

PelletsUnit  
ETA PU  
7 to 15 kW

**ETA** <sup>η</sup>  
... my heating system



The pellet boiler for the  
comfortably warm family home



*A passion for perfection.*  
[www.eta.co.at](http://www.eta.co.at)

## AREAS OF USE



## Everything already in it

The ETA PelletsUnit is the ideal pellet boiler for the renovation of new build of single-family and multi-family homes. An entire heating system is packed into a compact boiler. Highly efficient pump, safety valves and more are already integrated. This reduces the space required and assembly costs! The PelletsUnit is not just small, but also flexible: even a second heating circuit can be connected!

### Can be set-up anywhere

The ETA PelletsUnit can be operated with external air, i.e. the combustion is supplied with oxygen from the outside. This means that the boiler can also be situated in heated buildings or in rooms with comfort ventilation. In fact, the ETA PelletsUnit looks so good that you can even install it in your living room!

### Wood heating for maximum comfort

Wood pellets are made from compressed wood waste. Relying on wood pellets as your heating fuel means heating fully automatically with the highest degree of comfort. The pellet store can be up to 20 m away from the boiler and needs no more space than an oil tank. The ETA PelletsUnit is ideal for heating renovations; the operating costs and CO<sub>2</sub> emissions are significantly lower than any fossil fuel heating system.

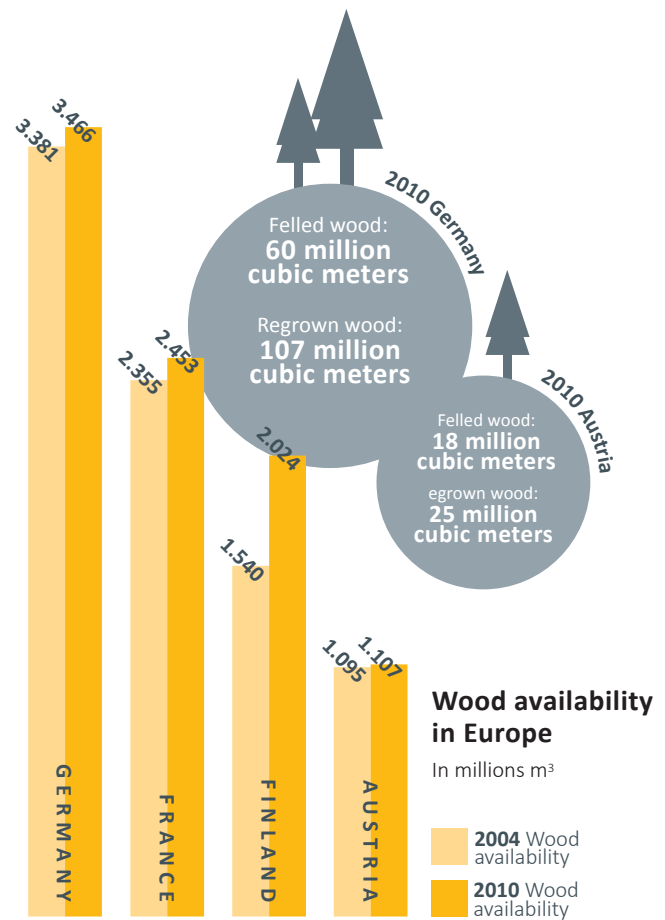
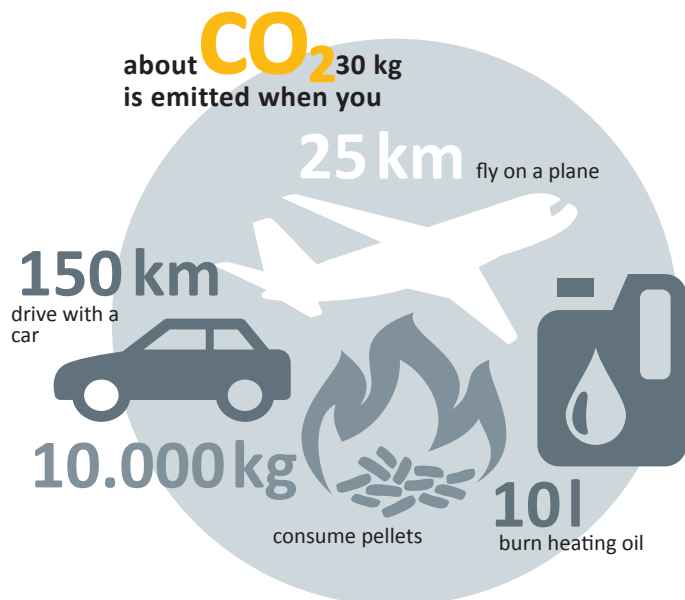
### A sustainable fuel

When comparing wood to fuels such as oil or gas, wood pellets hardly effect our environment. During its growth, the tree absorbs just as much CO<sub>2</sub> as it later releases during combustion and therefore no more CO<sub>2</sub> is freed than when waste wood simply rots.



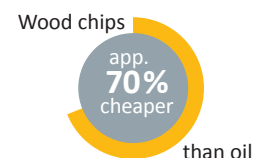
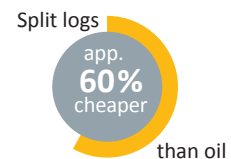
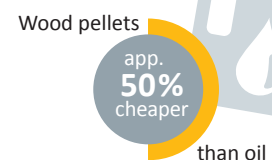
## A win-win situation

Save on heating costs, strengthen your domestic economy and look after the environment in the process: heating with pellets is worth it. A drastic price rise is also not expected in the future, as wood always regrows. Currently, around 7 million cubic meters of excess wood is growing in Austria - and forested areas are increasing across the whole of Europe.



### Oil in comparison

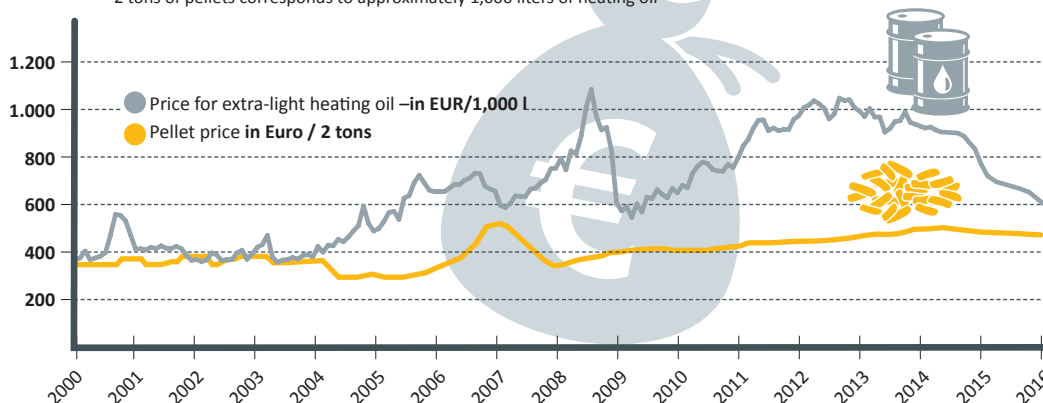
Calculation time period: 5 years



### Fuel costs:

#### oil and wood pellets in comparison

2 tons of pellets corresponds to approximately 1,000 liters of heating oil



While the price of fossil fuels such as oil and gas is subject to heavy fluctuations in the international markets and will certainly rise long-term, the price of wood and pellets is reliable.

## Always space for pellets

The pellet store can easily be set up anywhere where an oil tank stood before. It doesn't even have to be near the boiler, but can be situated up to 20 m and two storeys away. If there's no space in the house, the store room can also be set-up in an adjacent building, or an underground tank can be used. The store room just needs to be dry so that the pellets don't swell up. Wooden cladding can help in rather damp rooms.

### A clean solution

The wood pellets, which are pressed from the waste products of the wood industry, are delivered by tanker and blown into the store room. So the delivery of pellets is an extremely clean process. If the store is sealed then no dust can escape here either.

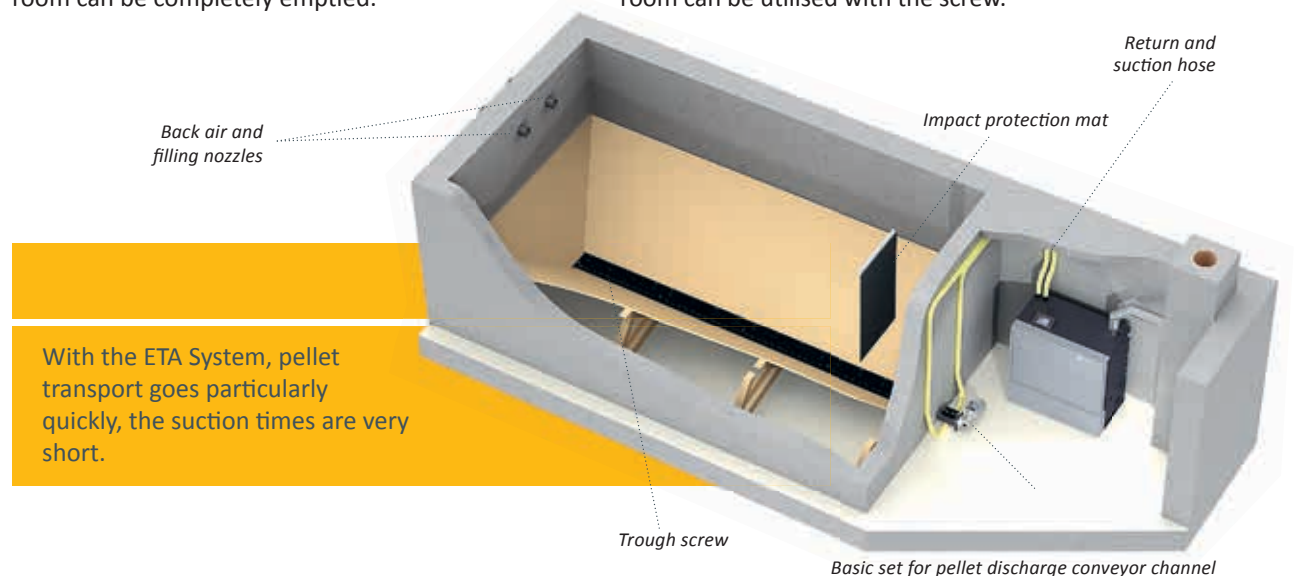


## How do the pellets get to the boiler?

### Discharge screw:

It stretches the entire length of the store room, can be up to 5 m long and transports the pellets from the store room to the transport hoses, which lead to the boiler. From here, the pellets are conveyed further with a vacuum motor. After transport the hoses are vacuumed empty. Hence they do not clog up and always work with the highest degree of efficiency. With this standard system, the store room can be completely emptied.

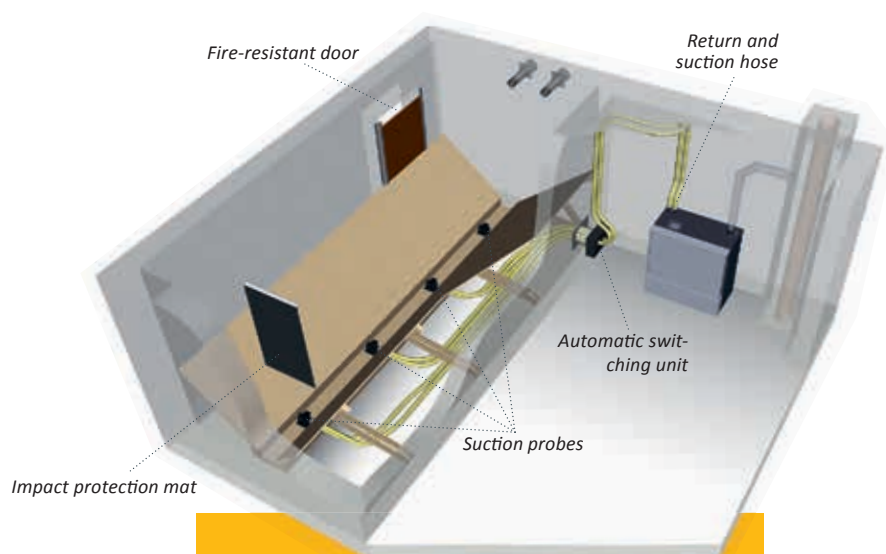
Over the inclined smooth floor, the pellets automatically slide into the transport screw. The impact protection mat is suspended opposite the filling nozzles, so that the pellets do not shatter on the wall when they are blown into the store room from the truck. The prerequisite for this construction is that the connections for the transport hoses to the boiler are located on the narrow side of the store room, so that the whole length of the room can be utilised with the screw.



With the ETA System, pellet transport goes particularly quickly, the suction times are very short.

### Suction probes:

If the shape of the room is not suitable for a discharge screw, the ETA suction probe system is the ideal choice. Here, the pellets slide over the slanting and smooth wooden floor directly to the four suction probes, which alternately transport pellets away from the store room. Through automatic changeover, the fuel supply is not interrupted if a probe doesn't get any pellets at a certain point in time. The prerequisite for this system is that the store room is situated opposite the boiler in the same storey or higher, and that the store room is no longer than 4 m. Unlike screws, the suction probes do not fully empty the store room. When the storage room capacity is tight, this can be a disadvantage. The advantage is that this system can be used even in angled store rooms.



With the suction probes, nearly all rooms can be used as a pellet store, even if it's angular.

## How big does my store room have to be?

The approximate pellet requirement per year in tonnes is calculated by dividing the heating load in kilowatts by 3. To calculate the pellet requirement in cubic meters, divide the heating load by 2. So, for example, for 12 kW heating load you need approx. 4 tonnes or 6 m<sup>3</sup> pellets per year, respectively.

When moving from another energy source to pellets, the pellet requirement can also be determined from the previous consumption. 1 tonne of pellets roughly corresponds to:

- 500 l heating oil
- 520 m<sup>3</sup> natural gas
- 750 l LPG
- 600 kg coal
- 1,400 kWh power with geothermal energy pumps (coefficient of performance 3.4)
- 2,700 kWh power with air heat pumps (coefficient of performance 1.8)

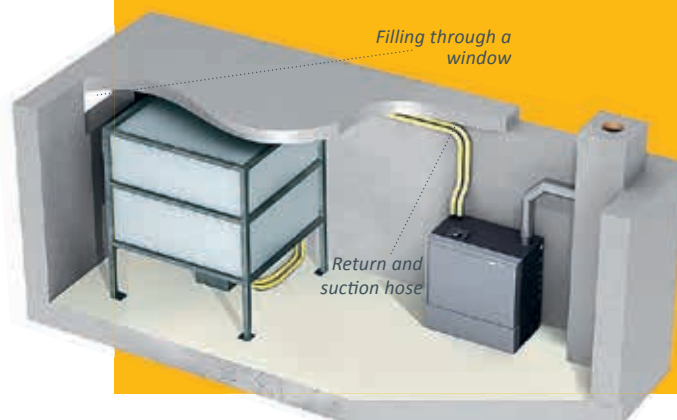


### ETA tip: storage in the ETAbox

One particularly practical solution is the ETAbox. It can be set up directly in the boiler room, in the attic, in a barn or – if covered – even outside. It even keeps the pellets dry in damp rooms. Distances of up to 20 meters of suction stretches from the box to the boiler are no problem. The ETAbox cannot be set up directly on the wall, however. Which is why the space required is larger compared to a brick store with the same capacity.

The ETAbox modular system is available in various sizes from 2 tonne to 8.8 tonne fill volume and can be installed in no time without a bricklayer or carpenter. What is important is that the room in which the box is located can be ventilated during filling.

If the ETAbox is set up directly in the boiler room, the relevant regional building regulations must be taken into account. In most German states, up to 6.5 tons of pellets can be stored in the boiler room. In Austria, up to 9.75 tonnes is allowed in some states. In Switzerland, up to 6.5 tonnes of wood can be stored in separate boiler rooms, whereby the clearance from the boiler must be 1 m.





# Heat, just the way you need it

The ETA PelletsUnit doesn't just produce heat, the ETA System also distributes it efficiently. Rely on the perfect control centre for your heating and hot water system.

The ETA PelletsUnit is equipped with a control system for the entire heating system. Whether you want to integrate a solar heating system, a conventional hot water preparation system or a buffer storage tank with fresh water module, whether the energy is transferred with radiators or via underfloor heating: You've got everything under control via a touchscreen on the boiler or also via computer or smartphone. Simple images show you if your solar heating system was successful or how full your buffer is.

## With buffer, please

Of course the ETA PelletsUnit also works by itself. But the ETA buffer storage tank is its perfect partner regardless. Above all, when heating in fall or in spring and for hot water preparation in the summer, often less energy is needed than what the boiler

produces. The buffer stores this excess heat and releases it on demand. This saves fuel and protects the boiler, because fewer boiler starts are needed. The ETA stratified buffer is ideal for the integration of a solar heating system. In summer, hot water can be produced at virtually no operating costs. But in winter, the solar collectors seldom produce the 60 °C that are common for hot water preparation. Then the water that is heated by solar energy is fed through the underfloor heating. This usually work with hot water temperatures of just 30 to 40 °C.

The ETA stratified buffer can also be equipped with a fresh water module, which constantly reheats the tap water with the help of a heat exchanger. The risk of germs and bacteria is minimised.

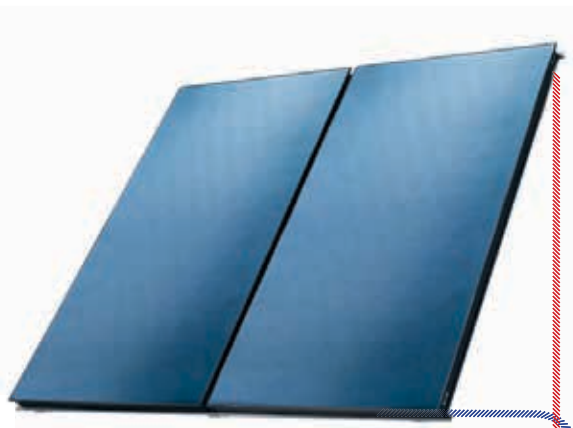
Remote controlled via the meinETA communication platform



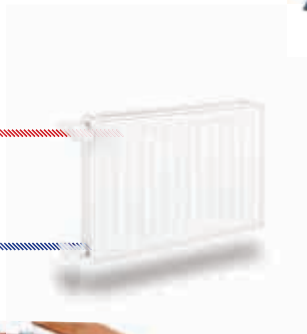
*The ETA mixing circuit module for two heating circuits saves a lot of time and money during installation, as no sensor lines, pumps and mixer cables have to be installed.*



*No matter whether solar heating system, hot water preparation or buffer storage with fresh water module: the whole system can be easily controlled from the boiler display.*



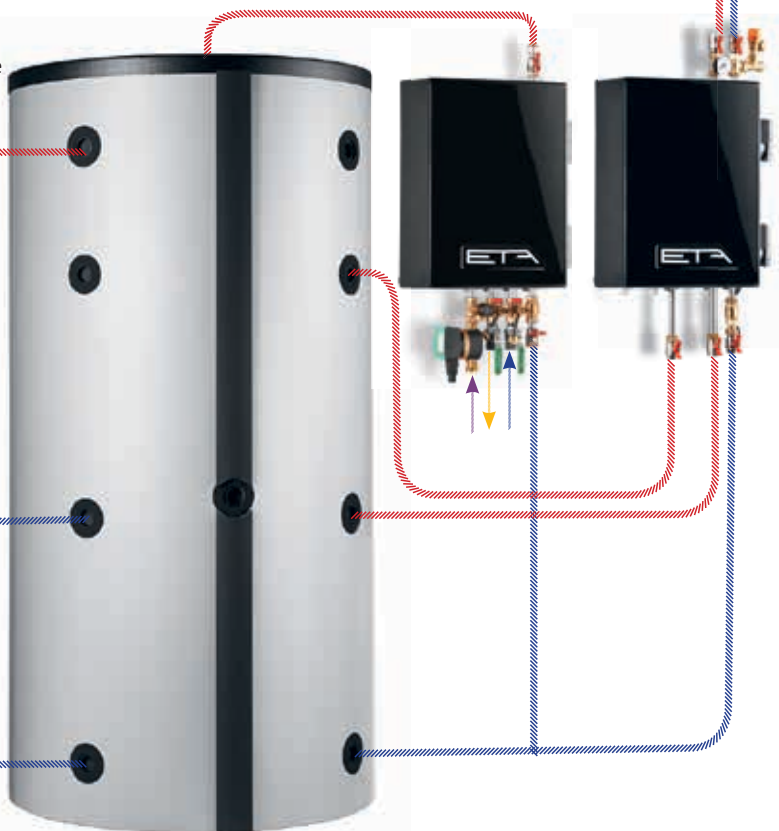
*For smaller solar heating systems with large buffer storage tank volumes or for very large solar heating systems, the ETA stratified charging module ensures maximum efficiency.*



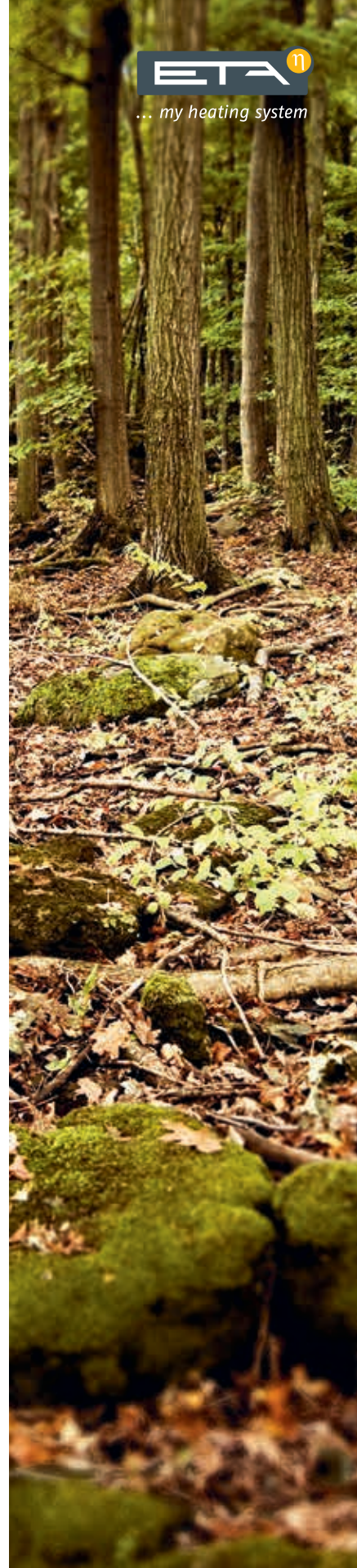
### Forget about your boiler

It'll let you know when it needs you! When it's time to add fuel a green signal lamp lights up on the room temperature sensor. Of course you can also set the room temperature on this compact, simple to use device.

*The ETA stratified buffer can also be equipped with a fresh water module, which constantly reheats the tap water with the help of a heat exchanger. Thus the risk of germs and bacteria is minimised.*



*An ETA stratified buffer is the ideal addition to PelletsCompact. It stores energy that is not required and delivers on demand.*





## Safe, reliable and easy to use

When selecting a new boiler, you make a decision that can have an effect on your daily life for many years. You determine how safe you can feel and how much you have to worry about maintenance and cleaning. This is where quality at a fair price pays!

### Automatically clean

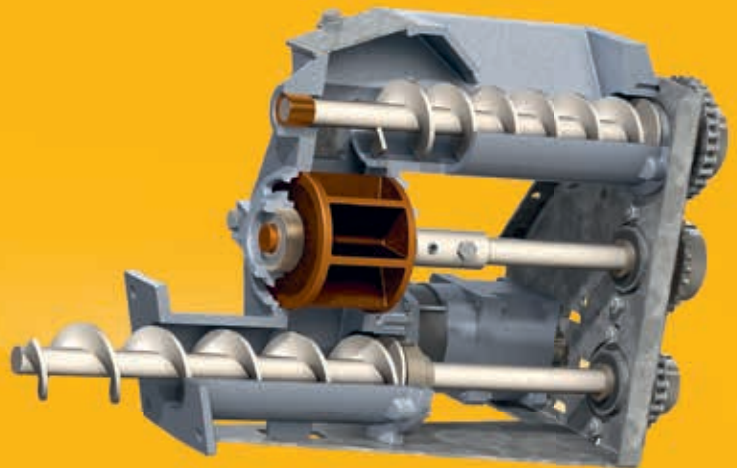
The ETA PelletsUnit cleans itself automatically – and not just at certain intervals, but precisely when it's needed. This ensures low emission values and the highest degree of efficiency during the heating season. You never have to open the combustion chamber and get yourself dirty. Not only is the combustion chamber de-ashed, the heat exchanger is also regularly cleared of deposits. As the pellets are burnt very efficiently, less ash is produced. In addition, the ash is compacted in containers. Which is why the ash box only needs to be emptied occasionally. And this is easily done from outside.



## Rotary valve

**The safe system.** The rotary valve absolutely protects you from burn-back: burning should only take place in the combustion chamber and nowhere else.

A dosing screw brings the pellets to the rotary valve – and only as many as the rotary valve can handle. This is why the pellets do not become wedged, crushed or broken. Thanks to this system developed by ETA, the sealed edges of the rotary valve do not wear out. The system remains safe throughout the entire service life of the boiler.







## Noiseless ceramic ignition

**Sparking technology.** The energy expended for the ignition is much less in comparison to other ignition systems. The ignition itself works quicker.



## Lambda probe

**It's about the mix.** With it's help, the mixing ratio of fuel and oxygen are perfectly matched. So different pellet qualities achieve the best possible efficiency. In addition, the probe immediately detects if the ignition was successful. This reduces the ignition time and saves power and money.

## Control system

### Versatile, but not complicated.

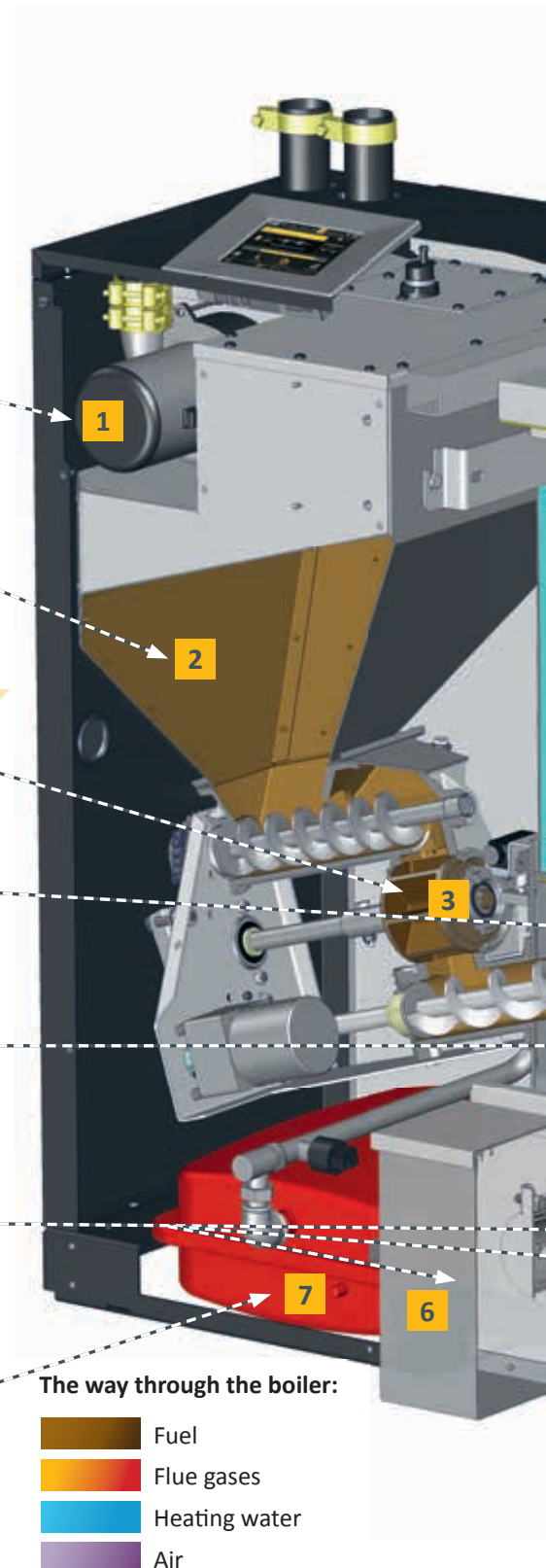
Whether furnace control, pellet conveying, buffer management, hot water preparation, weather-controlled heating circuit controlled with a weekly program for two circuits or the connected solar heating system: all of this can be controlled via a touchscreen directly on the boiler or via the internet from any PC, smartphone or tablet. It's a lot, but it's easy to handle as the images on the touchscreen are self-explanatory.



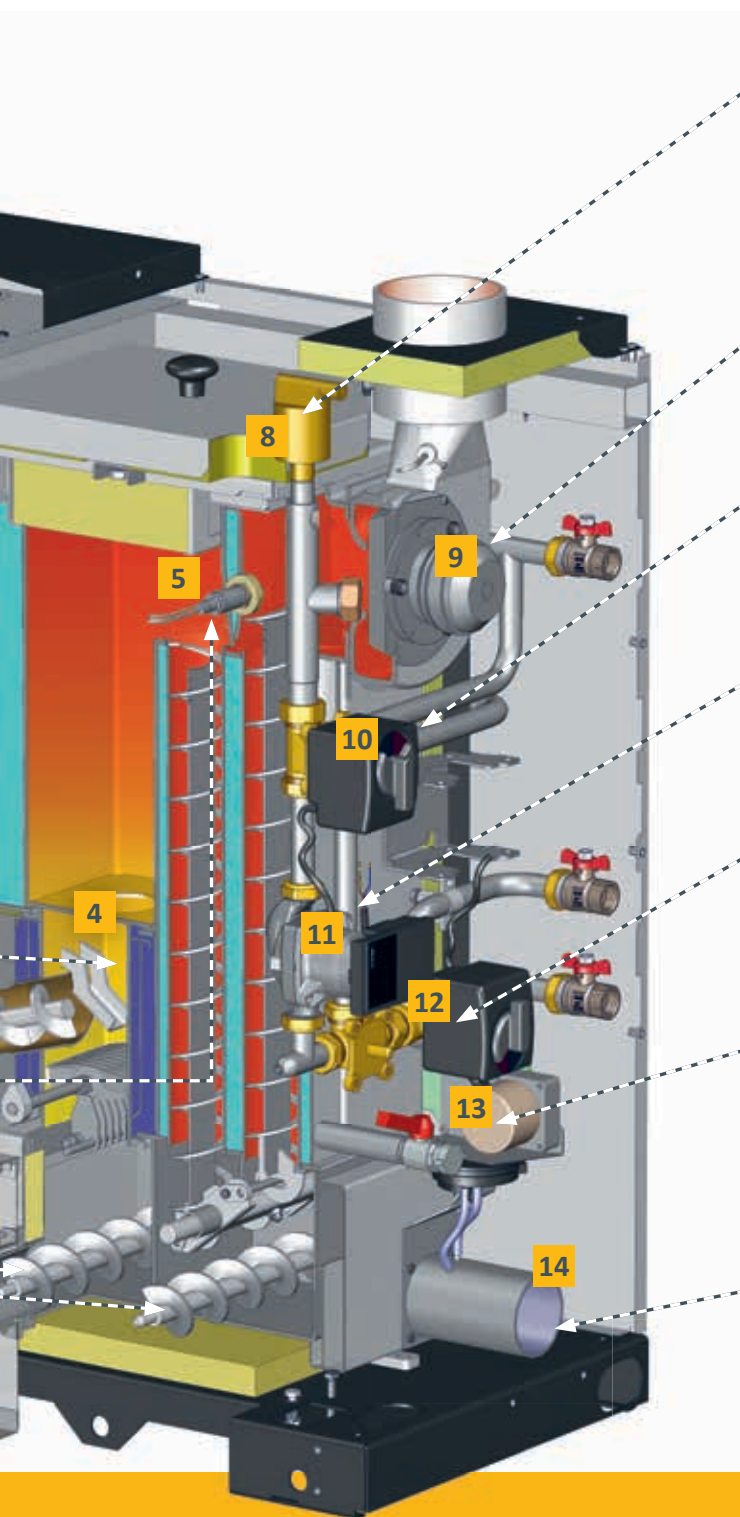
## The way to heat

From pellet hopper to combustion chamber to pump: the interplay of high-quality components is needed!

- 1 Vacuum turbine:** It transports the pellets from the store room to the intermediate container of the boiler.
- 2 Pellet hopper:** Here, 30 kg of pellets are stored temporarily and are immediately available for use. So pellets have to be transported from the store room to the boiler only once or twice a day for 10 minutes. You control when that is.
- 3 Rotary valve as burn-back protection device:** It is the completely sealed closing door between store and ignition and and therefore safely protects.
- 4 Combustion chamber made from stainless steel:** Here, temperatures are produced that are high enough to burn wood cleanly and efficiently. This ensures less ash and low emissions, even under partial load.
- 5 Lambda probe:** With it's help the mixing ratio of fuel and oxygen are perfectly. So different pellet qualities always achieve the best possible efficiency.
- 6 Automatic de-ashing in the ash box:** The small amount of ash that still falls despite the optimised combustion processes is firmly compacted in the 12 l ash bin. So the ash bin needs to be emptied less often. When it's time, the boiler sends a reminder email. The container is located outside and is therefore easily accessible.
- 7 Expansion tank:** It can take up to 18 litres of heating water and so safely evens out pressure fluctuations within the heating system.







**8 Safety devices:** A safety valve and an electronic pressure sensor protect the boiler from overpressure. An automatic rapid ventilator is also integrated, unwanted air is removed from the hot water circuit. The boiler does not need a thermal emergency cooling valve, as there is never too much fuel in the boiler that could cause overheating.

**9 Draught fan:** Quiet as a whisper, this fan ensures underpressure in the boiler. Additionally, it controls the air quantity and thus ensures safety in the boiler room.

**10 Mixer:** It can be flexibly used depending on system type. With a pluggable actuator it functions as a flow mixing valve for a heating circuit or as a mixer for return increase for buffer storage tank operation.

**11 Pump:** It is speed-controlled, highly efficient, energy-saving and ensures the movement of hot water. Depending on the system type, it is either the heating circuit pump for an underfloor heater or radiator heater or it handles buffer charging.

**12 Changeover valve:** Optionally, only one pump of the heating circuit can be kept in operation or the hot water tank can be charged. The valve always automatically switches to the circuit which the pump should already work for.

**13 Cleaning drive:** It ensures the boiler is clean. The heat exchanger is also cleaned automatically with turbulators. The grate is also moved regularly and thus freed of ash. With the help of screws, the ash is fully automatically and thoroughly transported from the combustion chamber into the ash box.

**14 Air connection for external air supply:** It collects the air required for combustion from outside. Thus the boiler can be set up safely in any room – for example also with living room ventilation. Country-specific regulations are to be observed.

## Draught fan

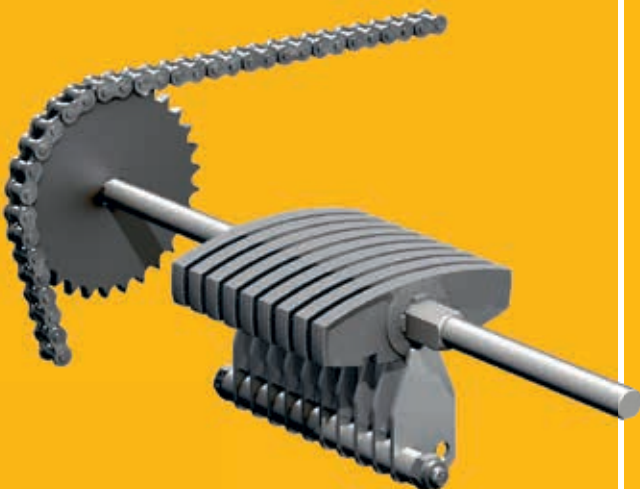
**Underpressure in the boiler.** Quiet as a whisper, this speed-controlled fan ensures underpressure in the boiler and determines the air quantity for the combustion. Energy-saving it ensures consistent combustion results – largely independent of the condition of the chimney. No draught limiter is required for flue draughts of up to 15 Pa.



## Rotating grate with cleaning comb

**Clean burns well.** This patented system cleans the combustion chamber regularly of ash – and that's always automatic after 15 to 30 kg of burnt pellets. The air required for the combustion process is distributed extensively between the clean grate segments. Additionally, the grate is constantly kept in slight motion. The gentle movement stokes the firebed and thus ensures even better combustion.

The ash is compacted and ends up in the 12 l capacity ash box. Even at full load operation, the boiler only has to be emptied from time to time. When it's time, the system sends an email or an SMS message. The information is also displayed on the touch display.





## Everything already in it

The most important elements for the heat distribution such as the pump, mixer and changeover valve are also integrated into the boiler like the expansion tank, safety valve and air valve. That saves space and make assembly easier.

**Controlled return riser with high-efficiency pump.** So as not to damage the heat exchanger, the water returning from the heating circuit must be brought to a certain temperature. The pump is highly efficient and also very economical with 15 to maximum 35 W power.



**Operation with external air supply.** The ETA PelletsUnit can be operated with external air, so the combustion is supplied with oxygen from outside and not from the ambient air in the

interior. This means the boiler can also be located within a heated building shell, without having to permanently open a window in the deepest of winter.



*Away mode, night time reduction, vacation setting: intuitively, you know immediately which button does what.*

## Easy to control from anywhere

Good technology is characterised by its user friendliness. You don't have to be a technician to use the many functions of the ETAtouch.

### ETAtouch: the touchscreen on the boiler

Confusingly arranged buttons and control systems are a thing of the past, because with the touchscreen of the ETA PelletsUnit you can quickly and easily control all settings. The icons are self-explanatory. Whether you generally want to make it warmer or cooler, change the time for night-time reduction or want to switch to eco mode during your vacation - you will tap on the right symbol intuitively and completely without operating manuals!

You not only control your boiler via the touchscreen, but also have an overview of all connected components, such as buffer storage tank, pellet store, solar heating system or hot water preparation. You know straightaway, for example, how many pellets you still have in store or how effective your solar heating system was.

*You can control the boiler via smartphone, PC or tablet as well as directly on the touchscreen.*



### meinETA: the free internet platform

If your heating boiler is connected to the internet, you can see and change all heating settings on your mobile, tablet or PC. So you always have a handle on your heating, wherever you are! When you login to [www.meinETA.at](http://www.meinETA.at), you see the touchscreen as if you were standing right in front of the boiler!

The pellet store needs filling, the ash bin must be emptied, it's time for the next heating service... You don't have to remember all these things yourself. meinETA reminds you for free by email.

### Quick help

Give your installer or the ETA customer service representative temporary access rights to your meinETA account. So they can prepare for their visit to you. And maybe the technician doesn't even have to come visit, because thanks to meinETA they can tell you over the phone what you need to do to make your heater work again. You can see who can access your boiler via the status display. Only you decide who's in your network!





*Come home to a warm house:  
the boiler can also be controlled  
while you're on the go.*

### Technical requirements for meinETA

To be able to use meinETA, you need a broadband connection in your home. The ETA boiler's touch screen is connected to the Internet via a network cable. And anyone who doesn't have a network connection in the basement simply connects via the ETA PowerLine. It comfortably transfers the data from any socket to the modem.

### For tablet, smartphone and PC

meinETA runs on all current operating systems, such as iOS or Android. Via PC, meinETA can be loaded by any modern internet browser, such as Mozilla Firefox, Safari, Google Chrome or Internet Explorer 9, for example.



### There for you

ETA devices are characterised by the highest quality. They feature patented systems developed in Austria. The entire assembly takes place in-house in Hausruckviertal, Austria. In the unlikely event of a breakdown, ETA customer service is on the spot quickly. An experienced, competent on-call team is available to you.

# Everything on one display: the ETA standard

A modern heating system is only effective if it is well-controlled. ETAtouch takes care of that.

At no added cost, the ETAtouch control system already includes all functions for two heating circuits, hot water supply via tank or fresh water module as well as for the integration of a solar heating system. The ETA PelletsUnit also comes with a LAN connection as standard. If you connect the boiler to the internet, you can easily control all components from a PC, tablet or smartphone.

## Boiler and combustion regulation\*

Speed-controlling the units saves power. The lambda and ignition time regulation increases efficiency. All components relevant to operation are monitored.

## Buffer storage tank management\*\*

Three to five sensors in the tank control the heat generator in the system and distribute the energy to the different consumers. Using five sensors, cascading regulation, QM wood heating stations and peak load management are part of ETA Standard.

## Hot water preparation\*

Is made possible both via the ETA fresh water module but also via the hot water tank or combi storage. For all variants, circulation pumps can be controlled with time and/or requirement programs.

## Solar heating systems\*\*

Single or double circuit solar heating systems with one or two tanks, zone loading via the ETA stratified charging module and also two collector fields as well as three consumers are controlled.

## Two weather-controlled mixing heating circuits\*\*

They run with a weekly program with many time windows and automatic and/or manual additional functions. The system can optionally be expanded with room sensors and remote control.



*Of course also without the need for an operating manual: The symbols on the touchscreen are self-explanatory. Making control of the heating system child's play.*

## Additional system functions\*\*

External heat detection and/or switching, thermostat or differential temperature thermostat, display of up to five freely selectable temperatures, heat request from external devices as well as heating pipeline(s) with or without mixer.

## Wall switch box for complex systems

All control systems can be extended with wall switch boxes, with or without touchscreen.

\*Control system and sensor included in standard delivery scope

\*\*Control system depends on configuration, sensors are available as accessories



# From Hausruckviertel to the whole world

ETA specializes in the manufacture of biomass heating, i.e. log, pellet and wood chip boilers. The most modern technologies combined with naturally growing resources.

## ETA is efficient

Technicians designate the efficiency of a heating system with the Greek letter  $\eta$ , pronounced „eta“. ETA boilers stand for more heat with less fuel consumption, environmental soundness and sustainability.

## Wood: old, but good

Wood is our oldest fuel - and our most modern: There is a lot of history in-between open fires in front of caves and modern biomass boilers. In the middle of the 20th century, the number of wood heating systems fell briefly. Oil was the new heating hype. A brief interlude in comparison to the consistency of wood. Today, we know that heating with fossil fuel has no future. It contributes to global warming and harms the environment. Supply security is not guaranteed long term also, as fossil fuels are diminishing, don't regrow, and sometimes come from politically unstable regions. While wood in contrast is a cheaper, domestic, renewable raw

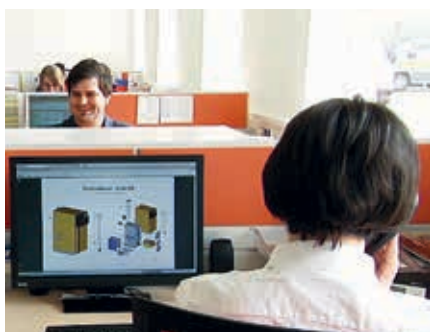
material that does not pollute the climate when burnt. No wonder wood heating is booming!

## Comfort with many components

Since December 1998, the Upper Austrian company ETA has been designing and building a new generation of wood-fired boilers. They are full of patented technologies and the most modern control technology – and are still easy to use. Comfort and efficiency make ETA products so popular around the world. With a production of over 10,000 boilers per year and a global export quota of around 80%, ETA is one of the leading biomass boiler producers.

## You get more than just a boiler

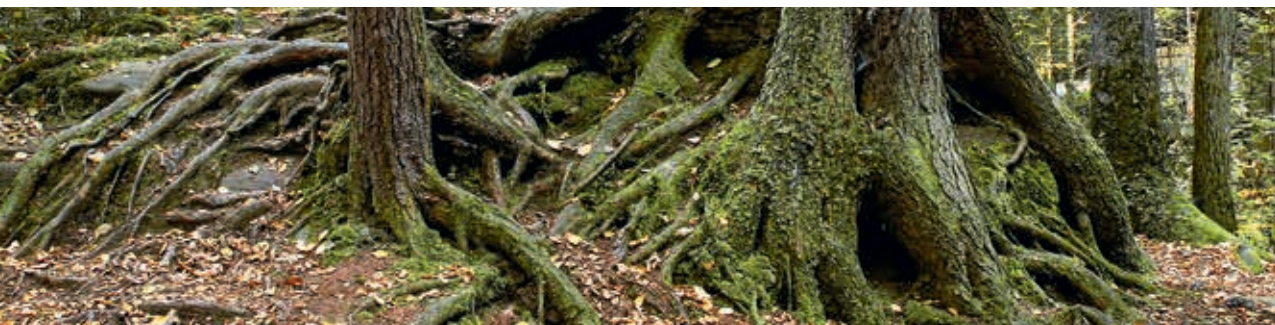
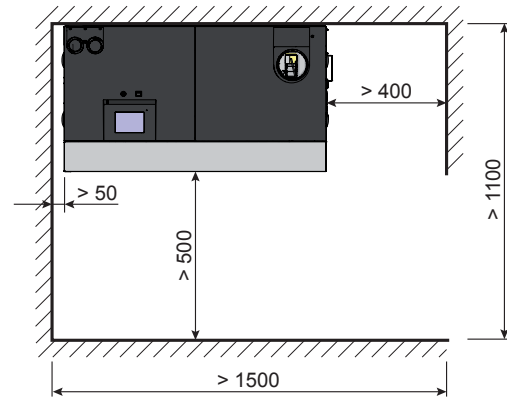
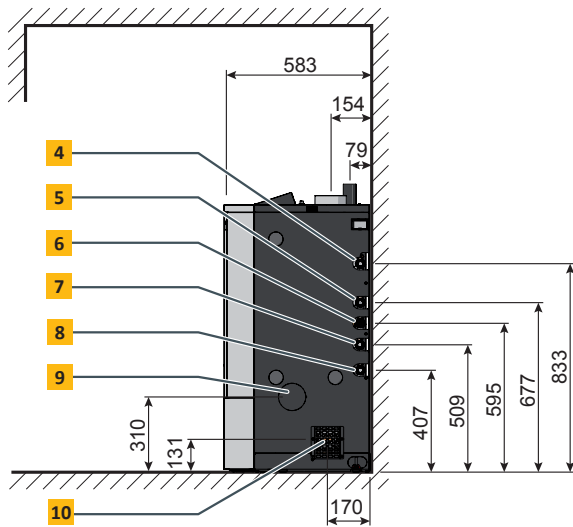
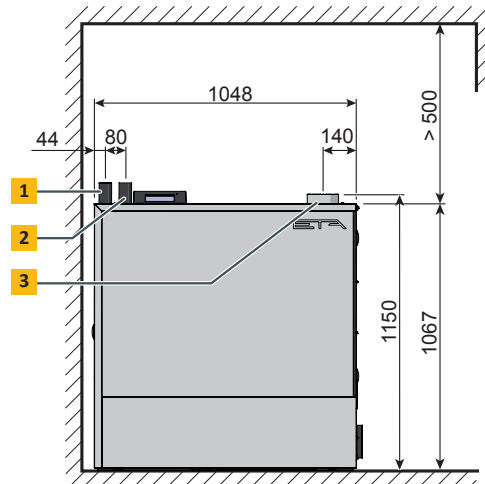
Anyone who decides on a wood or pellet boiler from ETA is choosing sustainability. And not just in terms of fuel. ETA shows responsibility across the board. So sustainable workplaces are created in the region. More than 230 employees in Hofkirchen an der Trattnach have the best working conditions – including an in-house canteen, bright assembly and storage halls, fitness rooms, and a sauna. And a free electric filling station, which is supplied by the in-house photovoltaic system. This also covers all power needs of a production hall and thus saves around 230 tonnes of CO<sub>2</sub> per year.

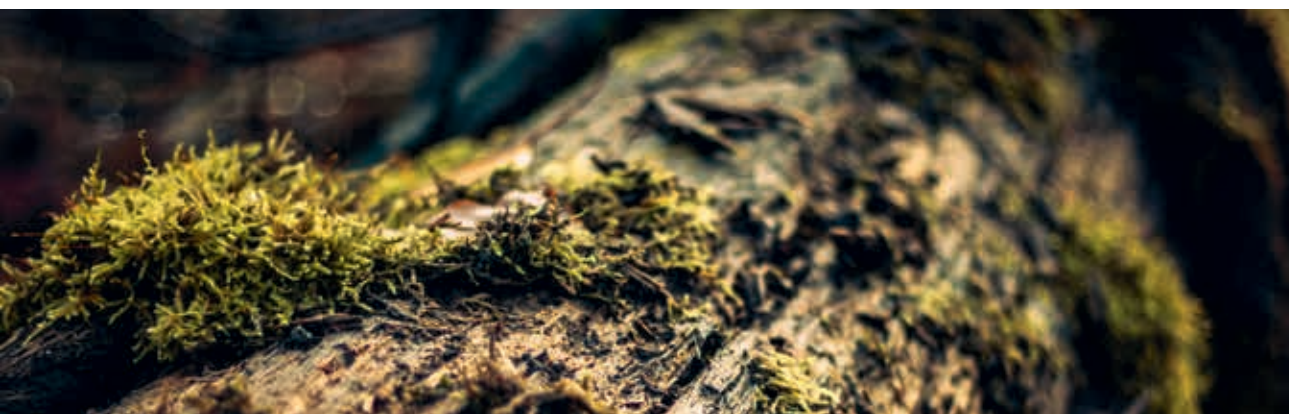


# Ideal for new builds and renovations

The ETA PelletsUnit fits into any house. It can be set up in the cellar or in the attic. The pellet store can be up to two storeys or 20 m away.

- 1** Pellet suction hose DN50
- 2** Pellet back air DN50
- 3** Flue gas connection, 7-11 kW: socket Ø113 mm or Ø100 mm; 15 kW: socket Ø110 mm or Ø113 mm
- 4** Return for heating circuit 1 and hot water tank, R3/4" coupling
- 5** Optional heating circuit 2 return, R3/4" coupling
- 6** Optional heating circuit 2 flow, R3/4" coupling
- 7** Flow for hot water tank, R3/4" coupling
- 8** Heating circuit 1 flow, R3/4" coupling
- 9** Drain fitted with 1/2" filling and drainage valve
- 10** Air connection for external air supply, DN80





PelletsUnit	Unit	7 kW	11 kW	15 kW
Rated capacity	kW	2.3 - 7.7	2.3 - 11.2	4.4 - 14.9
Efficiency at partial/full load* (installation outside living area)	%	89.3 / 93.4	89.3 / 92.5	95.7 / 93.5
Combustion efficiency (installation within living area) partial / full load	%	97.5 / 97.0	97.5 / 96.5	97.4 / 95.4
Boiler dimensions, W x D x H	mm	1,048 x 583 x 1,067		
Weight	kg	246		
Water content	Litres	27		
Residual pump head at ΔT=7 °C Maximum 100 m (80 m better) underfloor heating pipe length per distributor outlet, for heating body speed-controlled depending on the flow temperature	mWS / m³/h	2.8 / 0.9	1.9 / 1.3	2.0 / 1.8
Maximum distance to pellet store	m	20		
Ash box volume	Litres	12		
Required flue draught at partial/full load	Pa	>1 / >3 Draught limiter required over 15 Pa		
Electrical power consumption at partial / full load*	W	46 / 61	46 / 63	66 / 95
Maximum permissible operating pressure	bar	3		
Temperature adjustment range	°C	30 – 85		
Maximum permissible operating temperature	°C	95		
Boiler class	5 acc. to EN303-5:2012			
Suitable fuels	Pellets, ENplus A1, ISO 17225-2-A1			
Electrical connection	1x 230 V / 50 Hz / 13 A			

\*Data from test reports by BLT Wieselburg







ETA PU PelletsUnit 7 to 15 kW



ETA PC PelletsCompact 20 to 50 kW



ETA PE-K Pellet Boiler 35 to 220 kW



ETA SH Wood Gasification Boiler 20 to 60 kW



ETA SH-P Wood Gasification Boiler 20 and 30 kW  
with ETA TWIN Pellet Burner 20 and 26 kW



ETA HACK Wood Chip Boiler 20 to 200 kW



ETA HACK VR Wood Chip Boiler  
with moving grate 333-500 kW



ETA stratified buffer SP 500 to 5,000 lt  
and SPS 600 to 2,200 lt



ETA Hydraulic modules

Your heating specialist will be happy to advise you

**ETA** <sup>η</sup>  
...mein Heizsystem

**ETA Heiztechnik GmbH**  
Gewerbepark 1  
4716 Hofkirchen an der Trattnach, Austria  
Tel.: +43 (0)7734 2288-0  
Fax: +43 (0)7734 2288-22  
info@eta.co.at  
[www.eta.co.at](http://www.eta.co.at)

#### Technical changes reserved

In order to provide you the benefits of our continuous development, we reserve the right to change specifications without prior notice. Printing and typesetting errors or changes of any kind made in the interim are not cause for claims. Individual configurations depicted or described here are only available as options. In the event of discrepancies between individual documents regarding the scope of delivery, the information provided in our current price list shall prevail. Images and symbols may contain options that are available for an additional cost.

Photo source: ETA Heiztechnik GmbH, Lothar Prokop Photographie, istockphoto, Thinkstockphotos, Photocase, Shutterstock.

PelletsUnit ETA PU EN, 2016-06

