

INSTRUCTION MANUAL

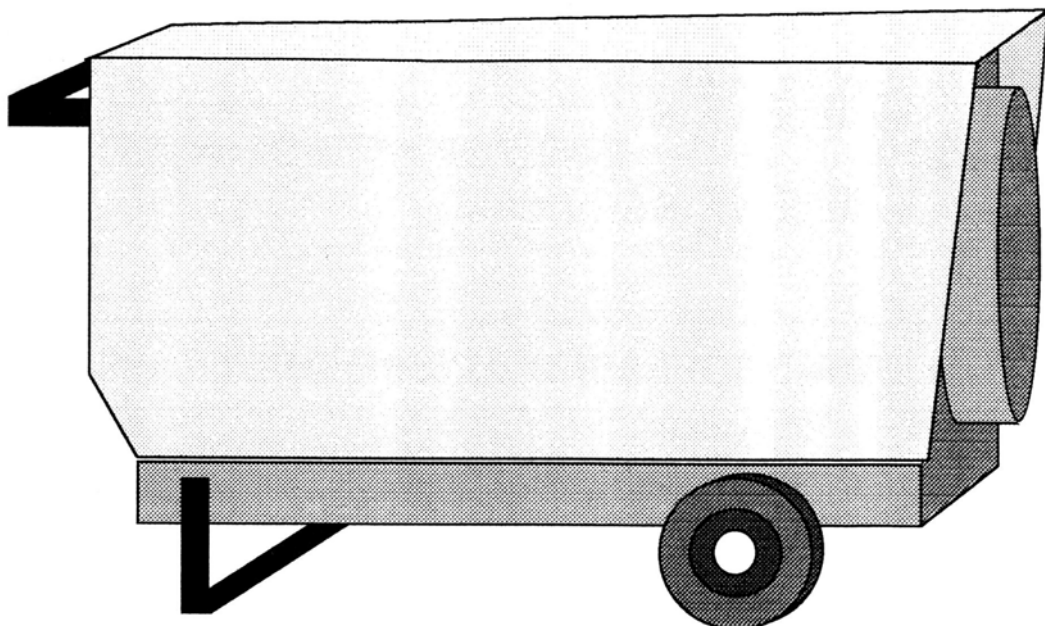
PATRON E 60

205,000 BTU/h (60 kW)
ELECTRIC FAN HEATERS

MODEL P60000

480 VOLTS

THREE PHASE



IMPORTANT

**READ AND UNDERSTAND THIS MANUAL BEFORE
ASSEMBLING, STARTING OR SERVICING THE
HEATER.
IMPROPER USE OF HEATER CAN CAUSE SERIOUS
INJURY.**

FOR PROFESSIONAL USE ONLY

! WARNINGS !

DO NOT COVER

**DO NOT POINT TO FLAMMABLE
MATERIALS**

**DO NOT OPERATE IN WET
CONDITIONS OR RAIN**

**DISCONNECT FROM POWER SOURCE
WHEN SERVICING**

FOR PROFESSIONAL USE ONLY

GENERAL INFORMATION FOR THE USER

The model P60000 electric fan heaters are designed for professional use.

The heat is generated in the heating elements inside the inner mantle of the heater. Warm air is then distributed by an electric motor driven fan blowing air through the heater.

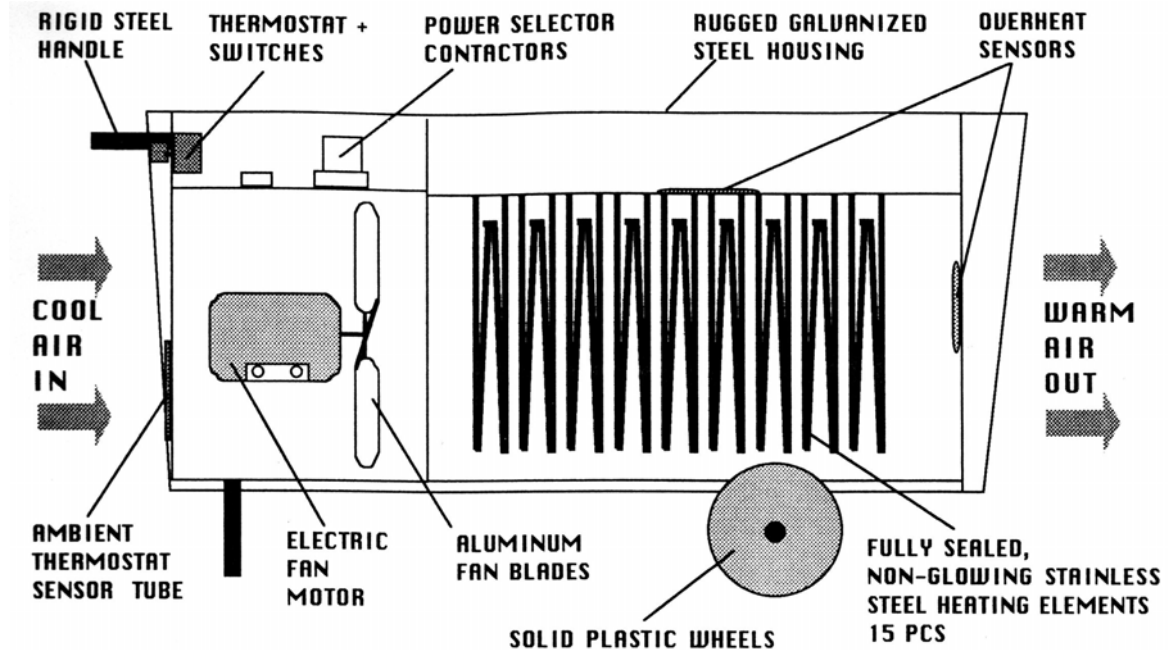
Although not glowing, the heating elements have high surface temperatures. Combustible materials must be kept at a safe distance from the heater. Extra care must be taken that no combustible particles can enter the heater with the air sucked in by the fan.

Keep the heater clean of dust at all times. Dust may cause fire when heated.

Make sure the fan blade may rotate freely at all times.

PRINCIPLE OF OPERATION

P60000 — ELECTRIC FAN HEATERS



TECHNICAL SPECIFICATIONS

HEAT OUTPUT (Three-stage selector)	BTU/h Watts	82,000 / 164,000 or 205,000 24,000 / 48,000 or 60,000
AIR FLOW	CFM m ³ /h	1765 3,000
ELECTRIC CONNECTION		480 V, 60 Hz, THREE PHASE Max. amp draw: full output 75 A / phase partial 60 A / phase partial 30 A / phase
AMBIENT THERMOSTAT		Temp. range 32 to 100 °F 0 to 40 °C
LENGTH	inches millimeters	46 1150
WIDTH	inches millimeters	20 500
HEIGHT	inches millimeters	25 620
WEIGHT	lbs. kilograms	125 60

OPERATION

REVIEW AND UNDERSTAND ALL WARNINGS IN THIS MANUAL. THEY ARE ESSENTIAL FOR SAFE USE OF THE HEATER. FOLLOW ALL LOCAL CODES.

TO START HEATING:

1. Place the heater on a stable and level surface. Make sure that no explosive or combustible fumes or dust are present. See that the heater is not exposed to water spray, rain or dripping water.

MINIMUM CLEARANCES FROM COMBUSTIBLE MATERIALS:

OUTLET — 6 FEET	SIDES — 1 FOOT	TOP — 2 FEET	REAR — 2
FLOOR — COMBUSTIBLE			

2. Connect power cord of heater into 480 V / 60 Hz / three phase power source. **THE POWER OUTLET HAS TO BE EQUIPPED WITH A CIRCUIT BREAKER!** See paragraph "technical specifications" in this manual for correct amperage rating.
3. Set the thermostat to a temperature above the ambient room temperature by turning the knob. **NOTE!** The heater will start only if the thermostat "calls for heat" meaning that it is set to higher than prevailing ambient temperature.
4. Select the power range by means of the switches marked S1, S2 and S3.
S1 "ON" = Partial output 24 kW (84,000 BTU/h)
S1 & S2 "ON" = Partial output 48 kW (164,000 BTU/h)
S1 & S2 & S3 "ON" = Full output 60 kW (205,000 BTU/h)

THE HEATER WILL NOW OPERATE AUTOMATICALLY, CONTROLLED BY THE THERMOSTATS.

TO STOP HEATING:

1. Turn all switches to "OFF"

ALLOW FAN TO RUN UNTIL IT STOPS AUTOMATICALLY - DO NOT DISCONNECT HEATER FROM THE POWER SOURCE!

2. Unplug the power supply cable after the fan has stopped down-cooling the heater.

NOTE!

THE HEATER HAS EQUIPPED WITH THE OVERHEAT LIMIT SWITCHES WHICH MAY CAUSE THE HEATER TO STOP.

ALWAYS CHECK AND REMOVE THE CAUSE FOR OVERHEATING BEFORE RE-STARTING!

STORAGE

Store heater in a dry, clean and safe place out of reach of children and unqualified persons.

MAINTENANCE

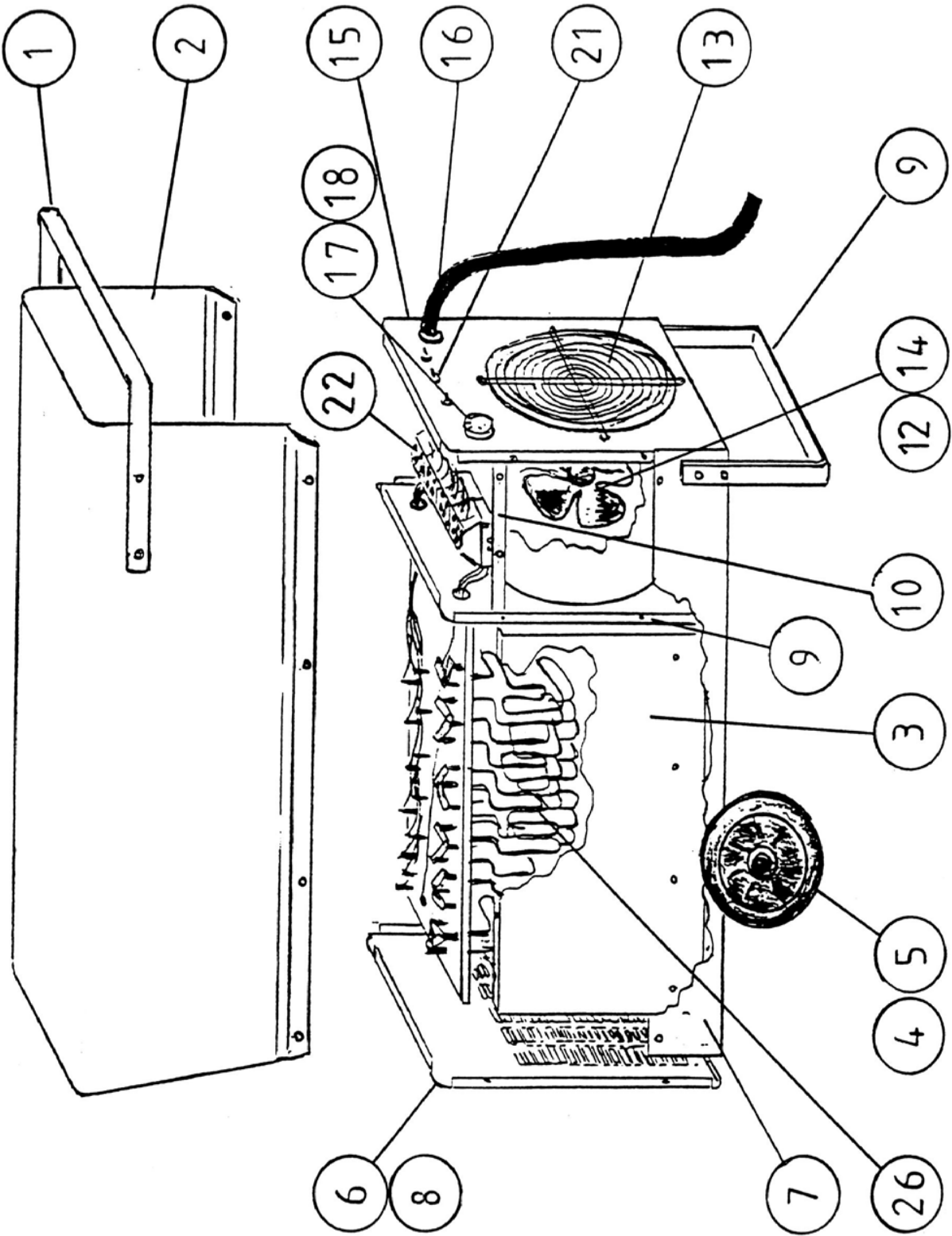
WARNING!

NEVER SERVICE THE HEATER WHILE IT IS PLUGGED IN, RUNNING OR HOT. SEVERE BODILY INJURY OR ELECTRIC SHOCK MAY OCCUR.

ONLY QUALIFIED PERSONS ARE ALLOWED TO OPEN HEATER FOR SERVICE.

1. Keep heater clean. Use pressurized air to blow fan blades clean. NOTE! Use moderate pressure to avoid damages to fan blades.
2. Inspect heater before and after each use.
3. The bearings of the fan motor must be lubricated according to instructions on the motor.

MODEL P60000

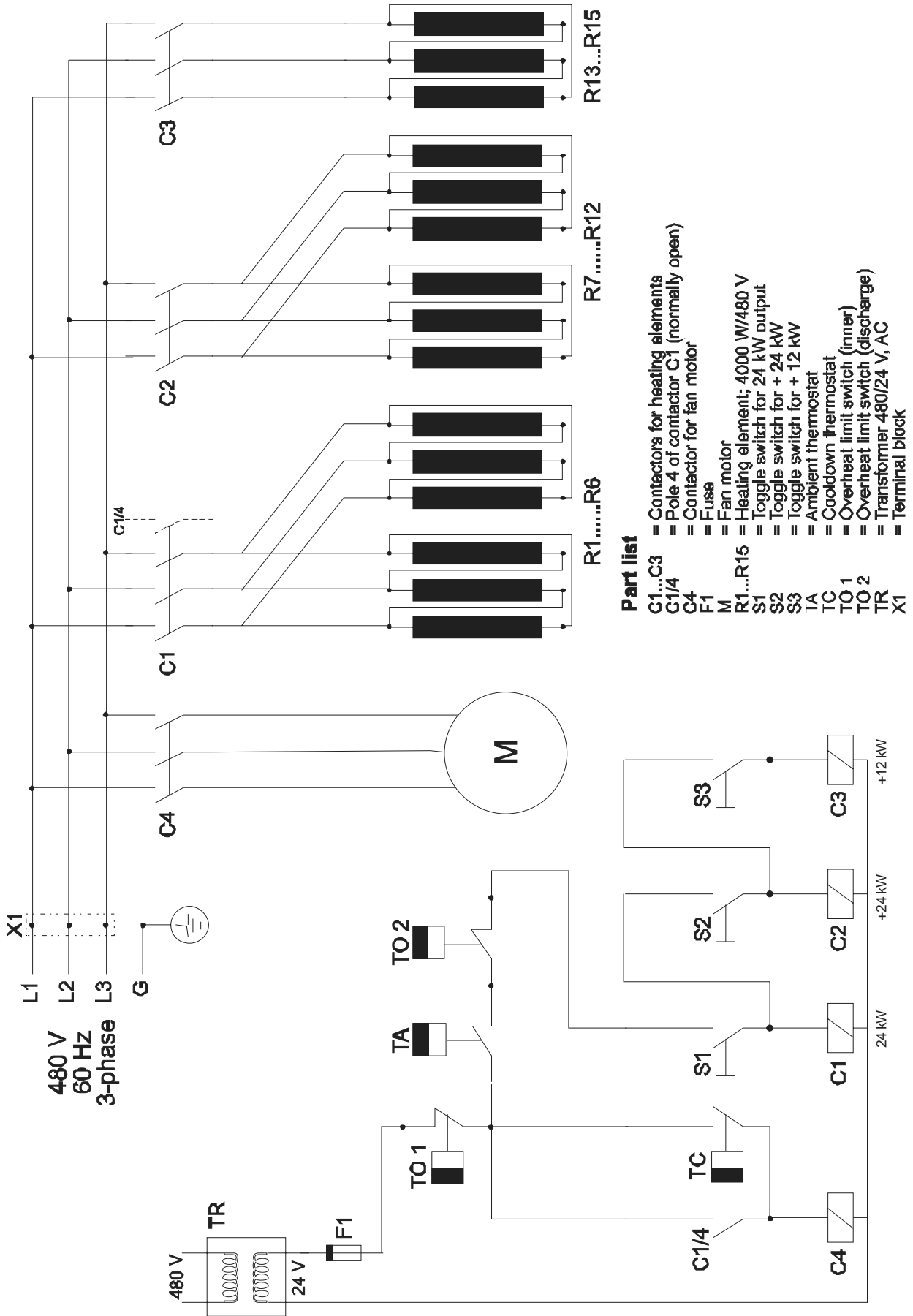


PART LIST

Item #	Part #	Description
1	600001	Handle
2	600002	Hood (including connection hatch)
—	—	Connection hatch (not shown)
3	600003	Heat exchange chamber
4	600004	Wheel assembly
5	600005	Wheel shaft
6	600006	Front panel
7	600007	Bottom frame
8	600008	Hose adapter
9	600009	Partition panel
10	6000010	Contactormounting plate
11		
12	6000012	Fan blade
13	6000013	Fan guard grill
14	6000014	Fan motor
15	6000015	Rear panel
16	6000016	Strain reliever
17	6000017	Ambient thermostat
18	6000018	Thermostat knob
19		
20		
21	6000021	Toggle switch (3 pcs)
22	6000022	Contactormounting plate
23		
24		
25		
26	6000026	Heating element (15 pcs)
27		
		SEE WIRING DIAGRAM FOR MORE ELECTRIC PARTS!

WIRING DIAGRAM

Wiring diagram for P60000



Part list

- C1...C3 = Contactors for heating elements
- C1/4 = Pole 4 of contactor C1 (normally open)
- C4 = Contactor for fan motor
- F1 = Fuse
- M = Fan motor
- R1...R15 = Heating element; 4000 W/480 V
- S1 = Toggle switch for + 24 kW output
- S2 = Toggle switch for + 24 kW
- S3 = Toggle switch for + 12 kW
- TA = Ambient thermostat
- TC = Cooldown thermostat
- TO 1 = Overheat limit switch (inner)
- TO 2 = Overheat limit switch (discharge)
- TR = Transformer 480/24 V, AC
- X1 = Terminal block