... my heating system

PelletsCompact ETA PC

The small "large" pellet boiler.
20, 25 and 32 kW

A passion for perfection.

www.eta.co.at

PelletsCompact ETA PC 20, 25 and 32 kW

The ETA PelletsCompact is a space-saving wonder

Thanks to the design of the new PelletsCompact, ETA have produced a pellet boiler that would not look out of place in your living room. The ability to place the boiler right up to the wall frees up space in your boiler room for other purposes.

A pellet store need not take up any more room than an oil tank and can be situated up to 20 meters from the boiler.

Most houses have space for a boiler like this, thereby making the PelletsCompact an ideal choice when upgrading your heating system.

Complete control with ETAtouch

Enjoy total control over your heating system with the 5.7" touchscreen that uses self-explanatory graphics and icons. Just a couple of taps with your finger is all it takes to increase or decrease the temperature.

For example, each heating circuit tab features this button:

Tap this button to bring up a menu where you can set the start and end of your trip. During the holiday period the heating zone will operate in set-back mode and can be set to reactivate prior to your return home.

Remote operation with smartphone or computer via Internet

If your boiler is connected to the internet, then you can access the boiler menus using a touchscreen smartphone. You'll know longer be wondering, "Did I switch off the heating?". When you are away, you can use your mobile to switch the heating into set-back mode, or to re-start the heating before heading home again. Gone are the days when you have to return to a cold house after being away for a winter break. You can also operate your heating from anywhere in the home on your smartphone, iPad, iPod Touch, computer or any networked device.

The only requirement is that you have an internet connection available at your boiler. All ETA customers have free access to the communication platform available at www.meinETA.at

External air supply for an air-tight house

In most countries, there are no special requirements for boiler rooms where the boiler output does not exceed 35kW. As a result the boiler can be positioned in a laundry room, utility room, games room, basement or wherever you want. The ETA PC is ideally suited to this type of use because it is possible to connect the boiler to an external air supply, thereby not using up air that has already been heated or making it possible to place the boiler within an air tight building with controlled ventilation.

Due to varying regional regulations, you should check in advance with your local building authorities.

Fully equipped

Every ETA pellet boiler comes with many outstanding features as standard, including a lambda probe, automatic cleaning and a complete combustion control system. This minimises the emissions from your ETA PelletsCompact while ensuring maximum day-to-day efficiency throughout the entire winter.

To offer a complete solution, your entire heating system, including buffer tank, heating circuits and solar heating can all be integrated into the boiler control system. This ensures that energy generated by the sun always takes priority over heat produced from your boiler.

A clean solution

A clean boiler uses fuel more efficiently. The patented rotating grate cleans itself while it burns and the ash generated in the boiler is automatically filled into the ash bin at the front. The ash bin only needs to be emptied three to five times a year, once completed the bin can be hidden again behind the sliding front panel.

If you forget to empty the ash bin, the ETA PelletsCompact can remind you by email.

ETA – convenient wood heating

Heating with wood? Campfires have a rustic appeal, while a wood stove adds comfort and ambiance to your living room. But, would anybody really want to heat their house with wood? Constantly having to add more fuel into a stove? Heating with pellets is the convenient answer to these questions.

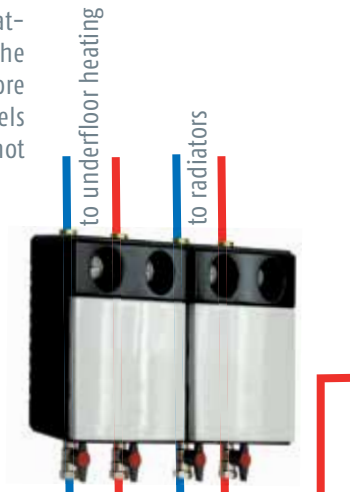
A modern pellet boiler is an effective option to oil or gas, providing heat at the touch of a button.

The difference is in the fuel supply

Every year, more and more oil is being turned into plastic, just imagine all the appliances, car parts and even plumbing in our homes as examples. In the face of this extra demand, supplies of oil and LPG (also a petroleum product), are dwindling while prices continue to rise. By using wood, we become part of a carbon neutral cycle. Thanks to energy from the sun, carbon dioxide produced when burning pellets is turned into new wood as trees grow in the forest.

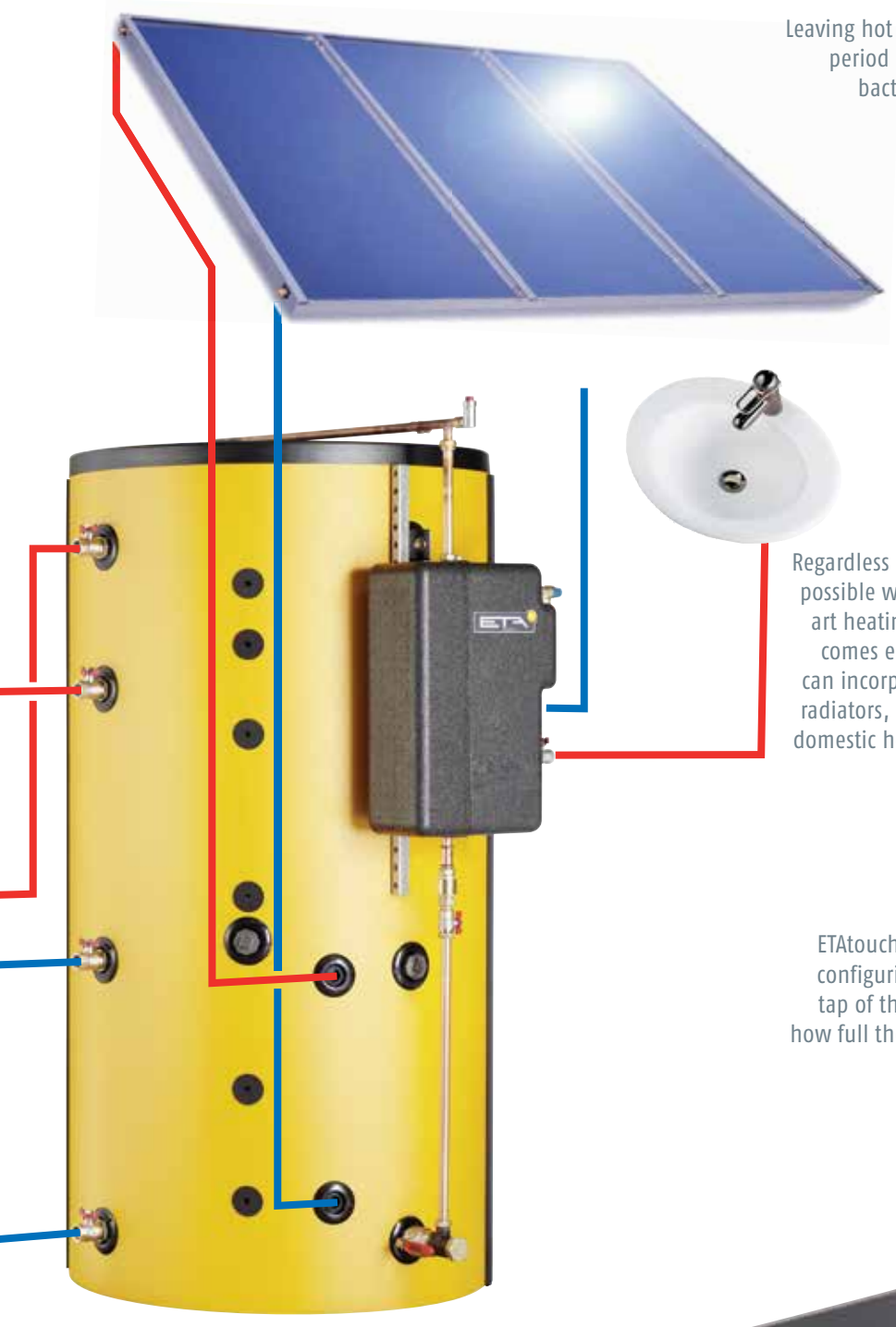
Harness the power of the sun with increased winter yield

With a buffer tank it is simple to connect solar panels to your heating system. During winter solar panels struggle to reach the 60°C required for domestic hot water. However, yield can be significantly increased when used in conjunction with underfloor systems where lower temperatures are used. If the heating circuits and solar panel are connected to the buffer then the sun's energy can be channelled directly to underfloor heating through the lower section of the buffer tank. During the summer, more heat is generated by the solar panels and this can used to meet domestic hot water needs.



Why a buffer storage tank?

Even though the PelletsCompact can operate as stand-alone boiler, a buffer tank offers many advantages. It can store the entire boiler output and provide exactly the amount of heat required for your heating and hot water needs. In particular, separate room temperature controls will have phases of very low heating needs or in the spring and autumn the heating load can also be very low as it is when only supplying hot water during the summer. A buffer tank can provide for this, reducing the frequency of boiler stop/starting and ultimately saving fuel.



Safe hot water supply

Leaving hot water unused in the tank for an extended period of time promotes the growth of germs and bacteria in the water. With the ETA fresh water module, a heat exchanger is used to generate hot water on demand. If you install a buffer tank fitted with a fresh hot water module then you know longer require a conventional hot water tank – the additional space required is no more than 0.5 square meters.

Complete control

Regardless of the buildings age, energy saving is only possible with excellent insulation and state-of-the-art heating controls. This is why the PelletsCompact comes equipped with a complete control unit that can incorporate the entire heating system, including radiators, under-floor heating, buffer management, domestic hot water (tank or fresh water module) and solar thermal.

Simple touchscreen operation

ETAtouch uses self-explanatory graphics that make configuring and adjusting the boiler as simple as a tap of the finger. With just a few taps, you can see how full the buffer is or how effective the solar heating has been.

The buffer tank and/or hot water tank don't have to be located next to the boiler. They can be installed in an ideal location close to water outlets so that hot water can be used at taps without the need for secondary circulation.

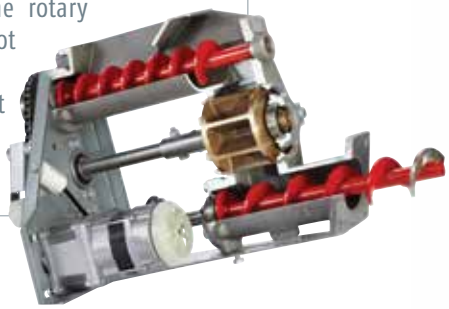
ETA technology

A Always clean thanks to the patented rotating grate

The boiler carries out an automatic cleaning procedure after consumption of 30–50kg of pellets. The grate rotates through a comb that removes ash and slag from the air gaps in the grate. During combustion the gentle movement of the grate keeps the firebed stoked, ensuring ideal pellet burnout with minimum ash production. All ash from the boiler is taken to the removable ash box.

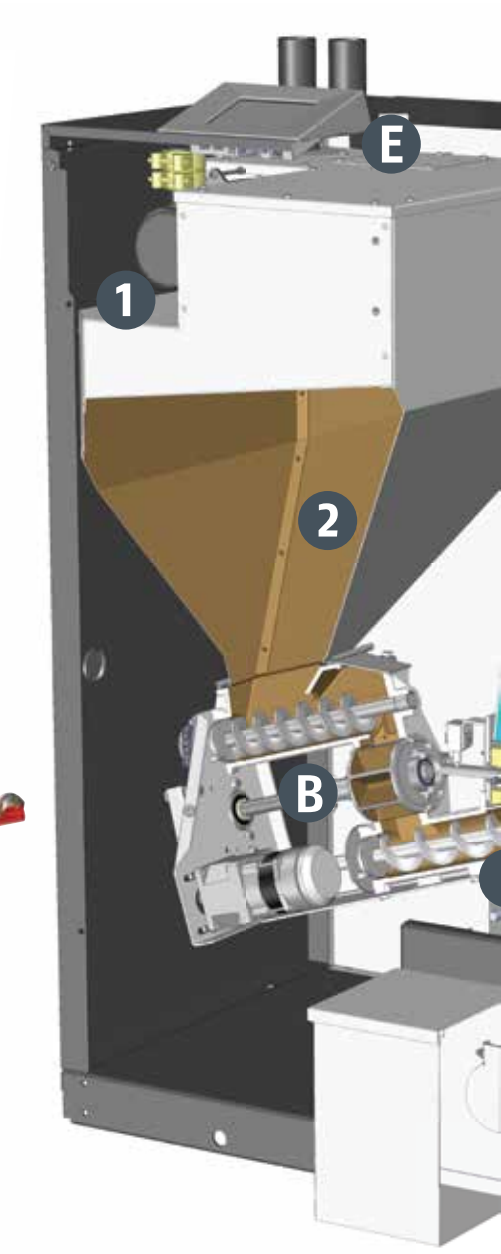
B Rotary valve for safety

The ETA rotary valve ensures complete burn-back prevention. A metering auger feeds pellets from the bin into the rotary valve. This prevents wear on the rotary valves sealing edges because it does not need to break pellets as it turns.
Resulting in burn-back prevention that can be maintained throughout the boilers service life.



C Draft fan ensures reliable removal of flue gas

A quite, variable speed, draught fan (only 57 watts) with closed loop feedback, ensures constant low pressure in the boiler and reliable flue gas removal independent of chimney draught. No draught stabiliser is required on chimneys with a draught up to 15Pa.



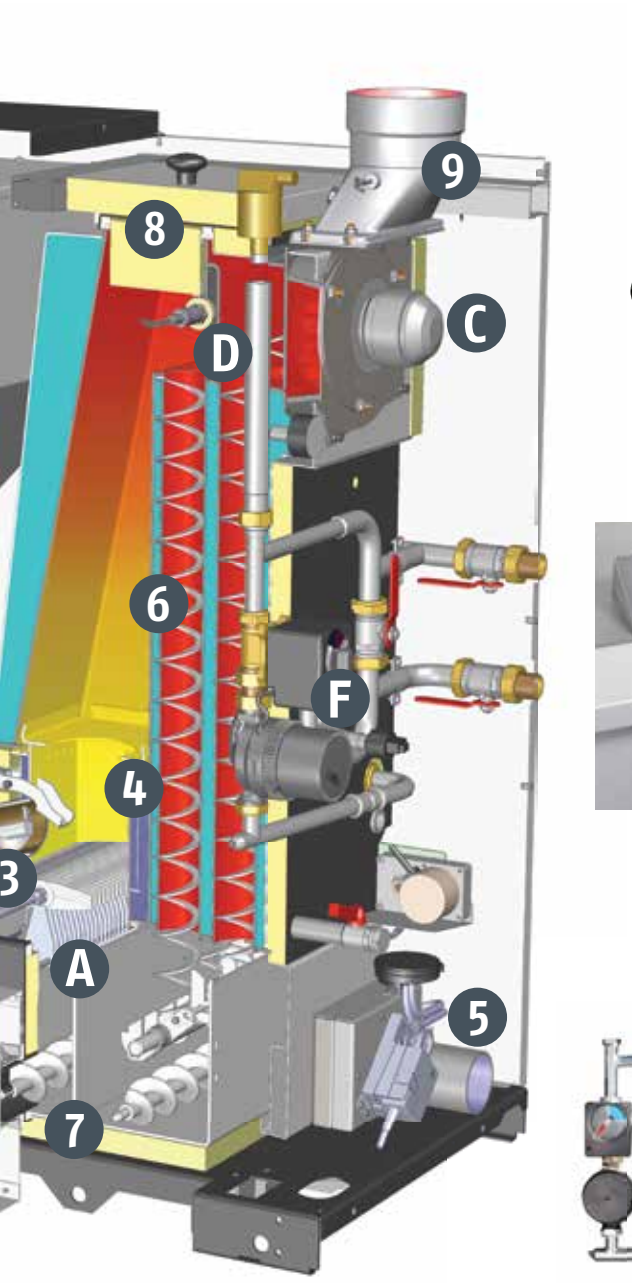
1 Vacuum turbine for filling pellets
from the storeroom to the boilers hopes using flexible DN50 pipe up to a range of 20m

2 Day bin for pellets
With 60kg pellet capacity the boilers hopper is filled in 10 minutes only once or twice a day. You can set the preferred time of the day for filling the boilers hopper

3 Automatic ignition
with noiseless ceramic igniter

4 Hot, stainless steel combustion chamber
minimises emissions, even under partial load

5 Air connection
External combustion air feed (DN 80 pipe, insulated against condensation), direct to outside the building



D Optimised fuel usage with lambda probe

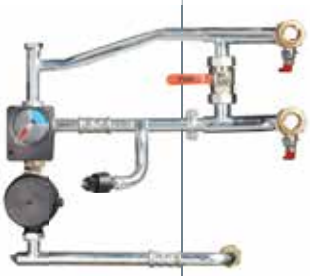
A lambda probe is fitted to the ETA PC as standard, ensuring clean combustion and maximum efficiency. The control system uses the probe to match combustion air supply with required boiler output. It also allows the boiler to compensate for varying pellet quality.

E Complete control of your entire heating system

Boiler control, pellet feeding, buffer management, domestic hot water (tank or fresh water module), weather compensated heating with weekly program for two circuits, solar thermal, active monitoring of all functions and drives, water pressure switch-off, LAN connection for remote access via the internet (PC, Smart TV, smartphone, etc.) and USB connection.

F Return riser valve with high efficiency pump

With a mixing valve type return riser, the PelletsCompact is ready for use with a buffer tank. As you would expect, the pump is a speed controller, highly efficient and energy saving unit (15-35 W max). With a lockable bypass, it can be integrated into all buffer less systems regardless of the size of heating load, making the PelletsCompact the ideal replacement boiler.



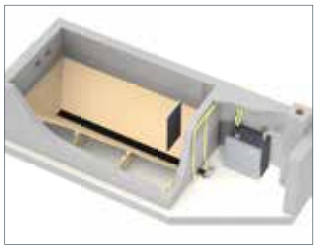
6 Automatic cleaning
of heat exchanger by means of agitated turbulators

7 Automatic ash disposal
compresses the ash into a removable ash box. With its 24-litre capacity, the box only needs to be emptied three to five times per heating season

8 All safety devices included
The boiler safety valve, a pressure transducer with water shortage switch-off and an automatic air vent are fitted to the boiler as standard. The minimal amount of fuel in the burning chamber at any time means no thermal safety valve is required

9 Exhaust temperature sensor
for active operational monitoring

Clever systems for fuel storage and transport

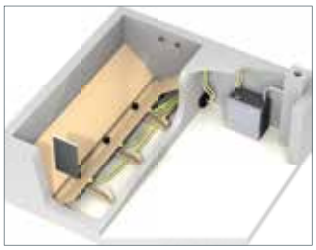


Up to 20 m distance between boiler and store

The ETA storage concepts can be adapted to any room configuration and are combined with a suction-based transport system from the pellet store to the boiler via flexible hoses. The vacuum turbine integrated in the boiler can easily overcome distances of up to 20 metres or height differences of up to two floors.

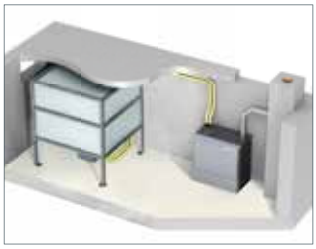
A 60-kg day bin in the boiler reduces the duration of pellet transport to 1 or 2 10-minute feeds per day, and you can set the preferred time of day for transport in the control system.

Thanks to ETA's modular fuel conveying systems, any existing room can be converted into an ideal pellet store – including an oil tank room.



ETA's standard solution - the discharge auger

An auger, up to 5 m long, extends across the entire store, emptying it safely and completely. The separation of the discharge auger and the vacuum stream means it is possible to clear the hoses each time the boiler completes the filling cycle. The vacuum can handle height differences of up to two floors.

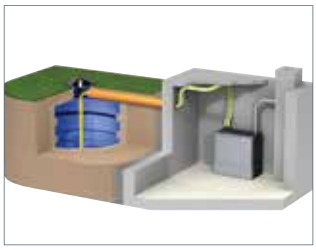


When an auger is impractical: pneumatic fuel conveyor

When installing an auger into a store is not possible, ETA offer a pneumatic fuel conveyance system using up to three suction heads. These are combined into a single system using an automatic switching unit.

ETAbox – for a small store in a big room

If there is enough space available (pay attention to local regulations), we recommend the use of our ETAbox bag silo system. This offers a major advantage in that it is flood proof. The store room walls will not burst due to water swollen pellets if the worst happens. The ETAbox is suitable for outside installation only if adequate weather and UV protection is provided.



And if there's really no room in the house: an underground tank

An underground pellet tank is available from www.geoplast.com, for example.

Usable cross-section of pellet storeroom in square metres

40° floor tilt, upper clearance of 0.40 m

Width of store in metres	Height of store in metres								
	2,0	2,2	2,4	2,6	2,8	3,0	3,2	3,4	3,6
2,0	2,10	2,50	2,90	3,30	3,70	4,10	4,50	4,90	5,30
2,4	2,32	2,80	3,28	3,76	4,24	4,72	5,20	5,68	6,16
2,8	2,47	3,03	3,59	4,15	4,71	5,27	5,83	6,39	6,95
3,2		3,20	3,84	4,48	5,12	5,76	6,40	7,04	7,68
3,6				4,73	5,45	6,17	6,89	7,61	8,33
4,0						6,52	7,32	8,12	8,92

Cross-section x room length (screw axis) = store volume
Store volume x 0.650 ton/m³ = pellet store in tons

Heating value of pellets = 4.9 kWh / kg
Density of pellets = 650 kg / m³

Rules of thumb for pellet requirements

24 kW heating load / 3 = 8 tons of pellets per year
24 kW heating load / 2 = 12 cubic metres per year

3,920 l heating oil	x 2.04	= 8,000 kg pellets
4,120 m³ natural gas	x 1.94	= 8,000 kg of pellets
5,790 l LPG	x 1.35	= 8,000 kg of pellets
4,870 kg coke	x 1.65	= 8,000 kg of pellets

Ground source heat pump with COP 3.4
11,200 kWh of electricity x 0.71= 8,000 kg of pellets
Air source heat pump with COP 1.8
21,620 kWh of electricity x 0.37= 8,000 kg of pellets

ETAtouch – Accessible anytime, anywhere

With two taps of your finger

you can reach your goal with the ETAtouch control system's touchscreen. The icons on the screen are self-explanatory. With the first tap, you select the part of the heating system you want to change. With the second, you select the function to change. And you get this convenience for the entire heating system, including solar panels.

Remote control with ETAtouch

With ETAtouch, a boiler can be remotely operated via smartphone, tablet or PC if the boiler room has an Internet-capable LAN connection.

Convenient holiday function

You can already enter your departure and return dates into the control system a few days before your holiday. During this time, the heating system will switch to set-back mode and start up again before your return. With remote control via smartphone, you can still change to set-back after your departure. And sometimes things don't go as planned. If you have to end your holiday prematurely, you can restart the heating system earlier via smartphone.

Worldwide access via "meinETA"

Remote access is possible via the "meinETA" Internet platform, which is free of charge for ETA customers. After registering on this platform, you can access the boiler from anywhere in the world: from a tablet PC on the sofa in your living room, a hotel PC and of course any smartphone. And of course access to the boiler is protected by user name and password.

To see how remote operation of your boiler could work, visit www.meinETA.at.

If you forget your boiler, it sends you an e-mail.

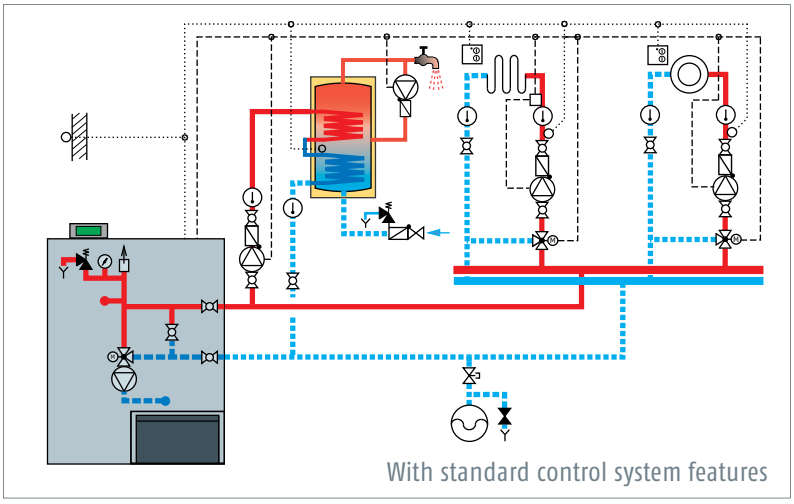
Since the ash box only needs emptying three or five times a year, when the boiler is running faultlessly you won't need to look after it every day. But if it does need human intervention, it will send you an e-mail.

Better preparation for service

In the event of a malfunction, you can grant the heating technician or customer service remote access to the boiler. Then every service call can be better prepared, and the service technician can be assured of bringing the right spare parts. An expert can intervene via remote access, often making a service call unnecessary as smaller problems can often be diagnosed remotely by the expert and solved by the customer with over-the-phone assistance from the expert.

ETAtouch – everything under control

Supplied as standard, the ETAtouch control system includes all functions for two heating circuits, domestic hot water supply (tank or fresh water module), solar thermal and even a LAN connection port for remote operation via PC, iPad, iPhone or smartphone.



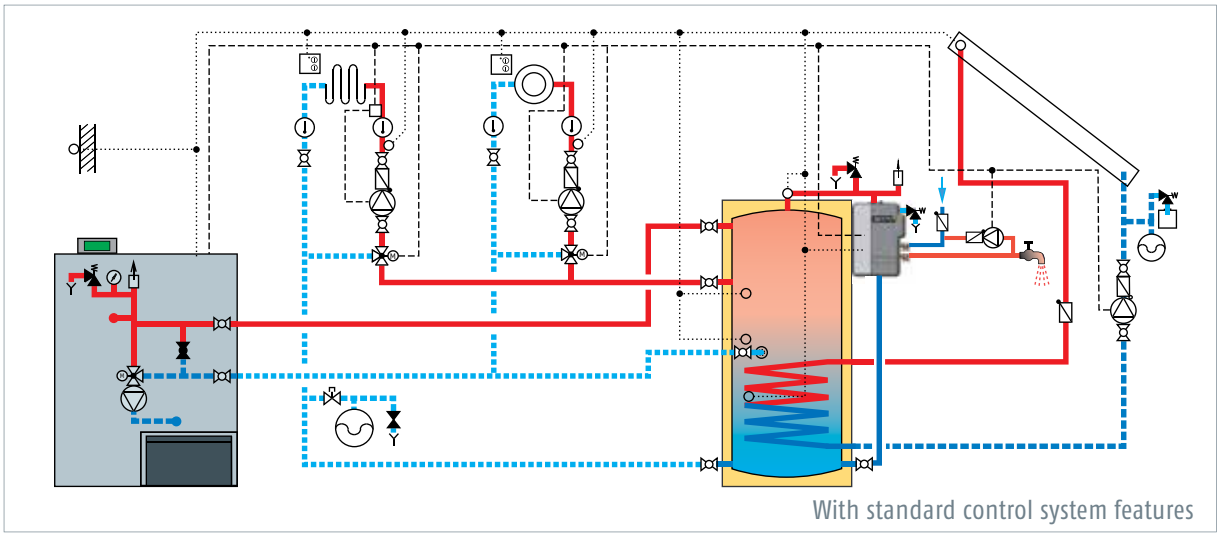
With standard control system features

Standard features

- Regulated boiler output using a variable speed draught fan in conjunction with boiler, buffer and flue gas temperatures.
- Regulated fuel combustion through use of lambda probe.
- Real-time monitoring of boiler operation, including; lambda and exhaust temperature, boiler and tank temperatures, return riser valve, closed loop draught fan speed control, rotating grate position, fire-bed fuel level, water pressure. Simple text fault notification with troubleshooting instructions
- Automatic ignition with duration control by lambda probe
- Variable-speed buffer charging pump with output management
- Return riser via mixing valve with residual heat utilisation
- Two weather compensated heating circuits with weekly programming, three daily time/temperature slots, come-and-go function, holiday set-back mode. Option to add remote room state with control switch
- Domestic hot water heating using tank, fresh water module or combi buffer tank – with weekly program
- Secondary hot water circulation pump control with time/duration programming. In the case of a fresh water module it operates once a tap is opened.
- Solar thermal system with variable speed pump control and simple solar heat metering.
- Peak-load management or control system for multiple pellet boilers
- If heat is supplied from an external source, circuits can be switched over automatically
- Extra configurable thermostat or differential thermostat, e.g. for a second hot water tank.
- Five extra terminals for temperature sensors
- LAN connection for remote control via Internet
- USB connection

Option to expand using wall mounted panel

- Two additional heating circuits
- External heat demand with constant boiler flow temperature
- Complex solar heating systems with stratified charging
- Pump for heating pipeline (or external consumers) with/without mixing valve

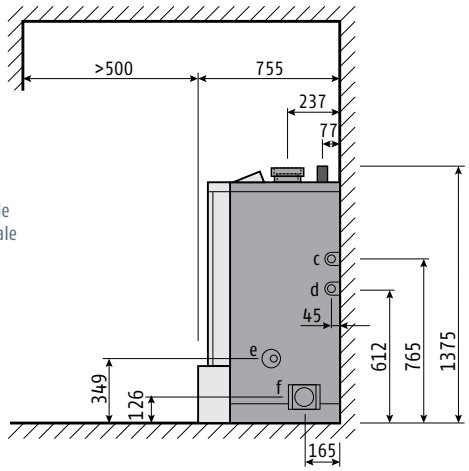


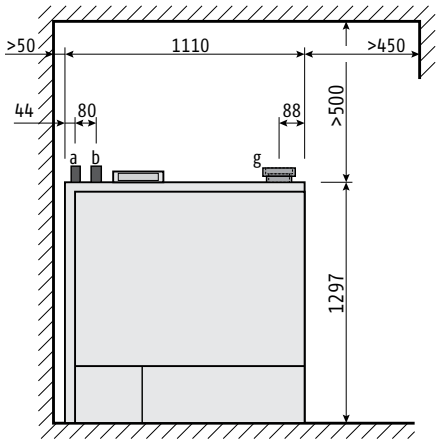
With standard control system features

PelletsCompact ETA PC 20, 25 and 32 kW

PelletsCompact 20-32 kW

a Pellet suction connection DN50 hose
b Pellet back air connection DN50 hose
c Flow with ball valve ansd screw joint R1“ male
d Return with ball valve and screw joint R1“ male
e Drain equiped with valve R1/2“
f Connection for external air supply, DN80
g Flue, female Ø130 or Ø120 mm





PelletsCompact		20	25	32
Rated capacity	kW	6,0 - 20,0	7,3 - 25,0	7,3 - 32,0
Boiler efficiency partial/nominal load* (installation outside living area)	%	91,8 / 94,8	92,2 / 95,2	92,2 / 94,5
Radiation losses in the installation room partial/nominal load	%	5,2 / 1,0	4,5 / 0,9	4,5 / 1,0
Combustion efficiency (installation within the living area)	%	97,0 / 95,8	96,7 / 96,1	96,7 / 95,5
Exhaust gas losses partial/nominal load	%	3,0 / 4,2	3,3 / 3,9	3,3 / 4,4
Boiler dimensions W x D x H	mm	1.110 x 755 x 1.297		
Weight	kg	347		
Water content	Litres	52		
Free remaining conveying height of the pump ΔT=20°C for buffer	mWS / m³/h	3,1 / 0,86	2,8 / 1,08	1,8 / 1,38
Waterside resistance at ΔT=20°C over internal hydraulic bypass	Pa / mWS	530 / 0,053	840 / 0,084	1340 / 0,134
Pellet bin on boiler (net)		60 kg (294 kWh)		
Maximum distance of boiler pellet store	m	20		
Ash box volume	Litres	24		
Flue gas mass flow rate partial/full load	g/s	4,7 / 12,1	5,5 / 14,5	5,5 / 18,7
CO2-content in dry flue gas partial/full load	%	10 / 13	10,5 / 13,5	10,5 / 13,5
Exhaust temperature partial/full load*	°C	90 / 130	95 / 135	95 / 140
Flue draught		1 Pa for partial load / 3 Pa for full load required over 15 Pa draught limiter required		
Carbon monoxide (CO) emissions partial/full load*	mg/MJ mg/m³ 13%02	16 / 5 25 / 7	14 / 5 21 / 7	14 / 5 21 / 7
Dust emissions partial/full load*	mg/MJ mg/m³ 13%02	8 / 6 13 / 10	6 / 3 10 / 5	6 / 5 10 / 8
Unburned hydrocarbons (CxHy) partial/full load*	mg/MJ mg/m³ 13%02	< 1 / < 1 < 1 / < 1	< 1 / < 1 < 1 / < 1	< 1 / < 1 < 1 / < 1
Electrical power consumption partial/full load*	W	56 / 90	60 / 101	60 / 142

Maximum permissible operating pressure	3 bar	Boiler rating	3 according EN 303-5
Temperature adjustment range	70 – 85°C	Suitable fuels	Pellets ÖNORM M 7135, DIN 51731, DIN Plus, EN plus-A1, EN 14961-2-A1
Maximum permissible operating temperature	95°C	Electrical connection	1 x 230 V / 50 Hz / 13 A

*Data from test reports of BLT Wieselburg, log numbers 021/10 and 022/10.
The test reports of BLT Wieselburg can be found on the Internet at: blt.josephinum.at

Conforms to EU standards
BLT Wieselburg Austria
TÜV South Germany
Quality seal of Holzenergie Schweiz
Austrian ecolabel
Der Blaue Engel
Institute for Fire Protection
Listed on the Energy Technology List
The Certification Mark for Onsite Sustainable Energy Technologies

ETA PU PelletsUnit 7 to 15 kW
(7, 11 and 15 kW)

ETA PC PelletsCompact 20 to 32 kW
(20, 25 and 32 kW)

ETA PE-K pellet boiler 35 to 90 kW
(35, 50, 70 and 90 kW)

ETA SH wood gasification boiler 20 to 60 kW
(20, 30, 40, 50 and 60 kW)

ETA SH-P wood gasification boiler
20 and 30 kW
with ETA TWIN bellet burner 20 and 26 kW

ETA HACK wood chip boiler 20 to 130 kW
(20, 25, 35, 50, 70, 90 and 130 kW)

ETA HACK wood chip boiler 200 kW

ETA stratified buffer SP and SPS
(600, 825, 1.000, 1.100, 1.650 and 2.200 litres)

ETA stratified buffer SP and SPS
with fresh water and stratified
charging module

Your heating specialist will be happy to advise you:

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