

OPERATION INSTRUCTION



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1. Control operation

see "Control"

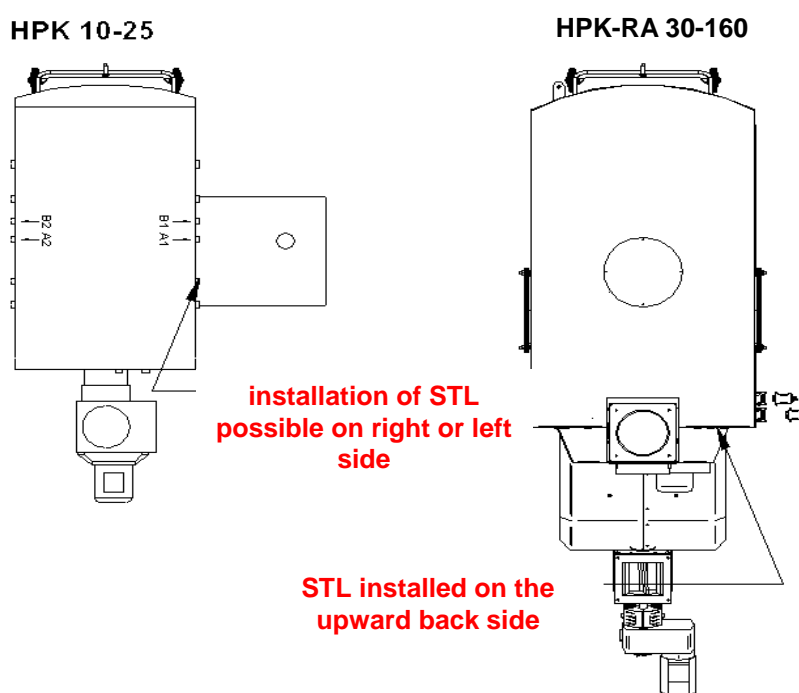
2. Frequent failures of the heating boiler

2.1. Automatic switch off by safety temperature limiter (STL)

STL is an additional safety devices installed for the boiler overheating prevention. Safety temperature limiter switches off the facility as soon as the heating boiler temperature rises to 100° C. That means, the fuel supply is disconnected and the blowers switched off.

Should a STL indicate a message, it must be manually unlocked, as soon as the boiler temperature drops under 70 °C. Then the boiler may be started again. For this purpose the screw shutter applied in a socket mounted on the boiler's back side must be removed, followed by pressing a reset button. Finally the shutter is screwed on again.

The failure message must be confirmed on the operational part of the heating boiler control system.



2.2. Safety heat exchanger for thermic outlet security

In case of the equipment overheating over ca. 95 °C the thermic valve regulates the outlet into the cold water inlet supplying a flow of cold water into the safety heat exchanger until the boiler temperature drops at the required level (set point temperature).

The hot vented boiler water must be deflected in a manner fully safe for the user.



ATTENTION

The user is legally bound to let test the safety heat exchange device performance by a specialist once a year.

Thermic outlet security

Press test button – water must flow into the outlet funnel. Upon releasing, it must be again well sealed. If the outlet flow is only insignificant, the thermic outlet securing or security battery is coated with calcic layer that must be removed (e.g. by pumping the diluted formic acid in it). If this procedure is not sufficient, the sealing and valve seating must be thoroughly cleaned.

Safety valve

The safety valves are provided with a test button – this must be pressed. If the valve function is correct, the water gets out. Upon release of the test button the valve must be again sealed without any leakage.

2.3. Thermic outlet security device indicated a message

Test all the pumps, whether they are running when necessary, manual switching on. Check up the heating boiler temperature and set up a lower temperature value, if necessary.

2.4. Power failure

Upon the power supply renewal, the facility performance shall continue automatically. The latest set up program starts from its beginning; it means that the automatic operation will start by ignition.

2.5. Insufficient cleaning

Should the cleaning be neglected, there is a danger that performance problems arise, the combustion is bad, i.e. the heating efficiency is lower and costs higher. Only a well cleaned heating boiler may assure its higher efficiency. When ash is not regularly disposed, the flue gases duct becomes choked – resulting in a worse combustion process.

3. Maintenance

3.1. General

Regular cleaning of the facility extends its service life. In addition, it is one of the prerequisites of a perfect operation of equipment. That is why a regular cleaning is inevitable.

The operation failures caused by an insufficient or inadequate maintenance may result in high repair costs and long downtimes of the facility. In these cases there is no guarantee claim. Therefore, a regular maintenance is unavoidable.



NOTICE

GILLES company does not take over liabilities for any injuries suffered by person and material damages caused by improper, careless or inadequate maintenance, repair or servicing works, as well as for any such damages caused by persons not belonging to the service staff of the GILLES company, or its authorised representatives.

All the equipment parts were so designed that there is a guarantee of their performance requiring fast no maintenance. Any safety and protective parts if removed during an eventual maintenance must be immediately installed on their place, and their proper functioning must be checked up..

Only original spare parts may be used for replacing of some machine parts. The disassembled parts must be kept for later use, or sent for their possible repair to the GILLES company centre.

3.1. Requirement on personnel

Personnel dealing with maintenance repair or service works must be well familiar with the machine and respective documentation.

Only corresponding specialists are entitled to carry out maintenance, repair and service works, and disassemble machine or equipment parts

3.2. Safety

Please pay attention to the safety notices in chapter 2 - SAFETY.

Regular cleaning and maintenance preserve and assure safety of the operation service and problem loss performance of your GILLES wood chips heating facility.

Switch off the facility no later than 2 hours before starting your cleaning or maintenance works!

Before service and repair works, the facility must be switched off by turning the main switch on the control panel to the position OFF. Assure the main switch against its unintentional switching on by a locking device!

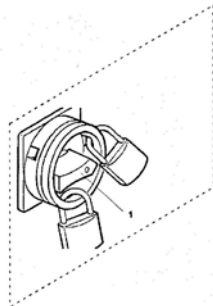
3.3. Heating facility examination and maintenance

The facility is designed so that requires practically no maintenance.

The owner / user of a wood heating system must observe local rules, law and ordinances governing the operation of these heating systems!

In Austria „Technical directives on fire prevention – TRVB H 118 apply, issued by the federal fire union, as well as other regional rules, ordinances and regulations.

The user is obliged to operate the heating system in accordance with the operation mode prescribed by the manufacturer. No deviation from these rules is allowable.



Technical safety equipment (e.g. burn back cell wheel) must be tested when starting the heating season and after any failure, in order to make certain of its perfect performance (Annex 2).

The automatic wood heating facilities of the energy performance of 153 kW and lower must be maintained regularly every 3 year and after any failure (facility installer).

In case of a failure on any of the safety equipment, the automatic operation of the heating facility is blocked.

Any leakages on the supply channels or feeding conveyors must be remedied immediately.

It is necessary to check up the level of the fuel material in store room regularly. The store room must be fulfilled in time, in order to assure such a permanent quantity of fuel that duly covers the conveying parts of discharging system.

The storage of inflammable materials in the storage room is forbidden.

During the heating season or working period, the operator must carry out regular week visual examination and month inspections of the facility way of operation and performance. In accordance with TRVB H 118, any examinations, cleanings, as well as any finding must be recorded in the Inspection book



WARNING

Any service and cleaning works may be carried out only when the main switch is OFF !

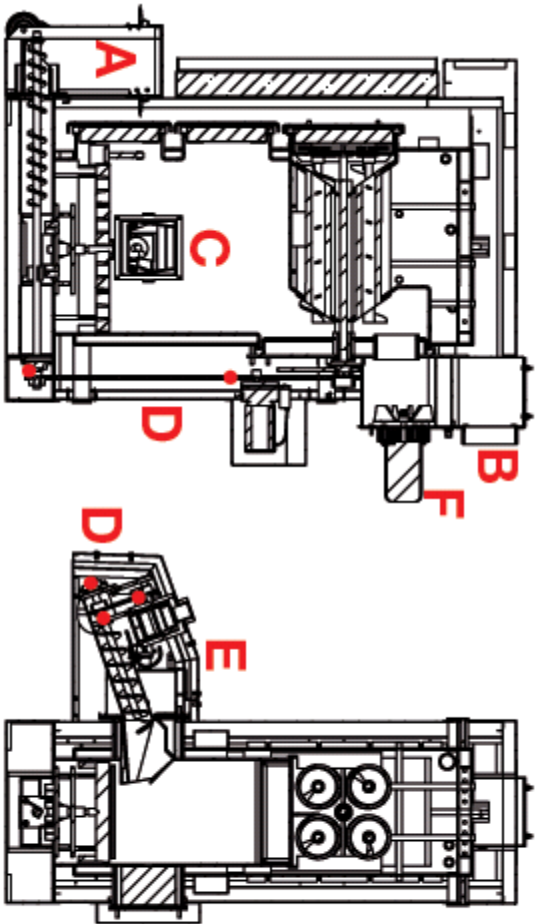
3.4. Maintenance plan

SERVICE AND MAINTENANCE PLAN

HPK-RA 12,5-49 (Pellets)



Before carrying out service or maintenance work disconnect and isolate power supply.



- A** Empty ash box
(when 2/3 full)
- B** Clean flue gas pipe, flue connection and flue gas fan
(Caution, take care not to damage flue gas temp. sensor and lambda probe)
2x annually
- C** Clean combustion tray and combustion chamber
2x annually
- D** Lubricate flange bearings and chains
2x annually •
- E** Clean ignition air tube
2x annually
- F** Air bleed screw
(check system pressure 2x annually)

- Detailed servicing information can be found in the Assembly Guide and Operator's Manual
 - The system must be switched off 2 hours before the fuel store is refilled.
 - Do not overfill when using logs or solid wood for emergency operation (up to 10 kg = 40 kW) and ensure that the generated heat is dispersed through the heating system.
 - Foreign bodies (nails, stones, slag etc.) should be removed weekly from the combustion chamber.
- Arrange an appointment with our Customer Service Department for servicing and maintenance work to be carried out.

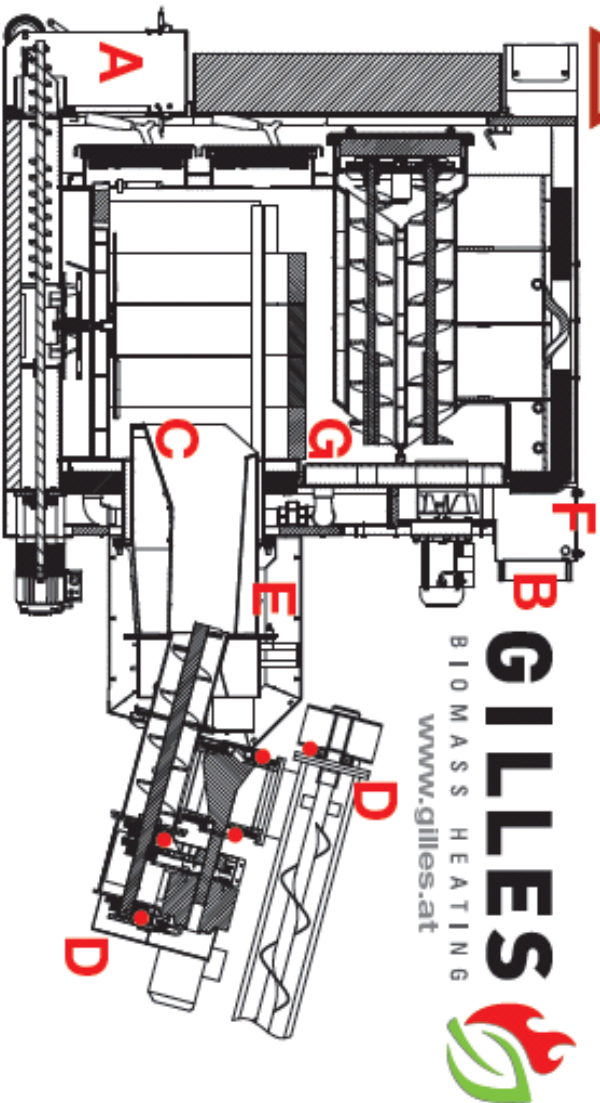
Service number

SERVICE AND MAINTENANCE PLAN

HPK-RA 15-160 (Wood chip)
HPK-RA 60-160 (Pellets)



Before carrying out service or maintenance work disconnect and isolate power supply.



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 BIOMASS HEATING
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- A** Empty ash box
(when 2/3 full)
- B** Clean flue gas pipe, flue connection and flue gas fan
(Caution, take care not to damage flue gas temp. sensor and lambda probe)
2x annually
- C** Clean combustion tray and combustion chamber
2x annually
- D** Lubricate flange bearings and chains
2x annually
- E** Clean ignition air tube
every 2 months
- F** Air bleed screw
(check system pressure)
- G** Remove ash from above combustion chamber (Arched fire bricks)
(each time the ash box is emptied)

- Detailed servicing information can be found in the Assembly Guide and Operator's Manual
- The system must be switched off 2 hours before the storage room is refilled.
- Do not overfill when using logs or solid wood for emergency operation (up to 10 kg = 40 kW) and ensure that the generated heat is dispersed through the heating system.
- Foreign bodies (nails, stones, slag etc.) should be removed weekly from the combustion chamber.

Filling procedure for Hinged Arm Sweep Collector:

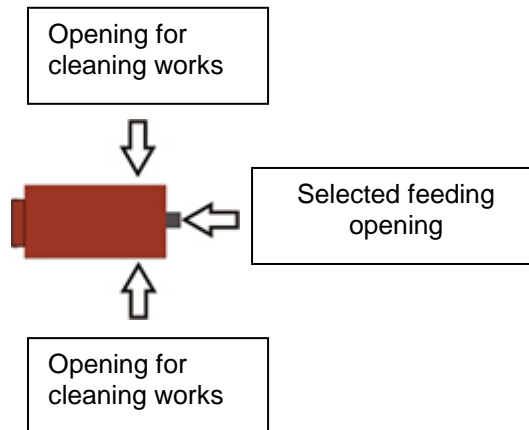
When filling the fuel store, to protect the sweep collector from damage, first fill to 0.5 M depth only, then run collection system manually until the collector arms are fully retracted. Now fill store up to 1 M depth and run for a further 10 seconds before filling rest of store / container.

Arrange an appointment with our Customer Service Department for servicing and maintenance work to be carried out!

Service number

You may make these works yourself. Nevertheless, there is a possibility to agree a term with our customer service and order the service works. These services are paid and thus there is not guarantee for their provision.

You may also request your qualified chimneyer that can take over these service works from your shoulders as well !



NOTICE

In addition, the examinations according to the rules of TRVB 118 Annex 2 are performed and recorded. The control book annexed.

4. Disposal of machine

To the end of its servicing lifetime the machine shall be professionally disassembled and disposed in accordance with the national rules. During the machine liquidation, please observe the following remarks:

- recycle the metal parts,
- recycle the synthetical materials,
- dispose the electrical and electrical parts as special waste materials.

Recommendation: Contact some company – specialist in the field of materials disposal.



5. Customer service / spare parts

5.1. Customer service

For any maintenance, repair or service works do not hesitate to contact professionals of GILLES company. These works require special skills and knowledge not described in this service manual.

Should a special case arise, you have to exchange some parts yourselves, pay attention to all the safety rules.

Contacts to our customer services:

Monday to Friday: Service division of the GILLES GmbH	 +43 / 7612 / 737 60-0
Weekends and days off: Hotline-Service number	 +43 / 664 / 133 93 23

GILLES Energie- und Umwelttechnik GmbH & Co KG
 Koaserbauer Str. 16
 A-4810 Gmunden
 Tel. +43 - 7612 - 737600
 Fax +43 - 7612 - 73760-17
www.gilles.at
office@gilles.at

Or contact our authorised representative partner:
See Part 1 – General – Service partners

5.2. Spare parts

You will get original spare parts at:

GILLES Energie- und Umwelttechnik GmbH & Co KG
 Koaserbauer Str. 16
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 Fax +43 - 7612 - 73760-17
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or by our authorised representative partner
See Part 1 – General – Service partners

6. GUARANTEE

6.1. Guarantee provisions

In principle, our „General sales and delivery terms and conditions“ are in force. These terms shall be given to the customer's disposal no later than on the contract conclusion.

The warranty provisions and guarantee regulations are specified in Part 2 – Safety, as well as in the delivered guarantee lists.

Any warranty a guarantee claims related with the personal or material damages are excluded, if at least one of the following points occurs:

- Installation and operations instruction are not observed,
- putting into operation and repair carried out by non authorised companies,
- improper installation, putting into operation, insufficient operation handling and servicing,
- absence of the documentation on putting the machine into operation and its service examinations,
- machine operation using defect safety equipment or equipment installed in inadequate manner, or using non-functional safety and protective equipment,
- neglecting of the remarks on transportation, instillation, putting into operation and maintenance of the machine,
- unwarranted changes of the machine (e.g. replacement of an engine by another – more efficient, changing of parts, etc.),
- insufficient examinations of parts being subject to wear and tear,
- unsound repairs,
- damages caused by influence of foreign materials, or “force majeure” (water, fire, etc.),
- lack of energy or water,
- absence of a device disconnecting the backward running.

In case of any technical questions, do not hesitate to contact us on this address:

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6.2. Resale of machine

In case of resale, the owner of the machine shall be bound to deliver the operation instructions to the buyer. In addition, the seller must inform the buyer about his obligation to study the operation instruction thoroughly and understand it, before putting the machine into operation.

Please inform us of the buyer's address without any delay in case you have resold the machine, in order to explain possible amendments in safety measures.