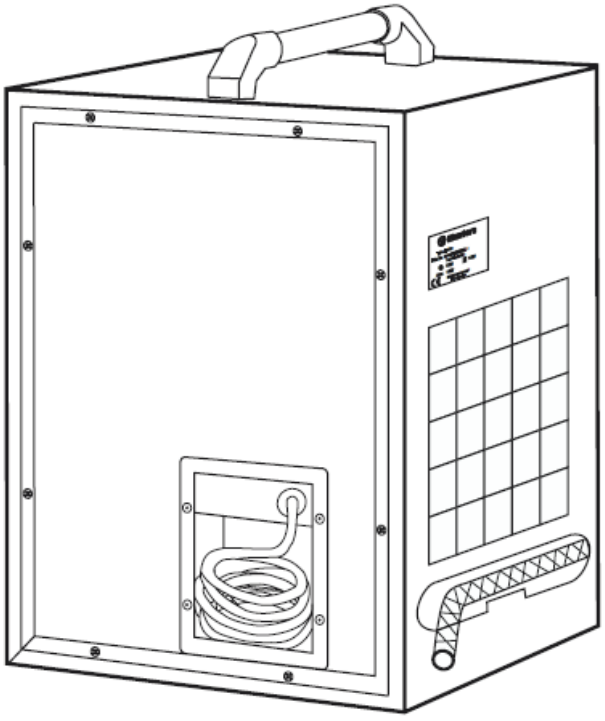
Original instructions

Supplement

C300

Air Cooled Condenser



For MCS300 Dehumidifier

MGB-5205-B0208

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Munters

GB

GB - Contents

1. GB - Introduction

1.1 General 3
1.2 About this supplement 3
1.3 Safety and Cautions....3
1.4 Function overview 4

2. GB - Installation

2.1 General 5
2.2 Safety....5
2.3 Fitting the condenser to the dehumidifier....6
2.4 Placing the unit combination 6
2.5 Drain connections 7
2.6 Connection to duct system 7
2.7 Connection to mains supply....7
2.7.1 Safety....7

3. GB - Operation

3.1 General 9
3.2 Emergency stop 9
3.3 Start 9
3.4 Stopping the unit 9

4. GB - Maintenance

4.1 General 10
4.2 Safety....10
4.3 Maintenance schedule 10

5. GB - Fault finding

5.1 General 11
5.2 Safety....11
5.3 Fault localization 11

6. GB - Technical data

6.1 Specifications....12

1. GB - Introduction

Effective from serial No. 27084

1.1 General

Munters C300 is an air cooled condenser used in combination with the MCS300 dehumidifier.

The air cooled condenser is an accessory to the dehumidifier, and is intended for applications where the wet air resulting from the dehumidification process in the dehumidifier can not be transported away via ducting.

In the air cooled condenser, the absorbed moisture in the wet air is condensed using the ambient air as a coolant.

A combination of the dehumidifier and the air cooled condenser operates with a closed circuit for the reactivation and wet air. A duct system for reactivation air / wet air is thus not necessary.

The condensated water is discharged through a drain pipe to a draining gutter.

1.2 About this supplement

This supplement deals with the C300 air cooled condenser and is a supplement to the User's Manual for the MCS300 dehumidifier.

The goal of the supplement is to provide the necessary information for the understanding of the unit's construction and function, and to serve as a guide during installation, operation, maintenance and basic fault finding that generally can be carried out before contacting Munters Product Service.

1.3 Safety and Cautions

The contents of this supplement include suggested best working practices and procedures. These are issued for guidance only, they do not take precedence over the individual responsibility and / or local safety regulations. During installation and operation of this equipment it is always each individual person's responsibility to consider:

- Their own and others' personal safety
- The safety of the unit through correct use of the equipment in accordance with the descriptions and instructions given in this supplement.

Every care has been taken in design and manufacture of C300 condenser to ensure that they meet the safety requirements of the directives and standards listed in the EC Declaration of Conformity.

It is recommended to be informed about the use of safety symbols in this supplement by reading the **Important user information** in the Technical Manual for the MCS300 dehumidifier.

The relevant safety information for this supplement will be found listed early in each chapter.

1.4 Function overview

The **wet air** from the dehumidifier is blown into the unit's condenser cell and is cooled by the **cooling air in** by means of a fan to a temperature lower than the dewpoint temperature of the wet air. The vapour in the wet air condenses and is collected and discharged off through the **drainage pipe**. The **reactivation air** is then drawn back into the dehumidifier and the circuit is closed.

The condenser is automatically activated via an Air Pressure Switch (located in the condenser) when the dehumidifier is started. **Wet air** is then passed through the **wet air outlet** of the dehumidifier into the **wet air inlet** of the condenser. This in turn starts the fan and heater in the condenser. The heater is used for heating up the air flow from the condenser into the dehumidifier by 8°C. This then stops condensation from forming on the Fan Inlet and Adapter in the dehumidifier.

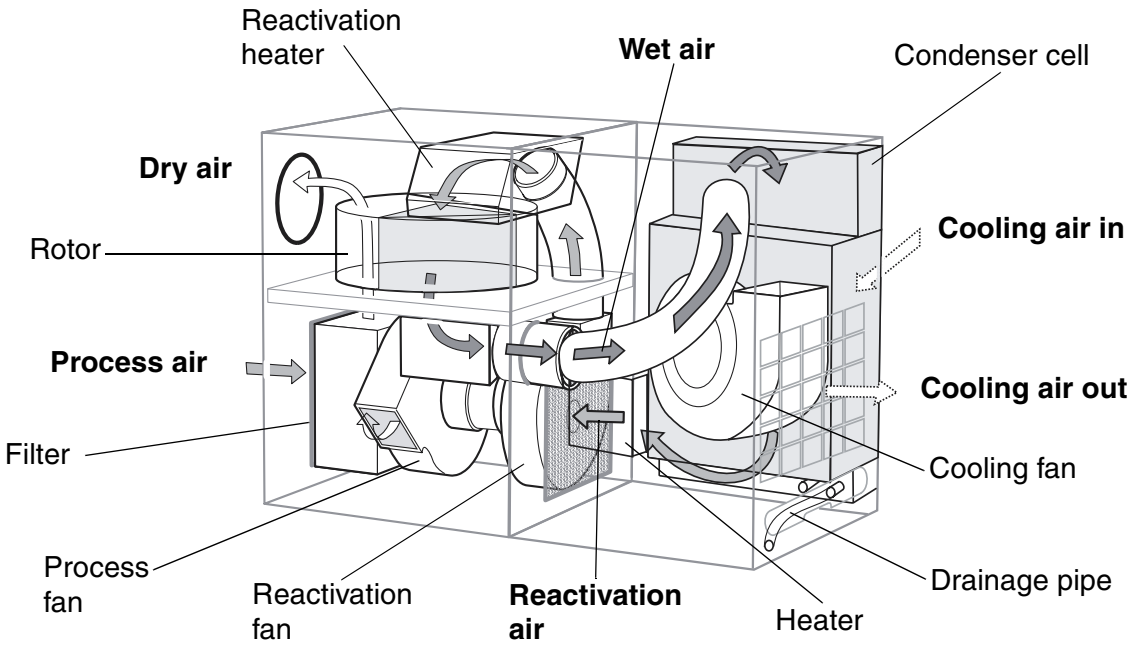


Figure 1-1. Principle of operation

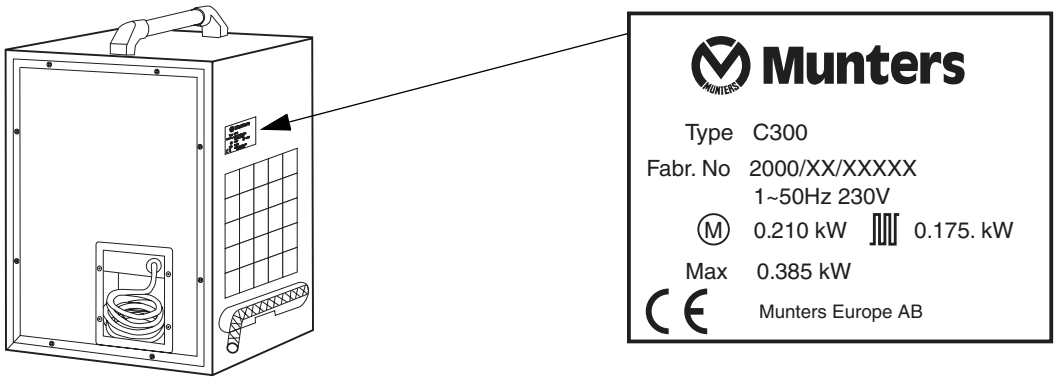


Figure 1-2. Identification plate location

2. GB - Installation

2.1 General

This chapter gives instructions on installing the C300 air cooled condenser to the dehumidifier and also how to install the combined equipment. The condenser should only be used in combination with the MCS300 dehumidifier.

The C300 is intended for indoor installation.

The condenser should 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.

Please observe the following general installation aspects:

- The Filter, inlet cone and gratings for the reactivation air inlet must be removed from the dehumidifier and an inlet adapter and outlet adapter must be fitted before the condenser and the dehumidifier are fitted together.
- Make sure that a service space of at least 500 mm from the wall is provided for servicing the condenser cooling air filter.
- Make sure that there is a space of at least 500 mm from the wall for the dissipated cooling air.
- Make sure that there is enough space for servicing at the condensate outlet pipe.
- Make sure that the dissipated heat (about 1,6 kW) in the cooling air from the condenser does not raise the temperature in the place of installation above 25 ^{o}C when cooling air is taken from that place. The values stated are guiding values only.
- The condenser is activated when the dehumidifier is switched on via an air pressure switch.

2.2 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.*



WARNING!*The unit must not be operated when the power cable is in the storage compartment.*



CAUTION!*The drain tube must not be allowed to slope upwards at any point as this would result in air being trapped and prevent the condensed liquid from draining away.*

CAUTION! *The end of the tube must **always** be above the top of the collected liquid. Failure to comply with this will result in the formation of an air trap, preventing the liquid from discharging freely, and causing a fault to occur.*

WARNING! *Heavy load, weight in excess of 21kg. Always use approved lifting equipment when attempting to move the condenser.*

WARNING! *The C300 must only be connected to dehumidifier MCS300.*

2.3 Fitting the condenser to the dehumidifier

1. Remove the front grating and the filter material from the **Reactivation Air Inlet** on the MCS300 dehumidifier by moving them upwards and out.
2. Use a screwdriver to remove the 4 screws holding the **Inner Grating** and the **Inlet Con**e. Remove these two parts from the dehumidifier, ***see figure 2-2. Installation-A***
3. Locate the **Inlet Adapter** and the **Outlet Adapter** included with the condenser delivery.
4. Place the **Inlet Adapter** connection in the **dehumidifier's Reativation Air Inlet** and then insert the same four screws that were used for the grating, ***see figure 2-2. Installation-B***
5. Using the 3 screws provided, connect the **Inlet Adapter** to the dehumidifier's **Wet Air Outle**t, ***see figure 2-2. Installation-C***

NOTE! *The gratings, filter material and the adapters must be kept in a safe place, if the dehumidifier is to be used seperately in the future.*

When steps 1-5 have been followed the dehumidifier and the condenser can be placed together as shown in ***figure 2-2. Installation-D & E***.

2.4 Placing the unit combination

The measurements for the dehumidifier and the condenser are given in *chapter 6*; *Technical data, Specifications,* of this supplement and the user's manual.

- Make sure that a service space of at least 500 mm from the wall is provided for servicing the condenser cooling air filter.
- Make sure that there is a space of at least 500 mm from the wall for the dissipated cooling air.
- Make sure that there is enough space for servicing at the condensate outlet pipe.
- Make sure that the dissipated heat (about 1.6 kW) in the cooling air from the condenser does not raise the temperature in the place of installation above 25 ^{o}C when cooling air is taken from that place. The values stated are guiding values only.

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2.5 Drain connections

The condensate should be drained away with a downward gradient of 10 mm per 500 mm of pipe length, to a drainage gutter. The condensate pipe must discharge above the water level of the drainage gutter, ***see figure 2-1. Drains connections***.

CAUTION! *The drain tube must not be allowed to slope upwards at any point as this would result in air being trapped and prevent the condensed liquid from draining away.*

CAUTION! *The end of the tube must **always** be above the top of the collected liquid. Failure to comply with this will result in the formation of an air trap, preventing the liquid from discharging freely, and causing a fault to occur.*

NOTE! *The ambient air temperature around the drainage tube must be above 0°C.*

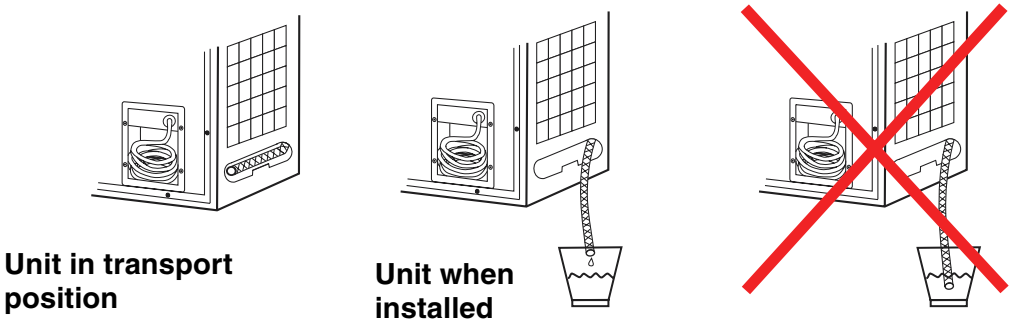


Figure 2-1. Drains connections

2.6 Connection to duct system

The cooling air to and from the condenser cannot be connected to ducts.

For connection of the dehumidifier process and dry air ducts, refer to the MCS300 User's Manual.

2.7 Connection to mains supply

Included with delivery is a 3.5m long cable with a plug for connection to an earthed outlet. The voltage and frequency are specified on the unit's identification plate.

NOTE! *The condenser should not be connected to the same electrical group as the MCS300.*

2.7.1 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.*

WARNING! *The unit must not be operated when the power cable is in the storage compartment.*

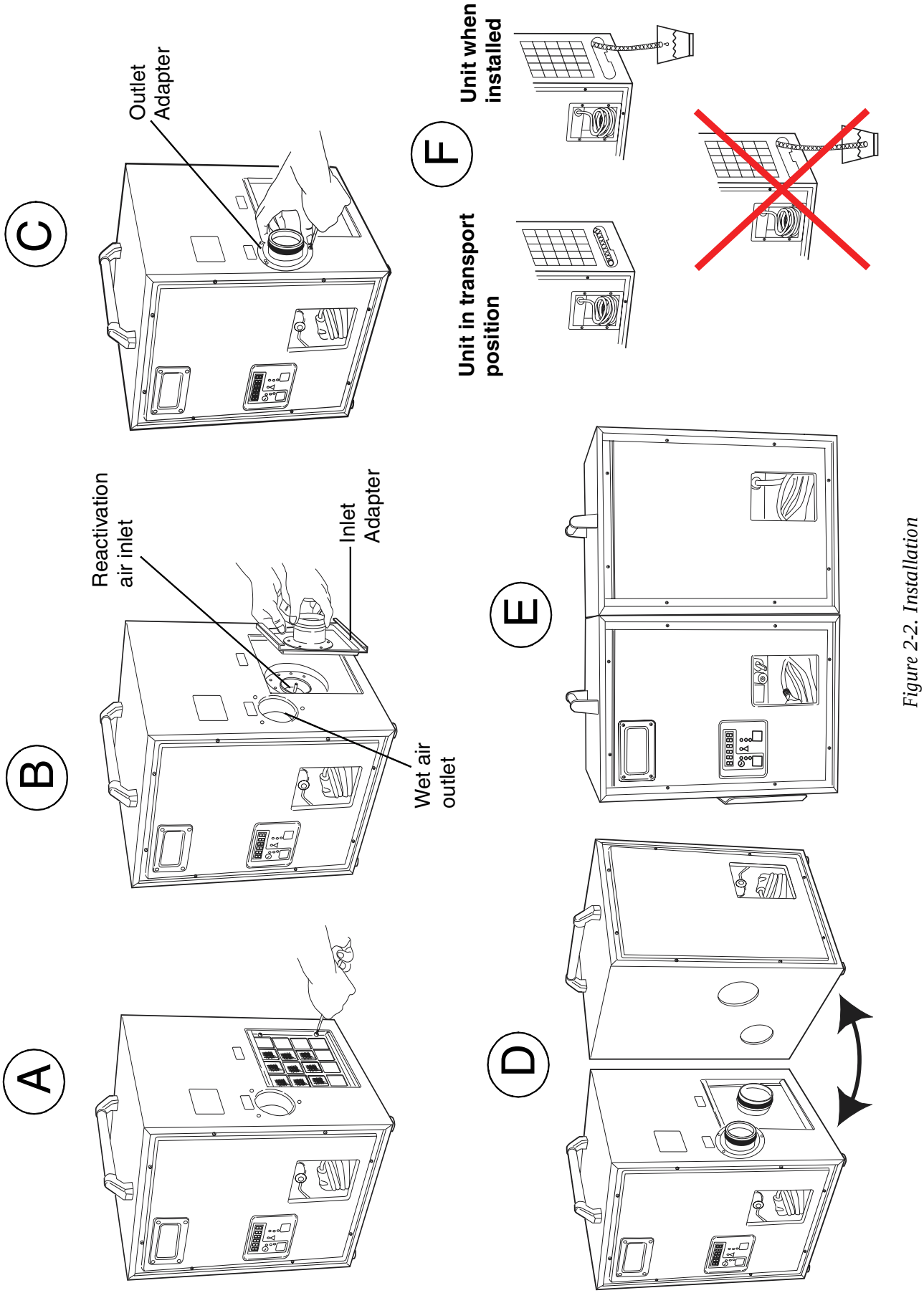


Figure 2-2. Installation

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3. GB - Operation

3.1 General

The condenser is automatically activated when the dehumidifier is started. An Air Pressure Switch located in the condenser is triggered when Wet Air is passed through the Wet Air Outlet of the dehumidifier into the Wet air Inlet of the condenser which in turn starts the condenser.

3.2 Emergency stop

Stop the unit with the on-off switch at the front of the unit, or pull out the plug from the wall outlet.

3.3 Start

When assembled start up the unit combination according to the procedures applicable in the MCS300 dehumidifier's User's Manual. The C300 Condenser then automatically starts as noted above.

3.4 Stopping the unit

Stop the condenser by stopping the dehumidifier (See User's Manual)

NOTE! *When the Condenser is not in use and needs to be moved, tilt the unit to drain away any excess fluid from the drainage pipe before moving.*

4. GB - Maintenance

4.1 General

The condenser is designed for long, continuous operation with a minimum of attendance. 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!*The unit must not be opened by anyone other than trained and qualified personnel.*

4.3 Maintenance schedule

The unit design allows for required maintenance actions to be carried out from the outside without the need for opening the unit.

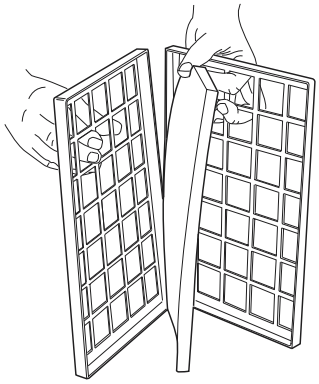
The following maintenance schedule is recommended by Munters and covers procedures for inspection and maintenance as well as suggested time intervals for a unit that operates under normal operational and environmental conditions.

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
Air Filter	Clean filter housing and change filter as required.	Clean filter housing and change filter.
Unit, general	Check for physical damage and clean unit exterior if necessary.	Check for physical damage and clean unit exterior if necessary.
Condensate Pipe	Clear the condensate pipe and check that the pipe slopes downwards and does not reach the water level in the drainage gutter.	Clear the condensate pipe and check that the pipe slopes downwards and does not reach the water level in the drainage gutter.
Internal Hoses	Check for any leakages around the connections of the Internal Hoses. Tighten hose clamps if necessary.	Check for any leakages around the connections of the Internal Hoses. Tighten hose clamps if necessary.

1) Filter mesh is removed by moving it upwards and out.

Table 4-1. Maintenance schedule



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5. GB - Fault finding

5.1 General

The purpose of this chapter is to provide guidance in basic fault finding and provide instructions for corrective actions so as to remedy faults.

5.2 Safety

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

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

5.3 Fault localization

To begin with, follow the directions under “Fault localization” in the User’s Manual for the dehumidifier.

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

Fault symptom	Possible cause	Action
Dehumidifier has stopped.	The thermal cut-out in the dehumidifier releases.	Check, and if necessary, clean the condensate pipe to the drainage gutter. Check, and if necessary, replace the filter for the cooling air.
	Condenser fan has stopped working	Contact your local Munters’ product service department.
The drying capacity has decreased.	The process air to the dehumidifier has a low relative humidity, less than 40%, or the temperature of the cooling air to the condenser is higher than 25°C.	Check that the fan of the condenser rotates freely. Check that the filter is clean.

Table 5-1. Fault localization

6. GB - Technical data

6.1 Specifications

Technical data for C300	230V, 50Hz	115V, 50Hz	115V, 60Hz
Performance data			
Airflow (m^3/h)	500	400	400
Heat dissipation to cooling air (kW)	1.6	1.3	1.3
Max. inlet temperature for cooling air (^oC)	25	25	25
Net capacity of MCS300 + C300	80%[1]	80%[1]	80%[1]
Rated currents and max. power			
Rated current, (A)	1.7	2.8	3.2
Fan motor power (W)	210	150	190
Heater Power (W)	175	175	175
Maximum electrical power (W)	385	325	365
Filter			
Filter (Article No.)	130032/1	130032/1	130032/1
Temperature range			
Permitted ambient operating temperature (^oC)	> 0 - +25	> 0 - +25	> 0 - +25
Other data			
Protection form	IP44	IP44	IP44
Total unit weight (kg)	21	21	21
Dimensions:			
Depth (mm)	400	400	400
Width (mm)	400	400	400
Height (mm)	550	550	550

[1] See capacity diagram in MCS300 User's Manual

Table 6-1. Specifications

7 Contact Munters

AUSTRIA	Munters GmbH Air Treatment Zweigniederlassung Wien	Eduard-Kittenberger-Gasse 56, Obj. 6 A-1235 Wien	Tel: +43 1 616 4298–92 51 luftentfeuchtung@munters.at www.munters.at
BELGIUM	Munters Belgium nv Air Treatment	Blarenberglaan 21c B-2800 Mechelen	Tel: +3215285611 service@muntersbelgium.be www.muntersbelgium.be
DENMARK	Munters A/S Air Treatment	Ryttermarken 4 DK-3520 Farum	Tel: +4544953355 info@munters.dk www.munters.dk
FINLAND	Munters Finland Oy Kuivaajamyynti	Hakamäenkuja 3 FI-01510 VANTAA	Tel: +358 207 768 230 laitemyynti@munters.fi www.munters.fi
FRANCE	Munters France SAS Air Treatment	106, Boulevard Héloise F-95815 Argenteuil Cedex	Tel: +33 1 34 11 57 57 dh@munters.fr www.munters.fr
GERMANY	Munters GmbH Air Treatment-Zentrale	Hans-Duncker-Str. 8 D-21035 Hamburg	Tel: +49 (0) 40 879 690 - 0 mgd@munters.de www.munters.de
ITALY	Munters Italy S.p.A Air Treatment	Strada Piani 2 I-18027Chiusavecchia IM	Tel: +39 0183 521377 marketing@munters.it www.munters.it
NETHERLANDS	Munters Vochtbeheersing	Energieweg 69 NL-2404 HE Alphen a/d Rijn	Tel: +31 172 43 32 31 vochtbeheersing@munters.nl www.munters.nl
POLAND	Munters Sp. z o.o. Oddzial w Polsce Air Treatment	ul. Swietojanska 55/11 81-391 Gdynia	Tel.: + 48 58 305 35 17 dh@munters.pl www.munters.com.pl
SPAIN	Munters Spain SA Air Treatment	Europa Epresarial. Edificio Londres. C/Playa de Liencres 2. 28230 Las Matas. Madrid	Tel: +34 91 640 09 02 marketing@munters.es www.munters.es
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