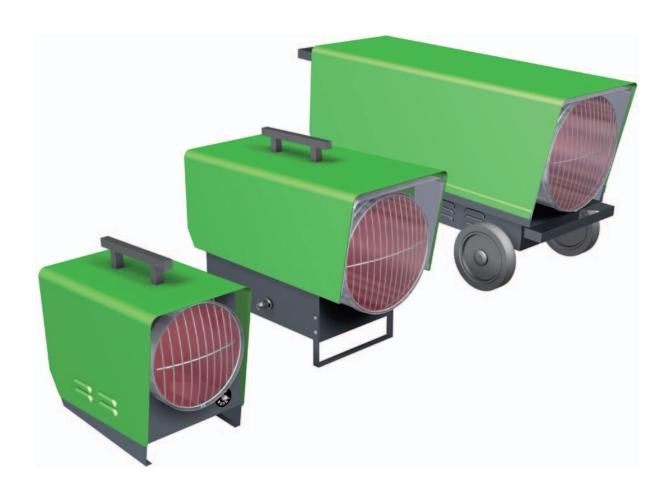


Propane gas heaters

 $Operation \cdot \textit{Technology} \cdot \textit{Spare parts}$ 





## **Contents**

Safety notes	4
Unit description	4
Installation instructions	5
Gas connection	6
Commissioning	8
Shutdown	10
Care and maintenance	10
Troubleshooting	12
Intended use	13
Customer service and guarantee	13
Environmental protection and recycling	13
Electrical wiring diagram PGT 30/60	14
Electrical wiring diagram PGT 100	15
Exploded view of PGT 30	16
Spare parts list for PGT 30	17
Exploded view of PGT 60	18
Spare parts list for PGT 60	19
Exploded view of PGT 100	20
Spare parts list for PGT 100	21
Maintenance protocol	22
Technical data	23

Carefully read this operating manual prior to commissioning / using the unit!

 $C \in$ 

This operating manual is a translation of the German original.

These instructions are an integral part of the unit and must always be kept in the vicinity of the installation location or on the unit itself.

Subject to modifications; no liability accepted for errors or misprints!

## Safety notes

Always observe the respective local building code and fire prevention guidelines as well as the guidelines of the accident prevention and insurance associations when using the units.

The units have been subjected to extensive material, functional and quality inspections prior to delivery. However, dangers can arise from the units if they are used improperly or not as intended by untrained personnel! Please observe the following information:

- The units may only be operated by persons that have been instructed in their operation
- The power plug must be pulled out of the mains socket before maintenance and repair work
- The units must be installed such that they are stable on a non-combustible surface
- It is necessary to ensure that no flammable objects or materials can be drawn in
- The units must be installed and operated in such a way that personnel are not endangered by exhaust gases and radiant heat and no fires may occur
- Portable liquid gas tanks must be installed such that they are stable and upright
- Liquid gas tanks must never be used whilst lying horizontal during unit operation
- All unit electrical cables must be protected against damage, e.g. by animals

- The units must then only be operated in areas where the units can be supplied with an adequate amount of air for combustion
- The units must only be operated in well-ventilated spaces and away from flammable materials. Personnel must not remain in the installation area Appropriate prohibition signs should be put up at the entrances!
- A safety zone of 1.5 m must be maintained around the units, incl. to non-combustible items
- A minimum distance of 3 m must be maintained from the unit outlet
- The unit outlet must not be restricted or fitted with hoses or pipes
- Never insert foreign objects in the unit
- The air intake grille must always be kept free of dirt and loose objects
- The units must not be exposed to direct jets of water e.g. pressure washers, etc.

## **△** CAUTION

The units must not be used for heating living spaces in residential buildings.

## **Unit description**

The units are mobile fan-assisted air heaters (WLE) directly fired with liquid gas, without a heat exchanger.

The units operate without an exhaust gas connection and are designed exclusively for commercial use.

The units are equipped with integrated power regulation for the stepless control of the heating capacity, quiet and low-maintenance axial fans, robust gas burners with thermal flame monitoring, electric solenoid valves, electric ignition, room thermostat socket and mains cable with earthed safety plug.

The units conform to the fundamental health and safety requirements of the appropriate EU stipulations and are simple to operate.

The units are EC type-tested, DVGW-registered and approved for EU countries.

# The units may be used among other things for the following:

- Drying newly completed buildings
- Spot heating of outdoor workplaces
- Spot heating workplaces in open, non-flammable manufacturing facilities and halls
- Temporarily heating enclosed spaces with a sufficient fresh air supply
- De-icing machines, vehicles and non-combustible warehoused goods
- Maintaining the temperature of frost-sensitive parts



## **Operating sequence**

Moving the operating switch to the "I" position puts the supply air fan into operation and the program sequence for the automatic burner is started.

After a few seconds, the electric solenoid valve opens the gas supply to the burner. The liquid gas is transported through a nozzle under pressure into the mixing tube. Here, the gas is enriched with a quantity of oxygen aligned with the unit output.

The gas/air mixture is ignited at the burner head by an electric ignition spark. Ignition is automatically ended as soon as a flawless flame burns, and the automatic burner has taken over the flame monitoring.

Regulation of the min/max heating capacity can be implemented on a stepless basis during unit operation on the integrated "power regulation".

## Monitoring the units

It is possible to safely monitor all functions with the safety devices of the units.

In the event of irregularities or if the flame is extinguished, the units are switched off and interlocked.

# Safety temperature limiter (STB)

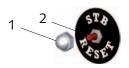
The units are equipped with a safety temperature limiter (STB), which interrupts the gas supply in case of overheating and electrically interlocks the unit. A manual reset of the STB can only be implemented after the units have cooled down.

## **CAUTION**

If the safety temperature limiter has been tripped then the cause of the malfunction should be identified and rectified before resetting it.

The STB is reset by actuating the reset key 2.

1. Unscrew the protective cap 1.



- 2. Push in key 2.
- 3. Screw the protective cap 1 back on again.

## Automatic burner

In the event of irregularities or if the flame is extinguished, the automatic burner switches off and interlocks the units.

The unit's fault lamp will light up in this case.

The automatic burner is unlocked by pressing the malfunction button.



The automatic burner can be unlocked after a waiting time of approx. 60 sec.

## **♥** NOTE

Before resetting safety equipment, the cause of the malfunction must be identified and rectified.

## **Installation instructions**

The safety regulations of the accident prevention and insurance associations, the respective regional building regulations and the combustion appliances regulations apply to operation of the unit. For example, for Germany:

- Combustion plant order (FeuVo) for the individual federal states
- Accident prevention regulations (UVV) "Heating, flaming and melting devices for construction and installation work" (VBG 43)
- Accident prevention regulations (UVV) "Use of liquid gas" (BGV D34)
- Workplace directives ASR 5
- Workplace regulations §§ 5 and 14

## **Outdoor installation**

- The operation of the units must not present a hazard or unreasonable loading
- The unit operator must ensure that it is not possible for unauthorised persons to manipulate either the unit or the power supply
- To prevent damage due to inclement weather, units installed outdoors must be adequately protected

## Installation in enclosed, wellventilated rooms

- The units are designed without an exhaust gas connection according to type, and can only be used in enclosed rooms on a conditional basis
- Reliable extraction of the combustion gases must be guaranteed in all cases in order to exclude impermissible contamination of the room air with hazardous substances



- The fresh air supply required for trouble-free combustion must be ensured. It is practical to have the fresh air supply provided by windows and doors or through appropriately dimensioned openings in the outside wall
- The units must not operate continuously whilst unattended

## The units may only be operated in rooms if:

- a sufficient quantity ofair is supplied to the units for the combustion
- these are well ventilated and aerated
- the proportion of substances harmful to health in the breathing air is at a harmless level

## There is good natural ventilation and aeration if:

- 1. the room volume in m<sup>3</sup> is at least 30 times the nominal heating capacity kW of all of the units operating in the space, and if the natural change of air is guaranteed by windows and doors or
- 2. constantly open ventilation openings are present for incoming and exhaust air in the vicinity of the ceiling and floor, whose size in m<sup>2</sup> is at least 0.003 times the nominal heating capacity in kW of all of the units operating in the space.

## **△** CAUTION

The units must only be installed in well ventilated spaces and not in living areas or similar recreational areas.

## Gas connection

The gas connection / unit operation must take place exclusively on the basis of the accident prevention regulation BGV D34, as well as the respective local construction and fire prevention regulations.

The units are operated with liquid gas in accordance with DIN 51622. They require a constant unit connection pressure of 1.5 bar. It is prohibited to exceed or undershoot the connection pressure.

## **△** CAUTION

A constant unit connection pressure of 1.5 bar (1500 mbar) must be guaranteed, also in continuous operation.

- When using longer hose lines, consider the respective pressure loss
- Only use components that have been tested and are suitable for the respective purpose, such as gas hose, pressure controller and hose breakage protection or leak gas protection
- If possible, the length of the gas hose should not exceed 2 m
- Only pressure controllers with a fixed outlet pressure setting are permitted. The units may only be operated out of the gas phase

- The use of longer hose lines is permissible if:
- special operational reasons exist
- appropriate additional safety measures are observed and the hose lengths are kept as short as possible
- Hose lines must be fundamentally protected against chemical, thermal and mechanical damage
- The units may only be operated out of the gas phase
- The units must be serviced by qualified persons only
- Only original spare parts may be used for repairs
- Unit parts that are prone to wear and ageing (e.g. gas hoses) must be replaced at regular intervals

## **Ö** NOTE

This does not apply if the correct condition is confirmed by an expert.

## **△** CAUTION

The units must not be used below ground level, e.g. in basements, without suitable gas monitoring equipment.

## **NOTE**

It is prohibited to exceed or undershoot the required connection pressure.

## **CAUTION**

Before all work on the gas supply and when replacing gas cylinders, all shut-off valves must be closed and no ignition sources are permitted in the immediate vicinity.



## Connecting the gas supply

1. Connect pressure controller to the gas cylinder or gas supply system.



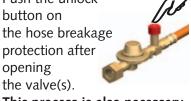
## Observe left-handed thread!

2. Open cylinder valve(s) or shut-off valve of the supply line.



With simultaneous discharge from multiple gas cylinders, all valves must be opened.

3. Push the unlock button on the hose breakage protection after opening



This process is also necessary after every cylinder change.

4. Check all gas connections for leak-tightness using suitable media.

For example with:

Soap solution or leak detection spray.



## **♥ NOTE**

Because these are conical seals in accordance with DIN 4815, part 2, only appropriate, fitting hoses may be used.

## **Ö** NOTE

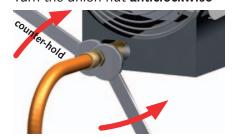
Only hoses for liquid gas in accordance with DIN 4815, part 1, pressure class 30 may be used for construction site operations.

## **Assembly note**

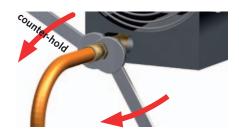
During the assembly or disassembly of the gas hose, it is necessary to counter-hold the unit by the gas connection nipple with an open-end wrench size 17, whilst observing the lefthanded thread.

This process also applies to the pressure controller, hose breakage protection and all further gas components.

## Tighten gas hose: Turn the union nut anticlockwise



Loosen gas hose: Turn the union nut clockwise



## Icing up of gas cylinders

With insufficiently dimensioned gas supply systems, there is a risk of the pressurised gas cylinder icing up.

Due to the reduction of the gas pressure, it is no longer possible to guarantee the correct gas supply to the unit.

Crystalline frost formation on the gas cylinder(s) must not be defrosted with naked flames, glowing objects, radiators, etc.



In order to avoid the gas cylinder(s) icing up, it is necessary to configure the gas supply in accordance with the unit connection value, the time in operation and the ambient temperature of the supply tank.

## Attachment multi-cylinder set (accessory)

In order to guarantee a regular gas take-off insofar as possible, all cylinder valves must be open. The cylinder battery can be expanded with ease, through the use of additional sets. Legend: 1 = Gas hose to the unit 2 = Hose breakage protection 3 = Gas pressure controller 4 = HP hose 0.4 m5 = T-connection 6 = Cylinder valve



## Tank gas systems

When connecting the units to tank gas systems, ensure sufficient pipe dimensions depending on the pipe length.

A sufficient gas supply to the consumer system can be ensured through the use of an evaporator.

In order to guarantee the faultless unit function, it is advisable to install a permanently set pressure controller with 1.5 bar outlet pressure and corresponding gas throughput (see unit name plate), as well as a shut-off device tailored and approved for the respective pre-pressure.

In order to avoid malfunctions of the unit's control and safety equipment due to harmful substances such as rust and dust from the gas supply line or tank(s), it has proven to be essential to install gas filters before the control and safety equipment of the units (see DIN 4788 and TRF 88 section 5).

## **Ö** NOTE

Installation work on the tank gas systems and the supply lines may only be performed by qualified specialist personnel.

## **△** CAUTION

Before all work on the gas supply and when replacing gas cylinders, all shut-off valves must be closed and no ignition sources are permitted in the immediate vicinity.

## **Commissioning**

The units should be checked for visible defects on the operating and safety devices as well as proper installation and correct electrical and gas connections before commissioning.

A person, who has been adequately trained in the handling of the units and the use of liquid gas per VBG 21, must be tasked with operation and monitoring of the units.

# Connecting the units to the electrical power supply

 Move the operating switch to the "0" (off) position.



2. Connect the unit's power plug to a properly installed and fused mains socket.

230 V/50 Hz

•

## **△** CAUTION

In the event of defects that endanger the operational safety of the units, operation of the units must be discontinued immediately and the supervisor informed!



The electrical connection for the units must be made at a separate feed point with a residual current device in accordance with VDE 0100, Section 55.

Before the unit start, ensure that the gas supply cylinders are correctly secured and are not positioned directly in the heat radiated by the units. The pressurised gas tanks must be positioned to the **side / rear** of the unit.



## **△** CAUTION

The tanks must never be heated or de-iced through the unit hot air flow.

There is a risk of explosion!

## **△** CAUTION

Pressurised gas tanks must not lie horizontal when used during unit operation.

Gas outlet in the liquid phase.



# Heating without room thermostat

The units operate in continuous operation without room temperature regulation.

1. Connect the strapping plug 2 supplied with the thermostat socket 1 on the unit.



2. Move the operating switch to the "I" (Heating) position.



The supply air fan starts up and the automatic burner starts the unit after approx. 15 seconds.

## NOTE on polarity!

If the unit should implement a fault shut-down during the start phase, first check the polarity of the power supply by turning the power plug through 180°.

It may be necessary to repeat this process with a change in position or new socket assignment!



## **△** CAUTION

It must be ensured that supply air can be freely sucked in and that heated air can be blown out without obstruction.
The unit intake and outlet must not be restricted or fitted with hoses or pipes.

# Setting and controlling the heating capacity

The desired or required heating capacity can be steplessly set on the "power regulation".

**Turning to the left:** higher heating capacity



Turning to the right: lower heating capacity

The heating capacity can also be steplessly changed during unit operation.

## **Safety distances**

- For safe operation, a 1 m safety distance must be maintained around the unit
- A minimum distance of 3 m must be maintained from the unit outlet

## **⚠** CAUTION

It is essential to observe the necessary safe distances from flammable and fire hazardous materials.

 Flooring and ceilings must be fire retardant

## **△** CAUTION

In case of a gas leak, halt unit operation immediately.
All gas shut-off valves must be closed and the units disconnected from the power supply.

# **Heating with room thermostat** (Accessories)

The units operate fully automatically and according to the room temperature.

- 1. Pull out the strapping plug 2.
- 2. Connect the plug 3 of the room thermostat 4 with the thermostat socket 1 on the unit.



- 3. Place the room thermostat 4 at a suitable location in the room. The thermostat sensor must not be located directly in the warm air flow and must not be placed directly on the cold floor.
- 4. Set the desired temperature on the room thermostat 4.



5. Move the operating switch to the "I" (Heating) position.



The unit starts automatically after a brief burner pre-ventilation if heat is required and then runs fully automatically.

## Ventilate

In this operating mode, the supply air fan runs permanently. The units can be used for air recirculation or ventilation purposes.

1. Close the shut off valve(s) of the gas supply system and allow the gas flame to burn out.



2. Move the operating switch to the "0" (off) position.



2. Move the operating switch to the "II" (Ventilate) position.



3. If the units are inactive for longer periods, disconnect them from the mains power supply.

Important notes regarding

the cooling phase in units with

automatic fan run-on (PGT 100

after the burner is switched off.

For this reason the electrical

disconnected from the mains

connection must not be

power supply before the

cooling phase has ended,

except in an emergency.

series, PGT 30/60 as option).

The automatic fan run-

on serves to avoid heat accumulation inside the unit

**NOTE** 



Thermostatic control as well as heating operation is not possible in this operating mode.

## ₩ NOTE

Overpressure and underpressure in the installation area should be avoided as this will inevitably lead to combustion-

related malfunctions.

## **△** CAUTION

The units must not be used below ground level, e.g. in basements, without suitable gas monitoring equipment.

## Shutdown

1. Close the shut off valve(s) of the gas supply system and allow the gas flame to burn out.



## Care and maintenance

## **♥ NOTE**

Regular care and maintenance, at the latest after every heating period, is the basic requirement for a long service life and malfunction-free operation of the units.

In accordance with the operating conditions, the units must be checked as and when required, but at least every two years, by a specialist to ensure that they are in a condition that is safe to use.

The results of this test must be recorded in a test certificate. The test certificate must be stored until the next test and presented for inspection by authorised persons on request.

## **CAUTION**

Before undertaking any work on the unit, the gas supply must be shut off and the power plug must be removed from the mains socket.

- Keep the units free of dust and other deposits
- Only clean the units with a dry or moistened cloth
- Never subject to direct jets of water.
  - e.g. pressure washers etc.
- Never use abrasive or solventbased cleaners
- Use only suitable cleaners, even for heavy contamination

For optimum operation

NOTE

the units should not be operated above an ambient temperature of 25 °C.



- Check the inlet and outlet grille for contamination on a regular basis
- Check hoses and seals for damage on a regular basis
- Replace damaged hoses, seals, etc. immediately
- Clean the gas burner, gas nozzle and the combustion air openings regularly
- Check ignition and ionisation electrodes regularly and adjust and clean if necessary

## **Ö** NOTE

Replace defective or damaged parts immediately and exclusively with original spare parts.

## **∜** NOTE

Adjustment and maintenance work may only be carried out by authorised and qualified technicians.

## **△** CAUTION

An electrical safety check must be carried out in accordance with VDE 0701 after any work on the units.

## **♥** NOTE

A strongly yellowy flame indicates an inadequate fresh air supply or dirt inside the unit.

# Disassembling and cleaning the gas burner

- 1. Switch off the gas supply to the unit and unplug the power plug from the mains socket.
- Remove the protective outlet grille, exterior cladding and inspection cover.
- 3. Undo the clamping screw 5 of the nozzle holder.
- 4. Remove the ignition cable from the ignition electrode.
- 5. Detach the ionisation cable from the ionisation electrode. **Be** aware of the cap nut and spring washer!
- 6. Loosen the clamping screw 4 on the electrode bracket and carefully draw out the ignition and ionisation electrode.
- 7. Carefully remove any adhered deposits from the ignition and ionisation electrode.
- 8. Detach the fastening screws of the gas burner and remove the complete gas burner from the unit.
- 9. Carefully clean the gas burner with a suitable brush and possibly compressed air.
- 10. Clean the gas nozzle if necessary.

Do not use any sharp-edged objects!

- 11. Carefully remove deposits or soiling in the unit base.
- 12. After all cleaning work on the gas burner, carefully refit all parts in reverse order.
- 13. After using the gas nozzle, tighten the clamping screw 5 again.

- 14. Adjust the ignition and ionisation electrode in accordance with the sketch and tighten the clamping screw 4 of the electrode bracket.
  The tip of the ionisation electrode must be in the vicinity of the flame.
- 15. Carefully refit all parts of the unit in reverse order.

## **△** CAUTION

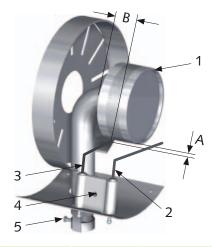
A functional inspection of the entire unit including leak testing of all gasconveying connections must be conducted

for example with:

Soap solution or leak detection spray.



## Gas burner



Unit type	Α	В
PGT 30	approx. 3 mm	approx. 15 mm
PGT 60	approx. 3 mm	approx. 15 mm
PGT 100	approx. 3-4 mm	approx. 30 mm

## Legend:

- 1 = Gas burner
- 2 = Ionisation electrode
- 3 = Ignition electrode
- 4 = Clamping screw (electrodes)
- 5 = Clamping screw (gas nozzle)

# **Troubleshooting**

Malfunctions:	Cause:
Unit does not start.	1 – 2 – 3 – 4 – 5 – 7 – 10 – 13 – 17 – 18
Unit switches off during operation. (Fault lamp in the automatic burner lights up)	2-6-7-8-9-10-13-14-17
Fan runs, but the gas supply is blocked or no ignition takes place.	7 – 12 – 13 – 14
The gas supply is interrupted, or the flame is extinguished.	6 – 7 – 8 – 9 – 10 – 13 – 14 – 17 – 18
Unit consumes too much fuel.	13
Unit cannot be switched off.	5 – 15
Heating capacity drops in permanent operating mode.	14
Heating capacity cannot be regulated.	11

Cause:	Remedial measures:
1. The unit is not connected to the electricity supply.	Connect the plug with an appropriate socket (230V/50Hz).
The fan motor is overloaded or the supply air fan runs irregularly or is blocked.	Check the motor, fan blade and drive clutch and replace if necessary.
3. The room thermostat is set too low.	The setting must be higher than the current room temperature.
4. No strapping plug in the room thermostat socket.	Connect the strapping plug with the thermostat socket.
5. The operating switch is defective.	Shut off the gas supply, unplug the power plug from the mains power socket and replace the operating switch.
6. The polarity of the power plug is incorrect.	Check polarity, turn the power plug through 180°.
7. No gas pressure at the solenoid valve.	Check whether the gas supply to the unit is present. Check the level of the gas cylinders. Check the gas hose for damage. Disengage or replace the hose breakage protection.
8. The ionisation or ignition electrode are incorrectly set.	Settings according to specifications; check the porcelain insulation of the electrodes.
9. The protective intake grille of the supply air fan is contaminated.	Clean the protective intake grille.
10. Shutdown by safety temperature limiter (STB). The power plug (only PGT 100) was disconnected from the mains power supply before the cooling time had passed.	Check the protective intake and outlet grilles (clean if necessary). Check whether the fresh air supply is sufficient. Unlock STB (reset STB).
11. The gas control is faulty or contaminated.	Replace or clean gas control.
12. The ignition does not work.	Operating switch to the "I" position (heating mode). Check the ignition cable for damage. Check the electrode settings, check cyclical igniter.
13. The pressure controller is defective, an incorrect pressure controller is fitted, or the hose breakage protection has interlocked.	Fit an original pressure controller. Disengage or replace the hose breakage protection.
14. The gas cylinder(s) is (are) iced up due to an excessively high gas take-off and low temperatures.	Replace the gas cylinder(s) and connect 2-3 cylinders with the multicylinder set, EDP no. 1014050.
15. The solenoid valve does not close.	Shut off the gas supply, allow the flame to burn out.  Operating switch to the "0" position and remove the power plug from the mains power socket. Replace the solenoid valve.
16. Leaky gas connection.	Use foaming media to search for the leak and remedy this.
17. The fault lamp in the automatic burner lights up.	Reset the automatic burner by pressing the malfunction button.
18. The automatic burner is defective.	Replace defective automatic burner.



## Intended use

The units are designed exclusively for heating and ventilation purposes in industrial or commercial use (not for living space heating in private use) on the basis of their structural design and equipment. The unit definition is "commercial drving unit" in accordance with DIN EN 1596.

The units must only be operated by appropriately instructed personnel.

With non-observance of the manufacturer's specifications, the respective local legal requirements or after arbitrary alterations to the units. the manufacturer shall not be liable for resulting damages.

## **Ö** NOTE

Operation other than the types listed in this operating manual is prohibited.

With non-observance, any manufacturer liability or guarantee claims are voided.

## **Customer service and** guarantee

As a prerequisite for any guarantee claims to be considered, it is essential that the ordering party or its representative complete and return the "certificate of guarantee" to REMKO GmbH & Co. KG at the time when the units are purchased and commissioned.

The units are tested several times to verify their correct function.

However, if malfunctions should arise that cannot be remedied by the operator with the assistance of the troubleshooting section, please contact your specialist dealer or contractual partner.

## **Environmental pro**tection and recycling

## Disposing of packaging

When disposing of packaging material, please consider our environment.

Our units are carefully packed and delivered in sturdy transport packaging made from cardboard and polystyrene.

The packaging materials are environmentally-friendly and can be recycled.

By recycling packaging materials, vou make a valuable contribution to the reduction of waste and conservation of raw materials.

Therefore, only dispose of packaging material at appropriate collection points.

## Disposal of the old unit

The manufacturing process for the units is subject to continuous quality control.

Only high-grade materials are processed, the majority of which are recyclable.

You also contribute to environmental protection by ensuring that your old equipment is only disposed of in an environment friendly manner.

Therefore, only bring the old unit to an authorised recycling business or to an appropriate collection point.



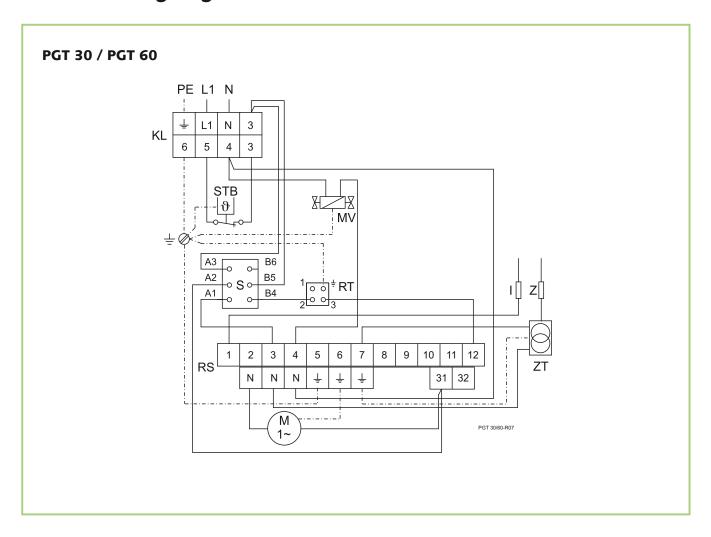
## **♥ NOTE**

Adjustment and maintenance work may only be carried out by authorised and qualified technicians.

## **CAUTION**

Copyright Without the written authorisation of REMKO GmbH & Co. KG, redistribution, even in part, or the use of this documentation for purposes other than intended is prohibited.

## **Electrical wiring diagram**



## Legend:

I = Ionisation electrode

**KL** = Terminal block

M = Fan motor

MV = Solenoid valve

RS = Relay socket

RT = Thermostat socket

**S** = Operating switch

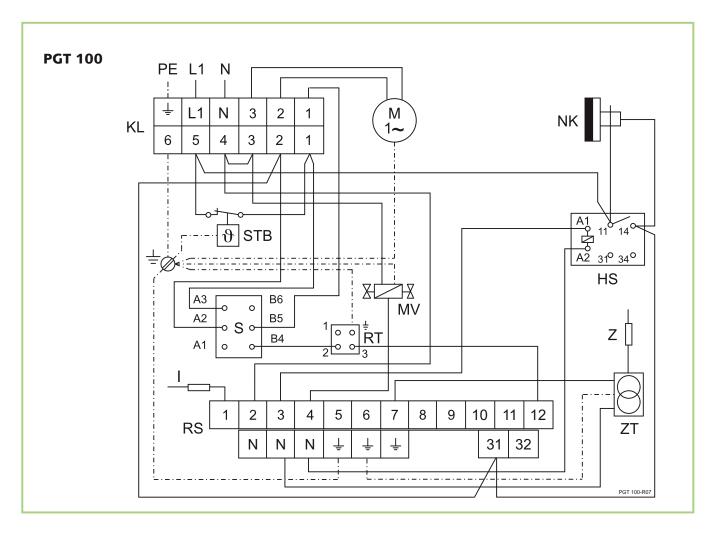
**STB** = Safety temperature limiter

**Z** = Ignition electrode

**ZT** = Ignition transformer



## **Electrical wiring diagram**



## Legend:

**HS** = Auxiliary relay

I = Ionisation electrode

**KL** = Terminal block

M = Fan motor

MV = Solenoid valve

**NK** = Aftercooler thermostat

**RS** = Relay socket

RT = Thermostat socket

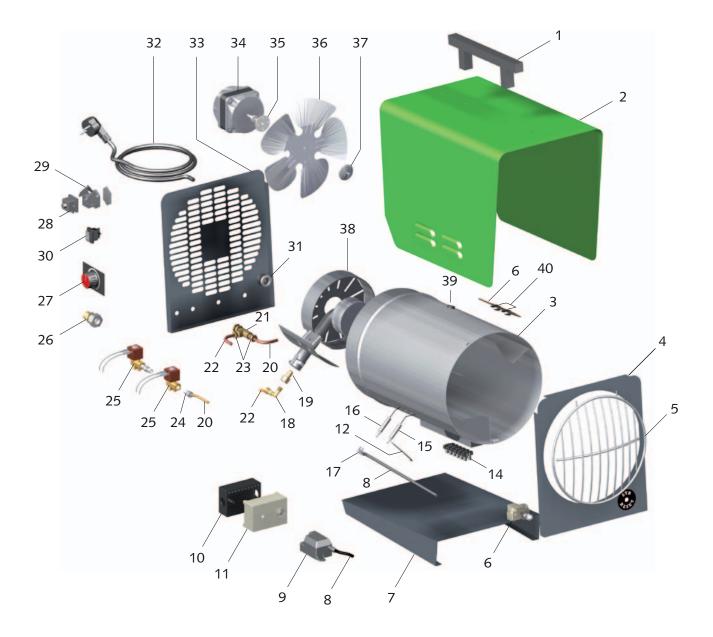
**STB** = Safety temperature limiter

**S** = Operating switch

**Z** = Ignition electrode

**ZT** = Ignition transformer

# **Exploded view of PGT 30**





# **Spare parts list**

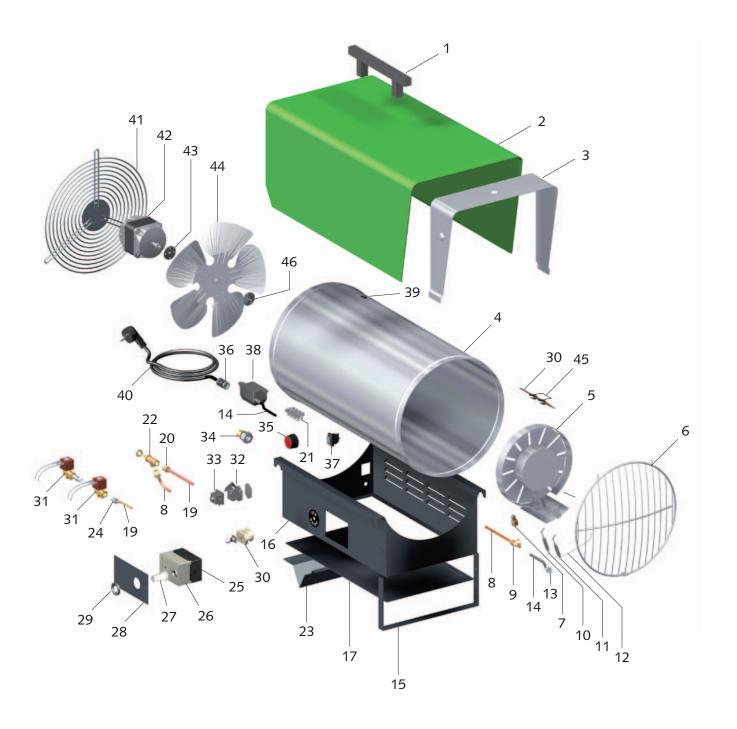
No.	Description	EDP no.	No.	Description	EDP no.
1	Transport handle	1101142	27	Adjusting knob, cpl.	1101192
2	Exterior cladding	1101440	28	Strapping plug	1101019
2a	Exterior cladding (stainless steel)	1101463	29	Thermostat socket	1101018
3	Combustion chamber	1101384	30	Operating switch	1101188
4	Completion panel, front	1101479	31	Strain relief	1101267
5	Protective outlet grille	1101383	32	Mains cable with plug	1101320
6	Safety thermostat	1101197	33	Completion panel, rear	1101480
7	Inspection cover	1101385	34	Fan motor	1108049
8	Ignition cable	1101521	35	Drive clutch B 6 Ø	1108455
9	Cyclical igniter	1101520	36	Fan blade	1101392
10	Automatic burner base	1102534	37	Clutch plate	1101375
11	Automatic burner	1101526	38	Gas burner	1101417
12	Ionisation cable	1101187	39	Grommet	1101304
14	Terminal block 4x	1101442	40	Retaining clip	1101395
15	Ionisation electrode	1101186	xx	Run-on relay (accessory)	1105075
16	Ignition electrode	1101180	xx	Pressure controller with hose breakage protection	1101470
17	Connection clip	1101181	xx	2 linear m. Gas hose	1101419
18	OT elbow union	1101316	xx	2 linear m. HP gas hose 1)	1101174
19	Gas nozzle	1101159	xx	5 linear m. HP gas hose 1)	1108410
20	Gas supply pipe M/R	1101444	xx	10 linear m. HP gas hose 1)	1108411
21	Gas control	1101411	xx	Multi-cylinder set (2-3 cylinders)	1014050
22	Gas supply pipe R/D	1101453	xx	T-connection for multi-cylinder set	1101177
23	Screw connection M10x1	1101409	XX	Nylon seal for T-connection	1101178
24	GE-screw connection	1101396	XX	HP hose 0.4 m <sup>2)</sup>	1101179
25	Solenoid valve	1101376	XX	Thermostat plug	1101020
26	Gas connection nipple	1101134			

xx = not illustrated

<sup>1)</sup> Version for construction site operation per DIN 4815 part 1, pressure class 30

<sup>2)</sup> for multi-cylinder set

# **Exploded view of PGT 60**





# **Spare parts list**

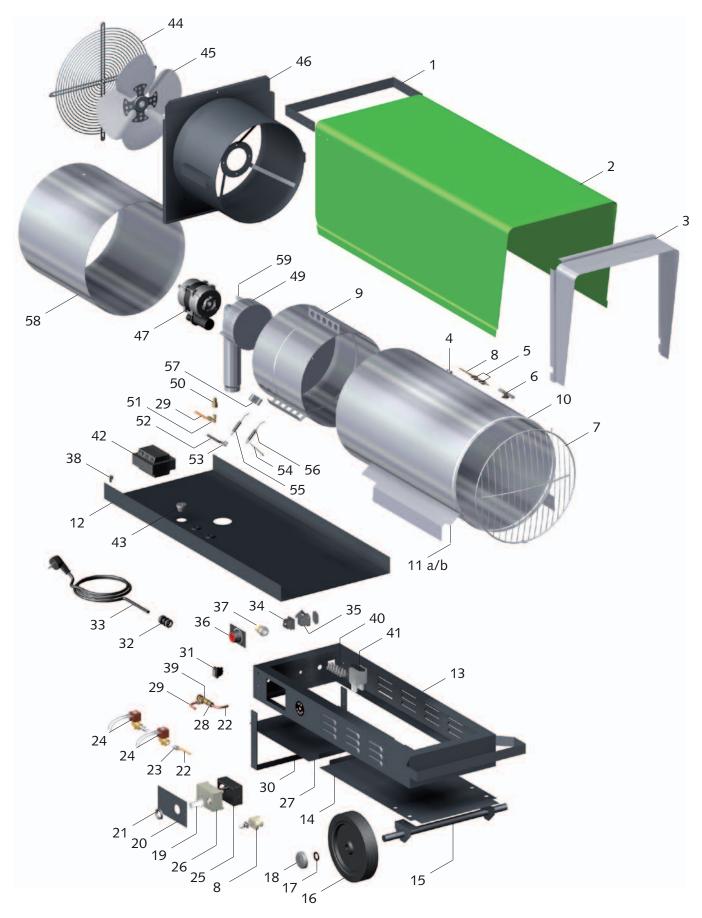
No.	Description	EDP no.	No.	Description	EDP no.
1	Transport handle	1101142	30	Safety thermostat	1101197
2	Exterior cladding	1101420	31	Solenoid valve	1101376
2a	Exterior cladding (stainless steel)	1101461	32	Thermostat socket	1101018
3	Insulation	1101421	33	Strapping plug	1101019
4	Combustion chamber	1101422	34	Gas connection nipple	1101134
5	Gas burner	1101423	35	Adjusting knob, cpl.	1101192
6	Protective outlet grille	1101424	36	Strain relief	1101267
7	Gas nozzle	1101426	37	Operating switch	1101188
8	Gas supply pipe R/D	1101457	38	Cyclical igniter	1101520
9	OT elbow union	1101316	39	Grommet	1101304
10	Ignition electrode	1101280	40	Mains cable with plug	1101320
11	Ionisation electrode	1101186	41	Protective intake grille	1101432
12	Ionisation cable	1101187	42	Fan motor	1101254
13	Connection clip	1101181	43	Drive clutch B 8 Ø	1101255
14	Ignition cable	1101521	44	Fan blade	1101150
15	Support, front	1101427	45	Retaining clip	1101395
16	Unit base	1101403	46	Clutch plate	1101375
17	Inspection cover	1101469			
19	Gas supply pipe M/R	1101441	xx	Run-on relay (accessory)	1105075
20	Screw connection M10x1	1101409	XX	Pressure controller with hose breakage protection	1101470
21	Terminal block 4x	1101442	xx	2 linear m. Gas hose	1101419
22	Gas control	1101412	XX	2 linear m. HP gas hose 1)	1101174
23	Support, rear	1101249	XX	5 linear m. HP gas hose 1)	1108410
24	GE-screw connection	1101396	xx	10 linear m. HP gas hose 1)	1108411
25	Automatic burner base	1102534	xx	Multi-cylinder set (2-3 cylinders), cpl	. 1014050
26	Automatic burner	1101526	XX	T-connection for multi-cylinder set	1101177
27	Push-button extension	1101524	XX	Nylon seal for T-connection	1101178
28	Cover	1101525	XX	HP hose 0.4 m <sup>2)</sup>	1101179
29	Nozzle	1101528	xx	Thermostat plug	1101020

xx = not illustrated

 $<sup>^{1)}</sup>$  Version for construction site operation per DIN 4815 part 1, pressure class 30

<sup>2)</sup> for multi-cylinder set

# **Exploded view of PGT 100**



We reserve the right to modify the dimensions and design as part of the ongoing technical development process.



# **Spare parts list**

No.	Designation	EDP no.	No. Designation	EDP no.
1	Transport handle	1101680	35 Thermostat socket	1101018
2	Exterior cladding	1101681	36 Adjusting knob, cpl.	1101192
2a	Exterior cladding (stainless steel)	1101462	37 Gas connection nipple	1101134
3	Insulation	1101682	38 Fastening bracket	1102906
4	Grommet	1101304	39 Gas control	1101692
5	Retaining clip	1101395	40 Terminal block 6er	1101366
6	Aftercooler thermostat	1101683	41 Auxiliary relay	1108038
7	Protective outlet grille	1101684	42 Ignition transformer	1101666
8	Safety thermostat	1101197	43 Grommet, large	1101677
9	Combustion chamber	1101685	44 Protective intake grille	1101648
10	Interior cladding, front	1101686	45 Fan blade	1101693
11a	Cladding support, right	1101631	46 Fan housing, cpl.	1101694
11b	Cladding support, left	1101632	47 Fan motor	1101634
12	Mounting plate	1101687	49 Gas burner	1101695
13	Unit base	1101688	50 Gas nozzle	1101659
14	Floor panel	1101652	51 OT elbow union	1101316
15	Axle	1101653	52 Ignition cable	1101696
16	Wheel	1102155	53 Connection clip	1101181
17	Locking ring	1101622	54 Ionisation cable	1101187
18	Hubcap	1101623	55 Ignition electrode	1101698
19	Push-button extension	1101524	56 Ionisation electrode	1101697
20	Cover	1101525	57 Electrode bracket	1101633
21	Nozzle	1101528	58 Interior cladding, rear	1101450
22	Gas supply pipe M/R	1101441	59 Spacer sleeve	1101699
23	GE-screw connection	1101396	Without figure:	
24	Solenoid valve	1101165	Pressure controller	1101418
25	Automatic burner base	1102534	Hose breakage protection	1101664
26	Automatic burner	1101526	2 linear m. Gas hose	1101419
27	Inspection cover	1101651	2 linear m. HP gas hose 1)	1101174
28	Screw connection M10 x 1	1101409	5 linear m. HP gas hose 1)	1108410
29	Gas supply pipe R/D	1101690	10 linear m. HP gas hose 1)	1108411
30	Support, rear	1101691	Multi-cylinder set (2-3 cylinders), cpl.	1014050
31	Operating switch	1101188	T-connection for multi-cylinder set	1101177
32	Strain relief	1101267	Nylon seal for T-connection	1101178
33	Mains cable with plug	1101320	HP hose 0.4m for multi-cylinder set	1101179
34	Strapping plug	1101019	Thermostat plug	1101020

 $<sup>^{1)}</sup>$  Version for construction site operation per DIN 4815 part 1, pressure class 30  $\,$ 

## **Maintenance protocol**

Unit type: ...... Unit number: .....



·																					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Unit cleaned - outside -																					
Unit cleaned - inside -																					
Fan blade cleaned																					
Combustion chamber cl	eaned																				
Gas burner cleaned																					
Ignition electrode adjust	ted																				
Gas hose checked for da	amage																				
Gas-transporting parts checked	for leak-tightness																				
Safety equipment check	ced																				
Safety devices checked																					
Unit checked for damag	ge																				
All fastening screws che	ecked																				
Electrical safety check																					
Test run																					
Comments:	Comments:																				
1. Date:	2. Date:			3.	Dat	e:				4.	Dat	e:				5.	Dat	e:			
Signature	Signature	e e		••••	S	igna	atur	e		Signature					S	igna	atur	e			
6. Date:	7. Date:			8.	Dat	e:				9.	Dat	e:				10	. Da	ite:			
Signature	Signature	e =			S	igna	atur	e			S	ign	atur	e			S	igna	atur	e	
11. Date: Signature	12. Date: Signature			13. Date:				•••	15. Date: Signature												
16. Date:	17. Date:			18		.te: .				19. Date:				20. Date:							

.....

Signature

.....

Signature

.....

Signature

.....

Signature

.....

Signature



## **Technical data**

Series		PGT 30 (E)	PGT 60 (E)	PGT 100 (E)	
Max. nominal heating capacity	kW	26	55	100	
Heating capacity, adjustable	kW	10 to 26	25 to 55	50 to 100	
Air volume	m³/h	800	1450	3600	
Fuel / gas type			Liquid gas cat I <sub>3B/P</sub>		
Unit connection pressure	bar	1.5	1.5	1.5	
Unit connection value	kg/h	0.78 - 2.0	1.95 - 4.27	3.9 - 7.8	
Power supply	V/Hz	230/1~/50	230/1~/50	230/1~/50	
Max. power consumption	W	70	110	325	
Elec. Max. current consumption	А	0.5	0.95	2.8	
Electrical protection (provided by the customer)	Α	10	10	10	
Enclosure class	IP	44	44	44	
Sound pressure level L <sub>pA</sub> 1m <sup>1)</sup>	dB (A)	56 - 69	62 - 72	74 - 82	
Dimensions: Length	mm	450	650	1060	
Width	mm	260	320	435	
Height	mm	410	510	620	
Weight (without accessories)	kg	12	47		
Product ID number			CE-0085AP0240		

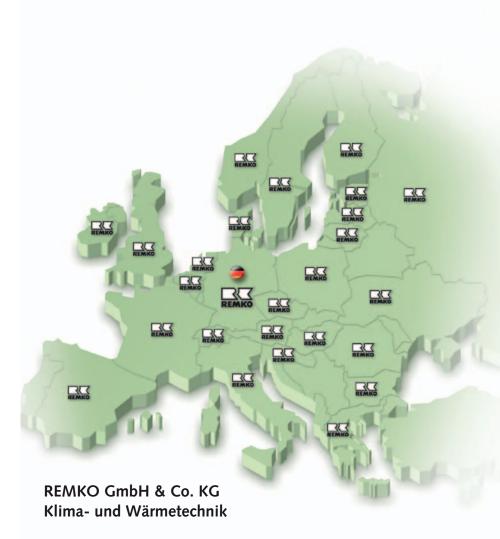
 $<sup>^{1)}\,\</sup>mbox{Noise}$  measurement in acc. with DIN 45635 - 01 - KL 3 in heating mode

Technical data for the automatic burner	
Operating voltage	230 V (-15 % + 10 %)
Frequency	50 Hz (40 - 60 Hz)
Safety time	5 seconds
Waiting time after fault shut-down	approx. 60 seconds
Permissible ambient temperature	– 20° C to + 60 °C
min. required ionisation flow	5 μΑ
Sensitivity (ionisation flow)	1 μΑ
Enclosure class	IP 44

# We reserve the right to make technical changes and provide no warranty as to the accuracy of this data!

# **REMKO INTERNATIONAL**

## ... and also right in your neighbourhood! Take advantage of our experience and advice



Im Seelenkamp 12 D-32791 Lage
Postfach 1827 D-32777 Lage
Telephone +49 5232 606-0
Fax +49 5232 606-260
E-mail info@remko.de
Internet www.remko.de

## Consulting

Thanks to intensive training, our consultants are always completely up-to-date when it comes to technical expertise. This has given us the reputation of being more than just an excellent, reliable supplier: REMKO, a partner who helps to solve problems.

## Sales

REMKO offers not just a wellestablished sales network both nationally and internationally, but also has exceptionally highlyqualified sales specialists. REMKO employees in the field are more than just sales people: above all, they must be advisers to our customers in air conditioning and heating technology.

## **Customer service**

Our units operate precisely and reliably. However, in the event of a malfunction REMKO customer service is quickly on the scene. Our comprehensive network of experienced dealers guarantees quick and reliable service.

