1 Technical specification

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