WOOD CHIP BOILERS

20 – 2,500 kW

HARGASSNER

BIOMASS HEATING TECHNOLOGY

hargassner.com

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Left to right: Philipp Aschenwald, Jonas Gerner & Daniela Iraschko-Stolz

Winter sport is our passion!

The fire burns in our eyes. Not just because we build sustainable biomass heating systems, but also because we are passionate sports fans. While it was once Anton Hargassner sr. himself who daringly pushed himself off the ski jump beam at a young age, he later kindled this fire for sport in Markus and Anton jr. Hargassner as well. This passion still burns in the Hargassner family today and the values of sport therefore also actively shape Hargassner's corporate culture. The "Hargassner Sport Family" unites this enthusiasm for sports, from youngsters to professionals, and shares it with the international fan community.

If you would like to be kept informed and experience first-hand everything that is going on in the world of the "Hargassner Sport Family", please follow them on their Facebook & Instagram social media channels.
#hargassnerfamily

Our corporate values are characterised by **harmony between nature and satisfied customers**

Hargassner. Since 1984, as a pioneer in automated biomass heating systems, we have endeavoured to stand by our customers as a reliable partner – with trustworthiness from Innviertel. We have now grown into an internationally successful company with a pronounced spirit of innovation.

- Over **38 years of experience**
- **140,000 customers** worldwide
- **Company premises covering 54,000 m²**
- More than **1,000 employees** at several locations
- **Export to 43 countries**
- **International awards**

Executive Board (left to right)
Markus & Anton jr. Hargassner

Heating with **wood chips**

Advantages

- **Independent of oil and gas**
- **Crisis-resistant**, because locally sourced
- **Short transportation**
- **Value creation process in the region**
- **Maximum convenience**
- **Waste wood utilisation**

Environmentally friendly. Wood chips are CO_2-neutral. In general, the cleaner combustion results in a CO_2 reduction of 95% compared to heating oil.

Local. Using wood chips offers a future-proof market for local companies and secure jobs in the region.

Economical. The combination of low fuel costs and highly efficient combustion makes heating with wood chips so economical.

Future-proof. Since more wood has been growing back in Germany and Austria for decades than has been used, there are sufficient reserves for future biomass entrants.

Comfortable & clean.
Today's biomass boilers are highly sophisticated. The wood chips are automatically transported from the storage room to the boiler. The ignition, control, boiler cleaning and de-ash processes are performed by the system itself. The control of heat distribution also works fully automatically and conveniently.

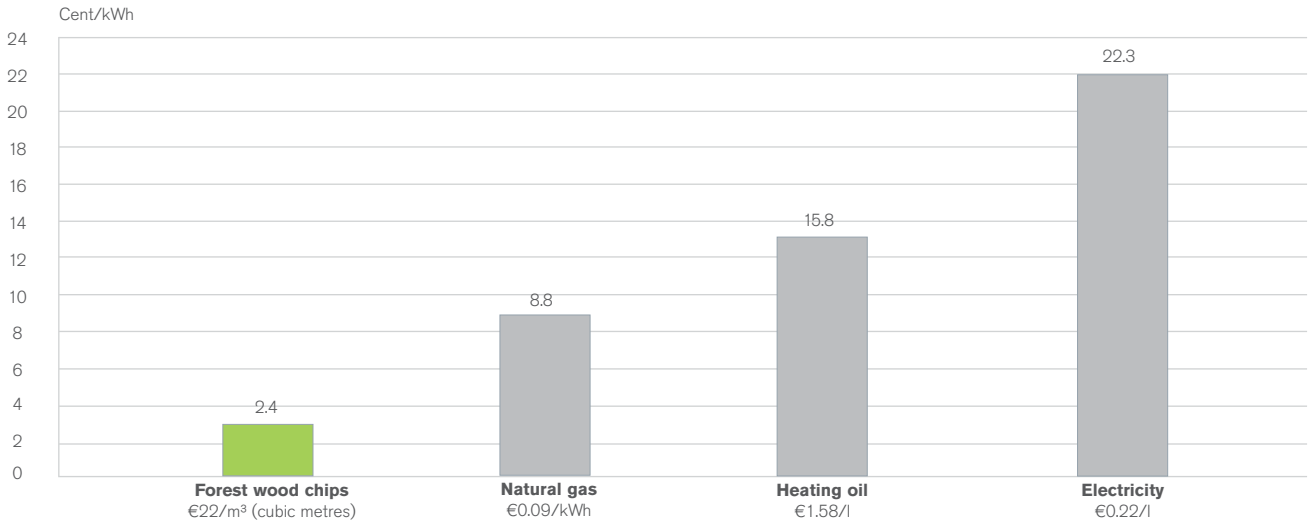
FACTS

Standards: EN ISO 17225-4, ÖNORM 7133 (G30, G50)
Calorific value: 4 kWh/kg at 25% water content
Density: 200 - 250 kg/m³
Size of wood chips P16S (corresponds to G30)**:**
Coarse particles (<6 %): max. 45 mm long, max. 20 mm Ø
Main particles (>60 %): between 3.15 - 16 mm long
Fine particles (<15 %): max. 3.15 mm long
Size of wood chips P31S (corresponds to G50)**:**
Coarse particles (<6 %): max. 150 mm long, max. 40 mm Ø
Main particles (>60 %): between 3.15 - 31.5 mm long
Fine particles (<10 %): max. 3.15 mm long
Water content: 10% - 35% (A1, A2, B1)
Primary energy effort: < 2.0% (for production)

Wood chips production directly on site

Energy prices per year*

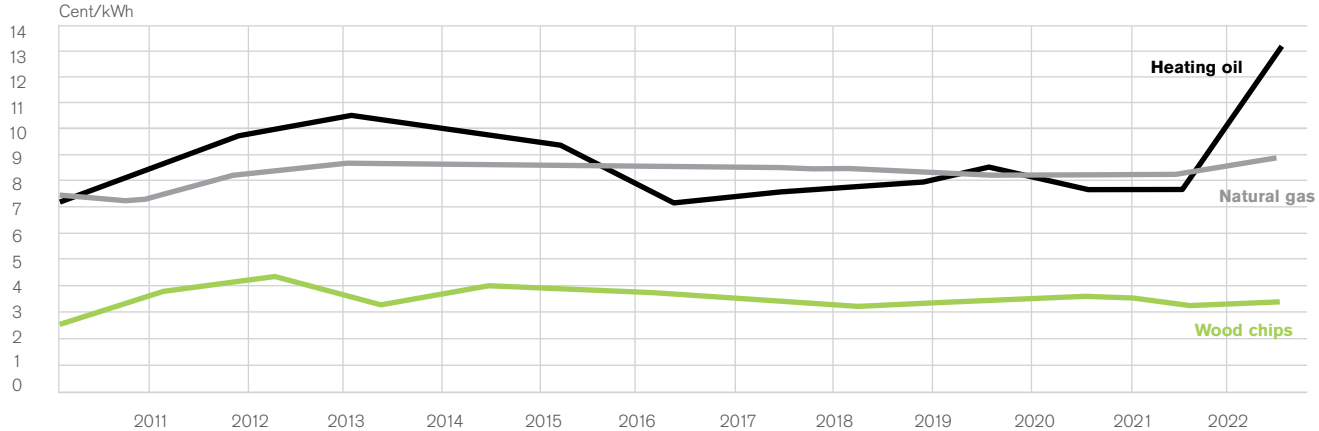
Comparing the costs of individual fuels down into cents per kilowatt hour reveals an astonishing picture:



* Last updated/guide values from 06/2022. Sources: Gas: e-control, heating oil: IWO, pellets: Genol and proPellets Austria, arbeiterkammerat

Long-term heating cost comparison between wood chips and oil/natural gas

In the ten years since 2011, wood chips have been more than 50% cheaper than heating oil on average. Even during the price changes due to global effects in 2022, wood chips played to their strength and remain by far the cheapest.



Sources: Gas: e-control, heating oil: IWO, pellets: Genol and proPellets Austria.
Sources: Gas: e-control, heating oil: IWO, pellets: Genol and proPellets Austria.

The variety of our **wood chip boilers**

ECO HK
20 – 60 kW

Perfect for:
- Detached houses
- Semi-detached houses
- Agriculture

For details, see p. 8

ECO HK
70 – 120 kW

Perfect for:
- Agriculture
- Public buildings
- Hotels and restaurants

For details, see p. 10

Biomass heating technology at its best

Products from Hargassner combine highest quality, expertise and decades of proven technology. As a biomass pioneer, Hargassner researches and develops the future of heating with a keen sense of the environment. These innovations make the boilers some of the best biomass heating solutions available in the world today. Lowest emissions at the highest efficiencies, maximum convenience and long lifetime characterise the "Hargassner" brand. Research, quality control and the focus on customer satisfaction

HARGASSNER
BIOMASS HEATING TECHNOLOGY

ECO HK
130 – 230 kW

Perfect for:
- Business
- Public buildings
- Industry

For details, see p. 12

ECO HK
250 – 330 kW

Perfect for:
- Business
- Public buildings
- Industry

For details, see p. 14

therefore characterise the daily tasks to a high degree. Many customers are already benefiting from this success story. A capacity of more than 30,000 boilers produced per year and over 140,000 satisfied buyers worldwide are proof of the top level of Hargassner heating technology.

Discover the wide world of Hargassner wood chip heating systems on the following pages.

AWARDED WITH THE INNOVATION PRIZE
ENERGIE GENIE

Our Eco-HK boiler series from 20 kW to 120 kW has been awarded the Energie Genie (energy genius) innovation prize. You can find more information about our awards and prizes on our website hargassner.com

ECO HK
20 – 60 kW

Hargassner – state-of-the-art wood chip heating technology for the low output range. These boilers are particularly well-suited to farms, detached houses and semi-detached houses.

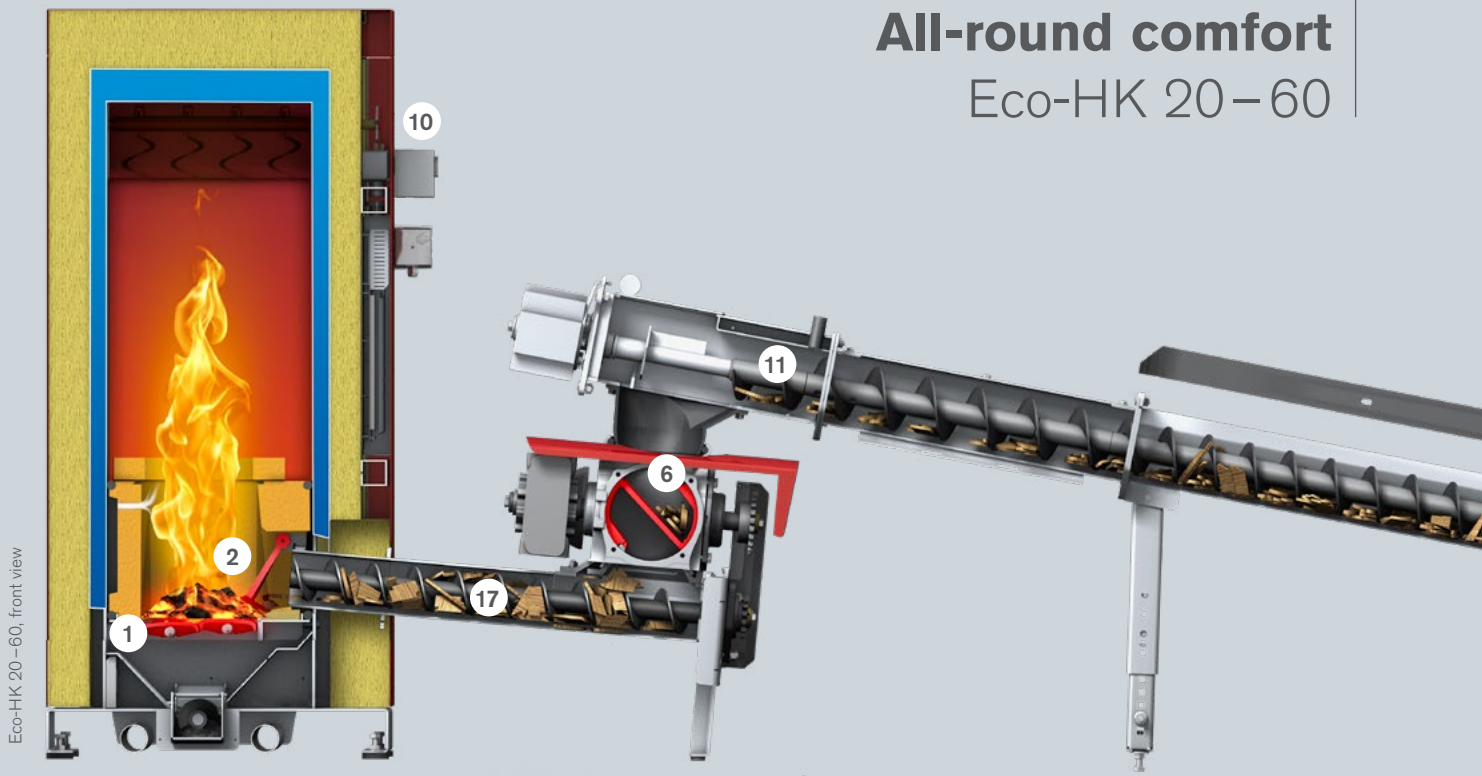
- **Cost-cutting** thanks to eco mode
- **Step grate** special grate system
- **Automatic fuel quality detection**
- **Eco-Control** for very low micro-dust levels
- **Rotary valve in Z-form**
- **Emergency operation**
  with wood logs possible

Application areas

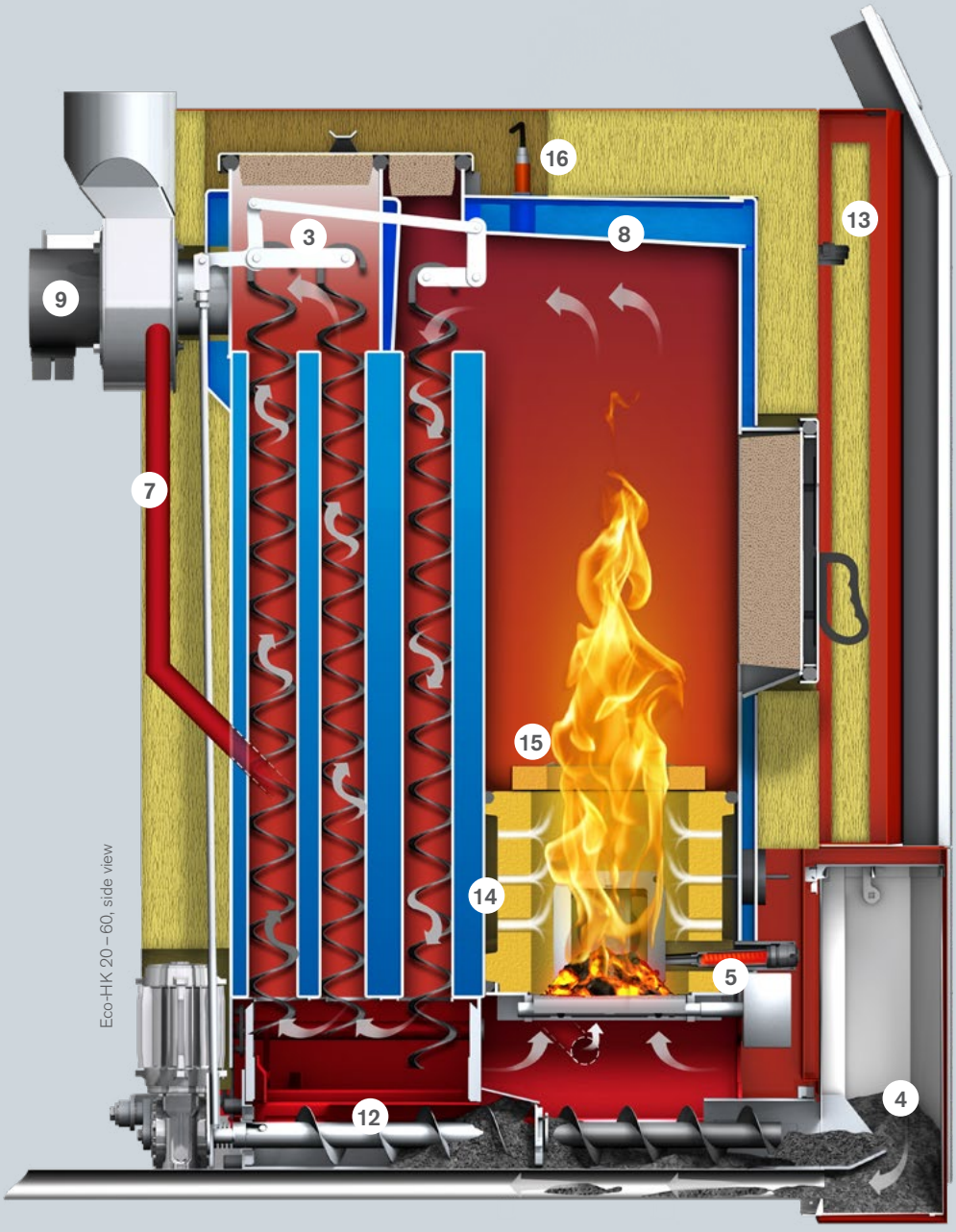
- Detached houses
- Semi-detached houses
- Agriculture

- H x W x D = 1,455 x 660 x 940 mm (Eco-HK 20 – 35)
- H x W x D = 1,455 x 745 x 1,025 mm (Eco-HK 40 – 60)
- Energy efficiency class A+
- Efficiency of up to 95%
- 5-year warranty

All-round comfort
Eco-HK 20 – 60



Eco-HK 20 – 60, front view



Eco-HK 20 – 60, side view

1 "Step grate" system
2 Firebed level control
3 Turbulators with autom. boiler cleaning system (also in 1st pass)
4 Ash box 30 l; optional: ash suction system for very long maintenance intervals
5 Automatic ignition with 300 W
6 Bicameral rotary valve in Z-form (18 cm depth)
7 Recirculation
8 Heat exchanger: no thermal safety circuit required
9 Exhaust fan (EC motor) with negative pressure monitoring
10 Integrated back-end protection, optional
11 Eco-RA – energy-saving fuel extraction
12 Ash extraction system for fly and grate ash
13 Negative pressure monitoring
14 Fully refractory-lined combustion chamber
15 Flame concentration jets made of high-quality refractory
16 Lambda sensor
17 Stainless steel stoker auger and pipe

ECO HK
70 – 120 kW

Hargassner – state-of-the-art wood chip heating technology for the medium output range. These boilers are particularly well-suited to multi-dwelling buildings, hotels, restaurants and small public buildings.

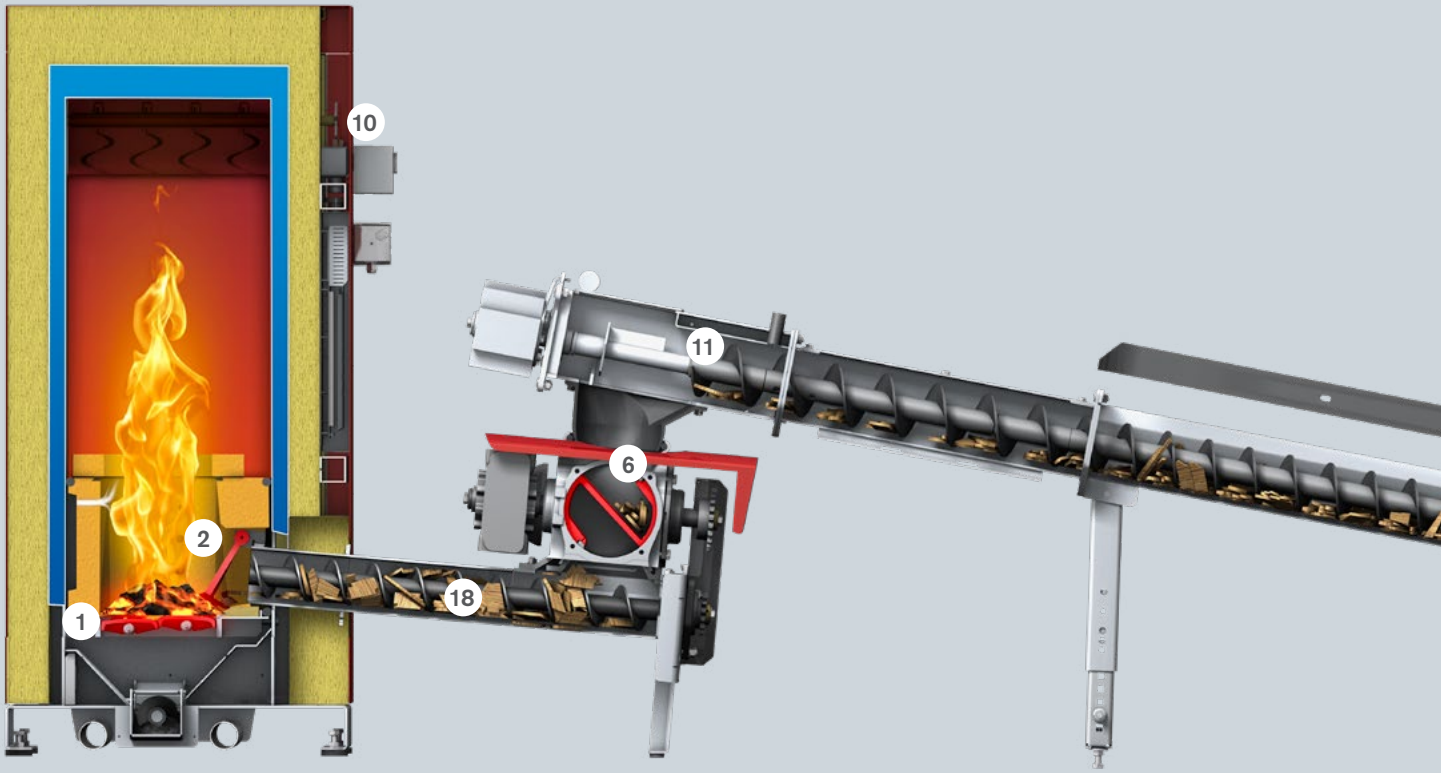
- **Cost-cutting** thanks to eco mode
- **Step grate** special grate system
- **Automatic fuel quality detection**
- **Eco-Control** for very low micro-dust levels
- **Rotary valve in Z-form**

Application areas

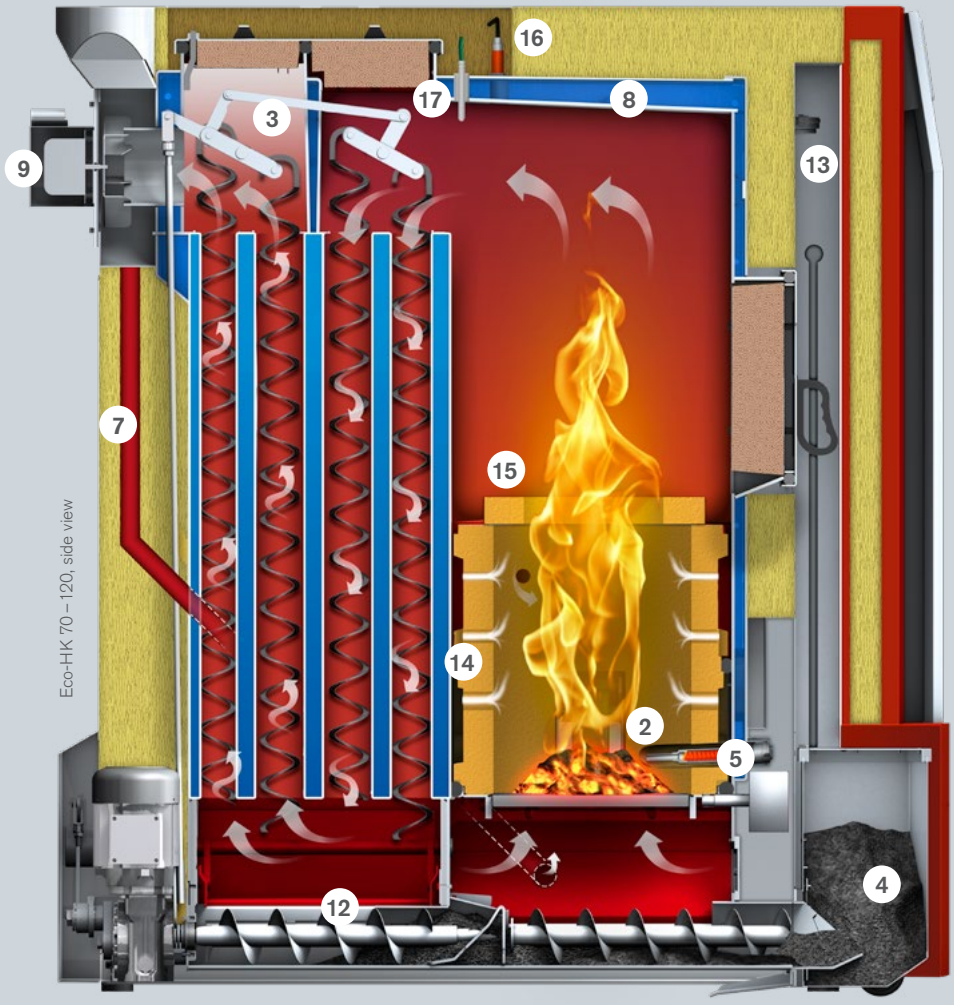
- Agriculture
- Public buildings
- Hotels and restaurants

- H x W x D = 1,670 x 745 x 1,215 mm
- Energy efficiency class A+
- Efficiency of up to 95%
- 5-year warranty

Perfect heating setup
Eco-HK 70 – 120



Eco-HK 70 – 120, front view



Eco-HK 70 – 120, side view

1 "Step grate" system
2 Firebed level control
3 Turbulators with autom. boiler cleaning system (also in 1st pass)
4 Ash box 60 l; optional: ash suction system for very long maintenance intervals
5 Automatic ignition with 300 W
6 Bicameral rotary valve in Z-form (18 cm depth)
7 Recirculation
8 Heat exchanger: no thermal safety circuit necessary
9 Exhaust fan (EC motor) with negative pressure monitoring
10 Integrated back-end protection, optional
11 Eco-RA – energy-saving fuel extraction
12 Ash extraction system for fly and grate ash
13 Negative pressure monitoring
14 Fully refractory-lined combustion chamber
15 Flame concentration jets made of high-quality refractory
16 Lambda sensor
17 Flame temperature monitor
18 Stainless steel stoker auger and pipe

ECO HK
130 – 230 kW

Hargassner – state-of-the-art wood chip heating technology for the medium-to-high output range. These boilers are particularly well-suited to public buildings and industrial and commercial enterprises.

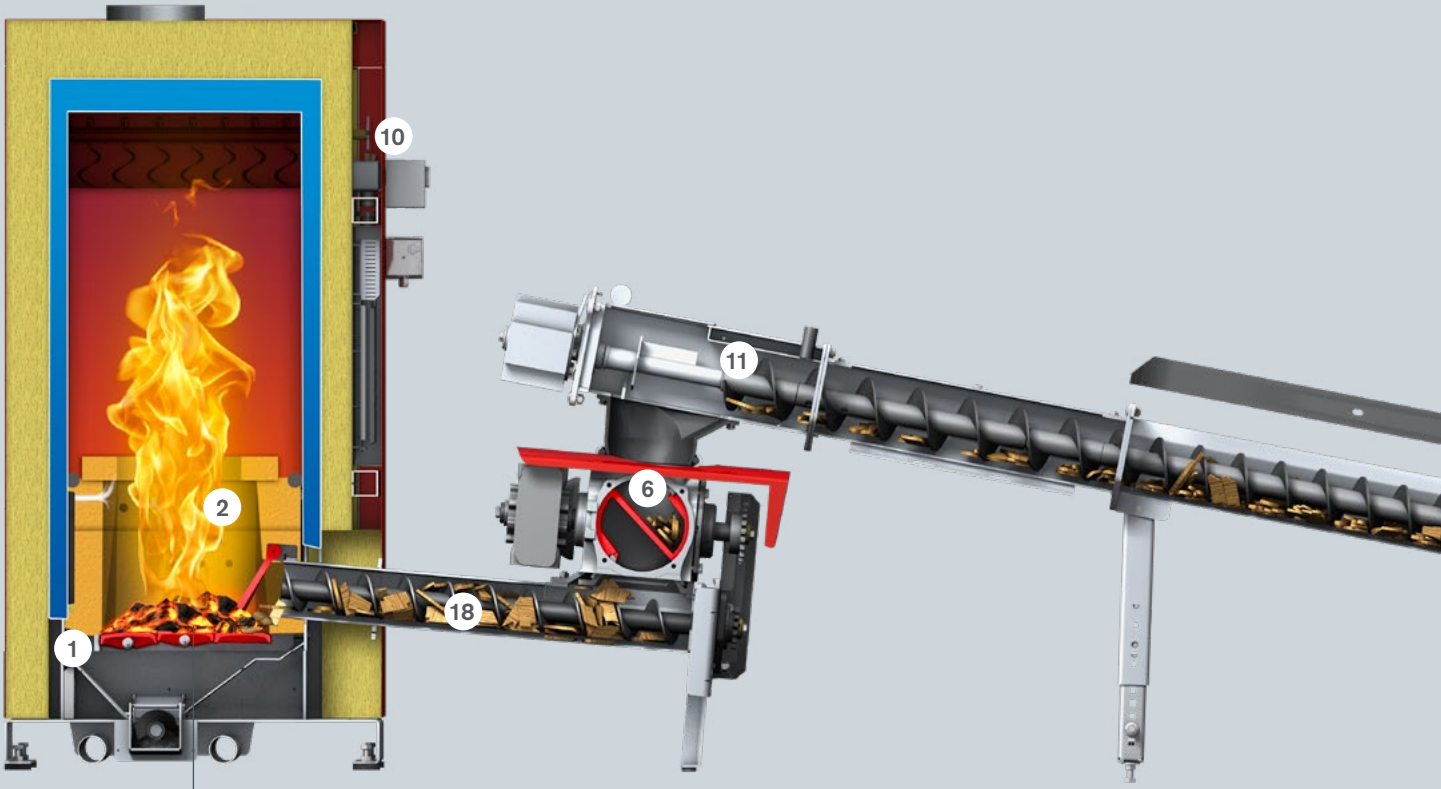
- **Cost-cutting** thanks to eco mode
- **Step grate** special grate system
- **Automatic fuel quality detection**
- **Eco-Control** for very low micro-dust levels
- **Rotary valve in Z-form**

Application areas

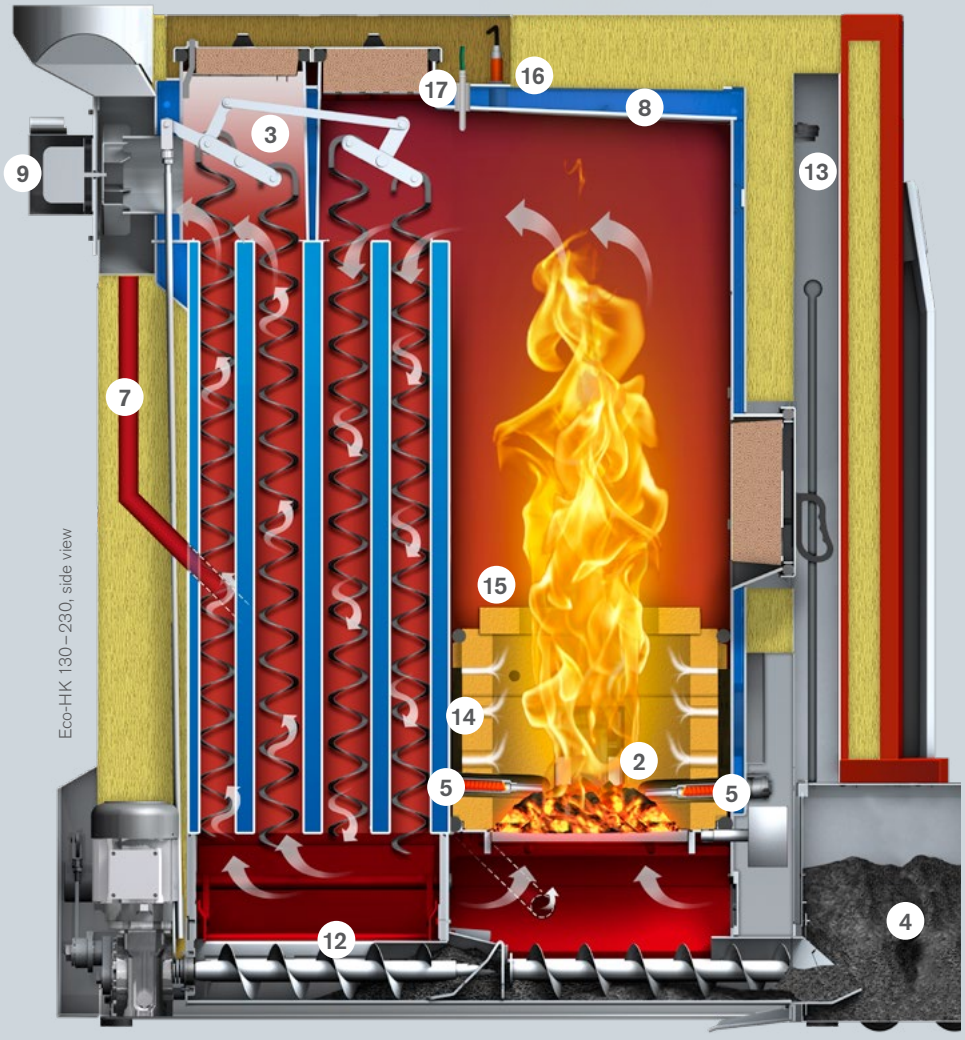
- Business
- Public buildings
- Industry

- H x W x D = 1,765 x 875 x 1,740 mm (Eco-HK 130 – 170)
- H x W x D = 1,915 x 945 x 1,905 mm (Eco-HK 200 – 230)
- Efficiency of up to 95%
- 5-year warranty

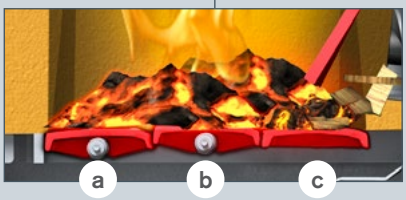
Professional performance
Eco-HK 130 – 230



Eco-HK 130 – 230, front view



Eco-HK 130 – 230, side view



1 "Step grate" system
a) De-ash grate
b) Stoker grate
c) Fixed grate
2 Firebed level control
3 Turbulators with autom. boiler cleaning system (also in 1st pass)
4 Ash box 75 l; optional: ash suction system for very long maintenance intervals
5 Automatic ignition with 300 W x2
6 Bicameral rotary valve in Z-form (22 cm depth)
7 Recirculation
8 Heat exchanger: no thermal safety circuit necessary
9 Exhaust fan (EC motor) with negative pressure monitoring
10 Integrated back-end protection, optional
11 Eco-RA – energy-saving fuel extraction
12 Ash extraction system for fly and grate ash
13 Negative pressure monitoring
14 Fully refractory-lined combustion chamber
15 Flame concentration jets made of high-quality refractory
16 Lambda sensor
17 Flame temperature monitor
18 Stainless steel stoker auger and pipe

ECO HK
250 – 330 kW

Hargassner – state-of-the-art wood chip heating technology for the high output range. These boilers are particularly well-suited to public buildings, industrial and commercial enterprises and local heating networks.

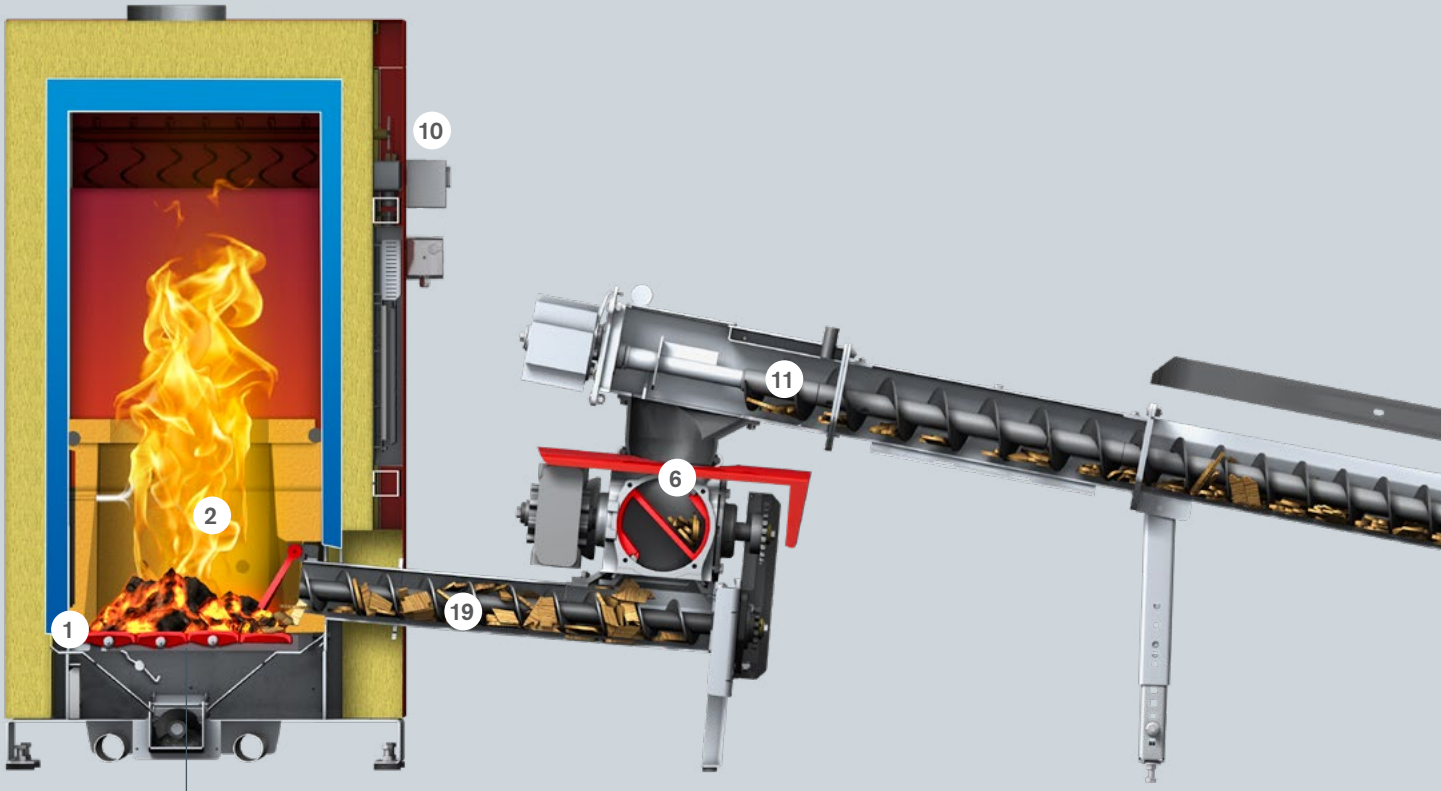
- **Cost-cutting** thanks to eco mode
- **Step grate** special grate system
- **Automatic fuel quality detection**
- **Eco-Control** for very low micro-dust levels
- **Rotary valve in Z-form**

Application areas

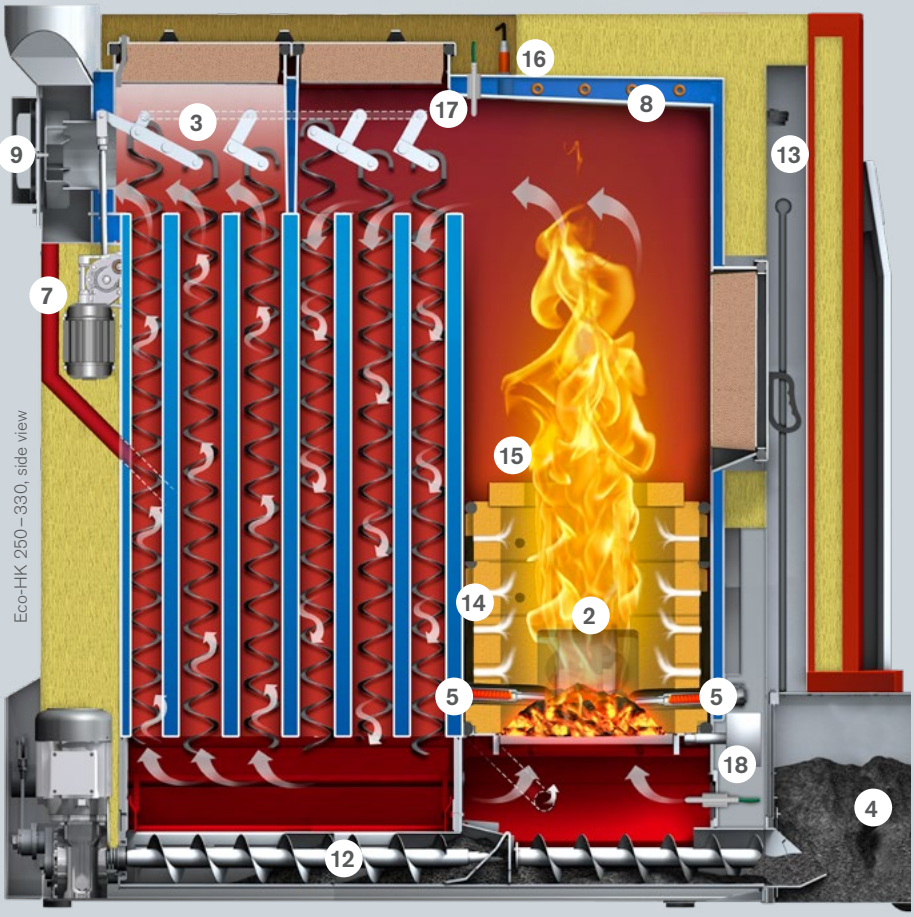
- Business
- Public buildings
- Industry

- H x W x D = 2,005 x 1,155 x 2,285 mm
- Efficiency of up to 95%
- 5-year warranty
- In cascade up to 2 MW

Maximum heating power
Eco-HK 250 – 330



Eco-HK 250 – 330, front view



Eco-HK 250 – 330, side view

1 "Step grate" system
a) De-ash grate
b) Breaker grate
c) Stoker grate
d) Fixed grate
2 Firebed level control
3 Turbulators with autom. boiler cleaning system (also in 1st pass)
4 Ash box 75 l; optional: ash suction system for very long maintenance intervals
5 Automatic ignition with 300 W x2
6 Bicameral rotary valve in Z-form (22 cm depth)
7 Recirculation
8 Heat exchanger
9 Exhaust fan (EC motor) with negative pressure monitoring
10 Integrated back-end protection, optional
11 Eco-RA – energy-saving fuel extraction
12 Ash extraction system for fly and grate ash
13 Negative pressure monitoring
14 Fully refractory-lined combustion chamber
15 Flame concentration jets made of high-quality refractory
16 Lambda sensor
17 Flame temperature monitor
18 Grate temperature monitor
19 Stainless steel stoker auger and pipe

This is what makes it unique

The wood chip boilers from the Eco series are the right choice for all applications that already require a medium to higher heating output. In cascade, i.e. up to 6 boilers connected in series, an output of up to 2 MW is possible. This is heating technology at its best, equipped with many energy-saving extras, so that heat can be produced with reduced emissions and at low cost when energy demands are higher. The "ECO series" stand for effective and efficient heating.

Energy-saving ECO operation

Speed-controlled EC exhaust fan with negative pressure control

Hargassner uses energy-saving EC exhaust fans in its Eco-HK boilers. The crucial advantage of this GreenTech EC technology* is the electric speed control, which significantly reduces electricity consumption (up to 80% less electricity). The negative pressure unit constantly measures the pressure conditions in the combustion chamber. The Lambda Touchtronic uses this data to control the speed of the exhaust fan, thus keeping the negative pressure at an ideal level. This concept ensures combustion with the lowest possible emissions and therefore maximum efficiency.

Energy-saving ignition

Thanks to the design of this ignition element, the power consumption has been reduced to just 300 watts (up to 1000 watts less) and, at the same time, the efficiency of the ignition process has been increased. Two ignition elements are installed in the Eco-HK 130 - 330 series.

Energy-saving fuel extraction system

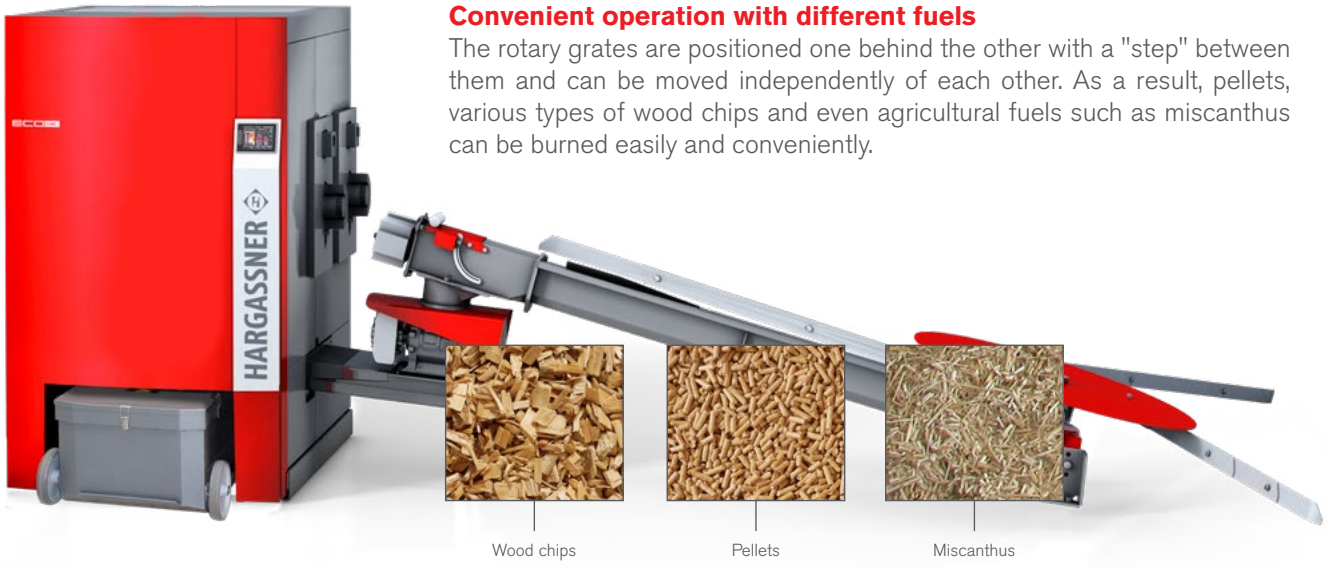
Thanks to a low drive output of just 0.18 kW (0.25 – 0.55 kW for 70 – 330 kW boilers) and a robust, high-efficiency spur gear, the fuel extraction system saves a huge amount of energy. Savings of up to 67% can be achieved here. With the excellent gear efficiency of over 90%, it clearly outperforms conventional worm gears.

- **Energy savings of over 88%**
- **Smart ignition monitoring**
- **Silent operation**

One boiler – **three options**

Convenient operation with different fuels

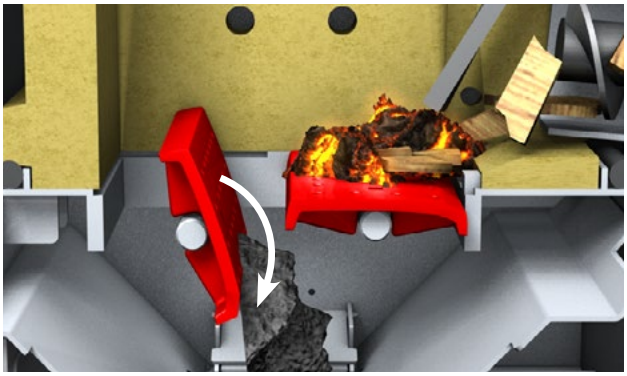
The rotary grates are positioned one behind the other with a "step" between them and can be moved independently of each other. As a result, pellets, various types of wood chips and even agricultural fuels such as miscanthus can be burned easily and conveniently.



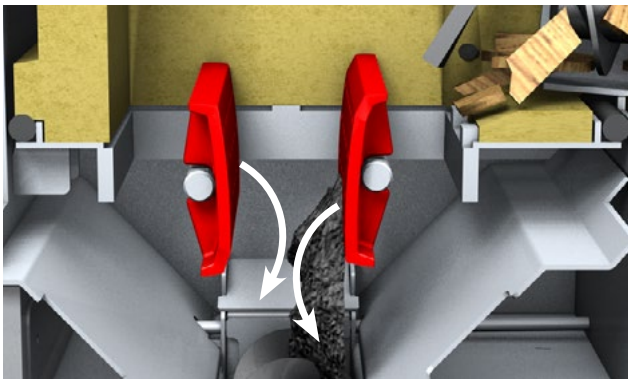
Eco-HK 250 – 330

Strong **step grate**

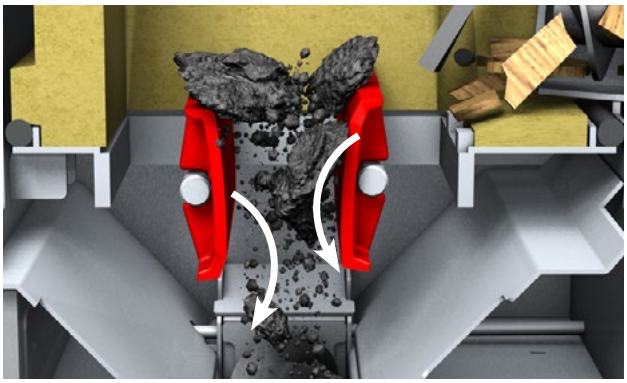
Closed grates in the combustion chamber with a high firebed – optimises the **gasification process and minimises micro-dust emissions.**



During the heating cycle, only the **rear rotary grate** is opened during the de-ash process. The ash falls down, the residual embers remain and enable further combustion of the newly extracted fuel.



The combustion chamber is cleaned completely before the boiler is restarted. **Both grates open** and cold ashes and foreign bodies such as stones and nails are disposed of.

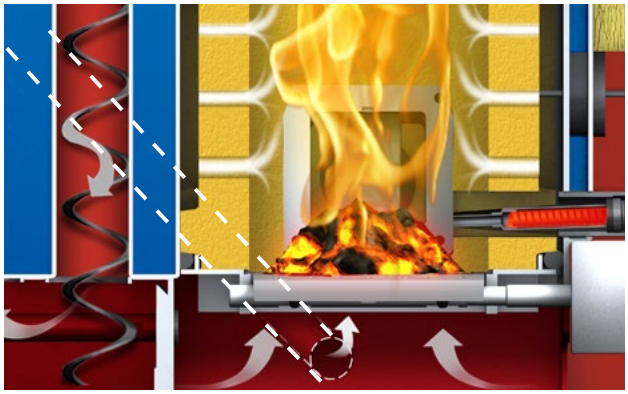


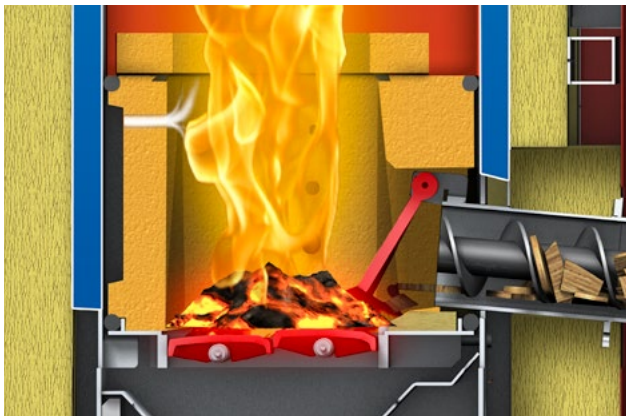
For fuel with a very low ash melting point, the rotary grate's special "**breaker function**" will break the clinker.

ECO HK
The future of heating

Fully refractory-lined combustion chamber as standard recirculation
The refractory combustion chamber's special storage effect guarantees high combustion temperatures (even for partial load), minimises the number of times the boiler has to be ignited and reduces emissions.

Every Eco-HK has **flue gas recirculation** integrated as standard to avoid ash clinkering caused by dry fuel or fuel with a low ash melting point. The residues can be disposed of via the ash extraction system without any problems, because the cooling of the firebed means that even low ash melting points of low-grade fuels are not yet reached.





Independent firebed monitoring
Non-contact sensors monitor the height of the firebed, so the most efficient combustion condition is achieved.

Lambda sensor control
The **lambda sensor** integrated into the control unit detects the calorific value of the fuel and thus regulates the optimum fuel/air mixture.

Optimised cleaning for high convenience

ALL heat exchanger tubes – including the 1st pass – are cleaned at regular intervals. The edges of the auger turbulators efficiently remove any fly ash residue from the boiler pipes which then falls straight into the ash auger. Both the fly ash and the grate ash are transported into a **fully integrated ash box** by just **one** ash extraction auger. The residues are crushed as they are being transported and then compacted in the box, resulting in increased annual efficiency and a higher degree of cleaning convenience. With Eco-HK 20 - 230 kW, only one drive is required for heat exchanger cleaning and ash extraction.

Integrated touch control - plug and play

The new **Lambda Touchtronic** meets every need. It is distinguished by an exceptional design and the fact that it is very easy to operate.

- Simple touch menu navigation
- Sophisticated heat distribution
- Automatically adjusts to weather conditions
- Various options for controlling your heating system remotely, ranging from your living room to while you're out (via the app)
- Can be connected to various smart home solutions

For even better and **cleaner air**

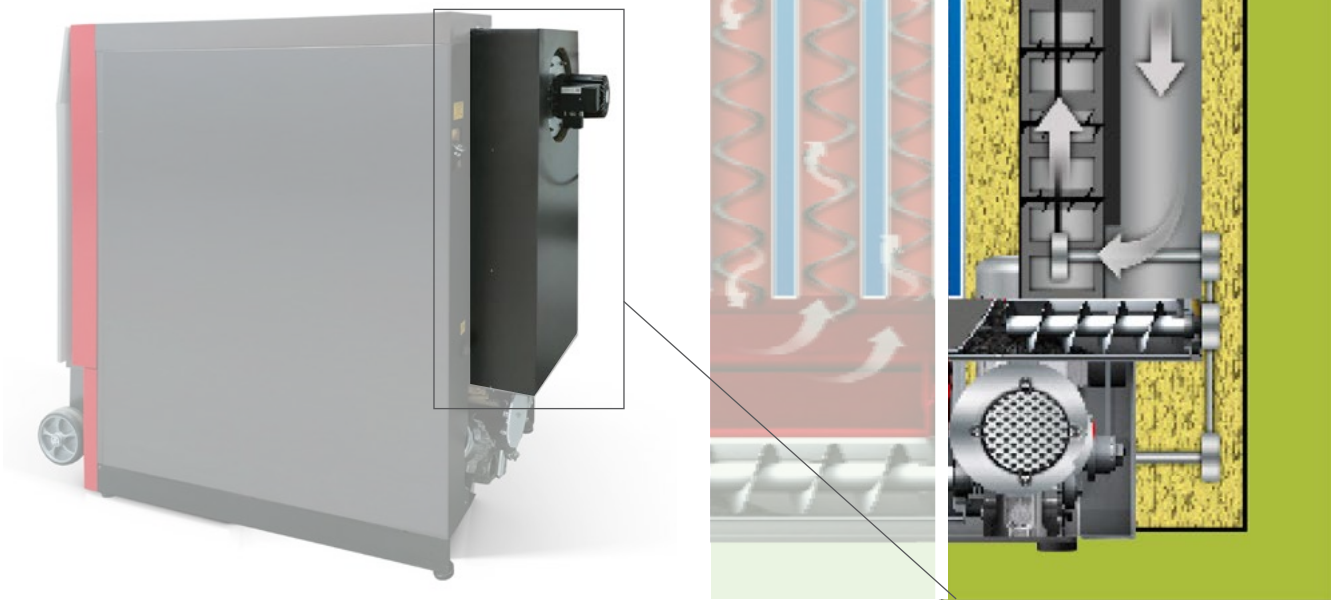
PARTICLE SEPARATOR
20 – 230 eCLEANER

Unique filter technology

The filter will significantly reduce your boiler's micro-dust emissions, depending on the quality of the fuel it's running on.

Electrostatic particle charging takes place in the eCleaner. The particles deposit on the walls and fall down through the automatic cleaning device. An auger moves them to the boiler's ash box.

- **Low space requirements**
- **Micro-dust emissions** minimised
- **Automatic cleaning and transport** into the ash box
- Can be **integrated into cascades**
- Optional, easy to retrofit at any time



Wood chip cascades

Up to six boilers for a maximum of 2 MW

Due to the special and exact combination of up to six boilers, the power requirement can be optimally adapted to the season. Operational reliability is increased and the fuel storage capacity doubled while also guaranteeing you, the customer, optimum price-performance ratio.

- **Highest operation safety**
- **Optimum low-load coverage**
- **Large extraction volume**
- **Optimum price-performance ratio**

CHP 60 kW heat & 20 kW power from wood

The Hargassner CHP plant consists of a gasification unit and a generator unit. Based on the principle of wood gasification, this system is used to generate current and heat from natural wood chips. The electrical current generated here is fed into the public grid. The heat that arises is used for heating purposes, drying or similar applications. For more information, see the detailed Hargassner CHP brochure or visit hargassner.com.

CHP = combined heat power

Powerful **industrial heating systems**

Hargassner boilers are designed for continuous high-performance operation. We offer a wide range with systems offering outputs of up to 2,500 kW! The target groups for these boilers range from restaurants and hotels to heating plants, farms and large commercial and industrial businesses. As a customer, you achieve a rapid amortisation of the investment costs through the use of cost-effective wood chips.

- **Robust industrial design**
- **Solid radiation vault**
- **Recycles fuels up to 60% of residual water content**

MAGNO UF
250 – 550 kW

This heating system is characterised by an under feed firing retort (UF) with burnout grate. The boiler is particularly suitable for use in restaurants and hotels, in large commercial and industrial businesses, especially for very dry fuel, and also ideal for joineries and sawmills.

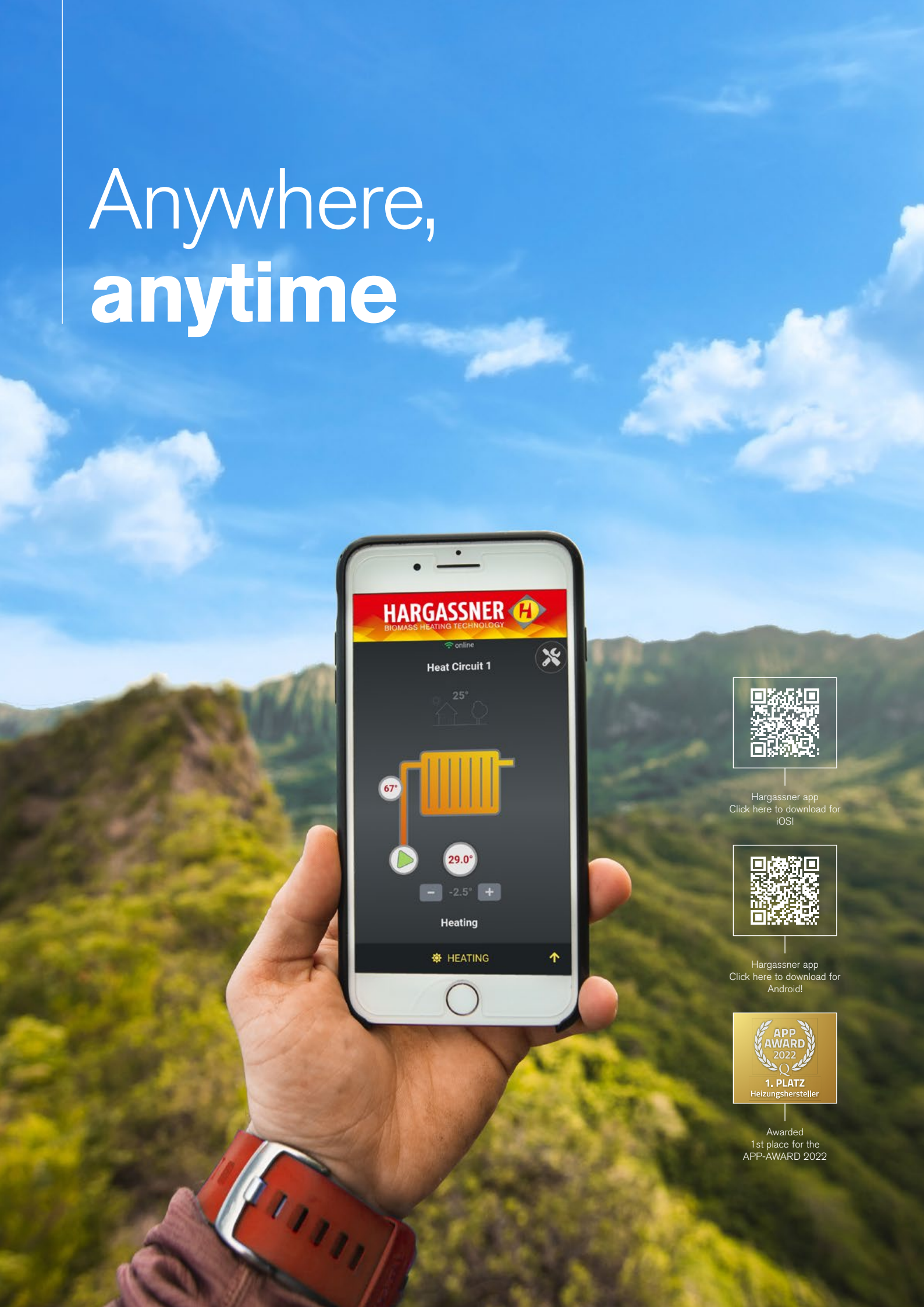
MAGNO VR
250 – 550 kW

The heating system for high output ranges with forward flat bed step grate firing (VR). This is particularly suitable for wood chips with a high residual water content of up to 60%. High temperatures guarantee clean and efficient combustion. All system are designed with low-NOx combustion chambers.

MAGNO SR
800 – 2,500 kW

We offer a unique range with systems offering outputs of up to 2,500 kW. These boilers are characterised by a forward grate step grate firing (SR). A modulating mode of operation as well as efficiencies of over 95.7% enable the highest annual utilisation rates. They are primarily designed for continuous high-performance use and can utilise fuel with a residual water content of up to 60%. Also ideal for local and district heating networks.

Anywhere, **anytime**



Hargassner app
Click here to download for iOS!

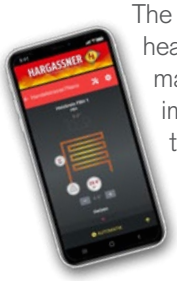
Hargassner app
Click here to download for Android!

APP AWARD 2022
1. PLATZ
Heizungshersteller

Awarded
1st place for the
APP-AWARD 2022

Remote control via phone or tablet

App for mobile heating control



The Hargassner app allows you to control the heating quickly and on the move and view information worldwide around the clock. The app immediately sends important information to the mobile end device via email or push message. This way, you know the status of the boiler at all times. (Requirements: Internet Gateway, smartphone with Android or iOS)

Awarded the APP-AWARD 2022

The Hargassner app picked up an excellent first place in the heating control app category in 2022. The "Deutsche Gesellschaft für Verbraucherstudien" (German company for consumer studies) investigated customer satisfaction and which apps could really inspire their users. Hargassner came out on top among 28 apps and thus received the App Award 2022.

Internet Gateway

Required for app and WEB service. The Internet Gateway will establish a secure TLS-encrypted connection between your Hargassner boiler"s control unit and the internet router. This way, you can safely access the heating system with your mobile device.

Convenient remote controls

Would you like to change your heating settings or read off the current status of your heating without having to visit your boiler room? No problem! The practical remote controls leave nothing to be desired. Simple, self-explanatory and visually perfectly matched to your needs! Details of our analogue and digital (touch) remote controls can be found on our website hargassner.com.

Control accessories for every need

Hargassner offers comprehensive accessory options. The Hargassner standard control covers the majority of the requirements in a modern house. However, if further heat circuits, solar panels, etc. are to be connected, additional boards and remote controls are available.
The best solution for every requirement: For more detailed information, please contact your Hargassner installation company.

Smart home connections

"Smart home" is an innovative way of controlling the management of energy in your home according to your needs. Hargassner has a connection ready for the most common home automation systems (Loxone, KNX, Mod-Bus, etc.). They take energy control to a new level. The benefits are clear. You save energy and costs and enjoy comfort and safety at the same time. Electrical appliances and devices, your heating system and lights around the home are all connected to one central control unit. Via the internet you are able to look at your home - also if you are out and about.

LOXONE KNX Modbus

Simple **boiler operation**

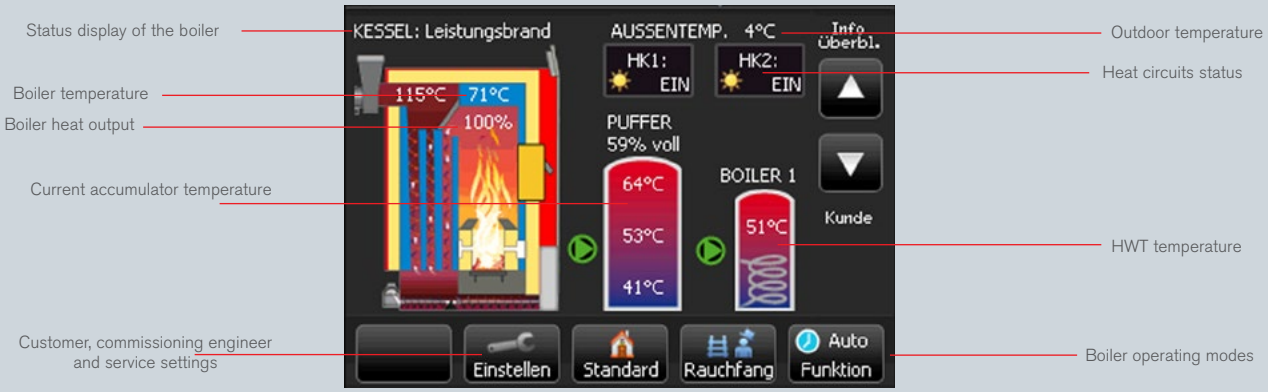
Hargassner has control programmes for all boiler series; these programmes are all clearly arranged and easy to use. They provide a convenient way to control heat circuits and hot water.

Hargassner Lambda Touchtronic

This software controls the Eco-HK boiler series from transport of the fuel and combustion to the heat circuits and hot water tanks. It is guided by weather conditions, so recognises changes in conditions as soon as they occur and seamlessly adjusts the boiler's output accordingly. As a result, the boiler is always running in the optimum output range, enabling you to save both fuel and unnecessary costs.

Everything at a glance

The menu of the Eco-HK series is characterised by its clear structure. More detailed features are available in the boiler-specific operating instructions or from the Hargassner partner commissioning engineer.



Lean back and relax –
your heating system will do the rest!

Control of heat circuits

The **Lambda Touchtronic** can control multiple heat circuits that are independent of each other. You can specify different settings in detail. For example, you can specify the room temperature you would like on a particular heat circuit at a particular time of day.

Hot water tank

It's only necessary to set the desired hot water tank temperature and loading time. The control unit takes care of the rest. Hargassner guarantees hot water - 24 hours a day.

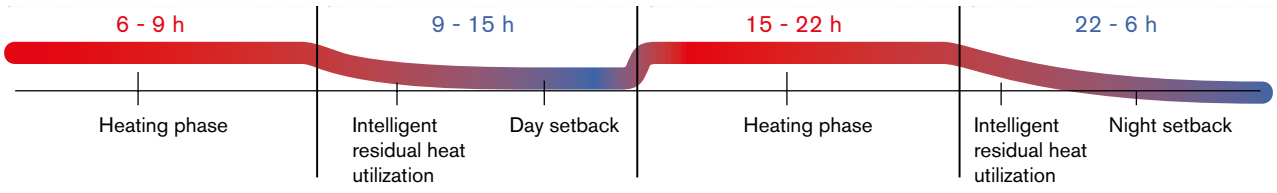
Another advantage is the automatic HWT priority. This ensures that the room temperature does not cool down during hot water tank loading periods.

Your home therefore remains warm and cosy at all times.

Hargassner's **3G day/night reduction mode** makes it possible to set three outdoor temperature thresholds. One mode for "Heating during the day", one for "Reduction during the day" and one for "Reduction during the night". As a result, the heating system only operates if necessary – this is convenient for energy saving. Thanks to the clever residual heat use feature, the energy remaining in the boiler after it has been shut down is efficiently fed into the heat circuits.

Example of a **day heating sequence with reduction logic**

Fixed outdoor thresholds above which heating is required: Day from 16°C, night from - 5°C (22:00 – 6:00 h)



Heating period 1

06:00 – 09:00: Outside it is -7°C, well below the defined threshold of +16°C. **The heating switches on.**

Day reduction period

09:00 – 15:00: Outside, the temperature rises to -1°C, which is below the day reduction threshold of +8°C. **The heating switches on in day reduction mode.**

Heating period 2

15:00 – 22:00: The outside temperature rises to +1°C, which is considerably lower than the threshold of +16°C. **The heating remains on.**

Night reduction period

22:00 – 06:00: The temperature cools down to -2°C, which is above the night reduction threshold of -5°C. **The heating switches off.**

Heating with wood is **environmental protection**

ECO HK

Eco fuel extraction system from Hargassner: energy-saving and cost-cutting

Unique advantages of the ECO-HK fuel extraction system

Thanks to a low drive output of just 0.18 kW (0.25 – 0.55 kW for 70 – 330 kW boilers) and a robust, high-efficiency spur gear, the fuel extraction system saves a huge amount of energy and therefore lowers electricity costs. You can save as much as 67% in electricity costs compared to those for conventional fuel extraction systems. With the excellent gear efficiency of over 90%, it clearly outperforms conventional worm gears. The new modular design ensures that the auger, along with its trough and removable cover, is easy to use.

- ✓ **Hargassner spur gear**
  Lowest friction loss with highest efficiency over 90 %
- ✓ **Modular design** for planning flexibility
- ✓ **Maximum use of storage space** due to low installation dimension

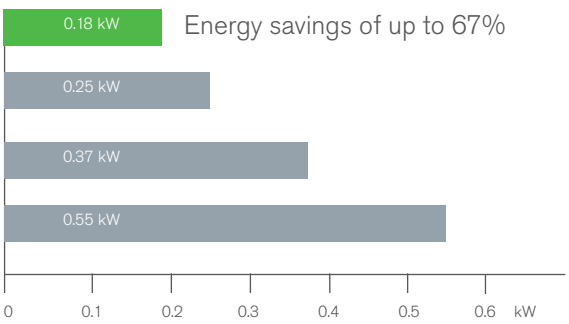
- ⊕ Lowest power consumption
- ⊕ Quick and easy assembly
- ⊕ Cost-effective (no sloping floor required)

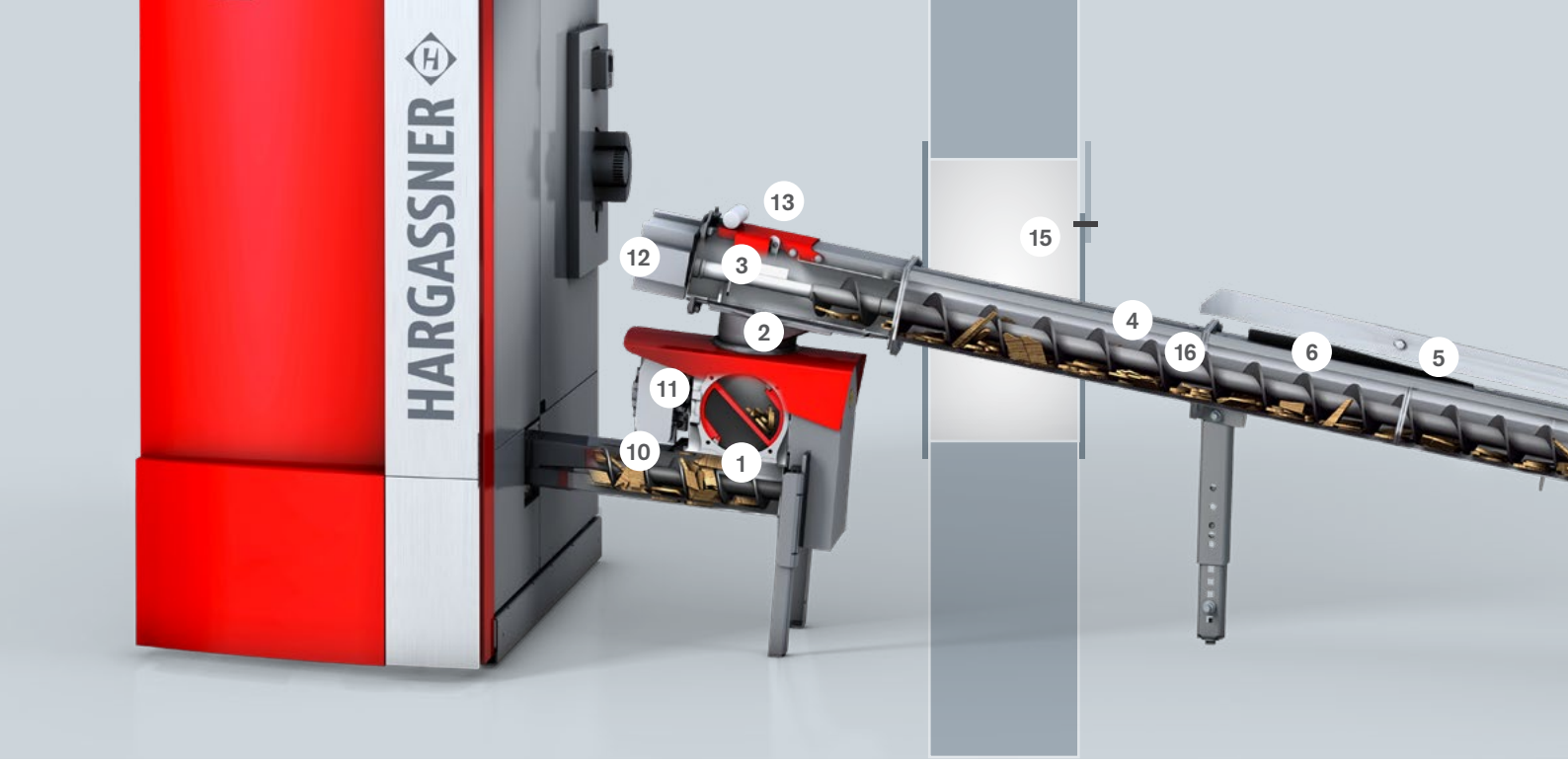
Drive systems compared

Worm gear
High friction loss
Low efficiency

Spur gear
Low friction loss
Maximum efficiency

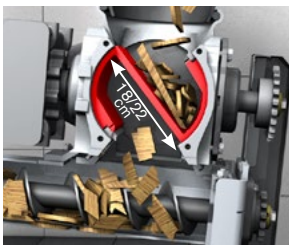
Very low electricity consumption!





ECO HK

Fuel extraction – robust and reliable



1 Two-chamber rotary valve

A Z-shaped rotary valve specially designed for wood chips.

- Chamber depth 18 cm / 22 cm
- For long pieces of wood
- 100% burn-back protection guaranteed
- Easy to replace
- Saves a lot of effort
- Has hardened cutting edges

2 Ball coupling

- Flexible tilt and rotation angle
- Maximum planning and installation flexibility

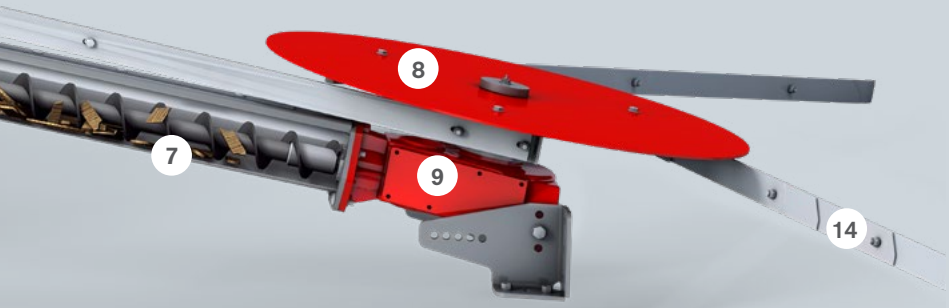
3 Breaker box

- Breaks wood chips that are too long
- Increased operational safety
- With special safety switch

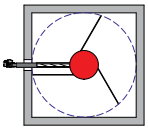
4 Modular design

- Planning flexibility
- Auger extensions of 300 – 2000 mm
- Easy to transport and install
- Quicker and cheaper to maintain
- Individual auger parts can be replaced

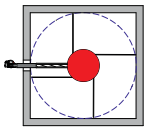
Fuel extraction
Eco-HK



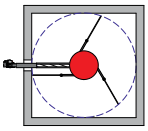
1 Bicameral rotary valve in Z-form
2 Ball coupling
3 Breaker box
4 FE system extensions (modular design)
5 Special spring blade layout
6 Effective wood chip inlet bracket
7 Extraction auger and shaft
8 No-load disc
9 Eco fuel extraction gear unit (spur gear)
10 Stainless steel stoker auger (and pipe) with STM temperature monitoring
11 Drive motor for the stoker auger and rotary valve
12 Drive motor for the extraction auger and agitator
13 Safety cover with a reverse function
14 Floor agitator with spring blades
15 Maintenance opening
16 Fuel storage room - temperature monitoring TÜB



5 Special spring blade layout
- Ø of up to 4 m = 3-blade system
- Power-saving gear ratio 1:16



- Ø of 4.5 to 5 m = 4-blade system
- Power-saving gear ratio 1:25

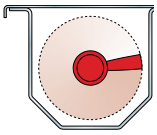


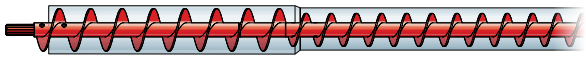
- Ø of 5.5 to 6 m = 3-blade hinged arms
- Power-saving gear ratio 1:25

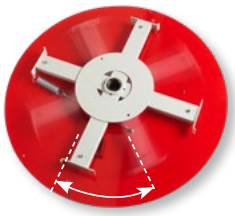
6 Wood chip inlet bracket
- Optimum fuel supply
- Ideal amount of fuel in the auger shaft
- Max. fuel storage room emptying
- Less effort required and less wear and tear

Solid construction
- Very robust and durable
- Operationally safe
- Maintenance-free

7 New auger and shaft
- Generously dimensioned
- No fuel jams
- Suitable for wood chips/pellets







8 No-load disc
- Disc remains still until the spring blades are retracted under the disc
- Effort required halved
- No hollow spaces created

9 Eco fuel extraction gear unit
- Maximum efficiency
- Energy-saving and highly efficient
- Durable

Optimum storage, **a great feeling**

The best solution **for every customer scenario**

One of the most important aspects of installing a wood chip heating system is planning the fuel storage room. Regardless of whether the storage room is in the house being heated or in an adjacent building and regardless of whether it's in the basement, at ground level or on the first floor, Hargassner has the right solution for every customer requirement. Of course, the storage room should be easy to fill and as big as possible or, as the case may be, as big as necessary. Installing the heating system in an adjacent building can offer some major advantages, because there is more space available and the storage room is also usually easier to fill.

Boiler room and storage room in the basement

Here, the storage room in the basement of the house is filled by a horizontal filling auger on the ceiling with an outside shaft.

Boiler room and storage room in an adjacent building

Here, the storage room (on the first floor) is filled by a vertical filling auger. The extraction is performed by an agitator system with downpipe.

Boiler room and storage room at ground level

In an adjacent building or a boiler house: This type of storage room is filled by the chipper itself or by a tractor with a front loader.

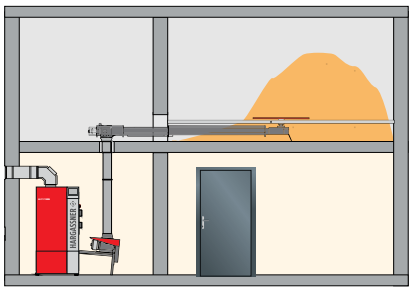
Heating system for a local heating network

Here, the boiler and storage rooms are housed in a completely separate building. The storage room is below ground level and can easily be filled from the top.

Heating modules as a special heating and storage room solution!

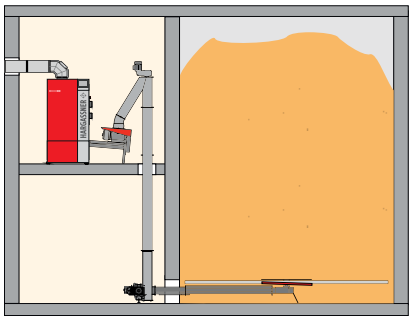
Here, the storage room is filled by a vertical filling auger.

Fuel extraction with coordinated concept



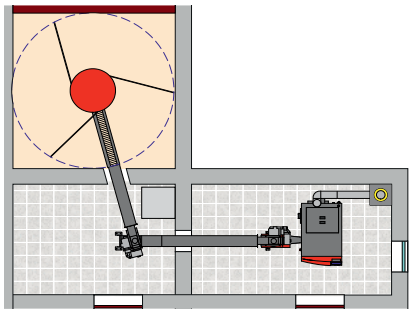
Downwards with downpipe

A modular downpipe system developed by Hargassner is used when the wood chip storage room is located on the floor above the boiler. The diameters 150 and 180 cm are available. Various pipe modules and variable extensions ensure precise adjustment towards the stoker auger. Hargassner also has solutions for a vertical offset and concepts with two fuel extraction systems (Y-piece available on request).



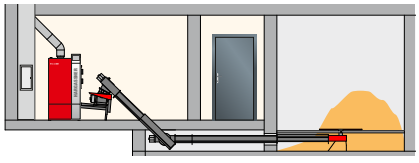
Upwards with vertical connection auger

If wood chips are stored on the floor below the boiler, a vertical, modular auger is used between the fuel extraction system and the boiler to transport the fuel upwards. Here, too, optimally developed modules, extension tubes and solutions ensure precise adjustment towards the stoker auger in the event of a possible offset.



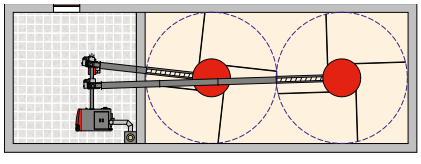
With universal connection auger

The concept with the connection auger is the all-rounder and bridges larger distances with a variable, diagonally mountable transport auger. With modules and extensions as well as variable connection heads at the boiler and the augers to each other, almost every building situation can be solved for optimum wood chip transport.



With variable ascending auger

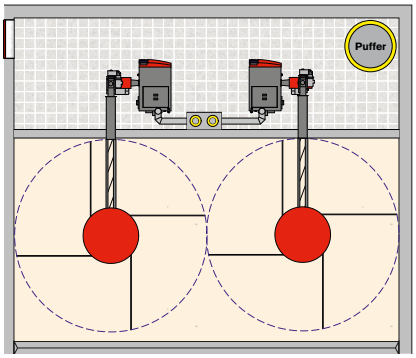
An ascending auger is the perfect concept if the boiler and storage room are separated by other rooms (e.g. corridors). For this purpose, the fuel extraction auger is below ground level. An ascending auger in the boiler room then transports the wood chips to the stoker auger of the boiler. Both augers are linear to each other. The ascending auger can be attached to the boiler itself diagonally.



With two fuel extraction systems

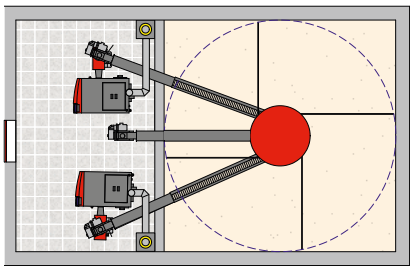
This concept makes optimum use of rectangular storage rooms and leads to the boiler with two fuel extraction systems and thus two transport augers. This increases the storage volume and thus also the coverage of the wood chips. The boiler switches between the two fuel extraction systems automatically.

Cascade control for more heating power



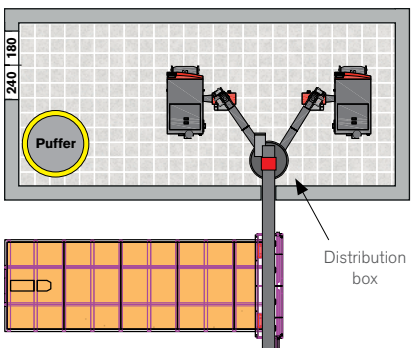
Multiple boiler systems with up to six boilers and up to 2 MW

The system concept for the high heating demand allows the heating operation to be optimally adapted to the season through the precise control of up to six boilers in series. The cascade connection also allows a larger capacity of the wood chip storage room to be dimensioned with several agitators. As a result, operational safety is increased.



Two boilers with one agitator

An agitator directly supplies two boilers controlled from a cascade control. A closed auger with a separate drive turns the agitator in the wood chip storage room. The boilers are supplied with fuel via two open extraction augers.



Distribution box for multiple boiler systems

This is the solution when extraction is only possible from the storage room. The round distribution box has its own drive and adjustable feet. It distributes the wood chips through openings for each boiler and variable connection augers. Up to four boilers can be supplied in this way. An extension is possible with extension frames. It can be used with Hargassner or third-party fuel extraction systems (silo extraction, moving floor extraction, etc.).

Automatic **storage room filling systems**

With ejector inside

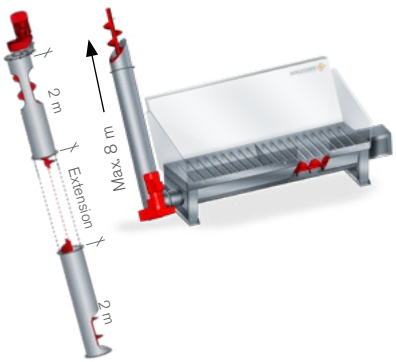
A vertical auger inside the storage room transports the wood chips upwards. The filling system's ejector ensures very low dust distribution.

With ejector outside

A vertical auger with shaft transports the wood chips upwards on the outside of the building - ideal for round silos and ground-level rooms with low room heights. The low-dust ejector for distribution is supplied from the outside through a wall opening.

With horizontal distribution auger

A vertical auger for transporting the wood chips upwards is combined with a horizontal distribution auger in the storage room instead of an ejector. Ideal for long wood chip stores and for bridging gaps.



With variable diagonal auger

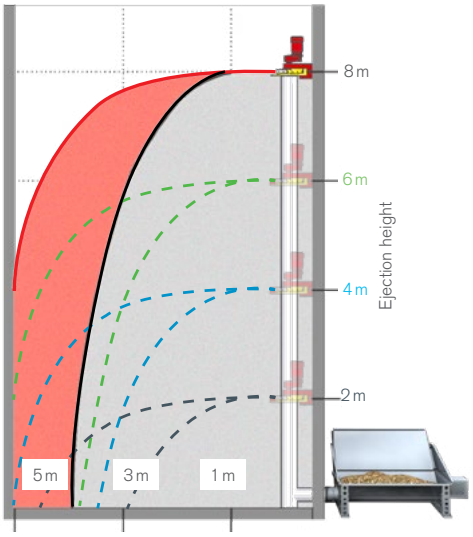
Here, a diagonally positioned filling auger with variable inclination and lengths of up to eight metres takes over the filling of the storage room. Ideal for high storage rooms with a gable.

Example

Automatic filling system (also for storage rooms that are difficult to access) with trough, vertical auger and ejector on the inside

The basic filling trough serves as a filling aid and is located outside the storage room. It is available in lengths of 1.4 m, 2.1 m and 2.8 m (with and without wheels). It can be supplemented with extension frames, side walls and a hinged lid for convenient tipping and can be lowered into the ground if required.

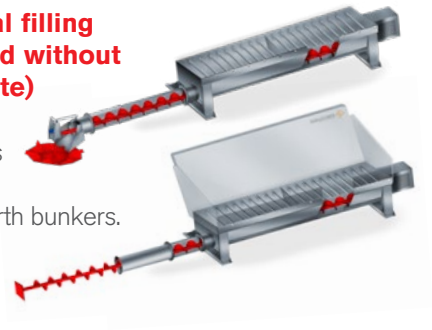
The vertical transport auger is available for heights of up to 8 m and, depending on the quality of the wood chips, achieves a capacity of up to 50 m³/h (horizontal augers are also available in various lengths). The ejector is adjustable for optimum and low-dust wood chip distribution depending on the shape of the storage room. The ejection width depends on the nature and throwing height of the wood chips. The larger and heavier, the further it is distributed (see red curve). Lighter wood chips cannot be thrown as far (black curve). This results in various filling heights.



Automatic **filling systems for cellar rooms**

With horizontal filling auger (with and without centrifugal plate)

With and without spinning plate it is the ideal solution for cellars and earth bunkers.

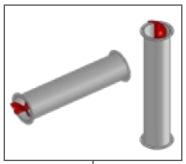


Filling auger for cellars

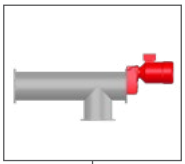
The horizontal filling auger is an ideal solution for the automatic filling of cellar rooms and for the distribution of wood chips in earth bunkers. For free-span filling systems of 5-10 m in length, an intermediate bearing is used for stabilisation. The conveying capacity is up to 30 m³/h (depending on material consistency).

Accessories

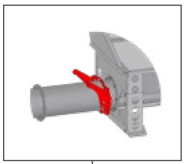
As a full-range supplier, Hargassner also offers a comprehensive range of add-ons for “automatic, convenient filling” of the wood chip storage room. Your Hargassner commissioning engineer will also be happy to provide information on site.



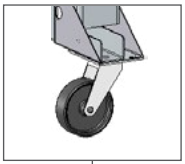
Extension horizontal and vertical (max. 8 m large)



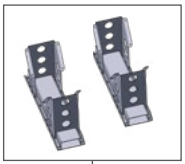
Angle adaptor



Quick-connect coupling



Transport wheels



Fork angle bracket

Heating modules for outdoors – storage with a system

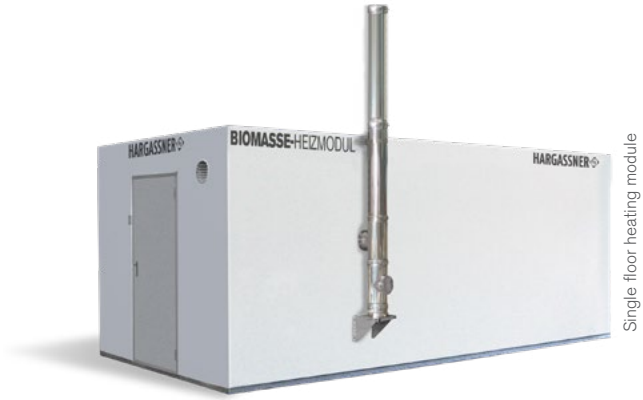
A heating container with a boiler and integrated pellet storage room saves an enormous amount of space in the building and generally makes it easier to switch to biomass.

This ideal combination of external boiler and storage rooms comes as a cost-effective system design and as single, double or multiple containers. The modules allow individual lengths, widths, heights and of course different heat outputs. That is why they can be used for detached houses, public buildings, commercial and industrial buildings, and even local heating power plants (heat contracting). They are also have a great price-performance ratio.

- ✓ **Set up quickly and easily**
- ✓ **Customised size and design**
- ✓ **Additional storage space**
- ✓ **Easily to expand**

Single floor heating module 35 kW wood chips, farm

Single floor heating module 2 x 100 kW wood chips, business



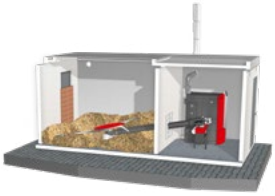
Single floor heating module

Double-floor heating module

Modular heating solution

Versatile for all applications

A Hargassner heating module can be dimensioned to suit any type of building. Of course, all wishes are open to you in terms of exterior design: whether plain in the standard version with a metal wall or clad to match the house or commercial property.

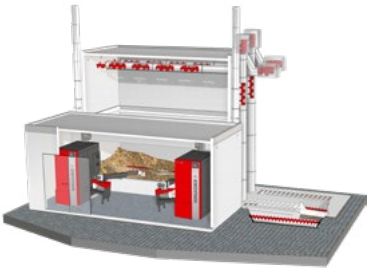


Single floor heating module
for heating systems from 20 – 120 kW and 20 – 32 m³ wood chips

- Apartment buildings
- Hotels

Double-floor heating module
for heating systems from 70 – 200 kW and 60 – 80 m³ wood chips

- Apartment buildings
- Hotels, industry, contracting, etc.



Multiple heating module
for heating systems from 140 – 1,000 kW and 80 – 160 m³ wood chips

- Apartment buildings
- Hotels, industry, contracting, etc.

Double-floor heating module 200 kW wood chips, business

Multiple heating module 660 kW wood chips, industry

Permanently **storing heat**

Accumulator systems for stored heat

Storing heat and excess energy from the heating water in the accumulator saves money. Depending on the model, they also heat the fresh water. The Hargassner storage systems are optimised for the key requirements – heat storage and hot water preparation.

Universal heat storage tank
Layered accumulator for 500 – 5,000 l

Layered accumulators of the types SP, HSP, FWS and their solar variants can be used for all Hargassner heating systems. The Hargassner commissioning engineer company will be happy to recommend the right solution. The addition of a freshwater station to the models is provided. The "spread sheet" guarantees optimum temperature stratification and particularly efficient energy utilisation. This saves heating costs in the long run.

- **Optimised energy utilisation** in the accumulator
- **Insulation and hard casing**
- Suitable for **combination with solar**
- **Easy and flexible installation**, can be switched in parallel
- **Special accumulators of up to 150,000 l**
- **Very little space required**

Universal hot-water storage tank
WS 300 and WS 500 (solar operation possible)

The allrounders among the hot-water storage tanks can be combined with all Hargassner heating systems. They are characterised by optimally dimensioned heating surfaces for fast heat up times and high continuous output. Solar operation is provided for the WS 300-S and WS 500-S types by integrating an additional bare-tube heat exchanger. This is the perfect way to store energy from biomass and the sun.

Household
People: 5/8*

Baths
Evening: 1/2*

Showers
Morning: 3/4* &
Evening: 2/3*

* The values given are guide values that depend on user behaviour and the actual temperature settings

SP = layered accumulator, HSP = hygienic layered accumulator, FWS = freshwater station

From flame **to ash**

After combustion, **dispose quickly & cleanly**

The larger the ash bin, the less frequent the maintenance intervals. Hargassner offers various transportation auger systems into a large ash bin. This massively reduces the ash-emptying intervals and improves convenience. A large ash bin means maintenance checks only need to take place once a year.

Ash transportation system (Eco-HK 20 – 330)
The ash transportation system features a flexible auger and transports the ash into a 240 or 300 litre ash bin. The ash bin can be positioned to the left or to the right of the boiler. Its connection hose can be extended up to 3 m.

Ash suction system (Eco-HK 20 – 120)
Hargassner offers an ash suction system for customers who want to have their ash bin outside their boiler room. It enables the 300 l ash bin to be up to 20 m away from the boiler.

Ash bin
There is a 240 litre ash bin that can be emptied by your refuse collection service and a 300 litre version that has to be emptied by a forklift or a tractor with a front loader.

AC-Ash-Cleaner ash suction device
The Hargassner AC-Ash-Cleaner ash suction device consists of an industrial vacuum unit with a 300 l ash bin on wheels and is used for easy disposal of ash from the ash box or boiler. The filter in the unit can be cleaned semi-automatically when the suction power is reduced. Important: The vacuum cleaner requires weather protection if installed outdoors!

A world full of **possibilities**

Hargassner is the full-range supplier for biomass central heating systems.
Hydraulic components, accessories of all kinds are available extensively and in individual designs for all requirements. Precise coordination of the entire heating solution guarantees optimal cooperation of each individual component with each other. Additional information can be found in further product brochures or on hargassner.com (also as download).

Find out more about our heating accessories at hargassner.com

Various **heating components**

Substation, heat meter, freshwater station & heat circuit groups

Expandable hydraulic components for heat circuit groups, freshwater preparation, etc. are adapted to the Hargassner boilers. Their control functions are taken over exactly by the Hargassner control system on the boiler.

Premium solar panels

As an ideal complement to biomass heating systems, Hargassner offers high-quality solar panels for the preparation of heating and hot water. They are available as flat-plate or horizontal collectors with above-average performance and a long lifetime, and they are available in reinforced versions for regions with high snow loads. The Hargassner Group is the only company worldwide to market vacuum flat-plate collectors. They are the only collectors that work 100% free of condensate.

Stainless steel flue pipe connection set ADO Ø 150 mm

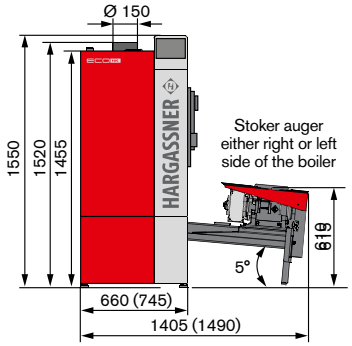
At Hargassner, you can also find special stainless steel flue pipe sets for wood chip boilers. The connection sets include all the necessary components such as bows, pipes, boiler collars and seals. There are two versions of these sets, an ADO one with an integrated chimney draught stabiliser (explosive). The Ø 150 mm connection set includes all the bows, pipes , boiler collars and clamp rings.

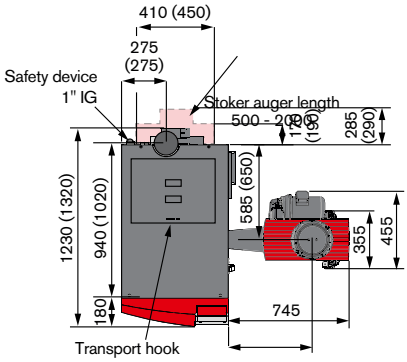
Back end protection

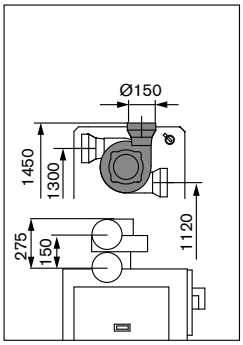
This provides automatic back-end protection for Hargassner wood chip boilers while simultaneously loading an accumulator tank. A fully integrated back-end protection that includes a return mixer and highly efficient accumulator loading pump, it can be mounted quickly and easily and reduces installation time and costs.

ADO = air-dependent operation

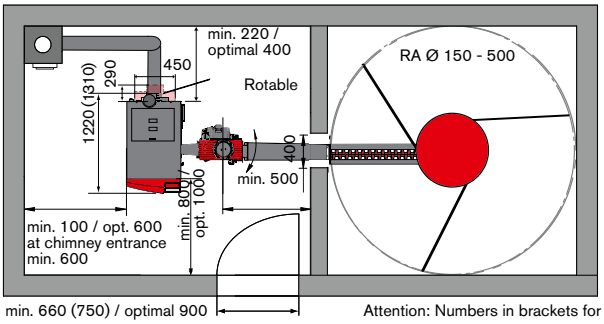
Eco-HK 20 – 60

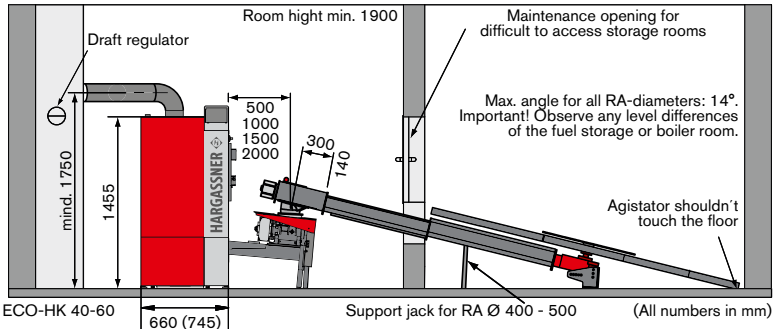






Numbers in brackets for Eco-HK 40-60

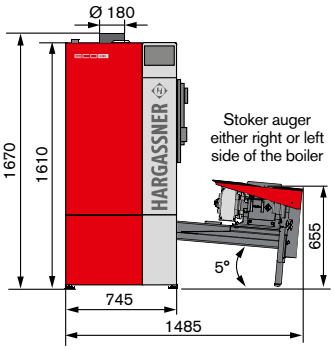


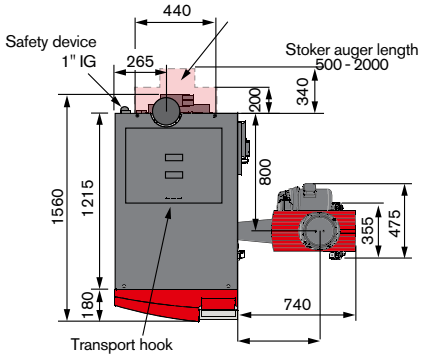


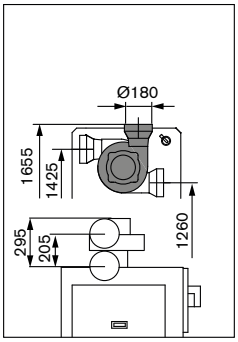
Attention: Numbers in brackets for ECO-HK 40-60

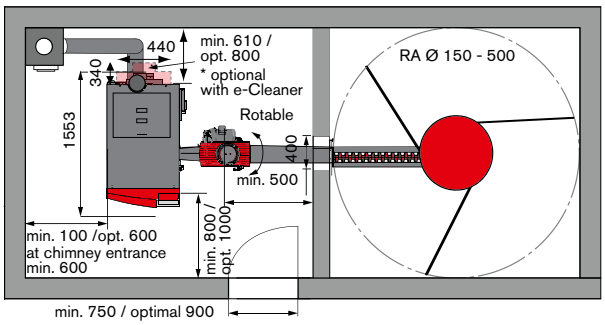
(All numbers in mm)

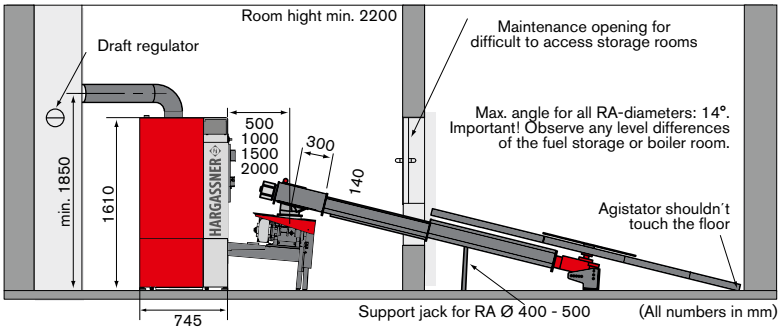
Eco-HK 70 – 120











(All numbers in mm)

Eco-HK 20 – 60

	Unit	Eco-HK 20	Eco-HK 30	Eco-HK 35	Eco-HK 40	Eco-HK 50	Eco-HK 60
Output range/nominal output*	kW	6-20	9-32	10-35	12-40	12-49	18-60
Efficiency full load / partial load	%	93.9 / 91.4	94.4 / 93.2	94.6 / 94.1	94.8 / 95	95.3 / 95	95.8-95
Fuel heat output - full load	kW	21	34	37	42	52	63
Flue pipe diameter	mm	150	150	150	150	150	150
Water content	Litre	100	100	100	142	142	142
Water-side resistance ΔT 10 [K]	mbar	23	50	67	81	119	174
Water-side resistance ΔT 20 [K]	mbar	6	13	18	21	31	46
Flow/Return	inches	5/4 IT	5/4 IT	5/4 IT	5/4 IT	5/4 IT	5/4 IT
Weight (incl. add-on parts)	kg	690			810		
Boiler size H x W x D	mm	1455 x 660 x 940			1455 x 745 x 1025		
Transport dimensions H x W x D	mm	1510 x 660 x 1025			1510 x 745 x 1110		
Boiler label	Category	A+	A+	A+	A+	A+	A+
Composite label incl. the control unit	Category	A+	A+	A+	A+	A+	A+

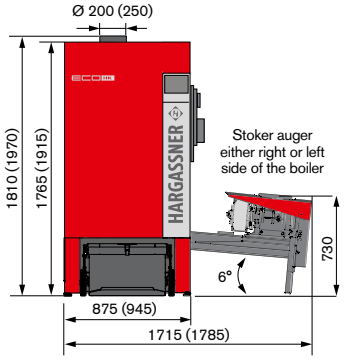
max. operation temperature 95°C, max. operating pressure 3 bar, boiler temperature range 69-78°C, required back-end protection 58°C, electrical supply 400 V AC, 50 Hz, 13 A

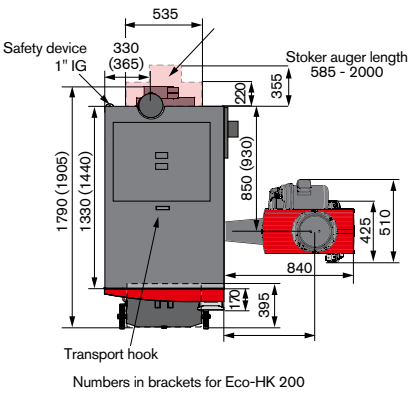
Eco-HK 70 – 120

	Unit	Eco-HK 70	Eco-HK 90	Eco-HK 100	Eco-HK 110	Eco-HK 120
Output range/nominal output*	kW	21-70	27-90	30-99	33-110	36-120
Efficiency full load / partial load	%	95.6 / 95.3	95.2 / 96	95 / 96.3	94.7 / 96.7	94.5 / 97
Fuel heat output - full load	kW	73	94	104	116	127
Flue pipe diameter	mm	180	180	180	180	180
Water content	Litre	180	180	180	180	180
Water-side resistance ΔT 10 [K]	mbar	57	91	113	139	161
Water-side resistance ΔT 20 [K]	mbar	15	23	29	36	41
Flow/Return	inches	6/4 IT	6/4 IT	6/4 IT	6/4 IT	6/4 IT
Weight (incl. add-on parts)	kg	1100		1150		
Boiler size H x W x D	mm	1610 x 745 x 1215		1610 x 745 x 1215		
Transport dimensions H x W x D	mm	1670 x 745 x 1335		1670 x 745 x 1335		
Boiler label	Category	A+	-	-	-	-
Composite label incl. the control unit	Category	A+	-	-	-	-

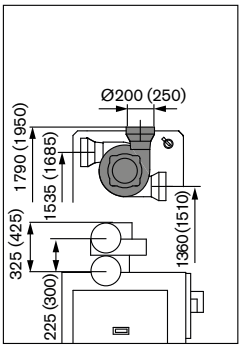
max. operation temperature 95°C, max. operating pressure 3 bar (4 bar on request), boiler temperature range 69-78°C, required back-end protection 58°C, electrical supply 400 V AC, 50 Hz, 13 A

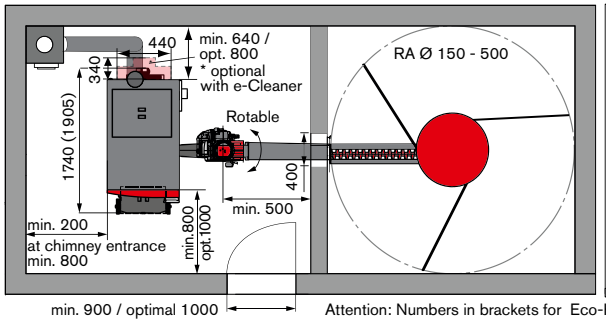
Eco-HK 130 – 230





Numbers in brackets for Eco-HK 200





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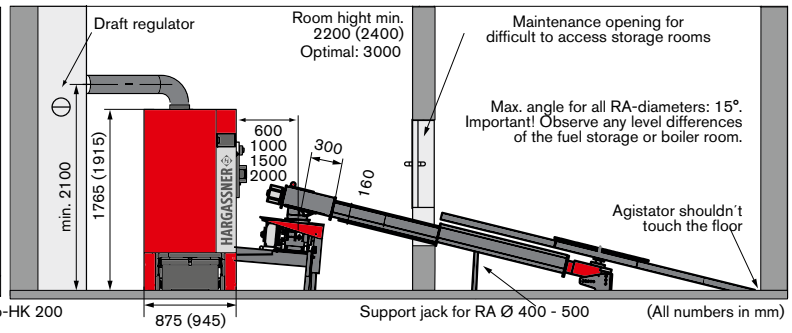
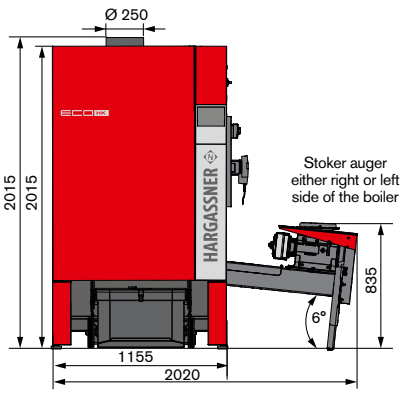
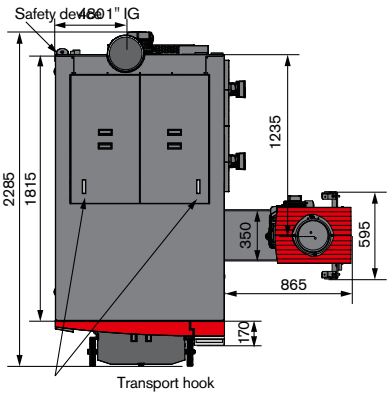
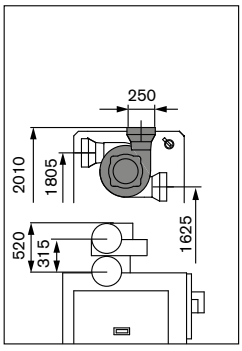


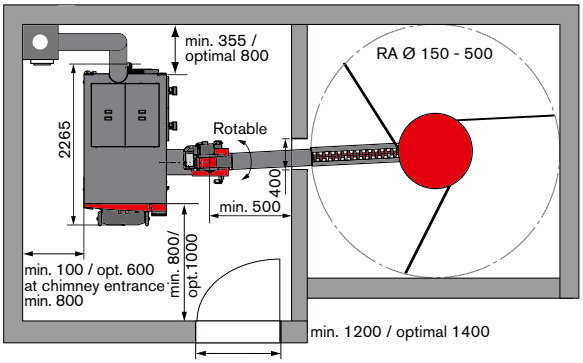
(All numbers in mm)

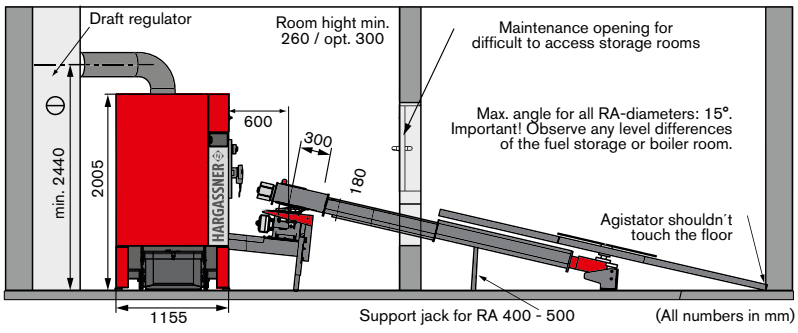
Eco-HK 250 – 330











(All numbers in mm)

Eco-HK 130 – 230							
	Unit	Eco-HK 130	Eco-HK 150	Eco-HK 170	Eco-HK 200	Eco-HK 220	Eco-HK 230
Output range/nominal output*	kW	39-130	44-149	49-166	59-199	59-216	67.8 - 226
Efficiency full load / partial load	%	93.5 / 95.7	93.4 / 93.1	94.2 / 93.7	94.4 / 97.4	94.6 / 97.3	94.2 / 94.6
Fuel heat output - full load	kW	138.7	159.5	176.2	213.7	228.3	239.9
Flue pipe diameter	mm	200			250		
Water content	Litre	253			360		
Water-side resistance ΔT 10 [K]	mbar	160	184.6	209.21	227	250	250
Water-side resistance ΔT 20 [K]	mbar	42.7	49.0	55.5	63	69	69
Flow/Return	inches	2“ / 2“			2.5" / 2.5"		
Weight (incl. add-on parts)	kg	1450			1600		
Boiler size H x W x D	mm	1765 x 875 x 1740			1915 x 945 x 1905		
Transport dimensions H x W x D	mm	1810 x 875 x 1435			1970 x 945 x 1595		

max. operation temperature 95°C, max. operating pressure 3 bar (4 bar on request), boiler temperature range 69-78°C, required back-end protection 58°C, electrical supply 400 V AC, 50 Hz, 13 A

Eco-HK 250 – 330				
	Unit	Eco-HK 250	Eco-HK 300	Eco-HK 330
Output range/nominal output*	kW	75-250	90-300	99-330
Efficiency full load / partial load	%	93.3 / 94.7	93.5 / 95.8	93.6 / 96.4
Fuel heat output - full load	kW	267	320	352
Flue pipe diameter	mm	250		
Water content	Litre	570		
Water-side resistance ΔT 10 [K]	mbar	228	296	356
Water-side resistance ΔT 20 [K]	mbar	57	74	89
Flow/Return	inches	2.5"		
Weight (incl. add-on parts)	kg	2500	2500	2500
Boiler size H x W x D	mm	2005 x 1155 x 2138		
Transport dimensions H x W x D	mm	2065 x 1150 x 1970		

max. operation temperature 95°C, max. operating pressure 3 bar (4 bar on request), boiler temperature range 69-78°C, required back-end protection 58°C, electrical supply 400 V AC, 50 Hz, 13 A

***The nominal output of these boilers is achieved with the fuel according to standard EN ISO 17225-4, class A1-B1 (P16 S-P31 S, M20) for wood chips and according to standard EN ISO 17225-2 class A1 for pellets. If these fuel specifications or the stated water content levels are not complied with, the respective nominal heat outputs may not be reached. Providing the above fuel-quality requirements are adhered to, the 24 hr constant heat output is approx. 92% of the nominal heat output (e.g. NO of 220 kW x 92% x 24 hrs = 4752 kWh)**


HARGASSNER
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SP Accumulator tank

Technical data SP + SP SW 1+2		SP 500	SP 650	SP 825	SP 1000	SP 1200	SP 1500	SP 2000	SP 2200	SP 2600	SP 3000	SP 4000	SP 5000
	Unit												
Accumulator Volume	Litre	476	647	796	892	1179	1445	1904	2186	2506	2871	3887	4885
Diameter ø without insulation	mm	650	750	750	790	990	990	1100	1100	1250	1250	1600	1600
Diameter ø with insulation	mm	850	950	950	990	1230	1230	1340	1340	1490	1490	1840	1840
Height without insulation	mm	1630	1660	1910	2020	1740	2090	2250	2550	2320	2620	2250	2760
Height with insulation	mm	1720	1750	2000	2110	1830	2180	2340	2640	2410	2730	2340	2895
Tilt dimension without insulation	mm	1650	1670	1920	2030	1758	2104	2268	2565	2411	2690	2460	2900
Connectors 8 pcs IT	inches	6/4"	6/4"	6/4"	6/4"	6/4"	6/4" (2')	6/4" (2')	8x21/2'	10 x 2"	10 x 2"	10 x 2"	10 x 2"
Weight SP (without insulation)	kg	78	92	105	116	141	164	216	216	241	325	437	576
Weight SW1 (without insulation)	kg	102	107	130	160	-	207	292	-	-	-	-	-
Solar heat exchanger bottom SW1 1" IT	m^2	2	2	2	3	-	3	4	-	-	-	-	-
Weight SW2 (without insulation)	kg	-	-	154	185	-	252	343	-	-	-	-	-
Solar heat exchanger top/bottom SW2 1" IT	m^2	-	-	2/2	2/3	-	3/3	4/4	-	-	-	-	-

Max. operating pressure 3 bar, max. temperature 95°C. Hargassner accumulator tanks are only available in combination with a Hargassner boiler! Individual delivery on request.

Hygienic layered accumulators HSP

Technical data HSP + HSP SW 1+2		HSP 500	HSP 650	HSP 825	HSP 1000	HSP 1200	HSP 1500	HSP 2000
	Unit							
Accumulator Volume	Litre	476	647	796	892	1179	1445	1904
Diameter ø without insulation	mm	650	750	750	790	990	990	1100
Diameter ø with insulation	mm	850	950	950	990	1230	1230	1340
Height without insulation	mm	1630	1660	1910	2020	1740	2090	2250
Height with insulation	mm	1720	1750	2000	2110	1830	2180	2340
Tilt dimension without insulation	mm	1650	1670	1920	2030	1760	2110	2270
Connectors 8 pcs IT	inches	6/4"	6/4"	6/4"	6/4"	6/4"	6/4"	6/4"
Stainless steel pipe - water volume	Litre	23	23	37	37	37	45	45
Stainless steel pipe 5/4" ET square	m^2	4.1	4.1	6.7	6.7	6.7	8.2	8.2
Weight HSP (without insulation)	kg	103	117	133	144	169	195	272
Weight SW1 (without insulation)	kg	119	141	157	188	256	-	-
Solar heat exchanger bottom SW1 1" IT	m^2	2	2	2	3	-	-	-
Weight SW2 (without insulation)	kg	-	-	182	213	-	284	-
Solar heat exchanger top/bottom SW2 1" IT	m^2	-	-	2/2	2/3	-	3/3	-

Max. operating pressure 3 bar, max. operating temperature 95°C, max. drinking-water operating pressure 6 bar. An accumulator tank can only be delivered with a boiler! Individual delivery on request.

SP FWS layered accumulators

Techn. data for SP FWS		SP FWS 825	SP FWS 1000
	Unit		
Accumulator Volume	Litre	825	1000
Diameter ø without insulation	mm	750	790
Diameter ø with insulation	mm	950	990
Height without insulation	mm	1910	2020
Height with insulation	mm	2000	2110
Tilt dimension without insulation	mm	1920	2030
Connectors 8 pcs IT	inches	6/4"	6/4"
Weight (excl. insulation)	kg	111	121

Max. operating pressure 3 bar, max. temperature 95°C. Hargassner accumulator tanks are only available in combination with a Hargassner biomass boiler! Individual delivery on request.

For dimensioned drawings and more details on Hargassner's solar layered accumulator tanks and hot-water storage tanks, please refer to the respective brochures or go to **hargassner.com**

HARGASSNER

BIOMASS HEATING TECHNOLOGY

Your expert for **PELLET | WOOD LOG | WOOD CHIP** HEATING

Complete Hargassner range: pellet boilers, wood chip boilers, wood log boilers, accumulator tank, industrial boilers up to 2.5 MW, heating modules, filling augers, combined heat power CHP, Power-Box warm-air module, solar panels and hydraulic accessories.

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