

THERMOBILE

I N D U S T R I E S B V

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USER'S MANUAL ELECTRIC HEATER PROHEAT 18



EEC remark

This appliance meets the required EEC directives:

Machine directive 89/392/EEC
Low Voltage Directive 73/23/EEC

Table of contents

1	PREFACE	3
2	UNPACK.....	3
3	GUARANTEE CONDITIONS AND LIABILITY	3
4	TECHNICAL DATA	4
	Components of the electric heater	4
	General data.....	4
	Electrical data	4
	Air-related data.....	4
5	SAFETY AND ENVIRONMENT.....	5
	5.1 Icons used in the manual	5
	5.2 General safety regulations.....	5
6	INSTALLATION.....	6
7	USE AND OPERATION	7
	Advice.....	7
	Electric heater not in use.....	7
	Ventilation of the ambient air	7
	Heating of the ambient air	7
	Heating and constant ventilation of the ambient air	7
	Use of the room thermostat.....	7
	Switch off the electric heater	7
8	MAINTENANCE.....	7
9	TROUBLE SHOOTING	8
10	WIRING DIAGRAM PROHEAT 18.....	9
11	MATERIALS LIST 80-04-05.....	12

1 PREFACE

Dear customer,

Thank you for purchasing the ELECTRIC HEATER PROHEAT 18. This heater is designed for heating air, for instance in houses, buildings, site offices and workshops. Your new ELECTRIC HEATER has many advantages.

Carefully follow the instructions in this manual and carry out maintenance activities on a regular basis.

Regular maintenance results in an enhanced reliability with the emphasis on safety.

Besides, it will lengthen the life span of the heater.

This manual contains various warnings and instructions. Therefore carefully read the manual and act accordingly. Only by meticulously following the instructions dangerous situations that may cause personal injury or damage the ELECTRIC HEATER can be avoided.

Trained personnel may only carry out maintenance activities and repairs.

2 UNPACK

- 1 Remove the packaging.
- 2 The packaging contains the following components:
 - Electric heater
 - User's manual
- 3 Inspect the electric heater for any damage.
- 4 Read the user's manual.
- 5 Now you can install the electric heater in accordance with chapter 6 of this user's manual.

3 GUARANTEE CONDITIONS AND LIABILITY

The customer is entitled to 12 months warranty towards the manufacturer, subject to the conditions given below.

- The guarantee period comes into effect on the date of delivery of the electric heater to the buyer.
- Any transport costs related to sending arising from a claim to guarantee are at the customer's expense.
- Any call out charges are at the expense of the customer. The guarantee is no longer valid if the appliance has been modified by any other than the manufacturer or not in accordance with the instructions of the manufacturer.
- The guarantee is exclusively valid if the electric heater has been installed and is used and maintained in compliance with the instructions of the manufacturer.
- Guarantee is excluded in case of defects caused by:
 - overdue maintenance or negligence
 - repair by an incompetent person
 - improper use
 - modifications of the appliance

This is at the discretion of the manufacturer.

The guarantee is only applicable to defects that have been discovered during the guarantee period, insofar these defects are based on material or manufacturing faults (at the discretion of the manufacturer or an unbiased expert).

- Only use original parts for replacements.
- The liability of the manufacturer for defects is explicitly limited to compliance with the guarantee obligations described above.

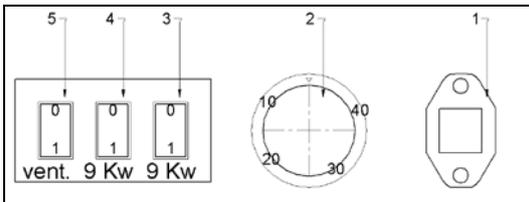
All claims to compensation for any reason, except the reason for non-compliance with the guarantee obligations, are excluded.

- Consequential damage of any nature caused by the electric heater is excluded.
- These guarantee conditions are generally binding.
- We shall not accept any obligations towards and arrangements with third parties.

4 TECHNICAL DATA

MODEL	ProHeat 18
VOLTS	400 V 3~
INPUT	18 kW
CURRENT	26 A
FREQUENCY	50 Hz
PROTECTION	IP 21
PROD. NR:	40.018.000
CE	Fabr. year: 2004 Serial nr: 47.0004
	THERMOBILE Ind. B.V. Brede, Holland

Type plate



thermostat	black red red	room thermostat
drawing 1	PROHEAT 18	

The electric heater consists of a sheet steel housing in which a ventilator and six stainless steel heating elements have been mounted in a fully shrouded way.

The heating part has been provided with overheating protections that deactivate the heating elements when the temperature becomes too high.

Components of the electric heater

- 1 Connection point room thermostat
- 2 Control thermostat
- 3 On/of switch heating, 9 kW
- 4 On/of switch heating, 9 kW
- 5 On/of switch ventilator

Type: PROHEAT 18

General data

depth	585 mm
width incl. wheels	535 mm
total height	945 mm
weight	40 kg
protection level	IP 21
direction of rotation of ventilator	always OK

Electrical data

supply voltage	400 V 3~
frequency	50 Hz

	position	current	power	capacity
from motor		0.6 A	250 W	
	9 kW	13 A	9 kW	7800 kcal/h
	18 kW	26 A	18 kW	15600 kcal/h

power supply cable H07RN-F	4 x 4 mm ²
plug 3p. + $\frac{1}{\text{ground}}$ or 3p.+N+ $\frac{1}{\text{ground}}$	32 A

fuse max.	35 A
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Air-related data

air speed	17 m/s
air output	1000 m ³ /h
temperature increase	120° C
maximum ambient temperature	40° C

The technical data mentioned have been rounded.

5 SAFETY AND ENVIRONMENT

It is necessary to carefully read the instructions for use before using the electric heater and to follow the instructions.

5.1 Icons used in the manual

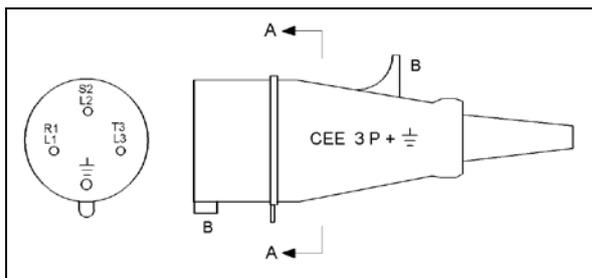


Point of attention.

5.2 General safety regulations

- If you are not familiar with the electric heater yet, we advise you to first carefully read the manual and study the instructions one by one.
 - Competent and trained employees who have read the manual for this appliance may only operate the electric heater.
 - Competent persons include persons who have been informed about the dangers resulting from improper use.
 - Never use the electric heater in rooms where there is a risk of explosions.
 - Always connect the electric heater to a standard earthed socket 400 V 3 ~ 50 Hz, fused with a maximum of 35 A. The socket must comply with the standard that applies in the country concerned.
-  Attention
- When using a plug 3P+N+ $\frac{1}{\text{PE}}$, do not use the ZERO.
You should connect the blue wire to a phase.
- See chapter 6.
- Changing the phase wires will not affect the proper operation of the electric heater.
 - If you need an extension cable, make sure that this is earthed and of the correct type. Improper or defective extension cables can lead to serious danger.
-  Warning for a faulty action that may result in fatal injury or damage of the electric heater.
- The fact that the electric heater is functioning properly does not mean that the electric heater has been earthed nor that it has been safely installed. Consult a recognised expert to be absolutely sure.
 - A trained and authorised person may only do repair and maintenance of the appliance.
- Do not place any objects within a distance of 150 cm in front of the air outlet.
 - Never cover or obstruct the air inlet and/or outlet. Do not insert any objects into the air inlet.
 - Do not place or install the electric heater in the rain and do not use when the air humidity is above 85%.
 - Always observe the applicable local safety regulations to prevent danger and accidents.
 - If you detect visible defects, immediately disconnect the power supply and repair it (e.g. power supply cable damaged).
 - It is forbidden to install the appliance in the direct vicinity of inflammable material or to cover the appliance.
 - During repair always use original parts that comply with the current safety standards. Parts of other manufacturers that appear to fit at first sight may jeopardize the safety.
 - Authorised and trained personnel may only carry out repairs and maintenance activities.
 - Before starting the maintenance activities, disconnect the power supply.
 - Never remove the housing of the electric heater while the electric heater is connected to the power supply.
 - Never clean the electric heater with water.
 - Make sure that the Safety and Environment regulations are observed in accordance with the local standards.
 - When producing the electric heater all materials used were carefully selected in order to burden the environment as little as possible.
 - Therefore the electro technical parts mainly consist of metals in which plastics have been incorporated to a small extent. These parts can without any problems be offered to a processing company for re-use.

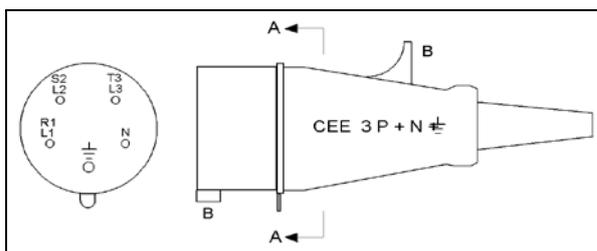
6 INSTALLATION



A: view A-A, seen from the inside

B: cam

CEE plug - 3P + \perp 32 A



A: view A-A, seen from the inside

B: cam

CEE plug - 3P + N + \perp 32 A

- 1 Check whether the mains voltage is 400 V 3~ + \perp 50 Hz.

If not, do not connect the electric heater.

- 2 If the electric heater has not been provided with a power plug, mount this following the instruction below:
 - Disassemble the plug. Loosen the screws of the terminals and the pull relief. If necessary, cut the tulle to size.
 - Slide the housing over the cable.
 - Cut the cores (if necessary) to the correct length for the terminals and mount the cores as follows:

green/yellow = earth wire
(most important wire)

L1 or R1	brown	} phase wires
L2 or S2	black	
L3 or T3	blue	

N Do NOT use (with 3P+N+ \perp)

In this case blue can be used as phase.
See NEN 1010 chapter 51, art. 514.3.4.
Exchanging the colours brown, black and blue will not affect the operation of the electric heater.

- 3 Securely tighten the screws of the terminals and, subsequently, of the pull relief. Place the housing on the interior work and screw it on.
- 4 Before connecting the electric heater to the power socket, set the switches 3+4+5 to position 0 (off). See Use and operation, chapter 7.
- 5 Set the switch to the required position. See Use and operation, chapter 7.



If you use an extension cable, pay attention to the advised voltage loss of the extension cable of 10 V. See the table below.

4 mm ²	50 m	26 A	9 V
6 mm ²	100 m	26 A	12.5 V

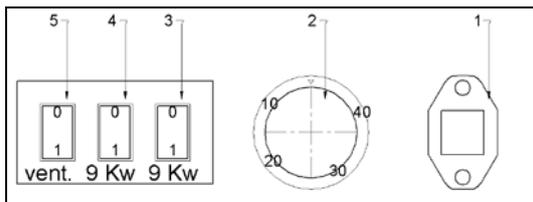
Fully unwind cable reels, if used.

7 USE AND OPERATION

Use the electric heater just for heating air. For example, use the electric heater for heating or drying houses, buildings, site offices and workshops. You can also use the electric heater for speeding up drying processes of, for example, paintwork and plasterwork.

Advice

The best and quickest drying result is achieved when you install the electric heater below and open a window above.



thermostat black red red room thermostat

Operating panel PROHEAT 18

Electric heater not in use

Set the switches 5 (ventilator), 3 (heating 9 kW) and 4 (heating 9 kW) to position '0' to switch off the electric heater.

Ventilation of the ambient air

Set the switch 5 (ventilator) to position 'I' and switch 3 (heating 9 kW) and switch 4 (heating 9 kW) to position '0'. The thermostat (2) will not become active.

Heating of the ambient air

Set the switch 3 (heating 9 kW) and/or switch 4 (heating 9 kW) to position 'I'. Set the switch 5 (ventilator) to position '0'.

Set the thermostat to the required temperature.

After the thermostat (2) has switched off the heating, the ventilator will stop after after-cooling.

Heating and constant ventilation of the ambient air

Set the switch 5 (ventilator) to position 'I'. Set the switch 3 (heating 9 kW) and/or 4 (heating 9 kW) to position 'I'. Set the thermostat to the required temperature. After the thermostat (2) has switched off the heating, the ventilator will keep running constantly.

Use of the room thermostat

If the room thermostat (1) has been connected, the heater thermostat (2) must be on maximum.

Switch off the electric heater



When switching off the heater, set the switches 5, 4 and 3 to position '0'.

Leave the plug in the socket for another 5 minutes for after-cooling.

8 MAINTENANCE



Before starting the maintenance activities, disconnect the power supply.

Remove the rear panel from the electric heater by unscrewing all screws.

Clean the inside of the electric heater with compressed air. Make sure that the fan blade is cleaned well.

Carefully loosen very persistent dirt with a screwdriver. Make sure that everything is removed, otherwise the ventilator can get out of balance. This will cause vibrations that will seriously affect the life span of the bearings.

Never clean the inside with water.

Clean the housing with a moist cloth. After that let the housing dry or wipe it dry. Place the housing on the electric heater again.

Touch up any damage of the coating.

We constantly aim at improving our products. Changes resulting from this are without reservation and without the obligation to change the heaters that have already been put in the market.

9 TROUBLE SHOOTING

The electric heater has been composed of high-quality parts and will function for 10 years under normal conditions.

Fault	Possible cause	Solution
Ventilator runs and the indicator lamp in the heating switch is lit (electric heater is cold)	Temperature protection or heating element defect Relay defect Wiring loose	(see remark 2)
Ventilator runs and the indicator lamp in the heating switch (3 and/or 4) is not lit (electric heater is cold)	Thermostat set too low. Switch (3 and/or 4) for heating not switched on.	Set the thermostat higher. Set the switch(es) to 'I'.
Ventilator does not run Heater gives warmth	Ventilator defect Wiring loose	(see remark 2)
Ventilator runs slowly Heater gives warmth	Fuse defect (see remark 3)	Check the fuses in the distribution box (see remark 1)
	At plug 3P + N + $\overline{\text{I}}$ the blue wire has been attached to the N instead of to a phase	Check the plug and connect the blue wire to L1, L2 or L3 (see remark 1)
Ventilator runs normally, heater gives less warmth than usual	One fuse defect means 50% of the warmth (see remark 3)	Check the fuses in the meter cupboard (see remark 1)
	At plug 3P + N + $\overline{\text{I}}$ the blue wire has been attached to the N instead of to a phase	Check the plug and connect the blue wire to L1, L2 or L3 (see remark 1)
	Heating elements defect	Technical defect (see remark 2)
Electric heater does not react	Electric heater does not receive any power	Check whether the power plug is in the socket. Check the fuses Check whether the connecting cable has been interrupted (see remark 1)
Electric heater does not react	Internal fuse is defect, 2 A slow 500 V (6.3 x 32)	Check the heater and replace the fuse (see remark 2)
Electric heater does not react	Guard is not on the room thermostat connection	Place the guard on the thermostat connection.
Room thermostat connected and electric heater does not react	Heater thermostat is not on maximum	Set the heater thermostat to maximum.

Remark 1) When you cannot remedy the fault, contact a recognised professional.

Remark 2) Contact the supplier of your electric heater.

Remark 3) When one fuse is defect, the heater will deliver 50% of the set value.

11 MATERIALS LIST 80-04-05

Pos.	Number	Description	
61	1	Motor with centr. fan 230 V~ 50 Hz 250 W	
62	1	Mounting bracket for motor	
63	1	Capacitor 8 µF 500 V~	
64	2	Air inlet rim	
65	1	Voltage monitoring relay 2-pole + resistance	
66	3	Stainless steel heating elements 230 v 3 kW	
67	3	Stainless steel heating elements 230 v 3 kW.	
68	12	IT 400 gasket rings 19 x 13 x 2 mm	
69	12	Brass nut ¼ Gas x 5½ mm pitch 19 mm	
70	1	Max. Clixon thermostat 63°C.	
71	1	After-cooling Clixon thermostat 45°C 16 A built-in change-over contact	
72	1	Regulating thermostat 0-40°C 16 A change-over	
73	1	Thermostat covering ring chrome	
74	1	Thermostat knob black 40 mm round	
75	2	Relay 2-pole 25 A 230 V~ + mounting brackets	
76	1	Cable H07RN-F 4x4 mm² l =2,75 m with 4 x bush 4x10	
77	1	Connector strip for 7 x 3 Fastons SFK7 HF KR with 	
78	1	Insulation plate under SFK7 HF KR 224 x 103 mm	
80	1	Front plate with outblow 150 round epoxied	Grey Ral 7022 Hg.
81	1	Rear side with 2 x 6 air inlet slots epoxied	Grey Ral 7022 Hg.
82	1	Bottom plate epoxied	Grey Ral 7022 Hg.
83	1	Cover 2 x 5 x 6 inlet slots epoxied	Red Ral 3003 Hg.
84	1	Steel tube frame black	
85	2	Wheels 160 mm rubber tyre and fastening material	
86	1	Type plate PROHEAT 18 100 x 40 mm	
87	4	Max. Clixon thermostat 63°C 25 A wall-mounted	
88	1	Fibreglass-enforced polyamide perfect swivel Pg 21	
89	1	Nut Pg 21	
90	2	On/of tumbler switch red 2-pole with lamp	
91	1	Change-over switch tumbler black 2-pole	
92	1	Cover plate 231 x 670 mm	
93	1	Ring core transformer 400/230 V~ 250 VA	
94	1	Connector strip for 3 x 3 Fastons SFK 3F KR	
95	1	Transformer plate with fastening and insulation	
96	2	Fuse holder 6.3 x 32	
97	2	Fuses 6.3 x 32 2 A slow 500 V	

Pos. no.	number	EDP no.	description
1	1	40018025	Interior work 18 kW assembly
2	1	40018013	Fastening plate
3	1	40018012	Guard
4	-		
5	1	40018024	Cooling plate
6	1	40018010	Mantle
7	2	40018031	Plastic handle
8	1	40018011	Rear panel
9	1	40018022	Handle
10	1	40202091 40202092 40226030	Room thermostat connection
11	1	40018019	Wheel shaft
12	2	40501672	Washer
13	2	40202142	Wheel
14	2	40202101	Locking ring
15	2	40202102	Dust cover
16	1	40018014	Footrest
17			
18			