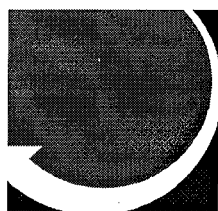


Dri - Tec 600 / 2000

Instruction Manual



Dantherm[®]
Environmental Air Management

Feb.98 973261

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1. WORKING PRINCIPLE

A dehumidifier dries the air by means of a cooling plant. The room air is drawn in at the back of the unit through a filter and over a cooling coil where moisture in the air is condensed into water drops on the evaporator coil. The condensate then runs into a tray and finally is piped into a water container. The dry, cold air is led over the condenser coil and is blown out into the room again at a temperature 2-5°C higher than the room temperature. The heat comes from the energy used to run the fan and the compressor together with the latent heat released when the water vapour is condensed.

By continued circulation of the room air through the dehumidifier, the relative humidity of the room will gradually be lowered.

2. TRANSPORT

Dri-Tec 600

The dehumidifier can be carried with the handle on top of the unit or rolled on the four wheels.

Dri-Tec 2000

The dehumidifier is tilted slightly backwards and is rolled to its appropriate place. Alternatively the unit can be lifted by a crane using the upper pipe strap.

Important!
The unit should be transported in vertical position. The cooling plant may be damaged if it is transported lying down!

If the unit has been transported over a long distance it should stand still for at least 30 minutes before it is put into service.

3. INSTALLATION AND CONNECTIONS

When possible the dehumidifier should be placed in the middle of the room to ensure a good air circulation in the whole room.

If this is not possible the dehumidifier should be placed in such a way that the air can be sucked in freely at the back of the unit and blown out at the front. The minimum distance from a wall should be about 400 mm.

The dehumidifier must be installed on a level surface to ensure free discharge of the condensed water.

Important!

Moisture can easily and freely spread through the air. It is therefore important to "seal" the room as tight as possible, i.e. doors and windows must be kept closed and movement in and out of the room must be minimized. Otherwise the efficiency of the unit will be considerably reduced.

3.1. ELECTRICAL CONNECTION

DRI-TEC 600

The unit can be connected either to 1x110V-50 Hz (**YELLOW PLUG**) or 1x240V-50 Hz (**BLUE PLUG**) by using the supplied connecting cables. These cables are supplied separately with unit.

DRI-TEC 2000

The DRI-TEC 2000 has a ready mounted cable with 1x240V plug (**BLUE PLUG**). If the unit is to operate in 1 x110V mode the supplied **yellow plug** must be mounted in stead of the blue 240V plug. At the same time the operating voltage is switched from 240V to 110V at the back of the unit by means of a square-hole spanner.

3.2. CONDENSATE OUTFLOW

The waste tube is fixed to a ½" copper pipe at the rear of the unit. The waste tube should discharges into a water container, which should be as tight as possible to avoid evaporation.

If a longer waste tube is connected to the unit and led directly to a floor drain, then make sure that the waste tube has a fall towards the drain.

4. START UP

4.1. Dri-Tec 600 1x240V

Take the cable with the **BLUE PLUG** which is supplied separat with the unit and connect the small rectangular plug of the cable into the socket (1) on the right hand side of the unit.

4.2. Dri-Tec 600 1x110V

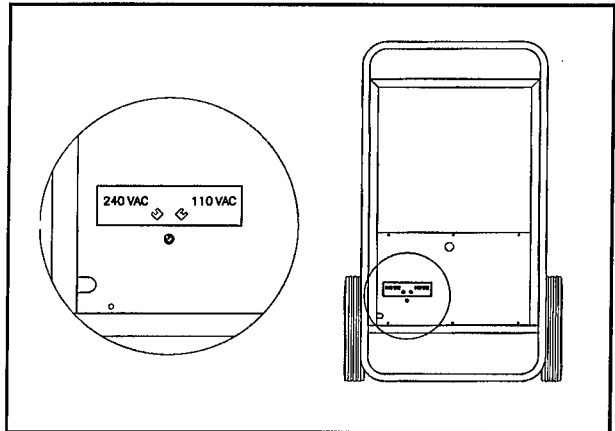
Take the cable with the **YELLOW PLUG** which is supplied separat with the unit and connect the small rectangular plug of the cable into the socket (1) on the right hand side of the unit.

4.3. Dri-Tec 2000 1x240V

If a **BLUE PLUG** is mounted on the mains cable the unit can be connected directly to 1x240V. Please check that the voltage switch at the back of the unit is also on 240V.

4.4. Dri-Tec 2000 1x110V

In order to operate the unit at 1x110V the **YELLOW PLUG** must be mounted on the mains cable and the voltage switch is set to 110V.



Voltage switch

Important for Dri-Tec 2000!

Each time the unit has been stopped, a time delay built into the electronic control will make the unit wait 1 minute, before it starts again. This is a security function which protects the compressor against overloading in case of frequent cutting in and out!

4.5. EXPLANATION OF SYMBOLS ON THE ELECTRONIC CONTROL

This electronic is only mounted in the Dri-Tec 2000!

A. Lights up in red if the sensor in the cooling system detects too high a temperature. The whole unit will then be switched off. This function safeguards the compressor against breakdown. Starts automatically after 45 minutes.

If this light is on the air flow through the unit should be checked, including the fan. Clean filter, condenser and evaporator as necessary. (See section 7).

B. Lights up in yellow if a temperature of more than 30°C is detected on the external air sensor - the dehumidifier stops. When the temperature has fallen to a temperature lower than 30°C, the unit starts automatically again.

C. Lights up in yellow, if the external air sensor detects a temperature of less than 3°C. The unit stops. When the temperature has risen to more than 3°C the unit starts again.

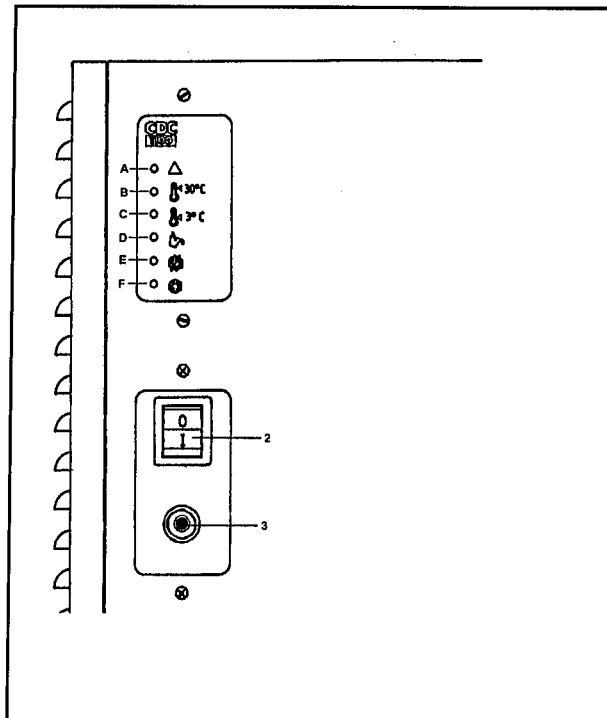
D. This light-emitting diode has no function in connection with a model Dri-Tec 2000.

E. Lights up in green during automatic de-frosting of the evaporator.

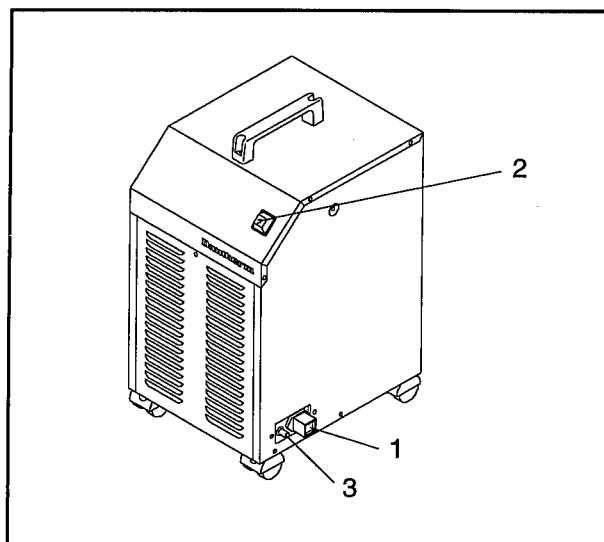
F. Green lamp is on when the first ice forms on the evaporator. The formation of ice continues for 44 minutes after which time the defrosting starts automatically.

4.6. ETA PROTECTION RELAY

In Dri-Tec 600/2000 a so-called ETA-relay (3) is built in to afford protection against wrong electricity supply. Should the unit be connected to a wrong tension, the ETA relay will switch the whole unit off immediately. The unit cannot be re-started before the ETA button has been pushed in manually. On Dri-Tec 600 the ETA relay is located on the bottom right hand side next to the electricity supply. In Dri-Tec 2000 the ETA relay is located under the ON/OFF switch (2).



Dri - Tec 2000



Dri - Tec 600

5. MAINTENANCE

The dehumidifier has been designed to ensure reliable operation and a minimum of inspection. All moving parts are lubricated for life.

It is, however, recommended to check the unit and if necessary clean it at least once a year. During this inspection special attention should be paid to the evaporator and the condenser. The fins can be vacuum-cleaned or brushed with care.

The filter at the back of the unit also has to be cleaned at regular intervals, depending on how dirty it becomes. The filter can be cleaned by washing, vacuum-cleaning or blowing.

6. TECHNICAL SPECIFICATIONS

DRI-TEC 600

Working range - humidity	40 - 100	%R.F.
Working range - temperature	10 - 30	°C
Power supply	110/240-50	V/Hz
Max. current consumption	3.2/1.68	A
Max. power consumption	320	W
Main fuse	16/10	A
Air volume	200	m ³ /h
Refrigerant	R 22	
Refrigerant - quantity	260	g
Weight	28	kg

DRI-TEC 2000

Working range - humidity	40 - 100	%R.F.
Working range - temperature	3 - 30	°C
Power supply	110/240-50	V/Hz
Max. current consumption	11.6/5.4	A
Max. power consumption	1200	W
Main fuse	16/10	A
Air volume	625	m ³ /h
Refrigerant	R 22	
Refrigerant - quantity	550	g
Weight	52	kg

7. FAULT-FINDING DRI - TEC 600

INDICATION	REASON	REMEDY
Unit is not working. Green lamp (2) is off	Main fuse for the building has tripped.	Replace fuse.
	ETA relay of the unit has switched off the electric circuit.	Remove the front cover grille and push in the reset button at the lower left hand side of the unit.
		If the ETA relay cuts out again, check if the unit is connected to the correct voltage.
	Power supply cable defective.	Repair power supply cable or replace it.
Dehumidifier does not run. Green lamp (2) is on.	Timer for deicing control defective.	Replace timer
	Internal compressor protection has cut off the compressor because:	
	- The air volume is too low.	Clean filter, evaporator and condenser of the dehumidifier. The dehumidifier must not be placed too close to a wall.
	- Fan has failed.	Replace fan
	- Room air temperature is higher than 30°C	Stop the unit and wait until the temperature has fallen to a level under 30°C.
The unit dehumidifies, but not sufficiently.	Unit is dirty	Filter, evaporator and condenser must be cleaned.
	Relative humidity lower than 40% R.H.	Wait until the relative humidity has risen.
	Loss of refrigerant from the cooling plant (the evaporator is not getting cold or only getting partly cold)	Repair the leakage of the cooling plant and charge with refrigerant

7. FAULT-FINDING DRI - TEC 2000

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Unit is not working. Green lamp (2) is off.	Main fuse for the building has tripped.	Replace fuse.
	ETA relay of the unit has switched off the electric circuit.	Remove the front cover grille and push in the reset button at the lower left hand side of the unit.
		If the ETA relay cuts out again, check if the unit is connected to the correct voltage.
		Repair power supply cable or replace it.
Dehumidifier does not run. Green lamp (2) is on.	The time lag has not yet allowed any function.	Wait one minute, then the dehumidifier starts automatically, if no other lamp of the panel is on.
	Hygrostat defect.	Pull out the Jack-plug from the unit.
Red lamp "Overheating" is on.	The air volume is too low.	Clean filter, evaporator and condenser of the dehumidifier. The dehumidifier must not be placed too close to a wall.
	Fan has failed.	Replace fan
Yellow lamp "Temp. too high" is on.	Room air temperature is higher than 30°C	Wait until the temperature has fallen to a level under 30°C. The unit starts again automatically.
Yellow lamp "Temp. too low" is on.	Room air temperature is lower than 3°C	Wait until the temperature has risen to more than 3°C. The unit starts again automatically.
The unit dehumidifies, but not sufficiently.	Unit is dirty	Filter, evaporator and condenser must be cleaned.
	Relative humidity lower than 40% R.H.	Wait until the relative humidity has risen.
	Loss of refrigerant from the cooling plant (the evaporator is not getting cold or only getting partly cold)	Repair the leakage of the cooling plant and charge with refrigerant

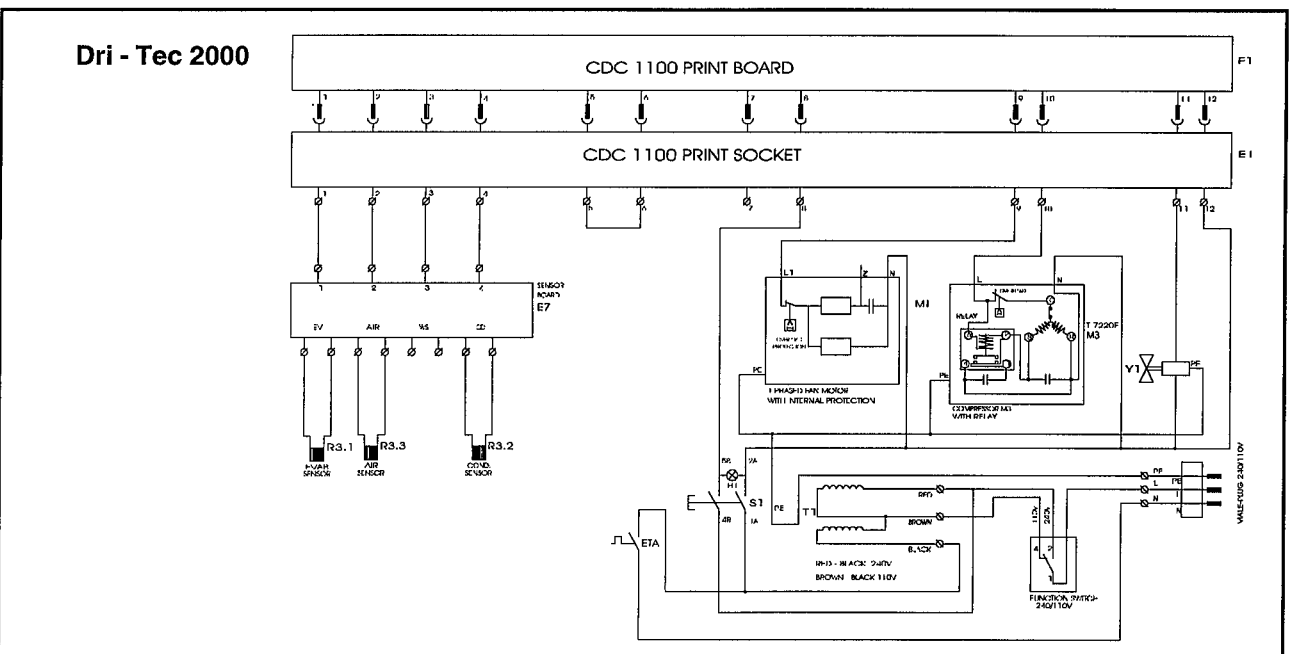
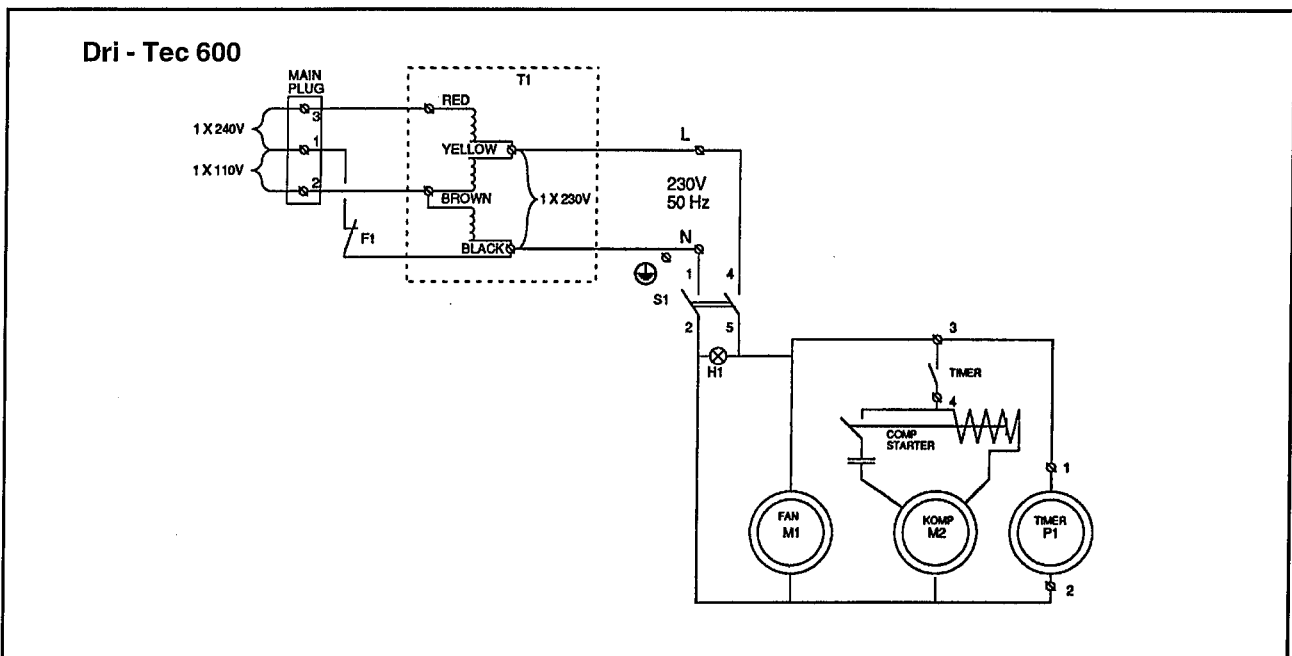
8. WIRING DIAGRAM

Dri - Tec 600

- H1: Green control lamp
- F1: ETA overload relay
- M1: Fan
- M2: Compressor
- P1: Timer
- T1: Transformer

Dri - Tec 2000

- E1: Electronic control
- E7: Sensor terminal
- H1: Green control lamp
- F1: ETA overload relay
- M1: Fan
- M3: Compressor
- R3.1: Sensor - evaporator
- R3.2: Sensor - circuit
- R3.3: Sensor - air
- T1: Transformer
- Y1: Solenoid valve



9. COOLING CIRCUIT

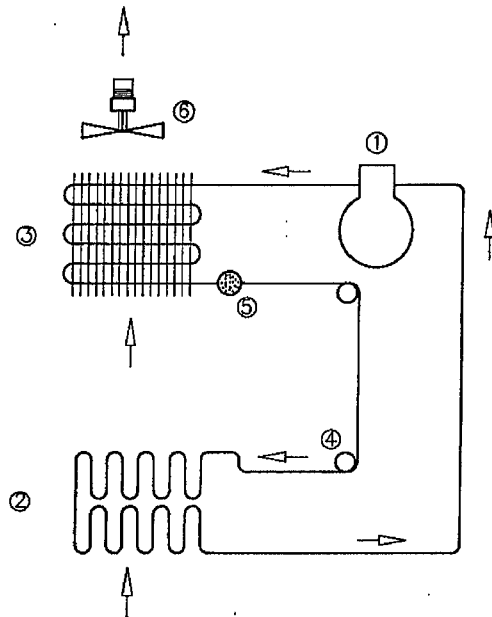
Dri - Tec 600

1. Compressor
2. Evaporator
3. Condenser
4. Capillary tubes
5. Liquid line drier
6. Fan

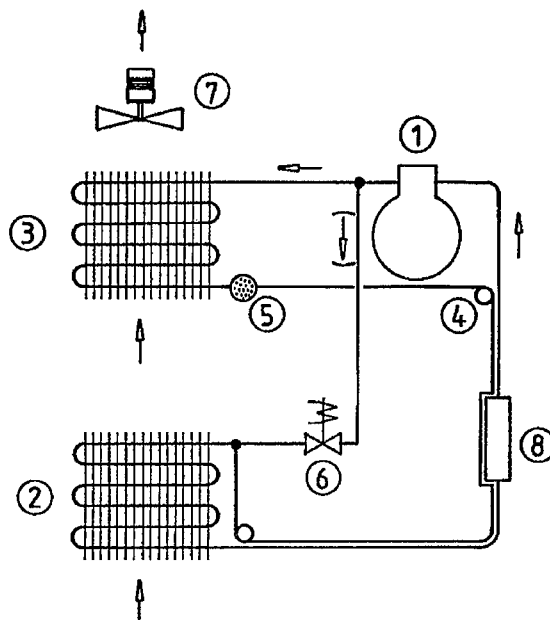
Dri - Tec 2000

1. Compressor
2. Evaporator
3. Condenser
4. Capillary tubes
5. Liquid line drier
6. Solenoid valve
7. Fan
8. Suction accumulator

Dri - Tec 600

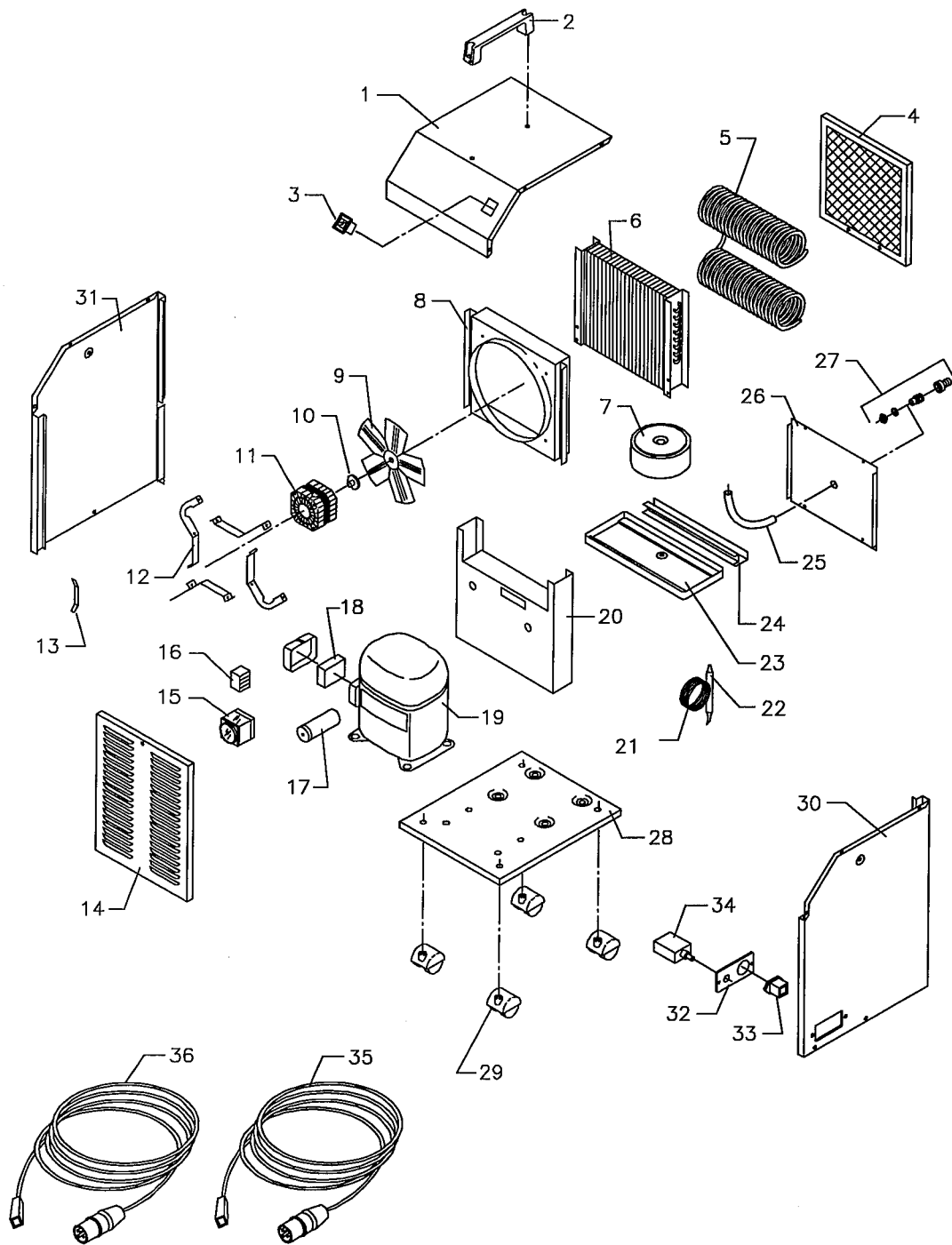


Dri - Tec 2000



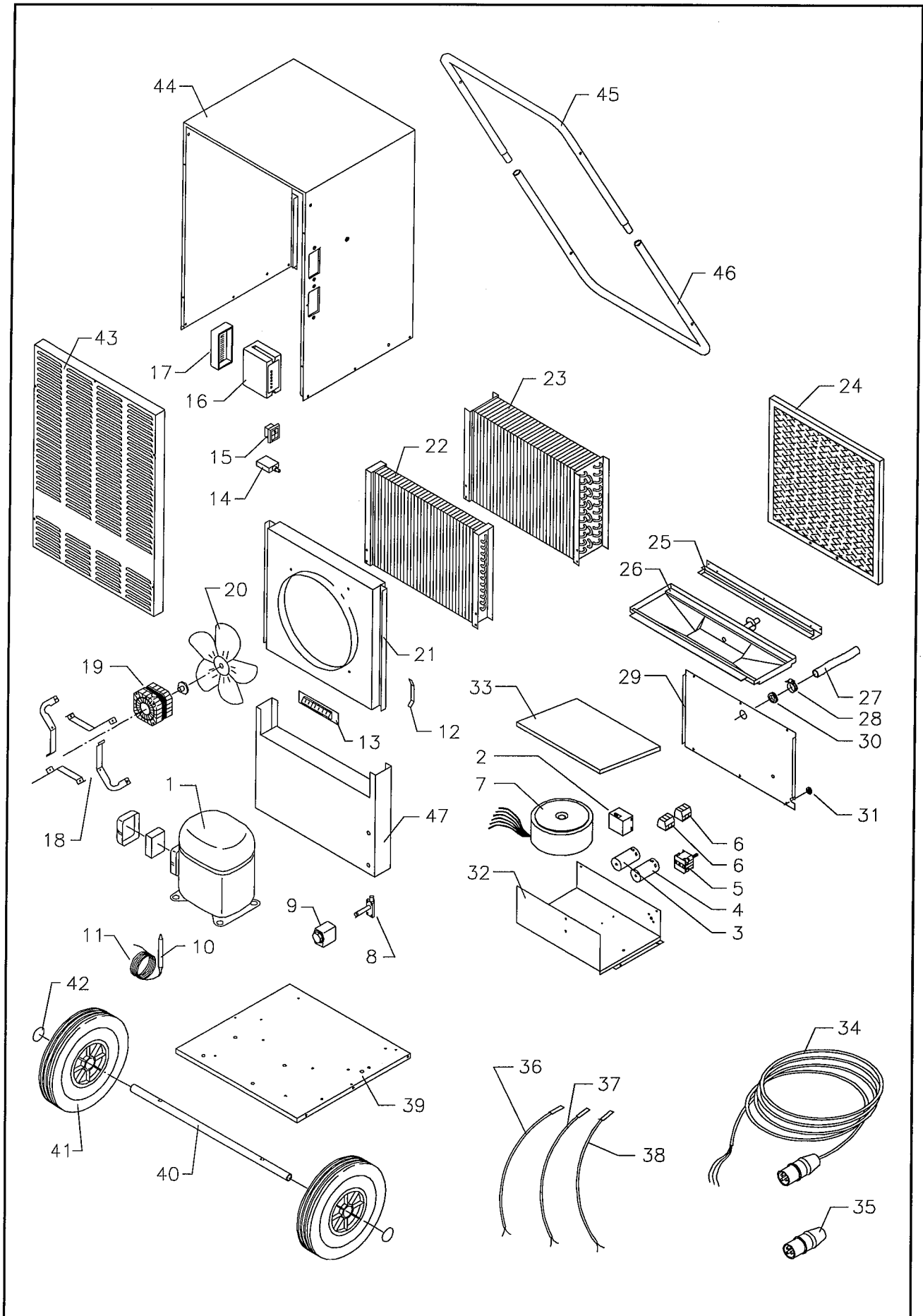
10. SPARE PARTS LIST Dri - Tec 600

Part No.	Dantherm No.	Description
1	082320	Cover plate, top
2	540450	Handle
3	515080	Switch ON/OFF
4	204120	Filter frame with filter
5	171230	Tube evaporator
6	600980	Condenser
7	515450	Transformer 110/240 V
8	069560	Fan housing
9	532510	Fan blade
10	791400	Driving plate
11	532480	Fan motor 5 W
12	23300	Fan bracket
13	205510	Earth connection
14	082330	Air discharge grille
15	516760	Timer clock
16	520920	Terminals
17	603130	Starting capacitor for compressor
18	603250	Starting relay for compressor
19	603170	Compressor
20	069520	Partition wall
21	435620	Capillary tube
22	607410	Liquid line drier
23	202890	Drip tray with drain
24	175180	Profiled bracket for air filter
25	428100	Hose ½"
26	069280	Rear plate
27	381280	Hose union ½" complete
28	069500	Bottom plate
29	541320	Wheel
30	082270	Cover plate, right hand side
31	086260	Cover plate, left hand side
32	069260	Mounting plate for plug
33	381290	Plug for power connection
34	511630	ETA relay
35	184220	Supply cable with plug 110 V
36	184230	Supply cable with plug 240 V



10. SPARE PARTS LIST Dri - Tec 2000

Part No.	Dantherm No.	Description
1	602401	Compressor
2	606170	Starting relay
3	602998	Running condensator
4	602999	Starting condensator
5	514891	Voltage switch
6	520980	Terminal strip
7	515445	Transformer 110/240 V
8	605470	Solenoid valve
9	605440	Coil for solenoid valve
10	607410	Liquid line drier
11	435610	Capillary tubes
12	205510	Earth connection
13	517770	Sensor terminal
14	511632	ETA relay
15	515080	Toggle switch
16	517580	Electronic control
17	555833	Socket for electronic control
18	023600	Fan bracket
19	532500	Fan motor
20	082830	Fan blade
21	082080	Fan housing
22	601010	Condenser
23	600100	Evaporator
24	205390	Filter
25	173271	Profiled bracket for drip tray
26	202750	Drip tray
27	428100	Armed hose 1/2"
28	543570	Hose clamp
29	082761	Back plate
30	524050	Rubber sleeve
31	524000	Rubber sleeve
32	082311	Bottom plate for control
33	082171	Lid for control
34	184221	Supply cable with plug for 240 V
35	525310	Plug
36	551430	Air sensor
37	551410	Condenser sensor
38	551420	Evaporator sensor
39	175281	Bottom plate
40	562230	Wheel axle
41	540730	Wheels
42	47706 0	Wheel cap
43	082821	Front cover panel
44	082822	Cover
45	562300	Carrying handle - upper
46	562240	Carrying handle - lower
47	082170	Partition wall



EC – Declaration of Conformity**Dantherm**[®]

**A/S Dantherm
Jegstrupvej 4
DK-7800 Skive
Tel. +45 97 52 41 44**

hereby declare that the machines,

**DEHUMIDIFIER TYPE DRI-TEC 600
DEHUMIDIFIER TYPE DRI-TEC 2000**

are in conformity with the following directives:

89/392/EEC: Directive on the safety of machines
73/23/EEC: Low Voltage Directive
89/336/EEC: EMC Directive

– and were manufactured in conformity with the following standards:

EN 60335-2-40: Standard for electric dehumidifiers
EN 50081-1-EMC: Generic Standard for Emission
EN 50082-1 EMC: Generic Standard for Immunity
EN 292: Machine Safety

SKIVE, D. 10/1.96
Place and date

Dantherm[®]
A/S DANTHERM DK-7800 SKIVE
Tel. +45 97 52 41 44

Signature