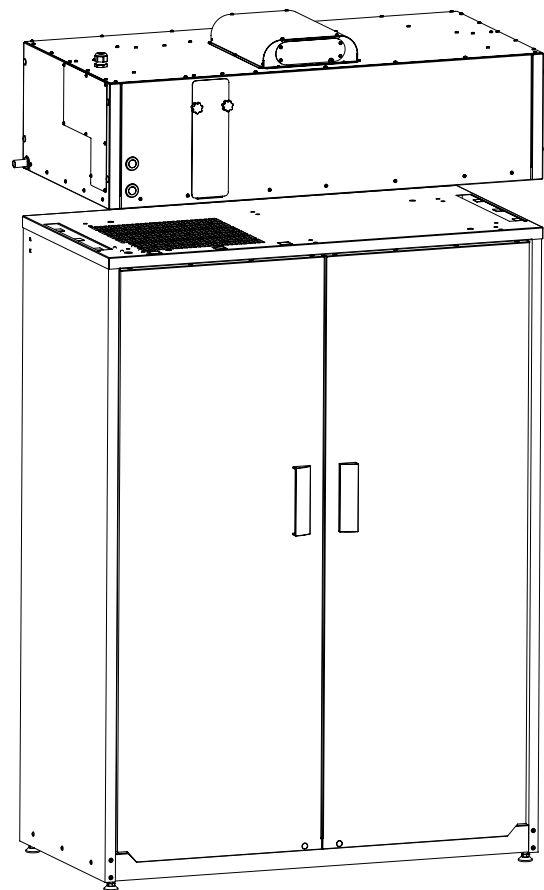




Drying cabinet TS 120A/D



CONTENTS

Safety regulations	3
Introduction	3
Technical data	3
Description/Function	4
Description/Wiring diagram	5
Description/Refrigerant system	5
Installation	6
Operation/Settings	7-8
Maintenance	9
Warranty	9
Troubleshooting	10
Drying advice	10
Checklist	11

SAFETY REGULATIONS

Safety during assembly



Warning! Electrical connection of the drying cabinet should be carried out by a qualified electrician according to national installation regulations.

Make sure that the cabinet can be made currentless for maintenance purposes, e.g. by means of a safety switch.

Connect to a residual current device

Safety during use

It is strictly forbidden to remove protective hoods, hatches or cover plates during operation.



Warning! The drying cabinet may only be used for drying laundry that has been washed with water.

Safety during maintenance/repairs

The power supply to the unit must be cut off before performing maintenance on the drying cabinet.



Warning! All maintenance, repairs, adjustment of settings and other work on the electrical system must be carried out by an authorised electrician according to national installation regulations.



Warning! All maintenance, repairs, adjustment of settings and other work on the refrigeration system should be carried out by an authorised refrigeration technician.

INTRODUCTION

The TS 120 drying cabinet is designed for the drying of textiles in apartment buildings, sports facilities, nursing homes, factories, preschools etc.

This instruction manual contains detailed instructions for use, installation, care and maintenance of the drying cabinet. It also describes which measures shall be taken for maximum safety and how the safety functions are designed and implemented.

NOTE!

All persons using, installing, repairing or performing maintenance on the product should first carefully read the section on safety.



This instruction manual contains instructions for operator use, and for replacement of the filters by maintenance staff.

More detailed servicing or troubleshooting may only be carried out by the manufacturer, the manufacturer's service representative or another suitably qualified professional.

This instruction manual describes all the necessary safety features. The user should carefully read the manual before the drying cabinet is electrically connected. In other words, the first thing the user should do after delivery is to read the instruction manual.

Various symbols and warning signs are displayed on the drying cabinet. If any of the warning signs is deformed or worn, a new one must be ordered and attached immediately to ensure maximum safety during use.

The drying cabinet may only be used for drying laundry that has been washed with water.

The manufacturer reserves the right to make changes.

TECHNICAL DATA

Dimensions and technical data

Height, total Cabinet + Hood	2,050 mm	Refrigerant	R134a 900 gr
Height Cabinet	1,650 mm	Auxiliary heater	1.5 kW
Height Hood	400 mm	IP Rating	IP 44
		Noise level	56 dB(A)
Rated voltage	3N~400V/50Hz	Condensate	
Fuse	10 A, time delay	Size of condensate tube	Ø =19 mm
Total power output	3.7 kW		
Width excl. condensate tube	1,200 mm		
Depth excl. door handle	600 mm		
Weight, total Cabinet + Hood	195 kg		

DESCRIPTION/FUNCTION

Drying cabinet TS 120 function

The TS 120 is a condensation dehumidifier, and is based on the principle that air moisture condenses on cold surfaces. The cold surfaces are created on the evaporator (EV) when the compressor (CC) transfers heat from the evaporator to the capacitor (CP).

The dehumidifier is equipped with a fan (F) that transports the air through the dehumidifier.

The air first passes through the filter, then moves through the evaporator, where the moisture condenses and is deposited on the evaporator. The condensate collects in a drip pan located underneath the evaporator, and is transported through a condensate tube that exits the unit on the left-hand side of the dehumidifier hood. The air subsequently passes through the capacitor (CP) and the fan (F).

In the condenser, the air is warmed up and the condenser is simultaneously cooled. Depending on the chosen settings, the air can subsequently be heated in the heating coils (E1-E2) before being released from the dehumidifier hood on the drying cabinet and transported to the laundry hanging in the cabinet. The heating coils always heat the air in the drying cabinet to a base temperature of +45°C. If the base temperature setting is lowered (adjustable from +20 to +45°C), the drying time will be longer.

Electrical system function

The wiring diagram shows the system in a currentless state, i.e. when the unit is not in operation.

Fan (M1)

The fan motor has no separate motor protection. Instead, it is equipped with a thermal switch (GT2). The thermal switch is located inside the motor winding, and disconnects the power if the motor overheats. The thermal switch resets automatically when the temperature returns to normal.

At high temperatures inside the cabinet, GT3 can control the fan to continue running after the drying cycle has ended to cool the machine. This function is fully automatic and independent of the stop button.

Compressor (M2)

The compressor has no separate motor protection. The motor protection function is integrated into the motor windings, stopping the motor if it overheats. The function resets automatically when the temperature returns to normal.

Thermostat (GT1)

GT1 controls the heating coils (E1+E2) and can be set from +20 to +45°C.

Overheating protector (OH1 and OH2)

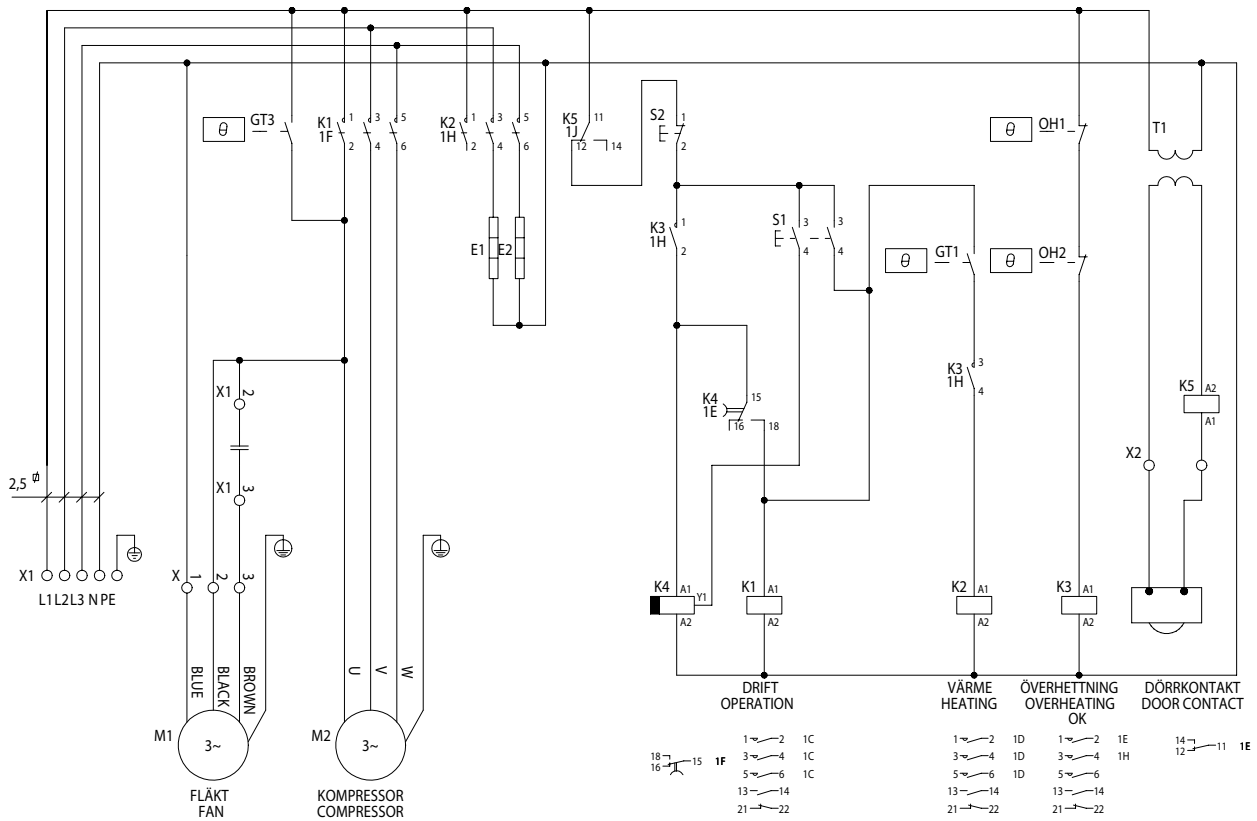
The overheating protectors (OH1 and OH2) are located in the air stream above the heating coils (E1+E2). OH1 and OH2 break the current in the event of overheating (approx. +85°C).

By pressing and holding the START button, the unit can be forced into operation. This is also a sign that the overheating protector has been triggered. The function will only be reset if the following two conditions are met: the temperature must drop and the safety switch must be deactivated for long enough for the overheating protectors, which have an automatic retaining action, to cool down and reset. The drying cabinet will only resume operation after the safety switch has been switched on again.

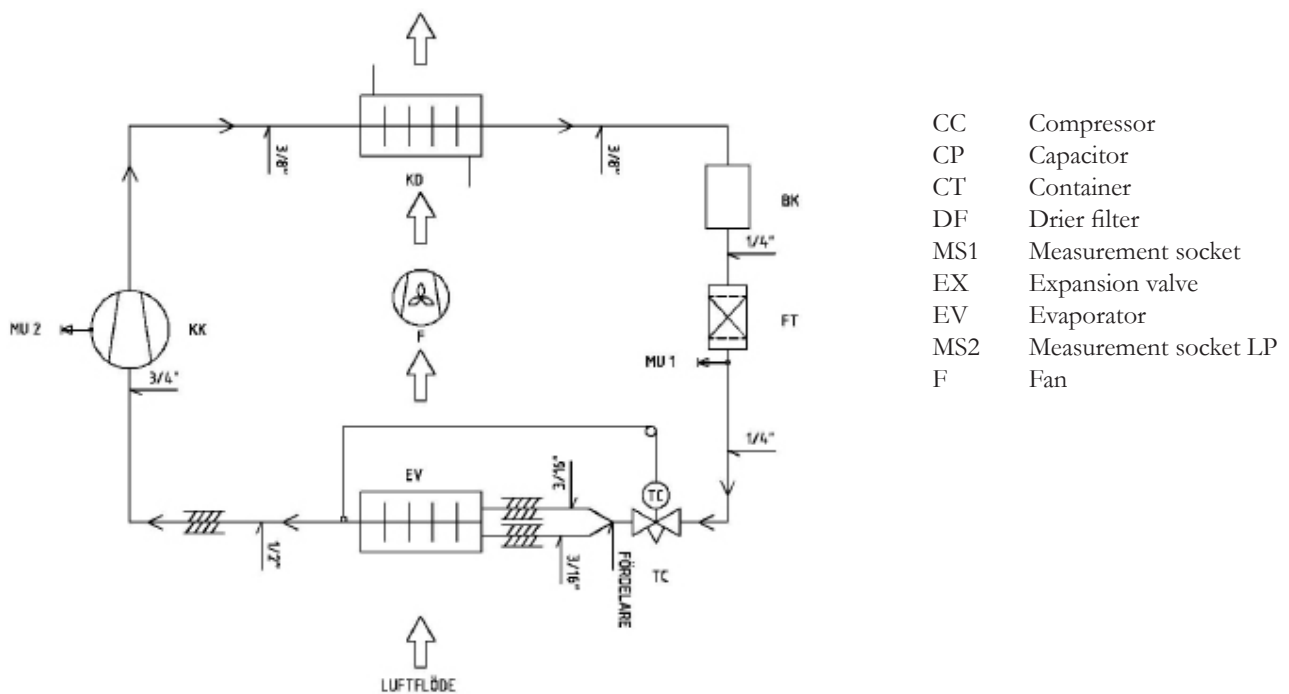
Door contact

The cabinet will not operate with the doors open. If the doors are opened during operation, the cycle will be interrupted. To restart the cycle, press the start button. The drying cycle will restart from zero.

DESCRIPTION/Wiring diagram



DESCRIPTION/Refrigerant system



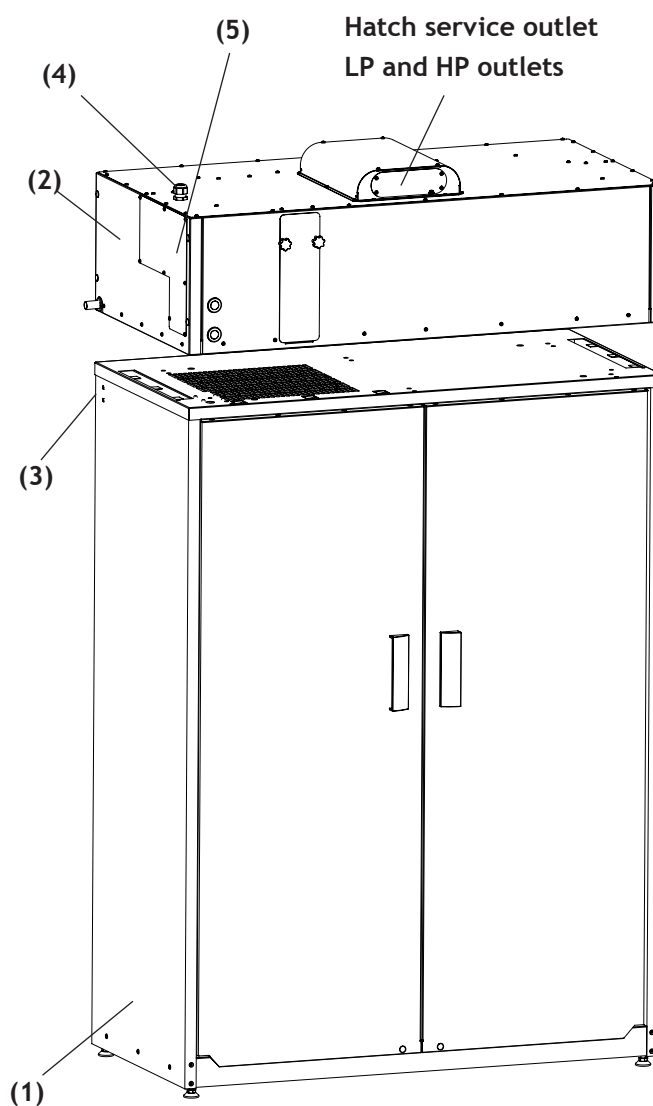
INSTALLATION

Mechanical installation

The cabinet frame (1) can be dismantled to facilitate indoor transportation of the cabinet. This allows, for example, the doors, drying rack and cabinet frame to be transported as separate parts.

NOTE! The doors and drying rack should be kept in the folded position until the anti-tip system has been fully installed, to prevent the cabinet from tipping over. The separate dehumidifier hood (2) may not be dismantled into separate parts.

- Remove the drying rack pipes from the cabinet.
- Assemble the cabinet frame (1) horizontally. Adjust it with the four adjustable feet underneath. They can be adjusted from inside the cabinet using a 5 mm Allen key. There are holes in the base. Use a water level to check that the base panel is horizontal.
- (If the cabinet is not completely level, the doors may not fit properly.)
- Install the anti-tip devices on the sides of the cabinet. They are supplied in a bag along with the cabinet. Screw the cabinet frame firmly to the wall, using both anti-tip devices (3).
- Place the dehumidifier hood (2) on top of the cabinet frame (1) and screw the dehumidifier hood through the ceiling onto the cabinet frame. Use the four enclosed M6 screws and their washers. The sides of the dehumidifier hood should now be aligned with the sides of the cabinet frame.
- (The dehumidifier hood is heavy; at least two strong people are needed to lift it.)
- Connect the door contact by threading the cable from the electrical box into the cabinet. There is a two-conductor cable with a contact sleeve rolled up at the bottom of the electrical box. Thread the cable through the rubber seal in the bottom of the electrical box.
- The cable from the door contact is in the ceiling inside the left-hand door. Connect the contacts and pull down the panel on the ceiling to hold the cable in place.
- Connect the condensate tube, which has \varnothing 19 mm, to the drain. Make sure there is sufficient drop height, and that the drain is preceded by a water trap. The tube can be rotated one turn to create a water trap.
- Install the enclosed drying rack components according to the instructions. Position the drying rack inside the cabinet.



Electrical installation

- Electrical installation (4) should be carried out by a qualified electrician according to national installation regulations. Remove the power hatch (5) and connect the TS 120 dehumidifier hood via the main switch to 3N~400V+earth. Fuse with a 10A time delay fuse. Connect to the terminal block (X1). Make sure that the cabinet can be made currentless for maintenance purposes, e.g. by means of a safety switch. Connect to a residual current device.
NOTE! The dehumidifier hood should be left connected to the cabinet frame for at least 1 hour before the unit is put into operation for the first time.

OPERATION/SETTINGS

Control, START/STOP

- Start the drying cycle by pressing the green Start button. The drying cabinet will only start operating when the doors are closed. The cabinet will switch off automatically after completion of the drying cycle (instructions for setting the drying cycle time are shown below).
- To interrupt the drying cycle, press the red Stop button or open the doors. NOTE! Do not repeatedly press Stop (or open the doors) followed by Start unless absolutely necessary.
- If the doors are opened during the drying cycle, you will need to press Start again to continue the drying process. The drying cycle will restart from zero.

Laundry drying times

Drying times for 9 kg of mixed cotton laundry with 50% residual moisture:

Setting	Amount of mixed cotton laundry with 50% residual moisture:	Base temperature	Power consumption per kg of mixed cotton laundry with 50% residual moisture:	Cycle time/drying time:
Fast	9 kg	45 °C	0,28 Kwh	60 min.
Economy	9 kg	20 °C	0,21 Kwh	90 min.

- The laundry should be spun for at least 5 minutes before drying.
- Hang thicker/heavier laundry items at the bottom of the drying cabinet and thinner items such as sheets and T-shirts at the top.



Warning! The drying cabinet may only be used for drying laundry that has been washed with water.

Important



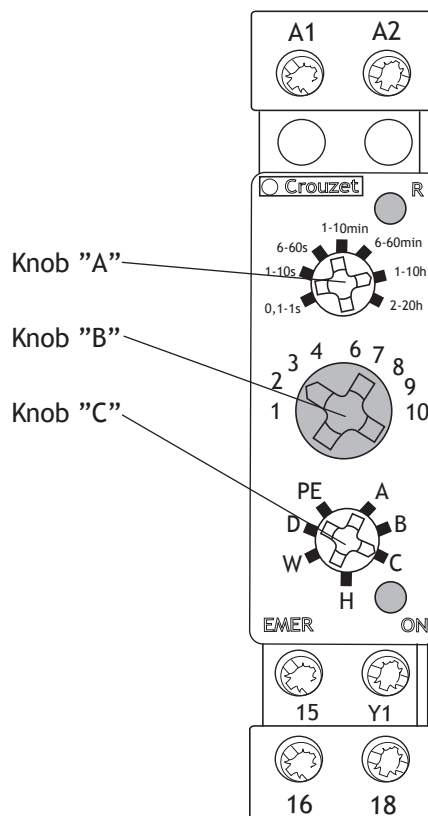
WARNING!
The humidifier's air inlet and outlet must never be covered during operation.
Protective hoods and cover plates must never be removed during operation.

Time relay

The dehumidifier has a time relay (multi relay), which is normally set to a 60-minute drying cycle, unless a different setting has been agreed on.

Setting the drying cycle time

- 1 Switch off the power supply before performing the adjustment.
- 2 Remove the power hatch (see power hatch pos. 5 on page 6) by undoing the screws.
- 3 Set the time relay according to the instructions below.
Example: operation time of 2 hrs.
 - 1 Turn knob A to the position 1-10h, which is calibrated in hours if the time scale was requested in hours.
 - 2 Turn knob B to position 2, which multiplies the factor from the set value on knob A.
 - 3 Knob C should be in the position C.
 - 4 Replace the lid and switch on the power.



OPERATION/SETTINGS

Setting the base temperature



Warning! The base temperature may only be set by the manufacturer, the manufacturer's service representative or another suitably qualified professional.

The dehumidifier hood has a thermostat for setting the base temperature.

The higher the base temperature, the shorter the drying time.

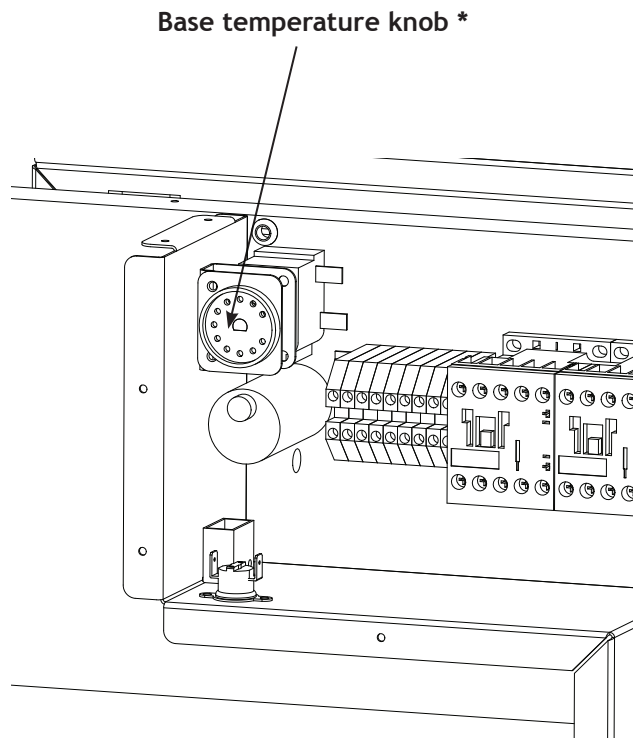
The base temperature knob has a stop screw installed in a groove.

This allows the base temperature of the dehumidifier cabinet to be adjusted from +20°C to +45°C.

*** The base temperature is set to +45°C on delivery, unless a different setting has been agreed on.**

Setting the temperature

- 1 Switch off the power supply before performing the adjustment.
- 2 Remove the power hatch (see power hatch pos. 5 on page 6) by undoing the screws.
- 3 Set the thermostat according to the instructions below.
 - When the knob (see picture) is turned anti-clockwise as far as it will go, the base temperature will be +20°C.
 - When the knob (see picture) is turned clockwise as far as it will go, the base temperature will be +45°C.



MAINTENANCE

Replacing the filter

The filter should be replaced after a maximum of 1,600 operating hours or at least once every six months.

- Unscrew the star knobs holding the filter hatch in place and pull the hatch outwards and downwards. The hatch will remain hanging in this position.
- Pull out the filter cassette by its handle. Insert the new filter cassette, making sure that the text “Stoftsida, El-Björn AB” is aligned to the left, as shown in the picture.
- Replace the filter hatch.

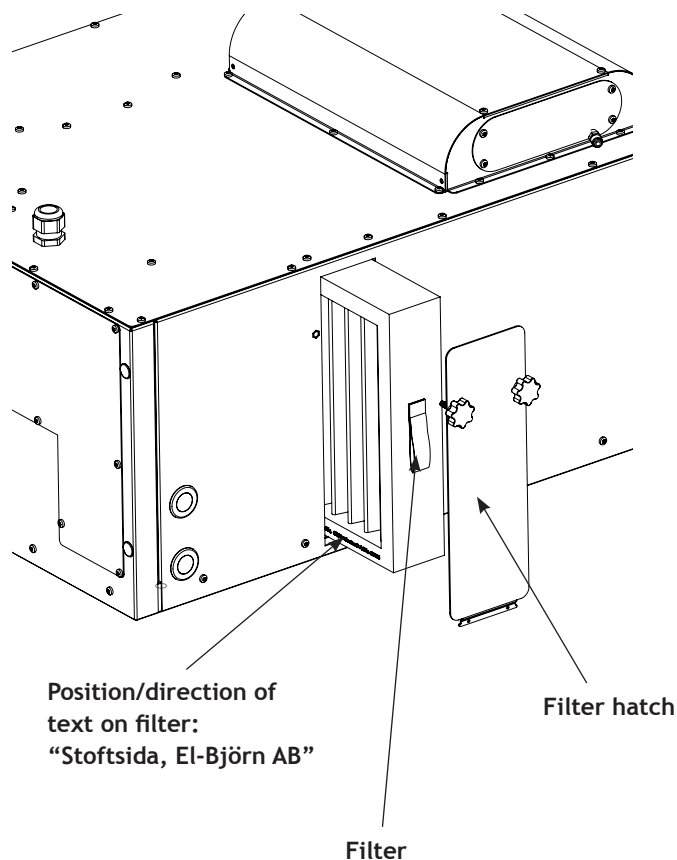
Cleaning

- Replace the filter according to the instructions under **“Replacing the filter”**.
- Clean externally with a mild soap solution and a damp cloth.
- Never use inflammable or combustible solvents near the machine.

Detailed cleaning (service)

Warning! Detailed cleaning (service) may only be performed by the manufacturer, the manufacturer’s service representative or another suitably qualified professional.

- Air-blow the inside of the machine carefully, then wipe with a damp cloth. Do not blow air on the capacitor or evaporator.
- Wash the fins of the evaporator and capacitor with dishwashing liquid and water as necessary.
- Clean the drip pan and the condensate tube/hose as required.



Transportation

The dehumidifier hood should always be transported in the same horizontal position as when it is mounted on the cabinet frame.

WARRANTY

El-Björn AB's products and deliveries are regulated by Standard Agreement NL09. Under these provisions, El-Björn AB is responsible for faults arising within one year after delivery.

The provisions of NL 09 also apply for professional parties who register according to the instructions below, although with the following modification:

El-Björn AB is liable for faults arising within five years after delivery (only applicable to products registered on the website).

In other respects, the provisions of NL 09 apply.

To obtain this extended warranty, you must register within 14 days after purchasing the products.

The extended warranty does not cover any of the lamps.

TROUBLESHOOTING



Warning! Troubleshooting is generally carried out by the manufacturer, the manufacturer's service representative or another qualified professional (e.g. a qualified electrician and/or a qualified refrigeration technician).

Abnormal noises

- In the event of abnormal noise or vibrations, switch off the machine immediately and make sure the fault is repaired before the machine is restarted. Contact El-Björn AB for advice.

If the machine does not start:

- Check that the doors are closed properly.
- Check that the fuses in the nearest electrical cabinet are intact.
- Check that the main switch is switched on.
- The overheating protector may have been triggered. Instructions for resetting it can be found on page 4 under the heading
- Overheating protector (OH1 and OH2).
- Check that the time relay is set correctly. See page 7 under the heading "Setting the drying cycle time".

The machine emits too little air

- Check whether the filter is completely blocked. See page 9 under the heading Replacing the filter. If the filter is blocked, replace the filter and restart the machine.
- If the fan does not work, the thermal switch in the fan may have been triggered. See page 6 under the heading Fan. If this does not help, contact the manufacturer, the manufacturer's

service representative or another suitably qualified professional (e.g. a qualified electrician).

Other information

- If the compressor does not work, the motor protection for the compressor may have been triggered. See page 4 under the heading Compressor.
- The air temperature inside the cabinet is too low although the base temperature is set at +45°C. Check that the electric heating coils are functioning correctly.
- The dehumidifier function does not work. If the air blowing into the drying cabinet has not heated up after 30 minutes of operation, turn off the machine immediately and ensure that the fault is corrected before restarting the machine.
- If the compressor does not start, the refrigerant may be leaking. Turn off the machine immediately and ensure that the fault is corrected before restarting the machine. To request service, contact the manufacturer, the manufacturer's service representative or another suitably qualified professional (e.g. a qualified refrigeration technician).
- Condensate is leaking from the dehumidifier hood. Clean the condensate tube/pipe/outlet and drip pan. Also see page 9 under the headings Cleaning and Detailed cleaning (service).
- If the fan continues running after the drying cabinet has been turned off or the drying cycle has been completed, this means the overheating thermostat (over +65°C) has been triggered. The fan will stop automatically when the temperature in the dehumidifier hood returns to +54°C or lower. Open all the doors and ventilate the cabinet after drying.

DRYING ADVICE

DRYING CABINET WITH DEHUMIDIFIER

You have just installed an energy-efficient, environmentally friendly drying cabinet (with a dehumidifier) in your drying room.

It dries by condensing the moisture out of the laundry and transforming it into water.

- Wash and dry the thickest laundry items first.
- The laundry should be spun for at least 5 minutes before drying.
- Hang thicker/heavier laundry items at the bottom of the drying cabinet and thinner items such as sheets and T-shirts at the top.
- Start the drying cabinet by pressing the green Start button. The drying cycle time is set at 60 minutes. The drying cabinet will switch off automatically after this time.
- NOTE! Make sure the doors are closed. The cabinet will not operate with the doors open.
- To interrupt the drying cycle, press the red Stop button. NOTE! Leave the doors open after the drying cycle is completed.
- The circulation fan can be set to automatically continue running to cool the machine after the Stop button is pressed. If this mode is used, leave the doors open while the fan is running to shorten the cooling time.
- The machine cannot be restarted via the Start button until the cooling cycle has finished and the circulation fan has stopped.

NOTE! Do not repeatedly press Stop followed by Start unless absolutely necessary.

The filter should be replaced regularly after a maximum of 1,600 operating hours or at least once every six months. The filter is located behind the filter hatch on the front of the machine.

CHECKLIST

Checklist for first operation of

DRYING CABINET WITH DEHUMIDIFIER TS 120A/D

The unit should be put into operation by staff with appropriate knowledge of the unit type, and only after obtaining authorisation from the owner of the premises.

- The unit may not be covered.
- Assemble the cabinet frame horizontally. Adjust it with the four adjustable feet underneath. They can be adjusted from inside the cabinet using a 5 mm Allen key. There are holes in the base.
- (If the cabinet is not completely level, the doors may not fit properly.)
- Always screw the two anti-tip devices firmly to the wall before extending the drying rack out of the cabinet.
- Screw the dehumidifier hood to the cabinet frame with the four M6 screws.
- Connect the door contact by threading the cable from the electrical box into the cabinet. There is a two-conductor cable with a contact sleeve rolled up at the bottom of the electrical box. Thread the cable through the rubber seal in the bottom of the electrical box.
- Connect a condensate tube with a water trap. Make sure the tube slopes sharply downwards to ensure correct drainage.
- The TS 120 drying cabinet has a post-heating coil to quickly heat it to the correct operating temperature. The thermostat is set to a base temperature of +45°C on delivery, unless a different setting has been agreed on. The higher the base temperature, the shorter the drying time. The power hatch must be removed before setting the base temperature.
- A thermostat knob is located in the upper left-hand corner of the electrical box. With the thermostat knob screwed anti-clockwise as far as it will go, the base temperature is set at +20°C*.
- With the thermostat knob screwed clockwise as far as it will go, the base temperature is set at +45°C*.

Warning! The base temperature or cycle time/drying time may only be set by the manufacturer, the manufacturer's service representative or another suitably qualified professional.

*/This means that the cycle time must be changed on the time relay at the same time as the base temperature is set. See instruction manual, page 7 under the heading "Setting the drying cycle time".

- Electrical connection



WARNING! Electrical connection of the drying cabinet should be carried out by a qualified electrician according to national installation regulations.



**Must be connected to the main switch.
Rated voltage: 3N~400V+N+PE
Fuse: 10 A time delay**

El-Björn AB, Box 29, 334 21 Anderstorp
Tel: 0371-588 100, Fax: 0371-181 34
info@elbjorn.se, www.elbjorn.com

