



Boilers from 25 to 80 kW,
for agriculture, business
and private households.



*Comfortable heating.
With wood!*

HDG Compact 25-80



**Heating with
wood chips,
pellets &
shavings**

hdg-bavaria.com

HDG Compact 25-80

Compact. Versatile. Economical.

The HDG Compact 25-80, the automatic heating system which burns wood chips, pellets and shavings, meets the needs of **agricultural, wood handling and processing businesses as well as single and multi-occupancy dwellings** with small to medium heat requirements.



- Flexible: suitable for **wood chips, shavings and pellets**
- Effortless: fuel feeding, combustion, ash removal – **all fully automatic**
- Safe: feeding system and rotary wheel ensure safe **operation of the system**
- Hand in hand: HDG will assist you with the **individual planning** of your system – from fuel storage through to heat distribution
- Award-winning: The HDG Compact has received the **kwf Innovation Award** and the **iF Design Award**

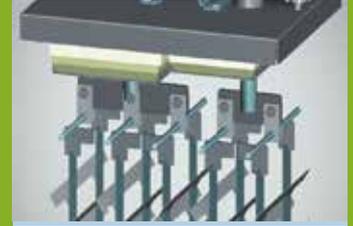




The highlights

■ Patented cleaning system

Automatic cleaning of all heat exchanger surfaces using stainless steel heat-resistant turbulators for permanently high levels of efficiency and maximum convenience.



■ Finger tip control

An innovative touch control with simple menu navigation and upgradable at any time ensures intuitive operation of your heating system.



■ Smart combustion technology

The tilting grate technology, which is used for the optimal removal of residues, guarantees that running time interruptions are overcome with its residual ember zone, thus ensuring ongoing efficient combustion.



■ Robust feeding system

The rotary feeder ensures a reliable fuel supply with a 4 chamber structure, sharp edges and obstruction detection including automatic reversing.



■ Convenient ash removal

The large integrated, and optional, external ash containers with ergonomic transport handle ensure easy ash removal.



■ Tried and trusted fuel feeding

The redesigned sloping down-pipe with double sorting-finger technology and powerful drive unit with high performance reserve provides trouble-free operation - even with varying fuel quality.



HDG Compact 25-80

Impressive in every detail

Combustion chamber temperature sensor

- Continuous operation in the optimal power range – even with varying fuel quality
- Protection of components through limiting the combustion chamber temperature
- High combustion quality by ensuring the ideal temperature range

Combustion chamber

- Modular structure combining functionality and durability
- Overloading protection with integrated safety shut-off via heat-resistant stainless-steel sensor pipe
- Reliable and quick ignition of fuel
- Low emissions by means of “hot” combustion chamber with high combustion temperature



HDG tilting grate technology - simply ingenious



In closed state, the tilting grate creates the ideal environment for a settled firebed and thus for optimal combustion.

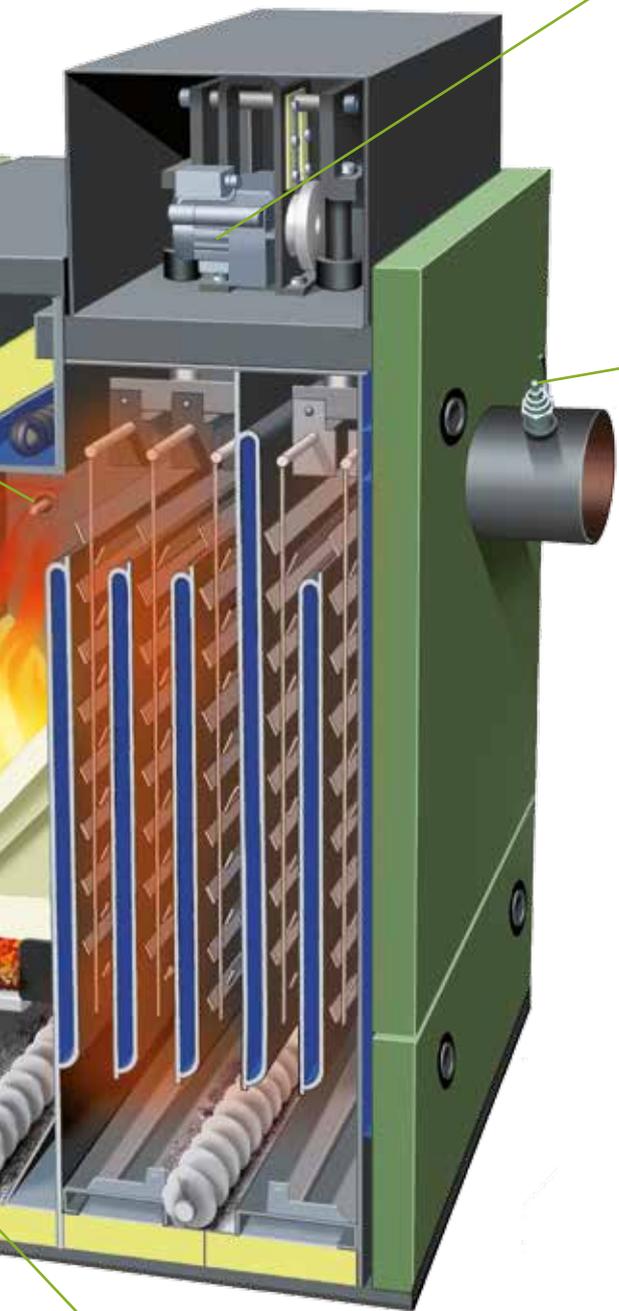


The tilting grate, made of solid cast iron, is tilted by more than 90° for ash removal. This removes all combustion residues.



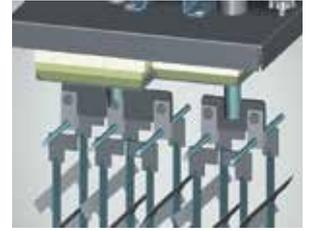
Due to the residual ember zone, reignition after closing the tilting grate is often not required for short idle periods.





Automatic cleaning as standard

- Cleaning of the heat exchanger surfaces through the removal of flue ash ensures a constant heat transfer
- Optimization of heat transfer by means of integrated turbulators, for consistently high efficiency
- Cleaning of all heat exchanger passes - cleaning work is therefore reduced to a minimum



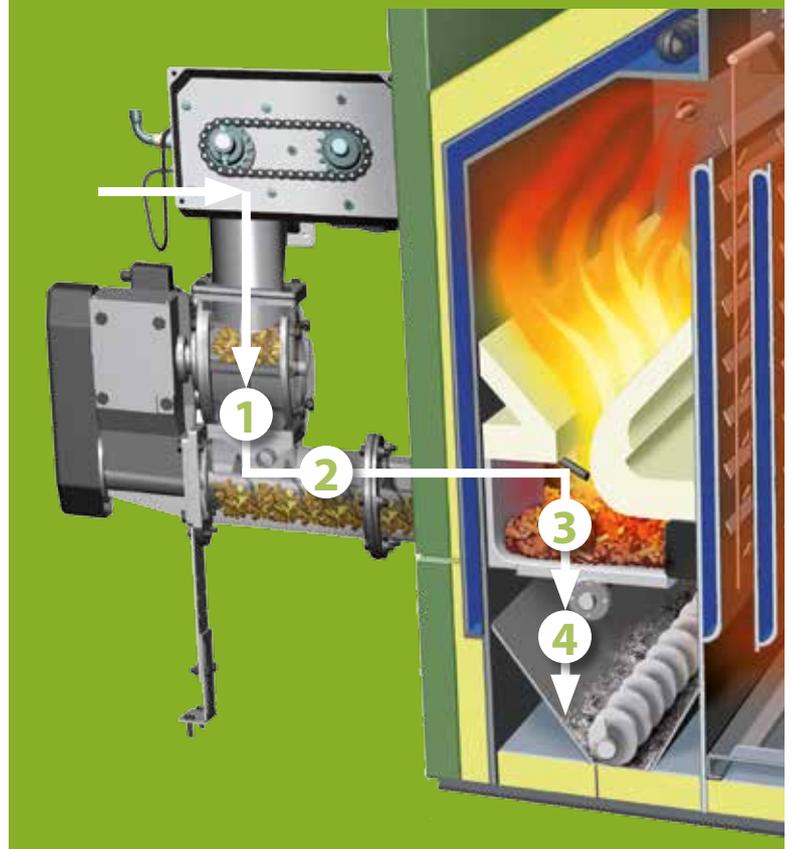
Lambda sensor

- Measurement of residual oxygen in the flue gas used as reference variable for combustion
- Ideal residual oxygen content ensures continually high efficiency and low emissions



Where the fuel goes

The **rotary feeder** ① separates the fuel feeding from the combustion chamber, thus providing back burn protection. The **stoker auger** ② transports the fuel as required into the combustion chamber. The fuel is ignited automatically on the **tilting grate** ③. A large **conveyor auger** ④ then transports the combustion residues into the ash container.



De-ashing

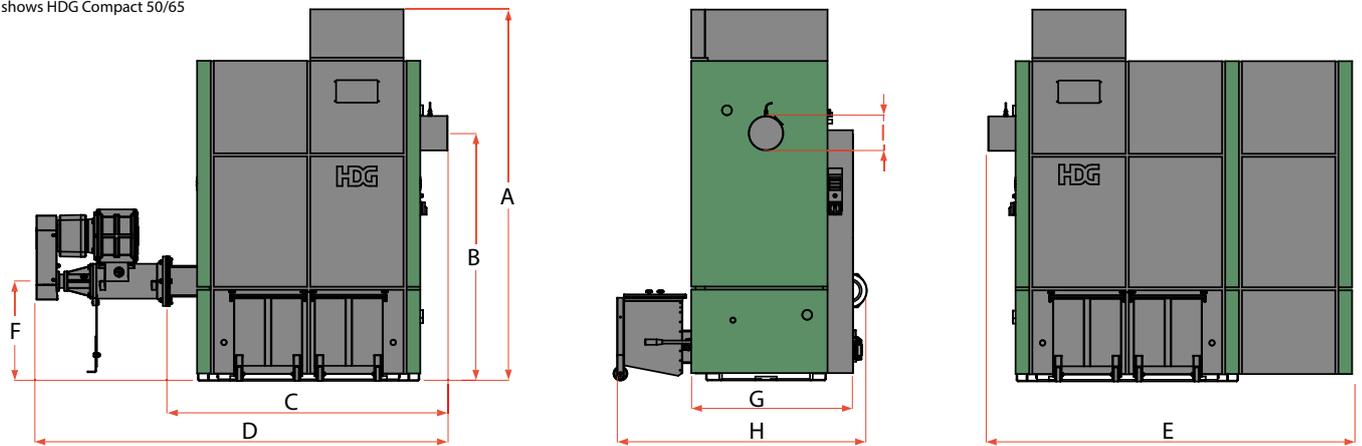
- Optional ash removal augers for the combustion chamber and fly ash chamber (available as standard for HDG Compact 80)
- Compression of ash in the containers for extended emptying intervals



HDG Compact 25-80

Technical data

Illustration shows HDG Compact 50/65



Type of system		Compact 25	Compact 35	Compact 50	Compact 65	Compact 80
Nominal thermal power		31/26 kW	31/35 kW	50 kW	65 kW	80/85 kW
Minimum thermal power		9.1/7.7 kW	9.1/7.7 kW	12/15 kW	12/15 kW	23/25.1 kW
Water capacity		110 l	110 l	167 l	167 l	221 l
Maximum allowable operating pressure		3 bar				
Necessary flue draught requirement		7 Pa	7 Pa	10 Pa	15 Pa	12/9 Pa
Permissible advance flow temperature		95 °C				
Weight		650 kg	650 kg	980 kg	980 kg	1200 kg
Height	A	1660 mm	1660 mm	1920 mm	1920 mm	1920 mm
Height of middle of flue pipe	B	820 mm	820 mm	1280 mm	1280 mm	1280 mm
Width with feed channel	C	1506 mm	1506 mm	1428 mm	1428 mm	1734 mm
Width with TBZ 150	D	2200 mm	2200 mm	2110 mm	2110 mm	2415 mm
Width with TBZ 90 with pellet suction system	E	1940 mm	1940 mm	1870 mm	1870 mm	2170 mm
Height of middle feed channel	F	514 mm				
Depth	G	700 mm	700 mm	830 mm	830 mm	830 mm
Depth with ash container (optional)	H	1038 mm	1038 mm	1257 mm	1257 mm	1262 mm
Flue gas pipe connection	I	150 mm	150 mm	180 mm	180 mm	200 mm

Left or right?

The HDG Compact 25-80 is available with the feed module fitted on the left or the right. The connection point between the delivery system and boiler is only fixed in place during on-site installation. **This means that the HDG Compact 25-80 can be integrated in nearly every building.**

New: The delivery system can be fixed in place quickly using the convenient clamping flange.



HDG TBZ 150 feeding system

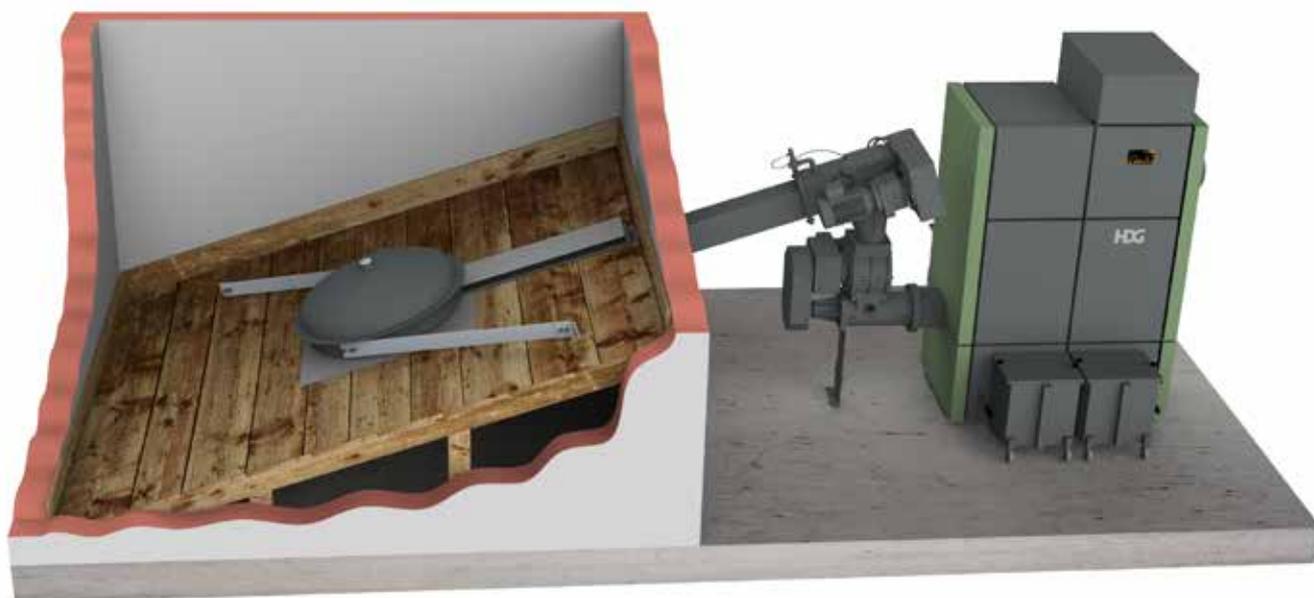
A completely safe solution

The **HDG TBZ 150 feeding system** consists primarily of the rotary feeder and the stoker auger. The combustion chamber is hermetically separated from the fuel store by the rotary wheel, therefore providing the best possible **back burn protection**.

In addition, the feeding system chops up the materials when needed and, together with the reversing mechanism which comes as standard, ensures **trouble-free operation**.

Fuel is inserted directly on to the grate with minimal expenditure of energy and with minimum wear.

This makes the heating a safe solution at all times.



The HDG TBZ 150 feeding system being used in practice with a HDG flexi blade delivery system in combination with a HDG Compact 50. The rotary wheel separates the fuel storage room from the combustion unit as back burn protection.

The HDG TBZ 150 feeding system in detail



The **easily replaceable rotary wheel ①** guarantees **exceptional smooth running** of the system with four pre-sharpened blade impellers and minimal friction surface.

The extremely **efficient spur wheel geared motor ②** with minimal power input provides **cost-effective operation**.

The **solid stoker auger ③** ensures **power saving operation** for the feeding system by means of the direct input on to the grate.

HDG Control

It doesn't get any simpler

Even if you are not using the heating system every day, the HDG Control makes boiler operation very simple for the user. The HDG 25-80 control technology is **intelligent and user friendly**.

The display – simple and clear

The system is operated using a **touch display**. All steps, including both control as well as maintenance, can be handled very easily on a daily basis via this display. The display indicates, for example, if something needs to be optimized.

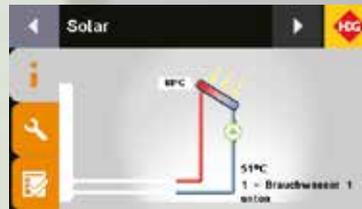
The new HDG control technology helps with every step.



Everything can be clearly and easily set via the display - e.g. heating circuit time programs.



The HDG Control presents the key components of the heating system at a glance.



Information is easy to call up on the display - for example, the current temperatures of the solar system.



Power at your finger tips: switch to summer mode or lower the heating for the holiday season.

HDG Control Touch XL – the larger display

The HDG Compact 25-80 is equipped as standard with our control technology in the form of a 4.3 inch display.

A larger **7 inch display** is also available on request. This makes it even easier to operate and provides additional information.

An additional advantage of the larger display is that the HDG Control can be operated via tablet, computer or mobile phone. This means the heating system at home can also be accessed remotely.

Display proportions



4.3 inch diagonal, equivalent to 109 mm



7.0 inch diagonal, equivalent to 178 mm



Clear

A heating system should be simple to operate without having to study it first. HDG has paid attention to this aspect in the development of the HDG boiler and heating system control:

- Intuitive operation
- Simple menu navigation
- Logical control unit
- Can be operated with gloves

All in one place

All boiler settings are on the display - no more guesswork, no more buttons that are easily overlooked:

- Settings made are saved quickly and easily
- Software updates are imported conveniently via integrated SD card slot
- Save heating data information

Complete control

The HDG Control unit is the central control of the heating system. The following can be controlled and adjusted from here:

- Temperatures
- Boiler and all operating states
- Delivery systems
- The entire heating system

HDG system controller

Optimal control of heating system

HDG Control

The HDG Control on the boiler is the control centre for the entire system. It is simple to operate all components from here:

- Feeding the fuel
- Temperature in the heating system
- Many other details



Domestic hot water preparation

Hot water is always available with a HDG boiler and is supplied as efficiently as possible. Domestic hot water (DHW) can be generated in several ways:

- Using an external domestic hot water tank
- Using a fresh water station.
- Directly integrated in the accumulator

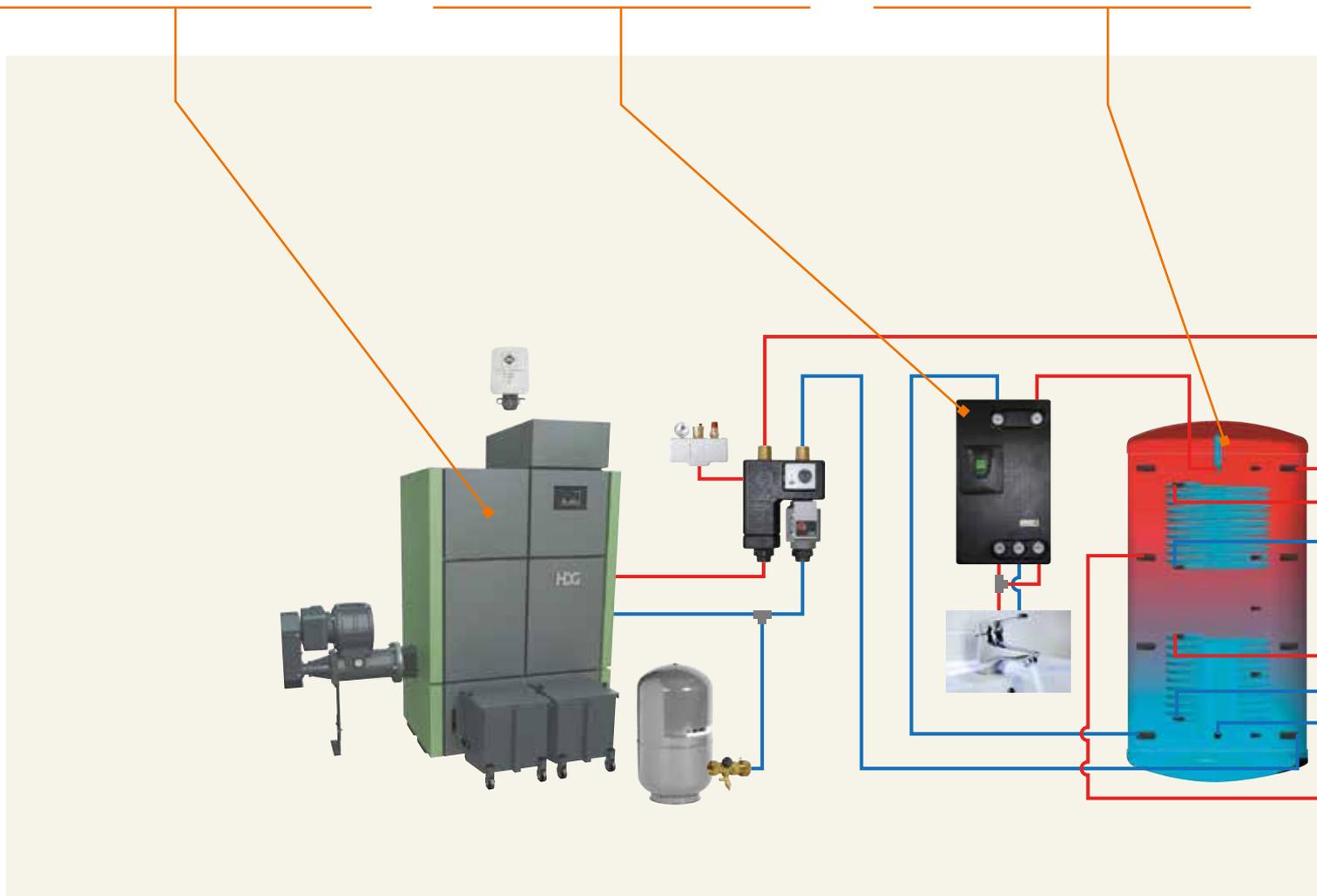
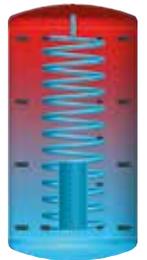
All options can be integrated in the HDG system.



Accumulator

The accumulator offers many advantages and is a sensible addition to the heating system:

- Storage and delivery of energy – like a battery
- Extends the running time of the boiler
- Minimizes uneconomic start phases
- Forced charging and time programmes can be set as required



Solar control

A solar system is a great addition to this heating system. There are various ways it can be used:

- For domestic hot water preparation
- To help with heating
- Or both (stratified charging is possible with up to three zones)

All systems can be controlled easily using the HDG Control.



Heating circuits

Heating circuits such as radiators and underfloor heating are regulated according to the current outside temperature. The flow temperature is determined by this. As a result, only as much energy is used as is required.

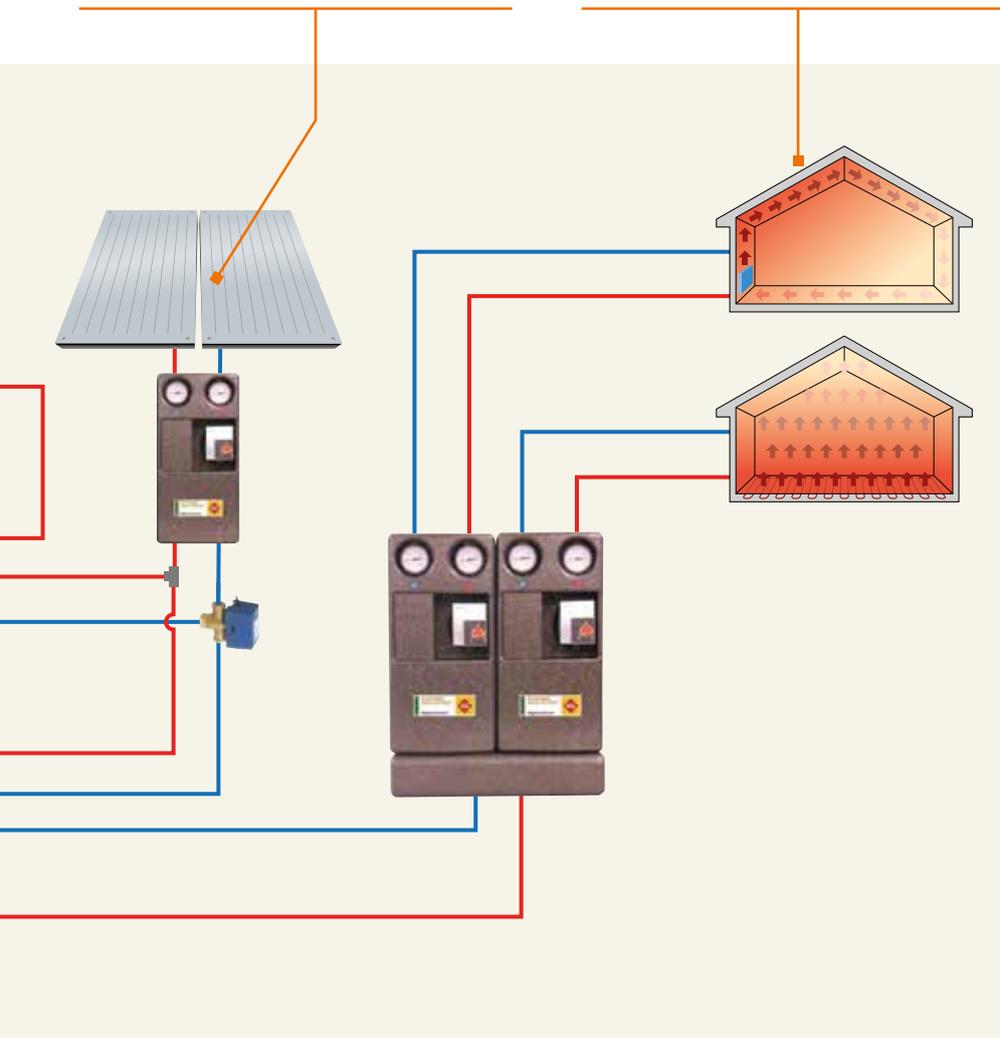
Additional heating circuits can simply be added to the HDG Control.



Stand-alone solution

The HDG Control can also be used as a stand-alone option:

- For use by individual customers in a local heating network
- For integration in existing heating systems



Potential for expansion

Simple expansion modules allow the **HDG Control to be individually adapted** to the heating system.

Local heating **networks** can also be integrated at any time.



HDG Fuel storage

We plan the best solution for you

With intelligent planning of fuel storage and delivery, **you save unnecessary costs and additional work.**

As a result of implementing thousands of different systems, we have gained the experience needed **to able to offer the best solution for every situation.**

We will be happy to inspect the requirements and arrangements at your site if required.

We use this information to draw up a CAD plan for the installation of a complete heating system – tailored to your personal requirements.



Optimally adapted to different situations

Which storage type is suitable for which fuel, which spatial arrangements must be present or created, how can fuel be delivered in the simplest way, how will the fuel be transported to the boiler, where is the best location to install the boiler – we have the perfect answers to all these questions.

However, as no two situations are ever exactly the same, our employees will be happy to give you the benefit of their many years of experience.



Example: fuel storage room created underground with load-bearing ceiling



Example: fuel storage room away from boiler room – pellets transported using HDG pellet suction system



The HDG heating box represents **an extremely flexible heating solution** – especially if there is no suitable boiler room available within the building being heated. The modular structure of the heating box means that heating systems of up to 400 kW can be implemented. Further information about the HDG heating box is available in a separate information brochure.

HDG fuel feeding

Where the wood chips and pellets go

The most common delivery system version in combination with a HDG Compact 25-80 is a HDG flexi blade delivery system.

With a robust and flexible design, a reliable fuel supply is ensured at all times.

- Suitable for **wood chips** and **pellets**
- Ideal for use in **fuel stores with a diameter of 2.5 to 4.5 meters**
- Allows **filling heights of up to 3 meters** or 250 kg per cubic metre.

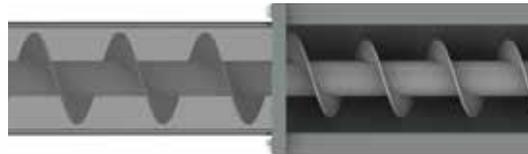


Extra high leaf-spring pack

The leaf-spring pack with a height of 80 millimetres (standard: 50 mm) optimises the material flow and transports **the same quantity of fuel with fewer rotations.**

Ergonomically optimised conveyor auger

The design of the auger is conical and gradually rising, and it is this which guarantees both **energy saving fuel transport and minimal impact on the materials.**



Maintenance-free wood chips

HDG has produced more than 10,000 augers. These years of experience form the basis for the fully **maintenance-free gearbox.**



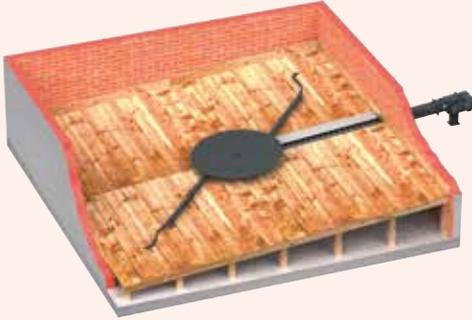
HDG tip from the experts

In the long term, a wooden intermediate floor guarantees energy-saving and reliable operation. The wood chips are gathered much more easily without losses due to friction, particularly with a partially emptied chamber.

Consistent and efficient operation is the result.

The right delivery system for you

Besides the flexi blade delivery system, HDG also offers alternative systems which can be adapted perfectly to individual requirements.



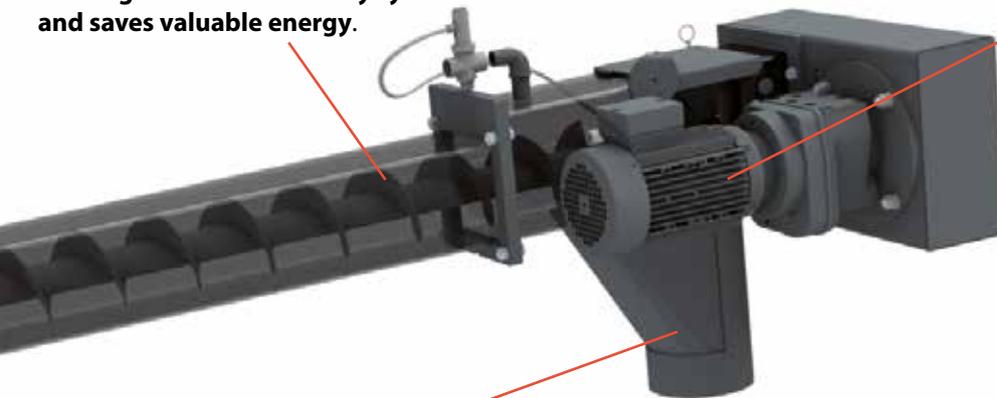
For larger diameters of up to 5.7 metres, the **HDG hinged arm delivery system** can be used. Large store rooms with tall filling heights (5 meters with a bulk weight of 250 kg/m³) are reliably emptied with the use of two pretensioned arm elements.



The **HDG pellet delivery system PSZ** is the cost-effective alternative to the pure pellet operation. A pressure relief plate protects the auger from the high bulk weight of the pellets. This allows a maximum filling height of 650 kg/m³ or 3 metres to be achieved.

Optimized auger channel

The auger channel has been geometrically optimized at a width of 160 mm and the filling capacity has been increased in line with this by 15 percent. This reduces the **running time of the delivery system and saves valuable energy.**

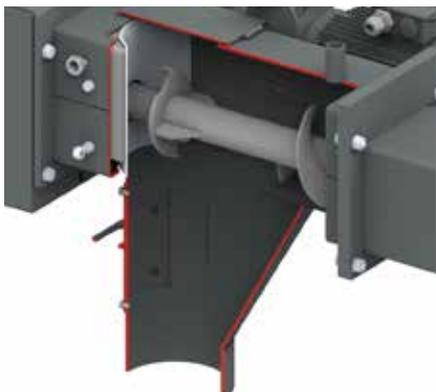


Powerful drive

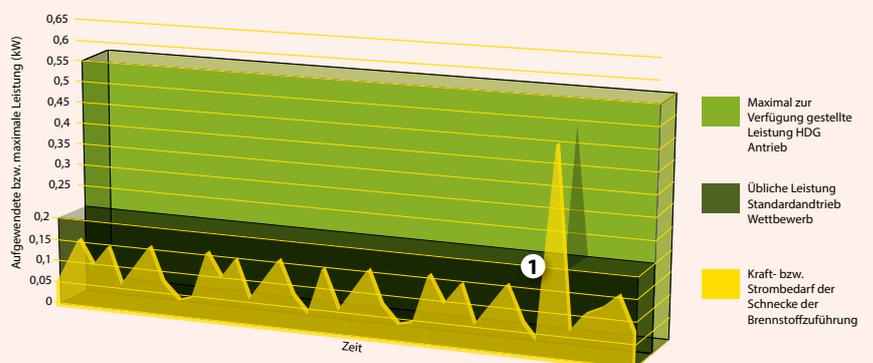
In keeping with the motto "as little energy as possible - as much energy as needed", the powerful, yet economical drive combines **low-power consumption with high performance reserves.**

Innovative sloping down-pipe

The completely redesigned sloping down-pipe with **double sorting-finger technology guarantees trouble free operation** – even with over-long wood chips.



Performance reserve for safe operation



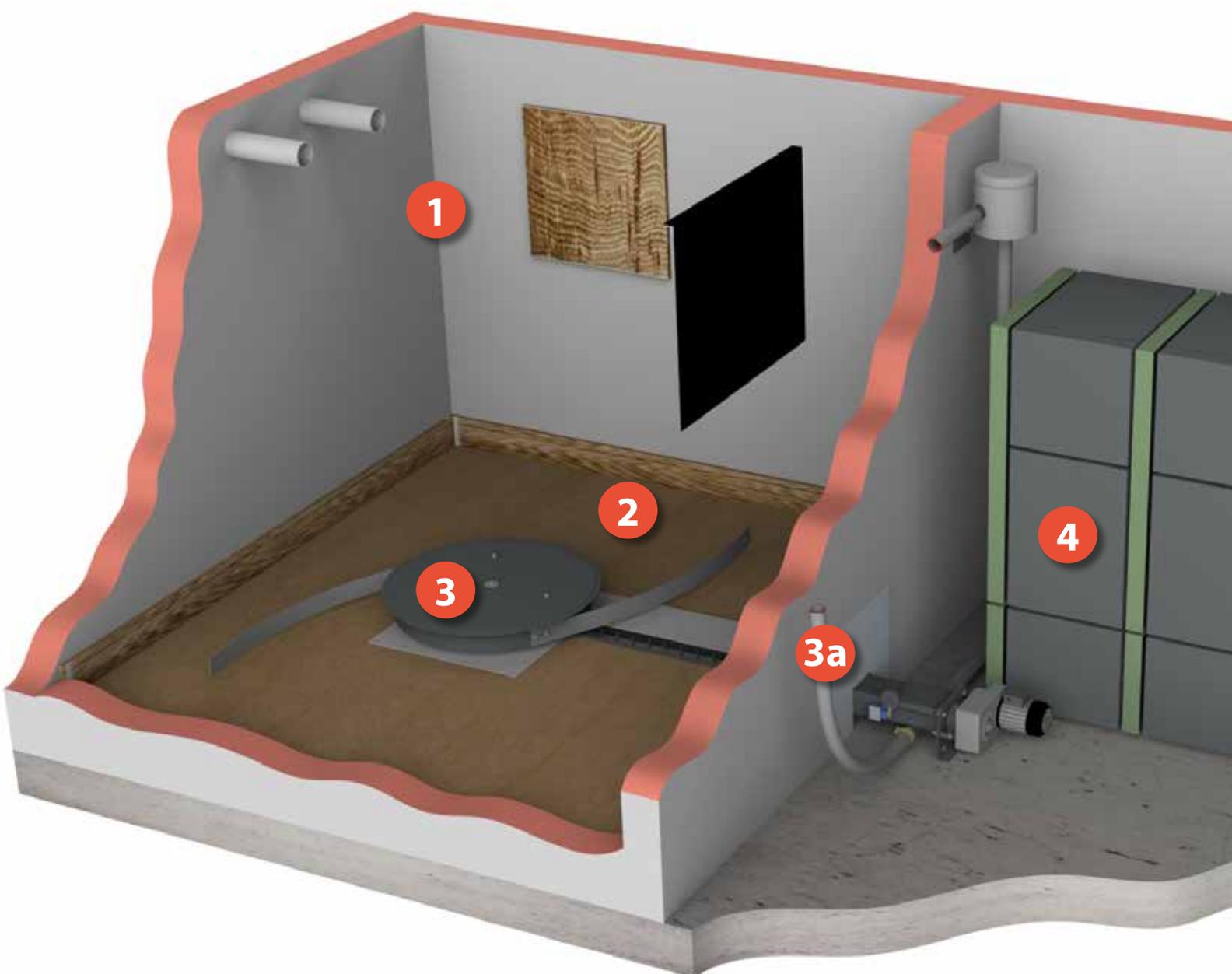
The drive of the HDG fuel feed provides sufficient reserves. Even if, for example, more power is required for a short period **1** of time due to larger pieces of wood. However, a powerful motor requires no more energy than a less powerful drive at "normal loads" – but requires **significantly more operational reliability.**

The HDG pellet suction system

The flexible transport for pellets

The HDG pellet suction system offers a flexible and efficient transport solution when operating the HDG Compact 25-80.

- Ideal, where **boiler and fuel storage room are not together**
- **Distances of up to 25 metres** can be overcome
- Perfect for **buildings** such as older constructions and renovated buildings
- Minimal loss of space and **maximum storage capacity**



Storage and fuel feeding for pellets



Mole

- Perfect for small fuel storage rooms up to 2.5 x 2.5 metres large
- Particularly suited to systems with small power ranges
- Quicker installation due to largely premounted parts



Suction probes

- Can be used very flexibly
- Available with 3 or 8 probes
- Ideal for adapting to the individual situation



Pellet auger

- Well-suited to systems with larger power ranges
- Extremely robust design
- Can be used with and without agitator



Sack silo

- The ready-made solution, suitable for virtually any boiler
- Supplies boiler or store quickly
- Simple assembly



The HDG pellet suction system

- 1 The pellets are simply **blown into the fuel storage room**. A protective mat stops them from breaking up.
- 2 For **storage and fuel feeding** of the pellets, **various options are available** (e.g. square room, sack silo, room with sloping floor etc.).
- 3 The FRA-PSS delivery system transfers the pellets to the **suction system^{3a}**, which transports the pellets using suction hoses **up to 25 metres away**.
- 4 The pellets then find their way into the intermediate containers next to the (central heating) boiler. From there, **the system uses the fuel as required** and in this way provides the warmth.

Ecological. Economical.

Energy from the cycle of nature

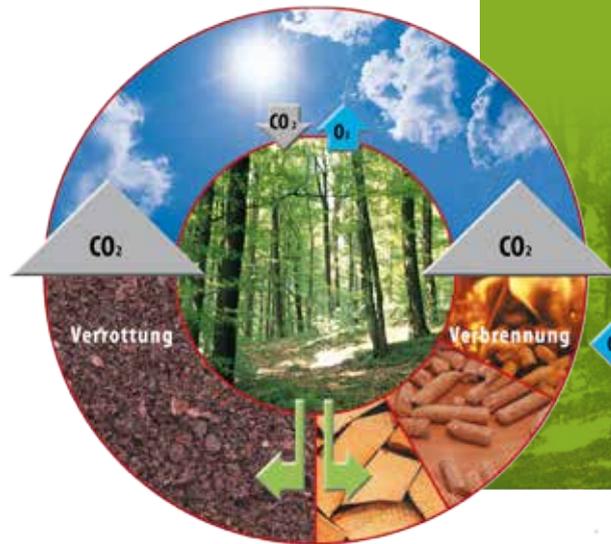
Wood is a source of energy which continually renews itself. This is assuming we use our forests **responsibly and sustainably**.

We are also a long way from exhausting the opportunities offered by wood. **We could safely double the amount of wood we use as an energy source** without putting the sustainability of forest management at risk.

Wood is a CO₂ neutral energy source. This means, that when wood

is burned, it emits only as much CO₂ into the atmosphere as was absorbed while it was growing. A similar amount would also be emitted if it were left to decay.

If you heat using a HDG boiler, you are meeting air pollution control requirements as this involves the specialist application of the latest technology. This means the flue gas values can stand up to any comparison.



Useful information at a glance: Heating with wood chips, shavings and pellets

Wood chips: wood chips are usually natural pieces of chopped up wood from wood choppers (using blades, not blunt tools)

Pellets: pellets are compressed wood in a standardised cylindrical form that are manufactured from untreated scrap wood (shavings, offcuts, etc.) without using chemical binding agents. In comparison to log wood and wood chips, pellets have the greater thermal value per kilogram.



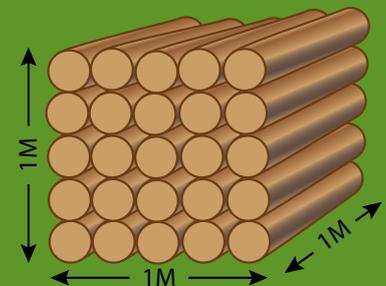
Shavings: shavings are generated in wood-processing plants (e.g. sawmills, carpentry workshops) as by-products and waste products in the processing of wood.

Explanations and abbreviations of cubic measures:

- 1 Srm = fill volume unit, corresponds to 1 m³ wood (tipped)
- 1 Rm = stacked cubic meter (stere), corresponds to 1 m³ wood (stacked)
- 1 Fm = 1 solid cubic metre (without intermediate spaces) corresponds to 1.2 Rm (stere) which corresponds to 2.5 Srm wood chips

Demand:

Log wood	Wood chips	Pellets	Natural gas	Heating oil
10 kWh	10 kWh	10 kWh	10 kWh	10 kWh
2.5 kg*	2.5 kg*	2.0 kg*	1000 litres*	1 litre
Percentage of energy consumption for supplying fuel compared to the total energy				
1.2 %	2.3 %	2.7 %	14.5 %	12 %



With 10 kWh of energy you could, for example, heat 860 litres of water to about 10° C. The annual heating energy needed for a new house with a living area of approx. 150 m² is about 15,000 kWh. For this you need about 1,500 litres of heating oil. The same energy is contained in 3 tonnes of pellets or in approx. 8 stere of hardwood or 10 stere of softwood with a water content of 15%. (Source: LWF Bayern + W. Jensch)

* Amount required instead of 1 litre of heating oil.

35 years. 50 000 boilers.

Right in every detail

From the start...

Josef Ackermann laid the foundations for the company in the 1920s.

He was an inventor, as was his son Karl who formed HDG Bavaria in 1978. Both were always seeking to get the best out of the technology.

We still stand by this today.

Pictured: Company founder Karl Ackermann watches on as a boiler is welded.

HDG makes heating with wood convenient, whether with a log wood, wood chip or pellet boiler. We have been hard at work in our family

business for more than 35 years, and, in the process, have driven forward many of the developments in the sector. Our results have been impressive.



Consider everything

We have gained more than 35 years' experience in the construction and sale of wood boilers.

We have designed everything that is part of a state-of-the-art heating system for **functionality and maximum benefit**: the reliable delivery of fuel, a boiler configured for highest efficiency and control technology that connects all components ideally.

But we didn't stop there. We have also developed ingenious solutions for transferring wood chips, practical fuel storage room designs, efficient systems for delivery as well as accumulators in all sizes and a whole range of other useful accessories.

We believe good service is important. We will, of course, provide you with detailed advice. We support you with

We care and help

planning and deliver our systems on time to you in our own trucks. Our trained specialists will put the system into operation. We continue to support you even once the system is running. Our customer advisers can always be contacted with any questions relating to the heating system. Our service employees are available to you nationwide.

Heating with wood - we are passionate about it. Let us inspire you with our passion!

Multiple award winners

Word has spread about our reputation for quality. Awards we have received include the German prize for innovation and the kwf award for innovation.

Environmental and quality management at HDG has also been certified by TÜV Süd (Technical Control Board).





Comfortable heating.
With wood!

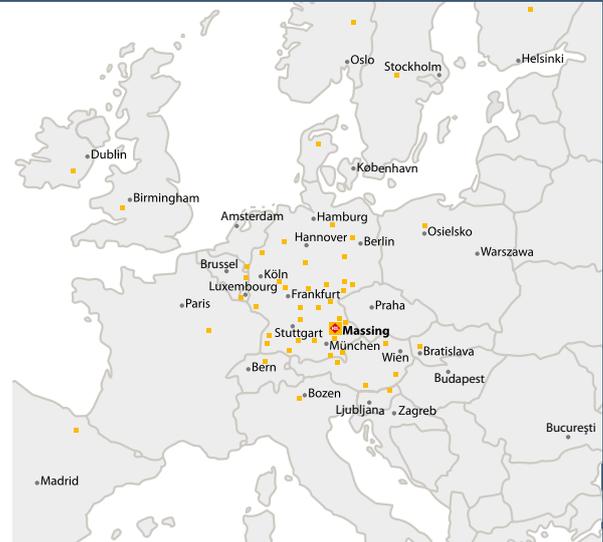
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HDG product range



HDG log wood boilers

Innovative developments from HDG have resulted in many prizes and awards. These have also spurred us on to continue our research and development work.

HDG log wood boilers conform to the guidelines for combustion technology and safety engineering.

In addition, HDG products are voluntarily submitted to independent institutes for quality testing.

Information on current promotional programs can be found at www.hdg-bavaria.com.



HDG wood chip, shavings and pellet boilers



HDG pellet boilers

We are happy to provide you with further information.



To protect our environment, we only use paints that do not contain mineral oils. Subject to technical changes and corrections.

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Version XXXXXX

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