PelletsUnit ETA PU 7 to 15 kW

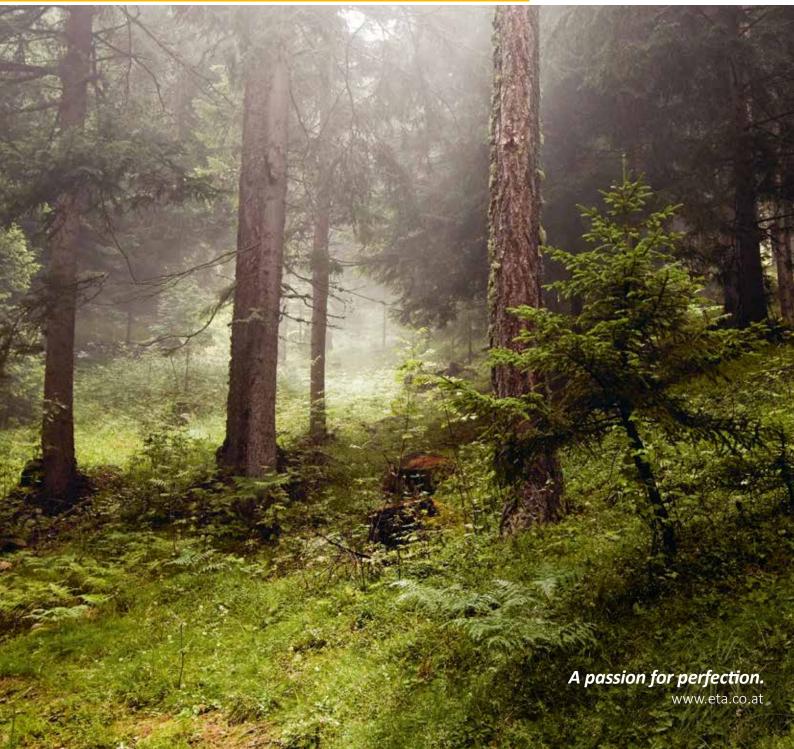






The pellet boiler for pleasantly warm single-family homes









Everything already in it

The ETA PelletsUnit is the ideal pellet boiler for both renovated newly built single-family homes and apartment buildings. An entire heating system is packed into a compact boiler. Highly efficient pump, safety devices and more are already integrated. This reduces the space required and installation costs. The PelletsUnit is not just small, but also flexible: even a second heating circuit can be integrated.

Can be set-up anywhere

The ETA PelletsUnit can be operated with external air, i.e. the combustion is supplied with oxygen from outside. This means that the boiler can also be located in heated buildings or in rooms with air conditioning. In fact, the ETA PelletsUnit looks so stylish that you can even set it up where it is visible.

Wood pellets for maximum efficiency

Pellets are balls of energy made from compressed wood by-products. Relying on the pellets means heating fully automatically and with the highest efficiency. Only the ash bin needs to be emptied every now and again. The pellet store room can be up to 20 metres away from the boiler and needs no more space than an oil tank room. The ETA PelletsUnit is also ideal for heating system replacements. So you not only reduce operating costs, but also significantly lower the CO2-emissions.

Using resources sensibly

In contrast to fuels such as oil and gas, pellets hardly effect the climate. During its growth, the tree absorbs as much CO2 as it later releases during combustion. In addition, during combustion no more CO2 is released than when wood waste simply rots.



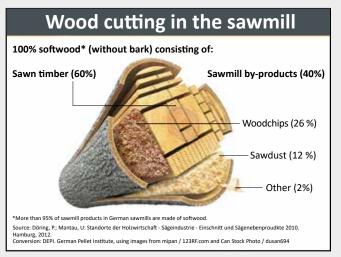
A win-win situation

Save heating costs, boost your domestic economy and help the environment in the process: heating with pellets pays off. Currently, around 7 million cubic metres of excess wood is growing in Austria - and forested areas are increasing across the whole of Europe.

Using resources sensibly

In contrast to fuels such as oil and gas, pellets hardly effect the climate. That is because trees absorbs as much CO_2 during growth as they later release during combustion. In addition, the CO_2 released when burning is equal to or less than that of naturally rotting wood.

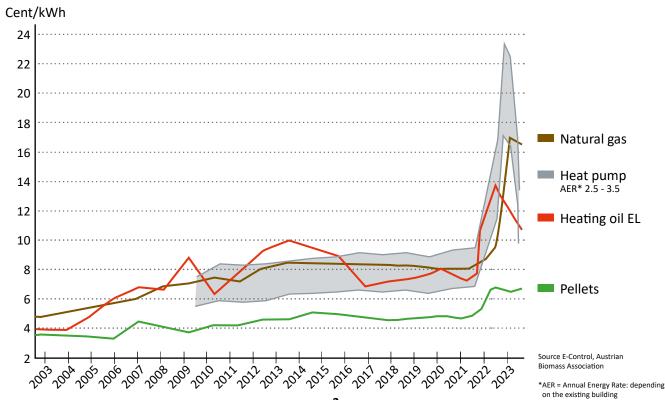




No extra trees have to be felled to produce pellets, because the wooden briquettes consist mainly of sawdust, a waste product of the wood industry.

Price development of energy sources

for households 2002 - 2023



Always space for pellets

The pellet store can easily be set up anywhere an oil tank has previously stood. It doesn't even have to be near the boiler, but can be located up to 20 m away. If the pellet store is located beneath the boiler, and if using a suitable conveying system, up to two storeys can be overcome. 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 pellets, which are created from the compacted 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 and easy process. If the store is sealed, 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 6 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 turbine. 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.



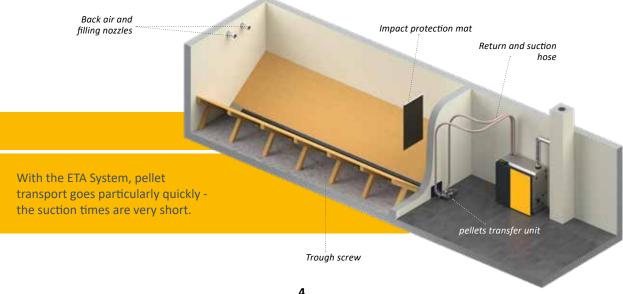
How big does my store room have to be?

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 metres, divide the heating load by 2. So, for example, for 30 kW heating load you need approx. 15 m3 or 10 tonnes pellets per year. When moving from another energy source, the pellet requirement can also be determined from the previous consumption.

1 ton of pellets roughly corresponds to:

- 500 I heating oil
- 520 m3 natural gas
- 750 I liquid gas
- 600 kg coke (fuel)
- 1,400 kWh power with geothermal energy pumps (coefficient of performance 3.4)
- 2,000 kWh power with air heat pumps (coefficient of performance 2.5)

Over the inclined smooth floor, the pellets automatically slide to 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 used with the screw.





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

Return and suction hose

Automatic switching unit

Suction probes

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.

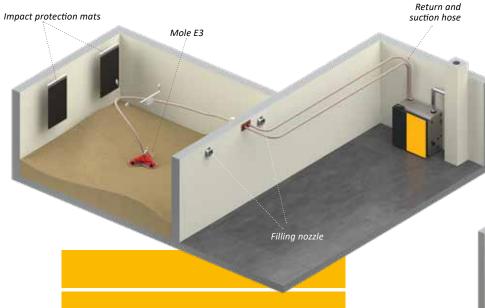
With the suction probes, nearly any room can be used as a pellet store, even if the store room is angular. Eight probes are also possible with larger store rooms.

Mole conveying system:

Due to the structural constraints, conventional ETA pellet conveying systems may have some limitations in terms of usable pellet storage volume. The high quality E3 mole conveying system is a useful application in this situation.

With the E3 mole conveying system, the storage space can be almost completely emptied and the sloping wooden structure is

eliminated.



ETA tip: storage in the ETA Box

One particularly practical solution is the ETAbox. It can be set up in the boiler room, in an attic, in a barn or – if covered – even outside. It even keeps the pellets dry in damp rooms. Distances of up to 20 metres of suction hose stretching from the box to the boiler are no problem. Please note that the ETAbox cannot be set up directly on a wall. This is why the space required is a bit larger compared to a brick store with the same capacity.





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 instantaneous hot water module, whether the energy is transferred with radiators or via floor or wall heating: everything is controlled from a touchscreen on the boiler or via a computer or smartphone. Simple images show you if your solar heating system was operating or how full your buffer is.

With buffer, please

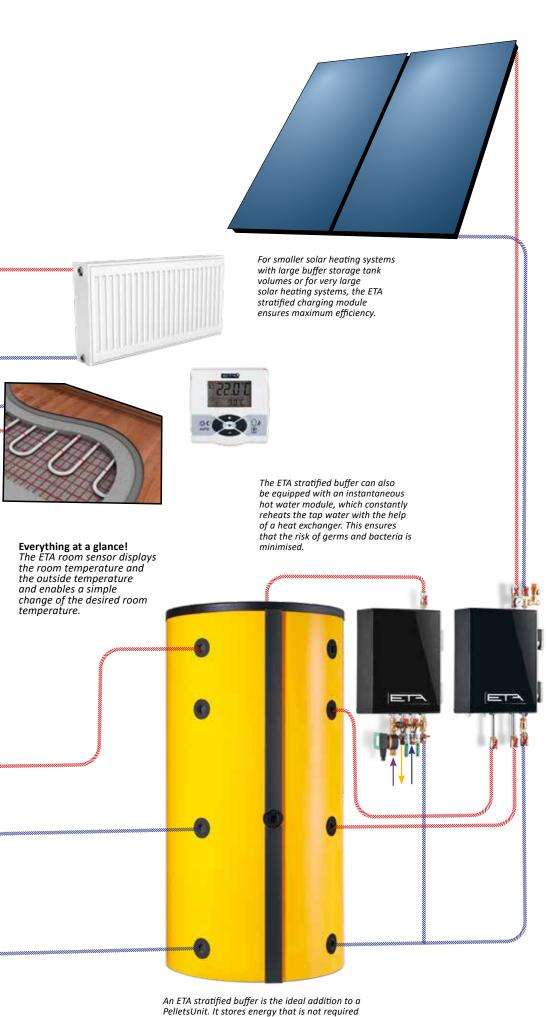
Of course the ETA PelletsUnit can work by itself. However the ETA buffer storage tank is its perfect partner. Above all, when heating in autumn or in spring and for hot water preparation in the summer, often less energy is needed than the boiler produces. The buffer stores this excess heat and releases 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 or wall heating. This usually works with hot water temperatures of just 30 to 40 °C.

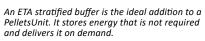
The ETA stratified buffer can also be equipped with an instantaneous hot water module, which constantly reheats the tap water with the help of a heat exchanger. This ensures that the risk of germs and bacteria is minimised.

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



No matter whether you want to integrate a solar heating system, a hot water preparation system or a buffer storage tank with an instantenous hot water module: the whole system can easily be controlled from a touch screen on the boiler.







Safe, reliable and easy to use

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

Automatically clean

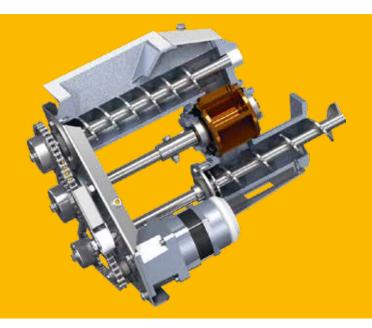
The ETA PelletsUnit cleans itself automatically – and not just at certain intervals, but precisely when it's needed. This ensures low emission values and the highest degree of efficiency during the heating season. You never have to open the combustion chamber and get yourself dirty. Not only is the combustion chamber de-ashed effectively, 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 the ash box. Which is why it only needs to be emptied occasionally. And this is easily and quickly done.



Rotary valve

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

A transport 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 ETA developed system, the sealed edges of the rotary valve do not wear out. The system remains safe throughout the entire life of the boiler.







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.

Noiseless ceramic igniter

Sparking technology. The energy used for ignition is much lower than other ignition systems. The ignition itself works quicker.





Lambda probe

It's about the mix. With its help, the ratio of fuel and oxygen are mixed perfectly. This means that 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 combustion control, pellet conveying, buffer management, hot water preparation, weather-compensated 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 is a lot, but it is 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!

- **Vacuum motor:** It transports the pellets from the store room to the boilers's intermediate hopper.
- 2 **Pellet bin:** Here 30 kg of pellets are stored temporarily and are immediately available for use. This means pellets have to be transported from the store room to the boiler only once or twice a day for 5 minutes. You can even control when that is.
- Rotary valve as burn-back protection: It is the completely sealed closing door between store and combustion chamber and therefore safely protects against burn-back.
- 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 its help, the ratio of fuel and oxygen are mixed perfectly. This means that 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. The ash bin only needs to be emptied every now and again. When it's time, the boiler sends a reminder by email. The ash box is located outside and is therefore easily accessible.
- **Expansion tank:** It can take up to 18 litres of heating water and so safely evens out pressure fluctuations within the heating system.







- Safety devices: A safety valve and an electronic pressure sensor protect the boiler from overpressure. An automatic bleed valve is also integrated, so unwanted air is removed from the 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.
- 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 return riser with mixer for buffer storage tank operation.
- 11 Pump: It is speed-controlled, highly efficient, energy-saving and ensures the optimum movement of hot water. Depending on the system type, it is either the heating circuit pump for an underfloor heater or radiator heating or it handles buffer charging.
- of the heating circuit can be kept in operation or the hot water tank can be charged. The valve automatically switches to the circuit for which the pump should be working.
- Cleaning drive: It ensures the boiler is clean.

 The heat exchanger is cleaned automatically with turbulators. The grate is also moved regularly and thus freed of ash. With the help of screws, the ash is automatically 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 standard room ventilation. Country-specific regulations are to be observed.



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 bleed valve. That saves space and make installation 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.

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.



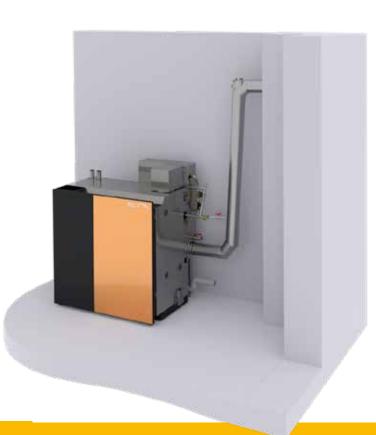


Revolving grate with cleaning comb

Clean burns well. This patented system cleans the combustion chamber of ash regularly – automatically after 15 to 30 kg of pellets are burnt. The air required for the combustion process is distributed evenly 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 I capacity ash box. Even at full load operation, it only has to be emptied from time to time. When it is needed, the system sends an email or an SMS message. The information is also displayed on the touch display.





ETA BW condensing heat exchanger

The optional ETA condensing heat exchanger allows fuel savings of up to 10%. The reasons for this are the condensation energy generated and the significantly reduced exhaust gas temperature (with appropriate operation).

Compared to conventional condensing boiler systems, the ETA condensing heat exchanger sets new standards in terms of plant safety. This includes the integrated volume flow sensor and the active control of the water quantity.

Requirements:

- The chimney is moisture-resistant and adapted to the boiler
- Water and sewer connection (for condensate drainage)
- Low return temperatures



Simple and can be controlled from anywhere

Good technology is characterized by being userfriendly. You don't have to be a technician to use ETAtouch's many functions.

ETAtouch: the touchscreen as heating control

The days of confusingly arranged buttons and controls are over, because with the touchscreen of the ETA control system you can make all settings conveniently and easily. The icons are self-explanatory. Whether you generally have warmer or cooler temperatures, want to change the time for night setback or want to switch to setback mode during your vacation - you will intuitively tap on the right illustration without any operating instructions!

You can control your heating system via touchscreen and also have an overview of all integrated components such as buffer tanks, solar systems or hot water tanks.



Heating, night setback, Holiday setting: the operation is immediately clear





the free of charge internet platform

If your ETA control is connected to the internet, you can view and change all heating settings on your smart phone, tablet or PC. So you have your heating under control, no matter where you are! When you log in at www.meinETA.at, you will see the touchscreen exactly as if you were standing directly in front of the boiler. If necessary, mein-ETA will also inform you free of charge by email about your heating system.

Within your own house network, direct access to the ETAtouch control of your heating system can also be achieved via VNC.

Quick help

Give your installer temporary access rights to your meinETA account. This way he can prepare for his visit to you. And maybe the technician doesn't even have to come because, thanks to myETA, he can tell you over the phone what you need to do to ensure that your heating system is optimally adjusted. You can see who can access your control via the status display. You always decide who belongs to your partner network!



For tablets, smartphones and PCs

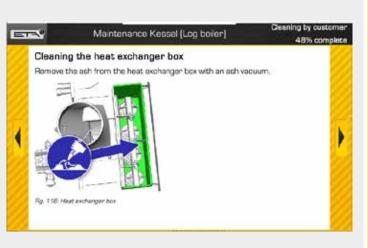
meinETA runs on all common operating systems such as iOS or Android. meinETA can be loaded via PC using any modern internet browser.





Maintenance assistant

Simply maintain your boiler yourself: the instructions on the boiler's touch display guide you step by step through the annual cleaning.



Everything is very simple

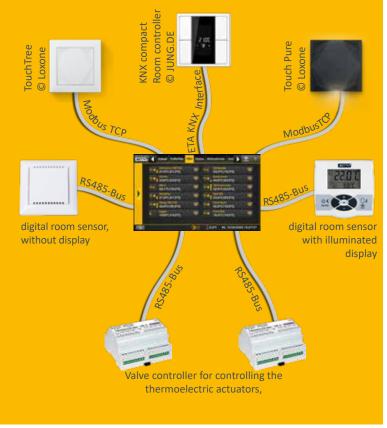


Perfect for your smart home

The ETAtouch control can be easily integrated into common smart home systems as well as into a building managment system (BMS). The mini server of the Loxone system exchanges data directly with the boiler via a ModbusTCP interface. And all you need to connect to a KNX bus system is the optionally available ETA KNX interface and a few simple clicks.

ETA individual room control interface example:

Whether Loxone, KNX or ETA individual room sensor with or without display: everything can be controlled via ETAtouch. It always passes on the correct signals to the valve controllers, which control how much hot water should come through to the respective room or heating section.



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 instantaneous hot water module, as well as for the integration of a solar heating system. All ETA heating boilers also come 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 several components save power. The lambda and ignition time regulation increases efficiency. All components relevant to operation are monitored.

Buffer storage tank management**

Three to nine sensors in the tank control the heat generator in the system and distribute the energy to the different consumers. From using five sensors, cascading regulation, QM-Holz and peak load management are part of the ETA Standard.

Domestic hot water preparation*

Is made possible both via the ETA instantaneous hot water module but also via the hot water tank or combination tank. 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 which allows many time windows and automatic and/or manual additional functions. The system can optionally be expanded with room sensors and remote control.





Comprehensible also without the need for an operating manual: The symbols on the touchscreen are self-explanatory. So controlling the heating system becomes child's play.

Additional system functions

Detection of third-party heating devices, such as oil boilers, gas boilers, heat pumps and wood burning stoves, thermostat or differential temperature thermostat, external demand from external devices such as heating fans, control of transmission lines, with or without mixers, and also of heat transfer stations, single room control systems, for example.

Wall-mounted control box for more complex systems

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

^{*} Control system and sensor included in standard delivery scope

^{**} Control system depends on configuration, sensors are available as accessory



From Hausruckviertel to the world

ETA specialises 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 η , pronounced "eta". ETA boilers stand for more heat with less fuel consumption, environmental soundness and sustainability.

Wood: old but excellent

Wood is our oldest fuel - and our most modern: There is a lot of history - from open fires in front of caves to modern biomass boilers. In the middle of the 20th century, the number of wood heating systems briefly fell. Oil heating became the new, hyped option. 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 also not guaranteed in the long term, as fossil fuels are being depleted, aren't renewable and often come from unstable regions. While wood by contrast is a cheaper, locally grown, 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 — making them easy to use. Convenience and efficiency make ETA products so popular around the world. With a production capacity of up to 35,000 boilers per year and a global export proportion 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. This is not just in terms of fuel, but encompasses responsibility across the board, with sustainable workplaces in the region. More than 400 employees in Hofkirchen an der Trattnach have the best working conditions – including an in-house restaurant, bright assembly and storage halls, a fitness room and a sauna. There is even a free electric charging station for electric cars, which is supplied by the in-house photovoltaic system. This also covers all the power needed of a production hall and thus saves around 230 tonnes of CO2 per year.





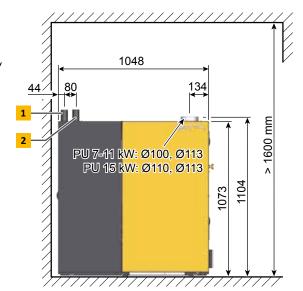


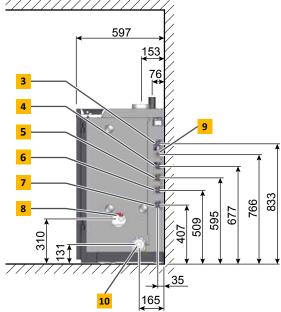


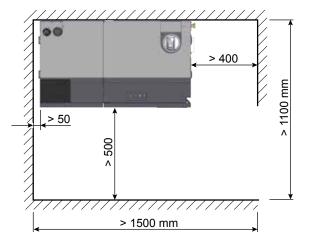
Ideal for new builds and renovations

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.

- Pellet suction hose DN50
- Pellet back air DN50
- Return for heating circuit 1 and hot water tank, R3/4" coupling
- 4 Optional heating circuit 2 return, R3/4" coupling
- 5 Optional heating circuit 2 flow, R3/4" coupling
- Flow for hot water tank, R3/4" coupling
- 7 Heating circuit 1 flow, R3/4" coupling
- 8 Discharge fitted with 1/2" filling and drainage valve
- 9 Outlet for the safety valve, coupling R3/4"
- Air connection for external air supply, DN80













PelletsUnit		7	11	15
Rated capacity	kW	2.3 - 7.7	2.3 - 11.2	4.4 - 14.9
Energy efficiency class**		A +	A +	A +
Efficiency at partial / full load* (installation outside living area)	%	89.3 / 93.4	89.3 / 92.5	91.5 / 94.2
Transport dimensions, W x D x H	mm	1	,072 x 600 x 1,15	0
Weight	kg		267	
Water volume	Litres		27	
Residual pump head at $\Delta T=7$ °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	3.8 / 0.9	3.5 / 1.3	2.4 / 1.8
Maximum distance to pellet store	m		20	
Ash box volume	Litres		12	
Flue draught required at partial / full load	Pa	above 15 Pa	> 3 Pa a draught limite	r is required
Electrical power consumption at partial / full load*	W	46 / 61	46 / 63	66 / 95
Maximum permissible operating pressure	bar			
Temperature adjustment range			30 – 85	
Maximum permissible operating temperature			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	3 A

^{*}Data from test report

Technical changes and mistakes reserved!



Complies with EU standards



Quality seal Wood energy Switzerland



Austrian Ecolabel

^{**}Energy labelling for packages (solid fuel boiler + temperature control)









ETA Pelletboiler

ETA PU PelletsUnit	7 - 15 kW
ETA <i>e</i> PE pellet boiler	7 - 32 kW
ETA PC PelletsCompact	20 - 105 kW
ETA <i>e</i> PE-K pellet boiler	100 - 240 kW



ETA condensing heat technology

ETA <i>e</i> PE BW pellet boiler	8 - 36 kW
ETA BW condensing heat exchanger PU	7 - 15 kW
ETA BW condensing heat exchanger PC	20 - 105 kW







ETA SH log wood boiler and TWIN pellet boiler

ETA <i>e</i> SH log wood boiler	16 - 20 kW
ETA eSH-TWIN combination boiler	16 - 20 kW
with ETA <i>e</i> TWIN pellet boiler	16 kW
ETA SH log wood boiler	20 - 60 kW
ETA SH-P log wood boiler	20 - 60 kW
with ETA TWIN pellet boiler	20 - 50 kW





ETA wood chip boiler

ETA <i>e</i> HACK wood chip boiler	20 - 240 kW
ETA HACK VR wood chip boiler	250 - 500 kW





ETA buffer tank

ETA buffer	500 l
ETA buffer tank SP	600 - 5.000 l
ETA buffer tank SPS	600 - 1.100 l

ETA hydraulic modules

ETA fresh water module
ETA stratified charging module
ETA system seperation module
ETA mixing circuit module
ETA heat transfer module and station

Your heating specialist will be happy to advise you:



...mein Heizsystem

ETA Heiztechnik GmbH

Gewerbepark 1 A-4716 Hofkirchen an der Trattnach Tel.: +43 7734 2288-0 Fax: +43 7734 2288-22 info@eta.co.at www.eta.co.at

Technical changes and mistakes 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.

94001-EN, Prospekt PelletsUnit ETA PU EN, 2024-01

