

Mobile Warmlufterzeuger

Mobile warm-air heaters

Typenreihe K (Öl)

Model series K (oil)



K 80

Art.-Nr. / Item No. 1101600

EU Declaration of Conformity

In accordance with the EU Machinery Directive (98 / 37 / EC) Annex II A

For equipment

construction series:

Fan-assisted air heaters with heat exchangers

Type:

K 30, K 30 T, K 50, K 80, K 120, K 160 eco, K 170, K 220

HEYLO GmbH, Im Finigen 9, 28832 Achim, declares that the machines described correspond to the EU Machinery Directive as far as safety and health requirements are concerned, in their design and in the construction type brought into use by us.

The declaration will lose its validity if unauthorised changes are made to the machines.

Applicable EC Directives:

Machinery Directive 98 /37 /EC

Low Voltage Directive 2006 / 95 / EC

EMC Directive 2004 / 108 / EC

Harmonised standards used:

- | | | |
|------------------|-----------|--|
| - DIN EN 12100-1 | 01 : 2003 | Safety of machinery – Basic concepts, general principles for design
Part 1: Basic terminology and methodology |
| - DIN EN 12100-2 | 02 : 2003 | Safety of machinery – Basic concepts, general principles for design
Part 2: Technical principles and specifications |
| - DIN EN 60204-1 | 06 : 2007 | Safety of machines and electrical equipment of machines |
| - DIN EN 50081-2 | 03 : 1993 | Electromagnetic compatibility – generic emission standard, industrial environment |

National standards as well as technical specifications used:

- | | | |
|--------------|-----------|--|
| - DIN 4794-1 | 12 : 1980 | Stationary fan-assisted air heaters with and without interchange of heat |
| - DIN 4794-2 | 12 : 1980 | Stationary fan-assisted air heaters with interchange of heat |

Achim, 18-10-2011


.....
Dr . Thomas Wittleder
- Manager -

Contents

		Page
1.	General information	23
2.	Technical Data	24
3.	Equipment Construction	25
4.	Mode of operation	26
5.	Connections	26
6.	Commissioning/starting up	27
7.	Installation Guidelines	28 – 29
8.	Maintenance	29
9.	Troubleshooting	30 – 32
10.	Wiring	33
11.	Parts list	34 – 36
12.	Burner adjustment	37
13.	Spare parts for oil burner	38 – 39

PLEASE NOTE:

Please read without fail before starting up!

Please observe the advice given in the operating instructions carefully. If you do not observe it, the claim for a guarantee will expire. The manufacturer is not liable for damages or subsequent damages that may arise.

1. General information

Equipment description

The K 80 lit with heating oil EL, is a compact fan-assisted air heater (WLE) that can be used in many ways and is easy to transport for heating and drying. It functions equally well with and without a chimney and, with its high heat capacity, it is compact and light, but still built as a robust device. The WLE can only be used commercially.

Fan-assisted air heaters are intended for spot heating of repair areas in the open and in closed rooms, for thawing and heating of machines, devices and pipelines and for drying of rooms, hay and crops as well as auxiliary heating in emergency cases.

A tested oil burner has been installed in accordance with DIN EN 267. The current operating instructions for the WLE will definitely be supplemented by the operating instructions of the burner manufacturer for the burner.

Safety instructions

The equipment can only be operated by sufficiently trained persons.

Mobile fuel containers can only be installed and operated under observation of the Technical Regulations for Combustible Fluids (TRbF 20).

Do not install and operate the equipment in oily, sulphurous or salty environments.

The equipment should not be exposed to sprayed water (e.g. high pressure cleaners).

Only WLE models of blower oil burners in accordance with DIN EN 230 and DIN EN 267 can be used.

On no account can the safety facilities be blocked or bridged over.

The equipment can only be operated unsupervised with a thermostatic regulator.

Strictly speaking, the equipment should only be disconnected from the mains supply in a cooled off state.

Equipment must be installed on level surfaces, ensuring that they are stable.



All devices have a CE mark

2. Technical Data for the Model Series K

Type	K 30	K 30 T	K 50	K 80	K 120	K160 eco 1st //2nd level	K 170	K 220 1st / 2nd level
Item No.	1101605	1101610	1101584	1101600	1101625	1101670	1101683	1101684
Nominal heat load (kW)	32	32	54	83	120	141 / 161	168	155 / 234
Nominal heat output (kW)	29	29	50	76	110	133 / 151	153	148 / 219
Nominal volumetric air flow at 20°C	1800	1800	3600	5700	7900	10500	10130	11400 / 14100
Hot air flow at Δt (m ³ /h)	2050	2050	4200	6500	8900	12600	11000	11650 / 16100
Temperature increase Δt (K)	46	46	45	45	42	45	48	43 / 42
Max .available internal static pressure (Pa)	50	50	100	100	150	150	250	360 / 625
Sound volume at 5 m distance dB(A)	58	58	59	59	72	77	52	59/68,1
Connection for power supply (V/Hz)	230/50	230/50	230/50	230/50	230/50	230/50	400/50	400/50
Power input (A)	2,2	2,2	2,8	2,45	4,9	7,7	6,5	7,2 / 10,2
Power consumption (kW)	0,50	0,50	0,65	0,56	1,13	1,77	2,65	2,50 / 3,58
Protection class (IP)	44	44	44	44	44	44	44	44
Fuel consumption (kg/h) Heating oil EL	2,5	2,5	4,7	6,8	10,1	11,9/13,1	14,0	13,1 / 19,0
Exhaust gas loss %	9,1	9,1	9,0	8,0	7,0	5	8,7	4,9 / 6,4
Required chimney draught (Pa)	0	0	0	0	0	0	0	0
Mass flow of exhaust gas max. (kg/s)	0,015	0,015	0,025	0,038	0,054	0,09	0,099	0,072 / 0,069
Equipment dimensions:								
Length (mm)	1447	1447	1623	1674	1878	2000	2191	2298
Width (mm)	690	690	795	875	971	1002	1002	1294
Height (mm)	822	822	1082	1300	1410	1510	1510	1709
Weight with burner (kg)	73	85	140	190	225	330	340	480
Exhaust gas pipe – diameter (mm)	150	150	150	150	200	200	200	200
Blow-out nozzle – diameter (mm)	2 x 205	2 x 205	420	520	550	550	550	2 x 550
Thermostat settings:								
Ventilator thermostat TR (°C)	35	35	35	35	35	35	35	35
Temperature monitor TW (°C)	80	80	80	80	80	80/70	80	80
Safety temperature limiter STB (°C)	100 (fixed)	100 (fixed)	100 (fixed)	100 (fixed)	100 (fixed)	100 (fixed)	100 (fixed)	100 (fixed)

3. Equipment construction

A **ventilator** and **chromium-titanium combustion chamber** with a heat exchanger and exhaust gas nozzle fitted in the housing. The oil burner is installed in the switch cabinet with its control units within the casing and above the air suction unit. The tuyere connection with the flame pipe is fitted on the vertically placed combustion chamber. Both functional units are connected to each other by means of supply lines for air, fuel as well as ignition and monitoring bodies. Since the flame reverses within the combustion chamber, it has to be long and slender.

Capillary tube thermostats are installed in the device. The temperature regulator ensures that heating times are short when heating up by delayed switching on of the ventilator. When switching off, the temperature regulator allows the ventilator to run for some more time to remove the remaining heat from the device. The combustion chamber is thus protected from overheating due to subsequent heat at the same time.

Efficient oil pre-heating has been installed in the devices for operation during cold external temperatures. It heats up a specific amount of heating oil until the burner can start up.

The room thermostat connection permits room temperature dependent control of the device using a room thermostat.

An operating hour counter has been fitted into the device. It indicates running times of the device in [h] during heating operation. The running times can be read after opening the door of the switch cabinet.

4. Mode of operation

During operation, the heating oil EL is sucked in by the combustion pump through the suction pipe from the supplied tank or from a firmly installed oil supply unit. The amount of oil required for the heating performance is introduced into the burner nozzle through the pressure pipe, sprayed into the combustion chamber and ignited. A flame lights up, which, together with its combustion gases, heats the combustion chamber and the heat exchanger. Excess heating oil conveyed from the pump flows back into the container.

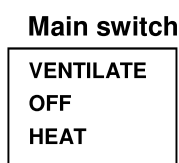
After a short heating up time, the temperature regulator switches on the ventilator. A very short heating up time is achieved in this way. The ventilator blows the sucked in air through the combustion chamber and the heat exchanger. It is heated up in this way. The heated up air exits on the opposite side through the blow-out nozzle.

The main switch is switched on to position -II- "heating" for **heating up**. First, the burner starts up and after heating up the combustion chamber and heat exchanger, the ventilator is also switched on and conveys hot air.

A room thermostat that is possibly attached later on has to be set higher than the ambient temperature, otherwise the device will not start up, since there will be no electricity supply.

The main switch is switched on to position -I- "ventilate" on the switch cabinet for **ventilation**. Only the ventilator is running now. The device is now functioning as a ventilation device.

The main switch is set to position -0- to **switch off** the device.



5. Connections

Power supply connection

The device is operated with 230V alternating current, 50 Hz. The K 80 is operated through a 2.5 m long cable with a three-pin plug. Power supply connection should only take place on networks that are secured with a fuse of a minimum of 10 A. Longer supply lines should have a cross section of at least 3 x 2.5 mm² or 5 x 2.5 mm² to avoid a drop in voltage in the device that is too high. In the case of low voltage of up to 195 V the device still functions flawlessly, so check the device's voltage if there are disruptions.

Operation with room thermostat

If the device is to keep the temperature in closed rooms constant, a 230 V room thermostat is connected to it. The cap on the connector must be removed for this purpose. The thermostat plug can now be plugged into the connector socket.

Oil pre-heating

Heating oil secretes paraffin at low temperatures. It blocks the oil filter and stops it from pumping. The devices do not start up and are therefore equipped with electrical heating elements. Oil pre-heating enables the oil to flow. It is controlled by a thermostat, independent of the device switch. However, the mains supply plug must be connected to a functioning and secured power supply source.

Chimney connection

Although the devices do burn without a smoke tube in the open and in open rooms, we recommend 1 m of tubing with a 150 mm diameter and a rain hood to stop penetration of rain and dirt as far as possible and to produce less of a draught.

In case of temporary operation in closed rooms, e.g. winter construction projects, the combustion gases must be discharged into the open. The exhaust gas pipe must be laid out in such a way, that at least 10 Pa draught is ensured in it and **no counter pressure whatsoever** is possible in the pipe. For this reason, please take care that the exhaust gas pipe is inclining and that it runs vertically upwards towards the end. It should at least be led above eaves height, even better above ridge height, to prevent counter pressure from the wind and thus emission of swirling soot from the burner. The exhaust gas pipes must be located at a minimum distance of 0.5 m from the combustible parts and be firmly attached. Their diameter should not be smaller than that of the exhaust gas nozzle of the fan-assisted air heater.

According to construction regulations, connection to a chimney with a 200 mm diameter that has to be led at least 0.40 m above the ridge, is prescribed for permanent operation in closed rooms.

6. Commissioning/start up

Heating

1. Connect the device to the oil supply lines through the flow connection and return port.
2. Plug in the mains plug in the appropriate mains supply socket.
3. If prescribed by the construction regulations, connect the chimney, else 1 m smoke tube with rain hood.
4. Turn on the main switch to position -II- "heating." The burner will start up in the pre-ventilation mode. After approx. 45 sec. the flame will ignite.
5. If the device and/or oil are cooled off, you will have to wait for 15 - 20 minutes depending on the temperature until the oil pre-heating has pre-heated sufficiently. Only turn the main switch on to the heating mode after this and, if it is being used, set the connected room thermostat above ambient temperature.
6. **Switching off:** Turn off the main switch on the switch cabinet - **do not pull out the mains plug** - since the ventilator must keep running for a short while after switching off to cool. The temperature regulator will switch the ventilator off automatically with a delay of 2 -3 minutes. This process can repeat itself a few times. Do not, therefore, pull out the mains plug to switch the device off for any reason. If the device is turned off by pulling its plug or by pulling at the main switch, the device cannot cool off afterwards and this can lead to damages to the combustion chamber and to flame monitoring.

In certain circumstances, the safety temperature limiter can switch itself off and lock automatically. The device will then only start up again after unlocking the safety temperature switch.

Ventilation

1. Turn the main switch on to position -I- "ventilate."
2. To switch off ventilation: Set main switch to position -0- "Off."



7. Installation guidelines

Regulations for installation

When installing mobile WLEs with closed combustion chambers, the respective local construction and fire protection regulations as well as regulations prescribed by professional associations must be adhered to, in principle.

Installation locations

The devices cannot be operated in places where ignitable air-gas or dust-air mixtures could occur (e.g. petrol pumps, painting workshops, etc.)

Floors and ceilings must be fireproof. Suctioning-in and blow-out nozzles should not be narrowed.

Installation rooms/spaces

1. Installation of the WLE in closed, well ventilated rooms **with a chimney connection:**

- The minimum size of a room must correspond to an average heat requirement in the room where the device is installed of 0.058 kW/m³.
- Fresh air supply required for flawless combustion must be guaranteed in any case (windows, doors or other openings).

Heating capacity (kW)	Room size (m ³)	Required amount of fresh air (m ³ /h)
25 kW	500 m ³	50 m ³ /h
50 kW	1000 m ³	80 m ³ /h
80 kW	1400 m ³	130 m ³ /h
110 kW	1900 m ³	180 m ³ /h
140 kW	2500 m ³	220 m ³ /h
160 kW	2800 m ³	240 m ³ /h

2. Installation of the WLE in closed, well ventilated rooms **without chimney connection:**

- The minimum size of the room must correspond to an average heat requirement of the room where the device is going to be installed of 0.058 KW/m³.
- On principle, a natural regeneration of air to 2.5 times that of the room content/h must be ensured (removal of the combustion gases and introduction of fresh air).
- The following openings are required for this amount of fresh air and outgoing air:
Fresh air: 2.8 m³
Outgoing air: 2.8 m³

Heating capacity (kW)	Amount of fresh air (m ³ /h)	Natural air regeneration (m ³ /h)
25 kW	500 m ³	1250 m ³ /h
50 kW	1000 m ³	2500 m ³ /h
80 kW	1400 m ³	3500 m ³ /h
110 kW	1900 m ³	4750 m ³ /h
140 kW	2500 m ³	6250 m ³ /h
160 kW	2800 m ³	7000 m ³ /h

Safety clearance

- On the sides of combustible parts: 0.60 m
- Blow-out side of combustible parts: 2.00 m
- Suctioning-in side for free in-flow of air: 0.60 m
- upwards: 3.00 m

Legal regulations

The following regulations must be observed during installation and start-up:

- Arbeitsstättenverordnung (Health and Safety at Work Act) §§ 5 and 14
- Arbeitsstättenrichtlinie ASR 5 (Health and Safety at Work directive)
- Unfallverhütungsvorschriften VBG 43, VBG 21 (Accident Prevention Regulations)
- Feuerungsanlagenverordnung (FeuVo) (Ordinance for Combustion Equipment) of the individual German states.

Available at: Deutsches Informationszentrum für technische Regeln (DITR) (German Information Centre for Technical Regulations) at DIN, Burggrafenstraße 6, 10787 Berlin

8. Maintenance

The device has to be maintained and cleaned at regular intervals to ensure operational safety and maintenance of prescribed ecological limits as well as economic viability.

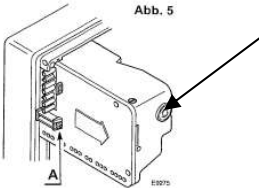
Maintenance work can only be carried out by competent experts. A fan-assisted air heater that is always kept clean ensures good combustion with undisturbed operation and a long life.

PLEASE NOTE !!! Pull out the mains plug first before doing any maintenance work!

1. The oil filter must be cleaned after every heating period or sooner.
2. The internal parts must be cleaned thoroughly to remove dust and dirt after every heating period or sooner, depending on how much dirt there is at the place of use.
3. Soot must be removed from the combustion chamber after every heating period and the burners must be checked for flawless values (can only be carried out by a specialist).
4. Only use original spare parts.

There are 3 openings on the K 80 to **clean the heat exchanger**. One is on the exhaust gas nozzle and can be opened by removing the hood and loosening the screws on the flange. The second and third openings for cleaning are on the blow-out and suctioning-in sides of the heat exchanger. Please remove the maintenance covering for this purpose.

9. Troubleshooting

Problem	Possible cause	Solution
<p>Burner is not running</p>	<p>No power supply</p> <p>Room thermostat (if being used) has been set too low</p> <p>Room thermostat is defective</p> <p>Automatic oil lighting device indicates disturbance (Lamp indicating disturbances lights up).</p>  <p>The safety temperature limiter has interrupted the power supply, blow-out temperature is too high, air input and air output have been narrowed down or device could not cool off afterwards: device was switched off by pulling out the plug, instead of by switching off.</p>	<p>Check with a voltage tester or lamp, turn on the main switch, change the fuse, check the supply line for loose contacts.</p> <p>If device is being operated without room thermostat: check whether the cap of the room thermostat connection is on, since the heater will not start up without the cap, if necessary, place the cap on (the cap contains a power supply bridge).</p> <p>Set room thermostat above room temperature</p> <p>Examine room thermostat (can only be carried out by an expert). Change it or bridge it over at the fastening clamp on the device in emergency cases and switch it on manually.</p> <p>Unscrew the switch cabinet covering. After waiting for approx. 1 minute, activate the lit up button for removing disturbances on the control unit of the burner. The indication of a disturbance on the control unit and signal should go off. The burner then attempts to start up again.</p> <p>When starting up initially, it is possible that the button for removing disturbances has to be pressed so often, until the burner has sucked in oil that is free of air. Check that the oil in the reverse flow pipe is free of bubbles. Heating up will only be possible after this.</p> <p>Turn the black protective cap to the left and remove it. Press the button for removing disturbances on the STB. This can be found above the entry point for the device cable. Get rid of the cause for overheating (resistance to suctioning-in or blowing out).</p>

Problem	Possible cause	Solution
Burner starts up, but then indicates malfunctioning	<p>Oil tank is empty</p> <p>Oil pipe is not connected or main tap is closed</p> <p>Oil filter is dirty</p> <p>Oil suctioning pipe is not hermetically sealed, pump sucks in air with it</p> <p>Oil pump is not producing any pressure</p>	<p>Fill up with oil</p> <p>Check pipeline and/or main tap</p> <p>Clean nozzle filter, pump filter, pre-filter, if necessary, change nozzle</p> <p>Seal off oil suctioning pipe. The oil in the reverse flow pipe should be free of bubbles.</p> <p>Set the pressure correctly. Change the coupling or pump (can only be carried out by an expert).</p> <p>Activate button for removing disturbances on the control unit (see section describing burner not starting up)</p>
Burner starts up but does not ignite, indicates malfunctioning	<p>No ignition spark. Carbon deposits on ignition electrodes or they are displaced.</p> <p>Burner nozzle is blocked</p>	<p>Check the tuyere connection. Pull out the mains plug or switch off the power supply and check the tuyere connection.</p> <p>Unscrew the burner nozzle. Change the nozzle for a new one. Do not attempt to clean the nozzle! Keep changing the nozzle, opened, cleaned nozzles never burn flawlessly.</p>
Flame goes out after starting up or burns intermittently	<p>The photo conductive cell is dirty</p> <p>Oil filter is dirty</p> <p>Oil suctioning pipe is not hermetically sealed, pump sucks in air with it: air bubbles in the oil in the reverse flow pipe.</p> <p>Burner nozzle blocked</p>	<p>Pull out the photo conductive cell and wipe it with a clean cloth. This cleaning should take place often in very dusty rooms.</p> <p>Check and clean all oil filters: pre-filters, pump filters, nozzle filters.</p> <p>Seal off the oil suctioning pipe, tighten all screws. Let the oil in the reverse flow pipe flow into a pot of oil. It must be free of bubbles. Set the pump pressure correctly (can only be done by an expert).</p> <p>As in "Burner starts up, but does not ignite", dismantle the burner nozzle and exchange for a new one (do not clean).</p>

Problem	Possible cause	Solution
	Combustion air is not properly set	Adjust combustion air (can only be done by an expert).
Burner does not switch off	Room thermostat has been fitted in an inappropriate place. Defective room thermostat	Fit the room thermostat at another place. It is important, for proper controlling, that the room thermostat if fitted in the room to be heated, should be fitted in such a way that no flow of cold air from windows, doors etc. comes into contact with it. If appropriate, move the room thermostat to another place. Examine the room thermostat (can only be done by an expert), change it in emergency cases.
Room thermostat switches burner off before the desired room temperature has been reached	The room thermostat has been fitted to a place where it comes into contact with hot air or rays of heat, e.g. from the sun, machines, hot water or steam pipes.	Move the thermostat to another place
Ventilator does not start up	Temperature regulator -1S3.1 (see wiring diagram) is not functioning No power supply	Check, whether the temperature regulator -1S3.1 is functioning, if necessary it has to be exchanged. Check the terminal strip X1 with a voltage tester (see wiring diagram) to see whether the ventilator drive is being supplied with electricity. Terminal 5 and 7N (see wiring diagram).



If the device is being supplied with power through the mains cable, work on the electrical unit can only be carried out by specialist electricians and/or a person trained in this area in accordance with VBG 4.

Please only get repair work to the electrical, gas and oil connections for fan-assisted air heaters done by HEYLO service partners.

Placing the device out of operation and disposal

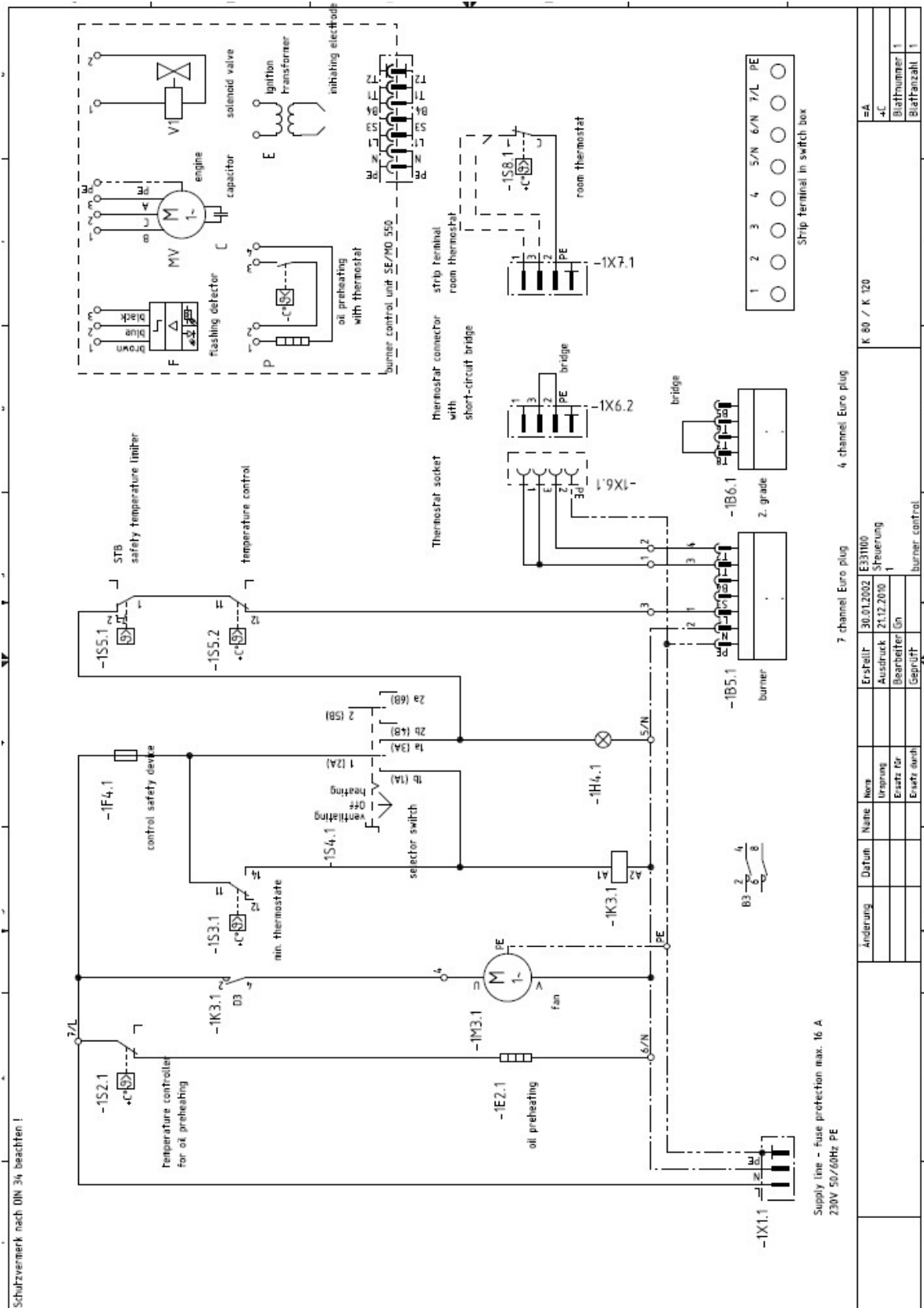
The device is designed for long term operation.
If it is to be disposed of, this must be done in accordance with the current relevant legal regulations in an environment friendly manner.

Any more questions? We would be glad to help!

Your HEYLO customer service:

Tel. +49 (0) 42 02 – 97 55 15
Fax +49 (0) 42 02 – 97 55 97
Email service@heylo.de

10. Wiring



11. Parts list for K 80 (Item No. 1101600)

Pos.	HEYLO Item No.	Description
1	1340067	Stirrup bolt
2	1380708	Rubber handle
3	1301988	Complete axle
4	1650010-01	Wheel VVP 300/25G
5	1650021	Starlock cap Dm. 25 mm
6	1232793	Ventilator Axial FB050
7	1450276	Mains cable with three-pin plug
8	1450912	Attached housing for room thermostat socket
9	1450916	Cap for room thermostat socket
10	1660980	Toggle switch I / 0 / II
11	1440743	Green operating lamp
12	1660150	Cap for safety temperature limiter
13	1440400	Control fuse 6.3 A
14	1440408	Miniature device fuse holder
15	1220134	Complete K80 heat exchanger
16	1380619	Gasket, burner flange
17	1380672	Gasket cleaning lid
18	1560224	Seal profile
19	1660087	Safety temperature limiter (STB)
20	1630630	Single-strand oil filter
21	1630644	Oil filter insert for single strand oil filter
22	1430035	Bi-metal thermostat with clip
23	1263008	Copper spiral
24	1400509	Heating element
25	1430121	Installed thermostat 20-90 °C /Value 40 °C (TR)
26	1430121	Installed thermostat 20-90 °C /Value 90 °C (TW)
27	1230145	Oil burner RG 2 H
28	1630214	Oil nozzle 1.65 Gph 45 °B Delavan
29	1420016	Control unit MO550
30	1630638	Filter insert for container filter
31	1262082	Barrel filter, complete
32	1630865	Coupling
33	1630866	Nipple
34	1450924	Gasket for room thermostat socket
35	1450925	Connection for connecting cable
36	1262080	Barrel filter
37	1660887	Cap for change-over switch
38	1440030	Miniature Contactor for fan

Diagram - View K 80 (1)

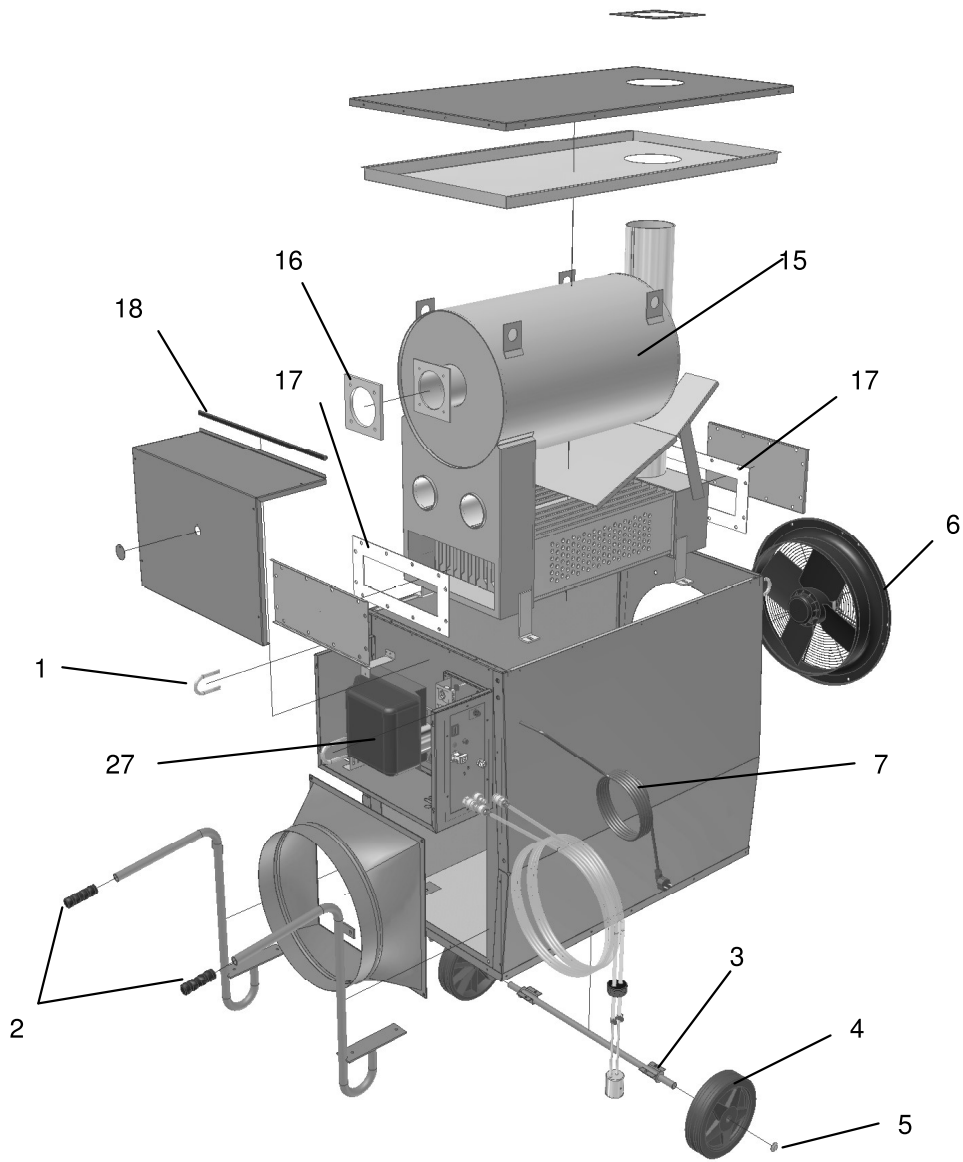
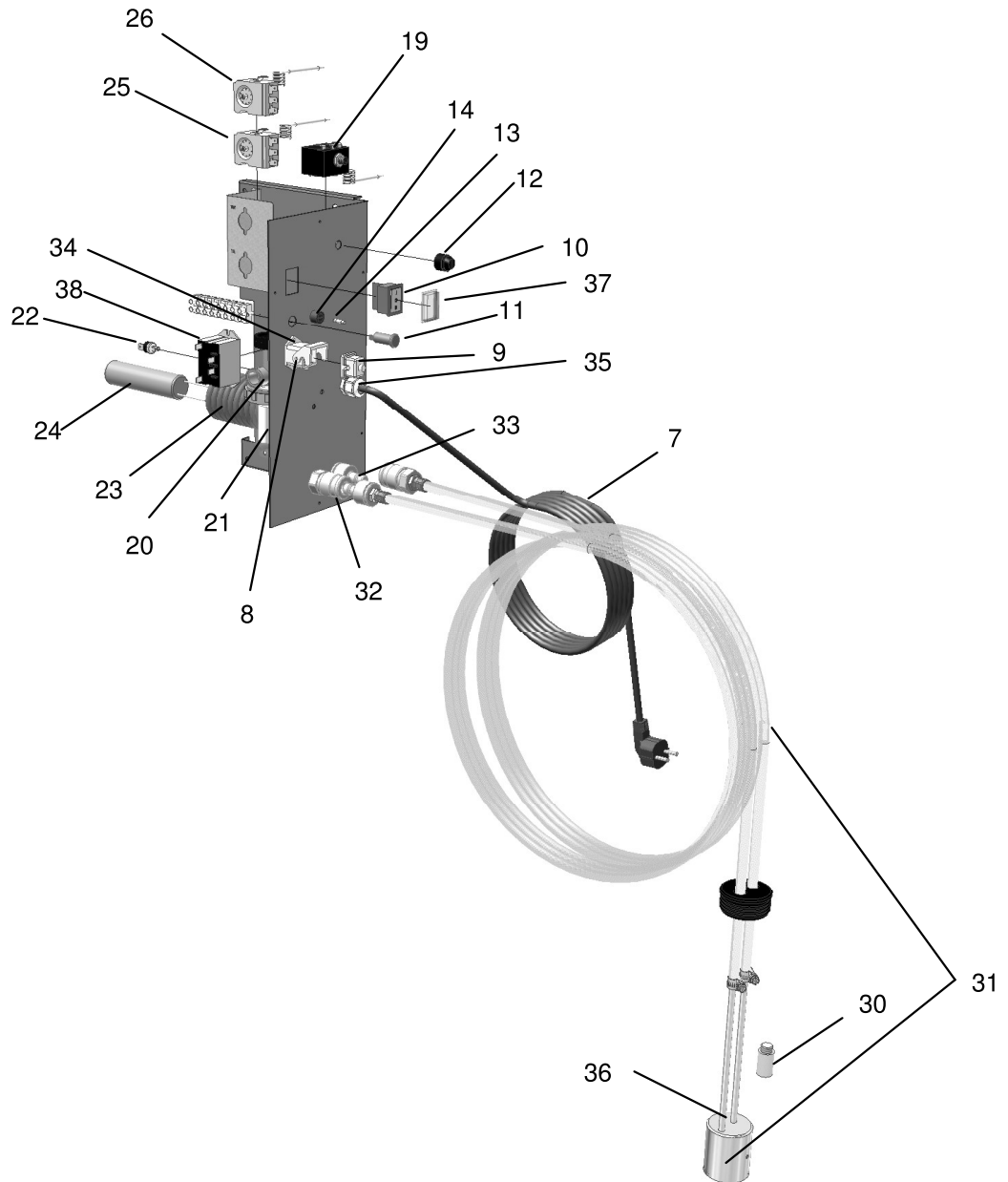
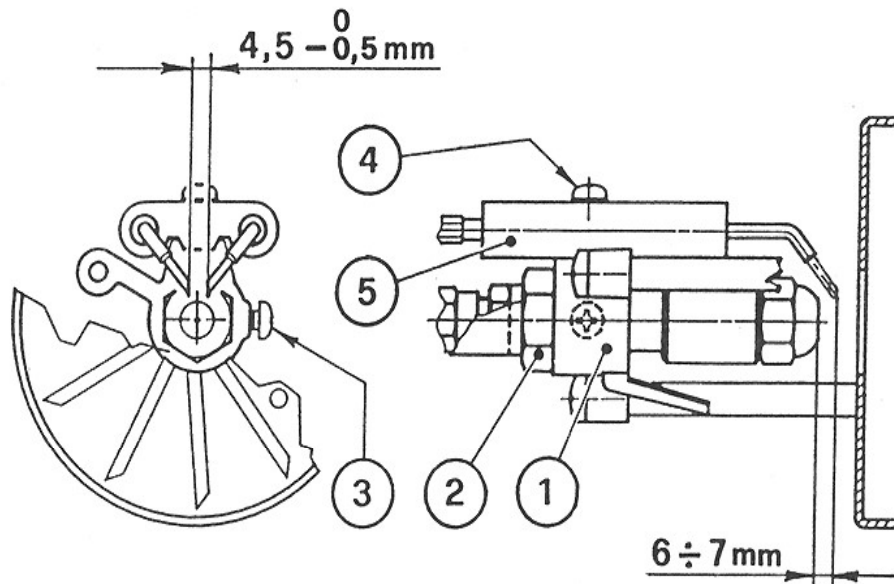


Diagram - View K 80 (2)



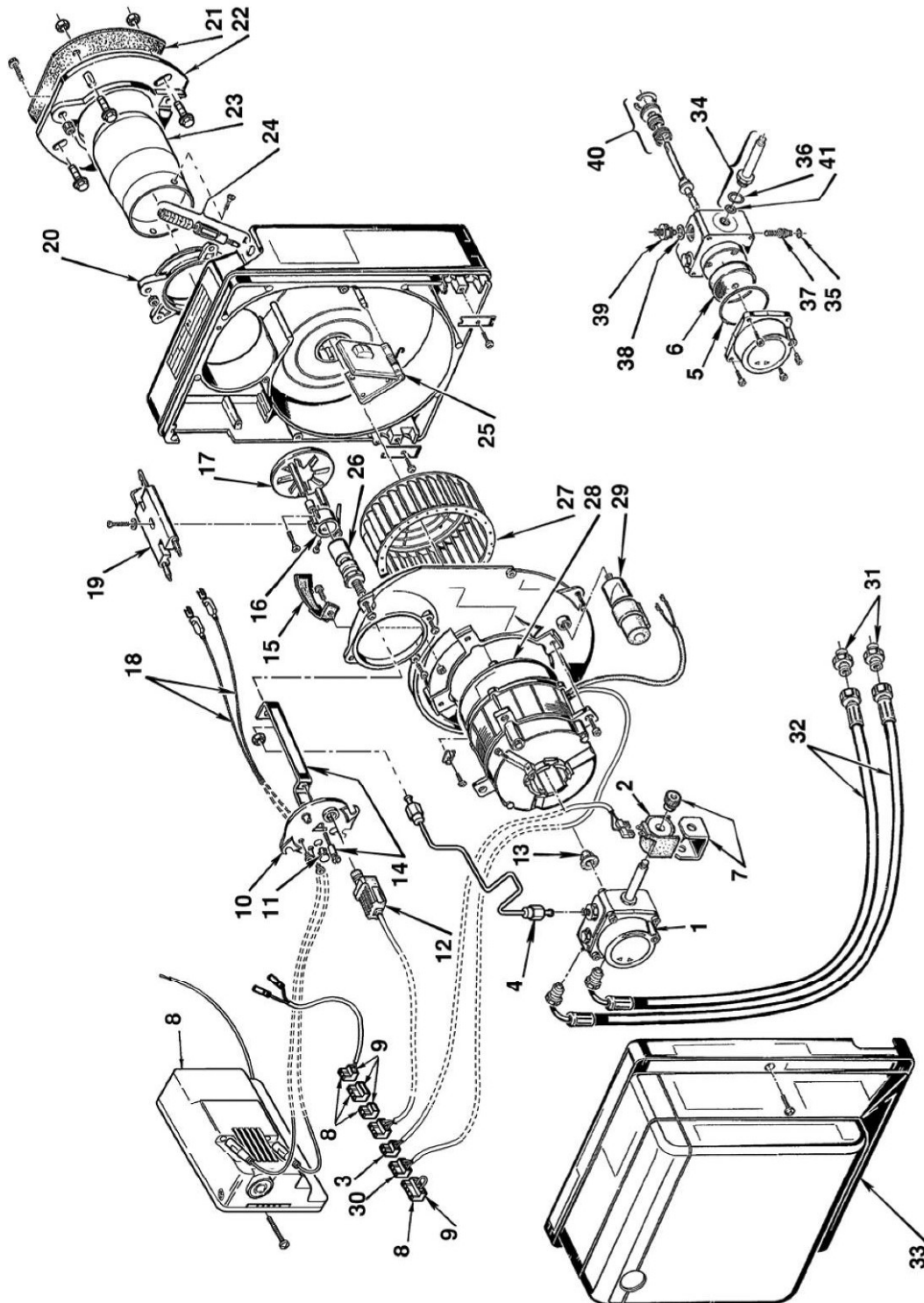
12. Burner adjustment



Please note: To set the system to stop the baffle plate (1), loosen the screw (3). To set the electrode system, loosen the screw (4).

Device	Heating output	Nozzle	Pump pressure	Air valve setting	Burner head setting	Burner type
K 80	76 kW	1.65 Gph 45°B Delavan Item No. 1630214	12.0 bar	3.5	2.0	RG 2H

13. Parts list for the oil burner RG 2 H (Item No. 1230145)



Parts list for the oil burner

Pos.	HEYLO Item No.	Description
1	1630549	R.B.L. Pump
2	1400612	Coil
3	1400616	Needle valve lead
4	1655043	Tube
5	1560212	O-Ring
6	1630654	Filter
7	1400657	Shell and knob
8	1420016	Control Box M0550
9	1400656	Assembly connection
10	1630431	Cover
11	1655003	Viewing port
12	1420124	P.E. cell
13	1650517	Joint
14	1630403	Bracket and screw
15	1655006	Suction duct
16	1630420	Diffuser disc support
17	1630422	Diffuser disc
18	1630336	High voltage lead
19	1630340	Electrode assembly
20	1630428	Collar
21	1655009	Gasket
22	1655010	Flange
23	1655044	Blast tube
24	1262352	Air damper regulator
25	1655045	Air damper
26	1630421	Nozzle holder
27	1651748	Fan
28	1655005	Motor
29	1400325	Capacitor 6,3µF
30	1440761	Motor socket
31	1655019	connector
32	1631884	Flexible oil line
33	1650419	Cover
34	1655038	Needle valve
35	1655020	O-Ring
36	1560216	O-Ring
37	1262353	Regulator
38	1560217	Seal
39	1560219	Connector
40	1560213	Pump seal
41	1560218	O-Ring