

P1 Pellet



Heating with pellets



For over 50 years, Froling has specialised in efficiently using wood as a source of energy. Today the name Froling is synonymous with modern biomass heating technology. Froling firewood, wood chip and pellet boilers are successfully in operation all over Europe. All of our products are manufactured in our factories in Austria and Germany. Froling's extensive service network ensures that we can handle all inquires quickly.

Make savings with pellets without compromising on comfort

The price changes for different energy sources in recent years show the benefits of wood pellets: this ecological way of heating is also economically attractive. Wood is a renewable energy source that is also CO₂-neutral. Pellets are made of natural wood.



produced by the industry are compacted and pelleted without being treated beforehand.

Pellets have a high energy output and are easy to deliver and store. These are just some of the advantages that make pellets the perfect fuel for fully automatic heating systems. Pellets are delivered by tanker and unloaded directly into your store.



The new Froling P1 Pellet

Occupying just 0.38 m² of space, the P1 Pellet boiler sets new standards. The new P1 Pellet stands out for its quiet operation and ease of use, combined with low emissions and very low energy consumption.

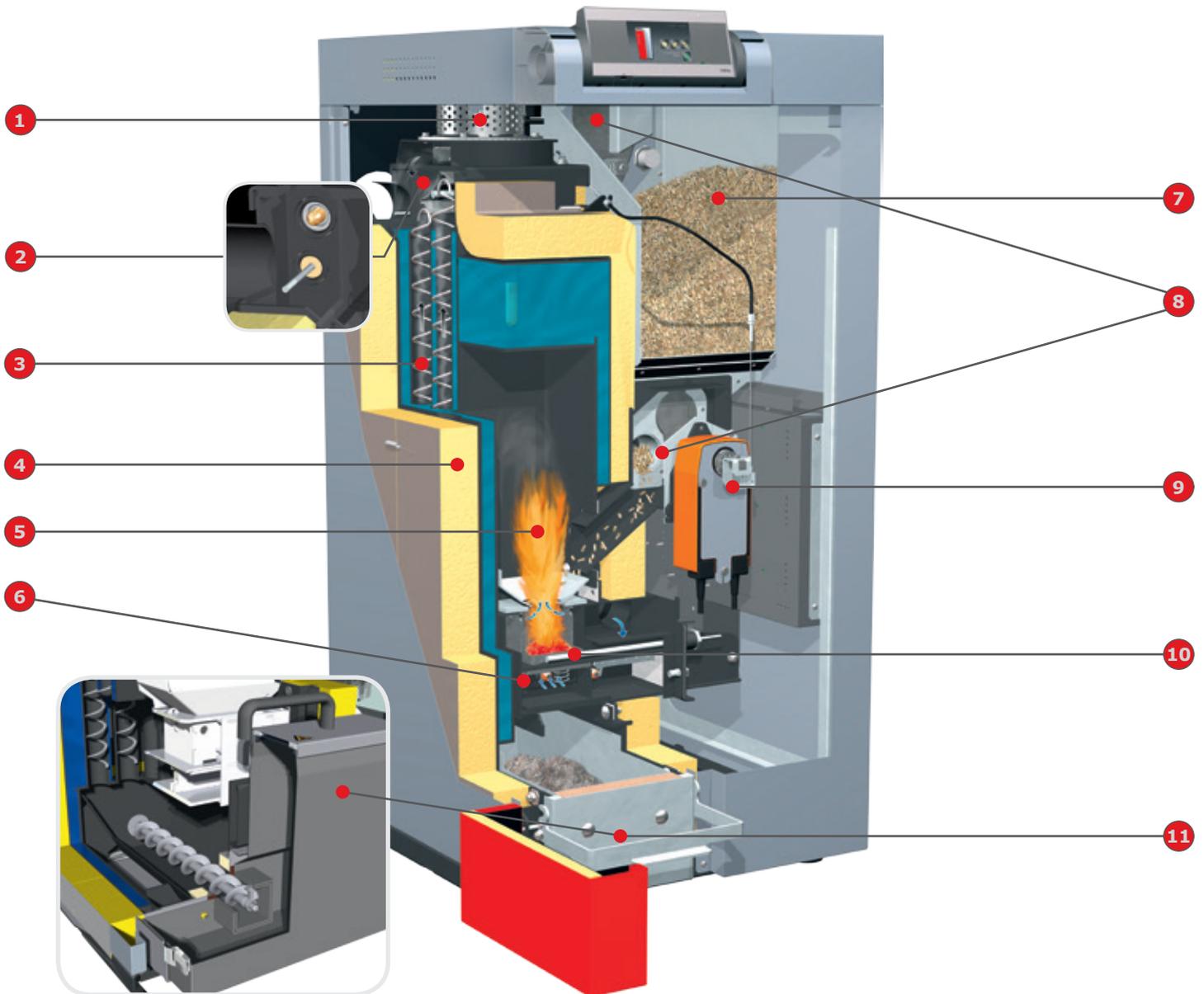
Thanks to its high energy efficiency the P1 Pellet is particularly suitable for low-energy and passive houses.

The compact solution for the boiler room

A unique design: The new P1 Pellet is also available with optional **DHW tank unit for hot water preparation** and a **hydraulic unit** with heating circuit pumps, heating circuit mixer and DHW tank loading pump. These two modules can be retrofitted at any time, making the P1 Pellet the compact all-round solution for the boiler room.



The latest technology



- 1 Speed-controlled, quiet induced-draught fan with function monitor for maximum operational reliability.
- 2 Broadband lambda probe for optimal combustion.
- 3 EOS technology (efficiency optimisation system) for maximum efficiency.
- 4 High-quality insulation.
- 5 High-quality pellet burner.
- 6 Automatic sliding grate for ash removal. The movement of the grate controls the secondary air and the integrated chimney cut-off at the same time.
- 7 Large pellet container.
- 8 Double protection system for maximum burn back protection.
- 9 Energy-saving drive for double protection system and Efficiency Optimisation System (EOS).
- 10 Automatic ignition.
- 11 Large Comfort ashcan (holds 13 l) for simple emptying and long emptying intervals with the P1 7 - 10. Automatic ash removal to a closed ash container (holds 18 l) with the P1 Pellet 15 - 20.



Smart positioning and installation

Feature: modular design

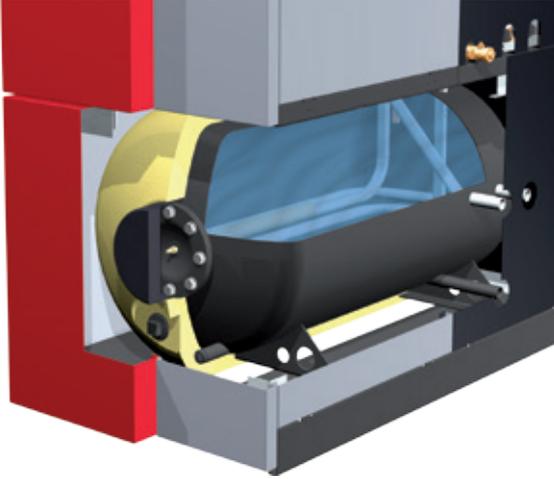
- Advantages:
- compact design
 - DHW tank unit and hydraulic unit can be retrofitted at any time

The P1 Pellet has important advantages even before it is put into the boiler room. Thanks to its particularly compact dimensions - 60 x 64 x 120 cm (W x L x H) - assembly is child's play, even in confined boiler rooms. The P1 Pellet boiler unit is completely insulated and wired so all you need to do is plug it in.

Thanks to its modular construction, the P1 Pellet can be equipped with an optional DHW tank unit and hydraulic unit at any time. The individual modules come separately (also optionally available as a complete unit).



A well-designed inside



Feature: optional DHW tank unit

- Advantages:
- optimal hot water preparation
 - can be retrofitted at any time

The vacuum-enamelled DHW tank unit has impressively compact dimensions and high-quality solid foam insulation, and with a capacity of approx. 130 l, it is the ideal solution for hot water preparation. The DHW tank also has an insulated magnesium anode and a connection for an electrical heating cartridge.

Feature: optional hydraulic unit

- Advantages:
- best possible heating circuit control
 - intelligent complete solution
 - can be retrofitted at any time

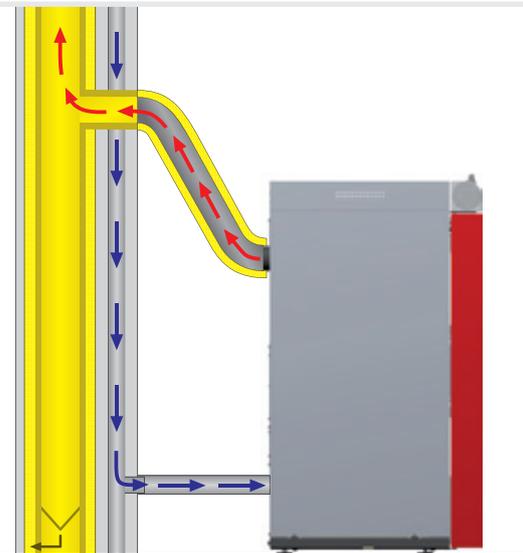
The hydraulic unit is available as an option and can be retrofitted at any time. The module contains up to two heating circuit pumps, two heating circuit mixers, an expansion tank (18 l), a line regulating valve, a safety group (with pressure gauge, quick vent valve and safety valve) and an optional DHW tank loading group.

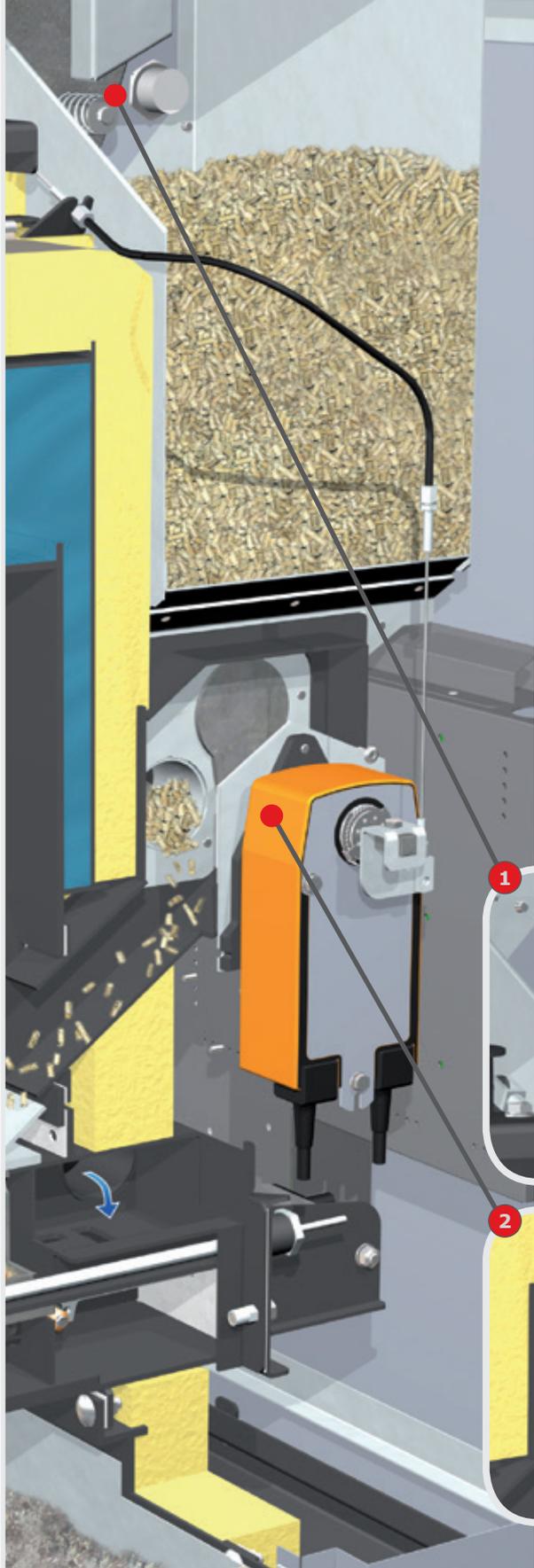


Feature: room-air-independent operation

- Advantages:
- perfectly suited for low-energy houses
 - maximum efficiency

Energy-saving houses often have a closed building shell. In traditional boiler rooms, there can be uncontrolled heat loss from the necessary ventilation openings. This is avoided with room air-independent boilers because of the direct air connection. The combustion air that is fed in is also pre-heated with an integrated system, increasing the efficiency of the overall system.





Feature: large pellet container

- Advantages:
- easy loading
 - efficient operation

The large pellet container with a capacity of 32 l reduces the frequency at which pellets need to be fed into the system. The pellet container is filled completely automatically with an external suction turbine.

Feature: double protection system

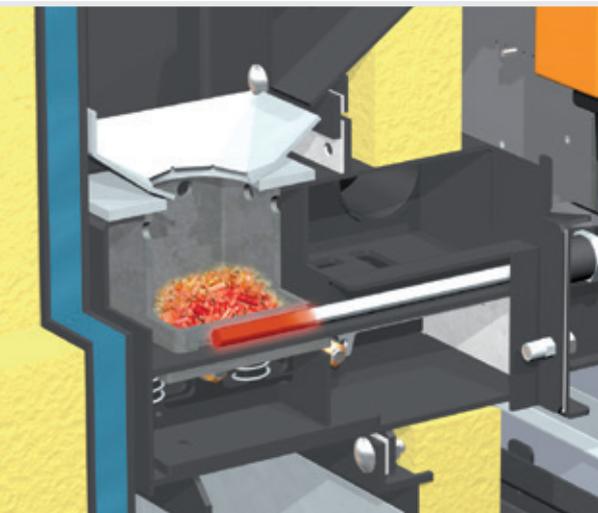
- Advantages:
- highest possible operating safety
 - maximum burn back protection

The gate valve for the store **1** and the gate valve for the burner **2** provide a double valve system ensuring maximum operating safety.

When fuel is fed from the store to the pellet container, the store gate valve opens. The gate valve for the burner closes simultaneously.

In this way the double protection system ensures a reliable closure between the store and the pellet burner, guaranteeing maximum burn back protection.

Intelligent features



Feature: automatic ignition

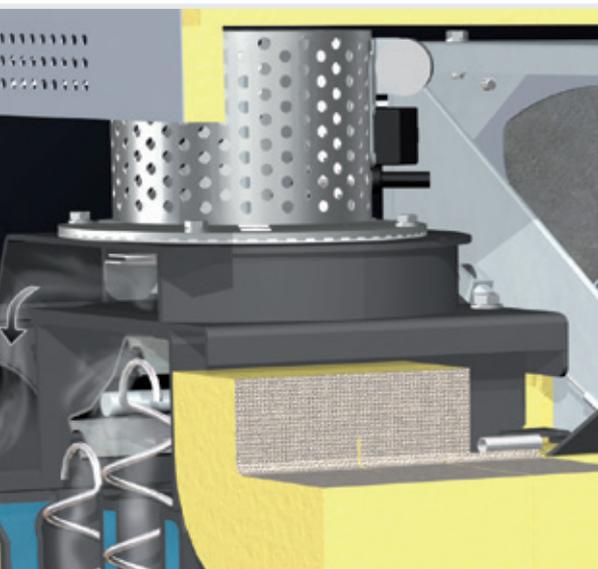
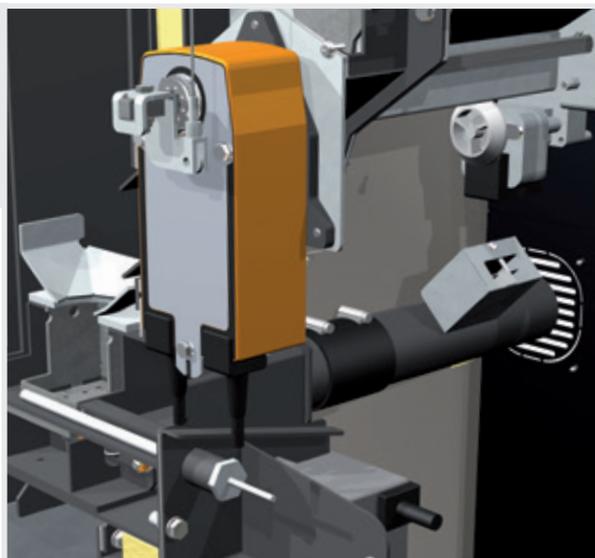
- Advantages:
- quiet operation
 - low energy consumption

The new glow ignition is particularly suitable for low boiler outputs. As it is operated without an additional blower fan, the glow ignition is extremely quiet and saves a lot of energy.

Feature: intelligent drive concept

- Advantages:
- low energy consumption
 - optimum operation

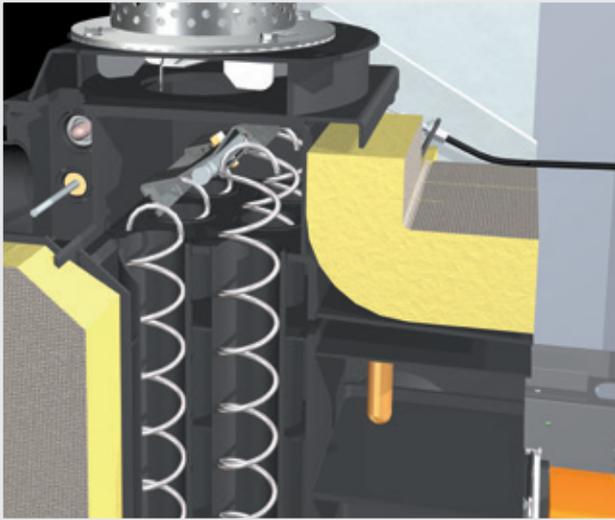
A unique design: a single drive moves the two gate valves and the turbulators of the heat exchanger cleaning unit. The grate drive moves the sliding grate to control the secondary air, the integrated chimney cut-off, and cleaning and ash removal. In this way the new drive concept ensures low energy consumption and efficient operation.



Feature: speed-controlled induced draught fan and lambda control with broadband probe

- Advantages:
- maximum ease of use
 - constant optimisation of combustion

The speed-regulated induced draught fan, which comes as standard, ensures the exact air quantity for combustion. As the induced draught fan is speed-regulated it stabilises combustion throughout and adjusts the output to requirements. Working together with the lambda control, it ensures optimum combustion conditions. The induced draught fan also runs very quietly and energy efficiently.



Feature: EOS system as standard

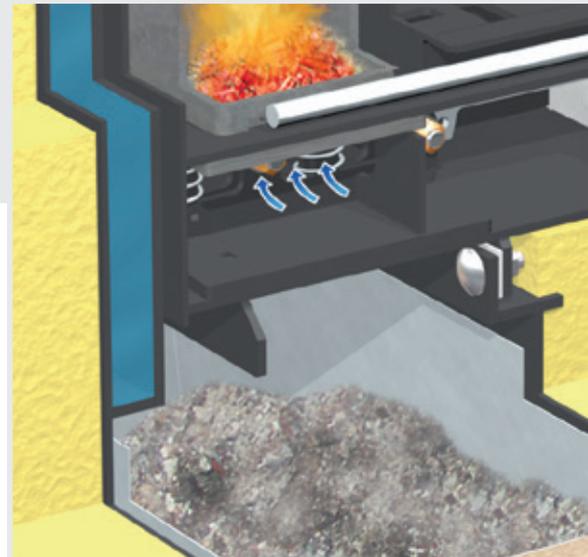
- Advantages:
- even greater efficiency
 - fuel savings

The EOS (Efficiency Optimisation System), which comes as standard, consists of special turbulators placed in the heat exchanger pipes. The lever mechanism is controlled together with the double protection system. An additional benefit: clean heating surfaces ensure higher efficiency and thus lower fuel consumption.

Feature: pellet burner with automatic sliding grate and chimney cut-off

- Advantages:
- high efficiency
 - automatic ash removal

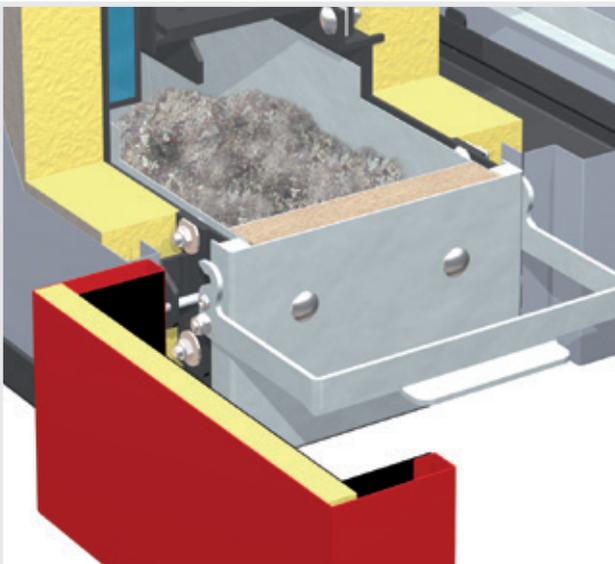
The burner is perfectly adapted to pellet fuel and its requirements, enabling a particularly high level of efficiency. The sliding grate ensures automatic ash removal into the large ashcan. The grate drive also controls the secondary air during combustion and after shutdown works in combination with the integrated chimney cut-off to prevent quick cooling of the boiler due to the chimney draught.



Feature: convenient ashcan

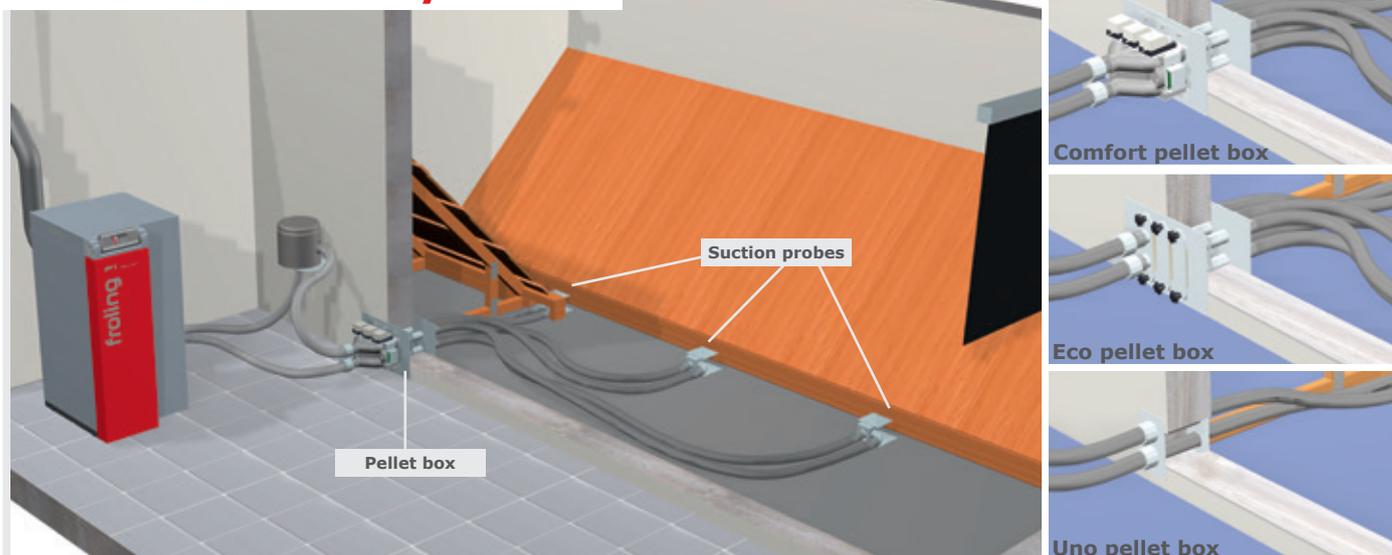
- Advantages:
- long emptying intervals
 - convenient emptying

We never compromise on ease of use. The ash that accumulates is automatically conveyed into the large ashcan where it can be easily emptied.



Feed systems

Universal suction system



This system is easy to install and very flexible. The universal suction system can handle even large distances between the store and the boiler room. The position of the suction probes or the transfer unit (pellet box) can be adjusted to fit the individual conditions of the store optimally.

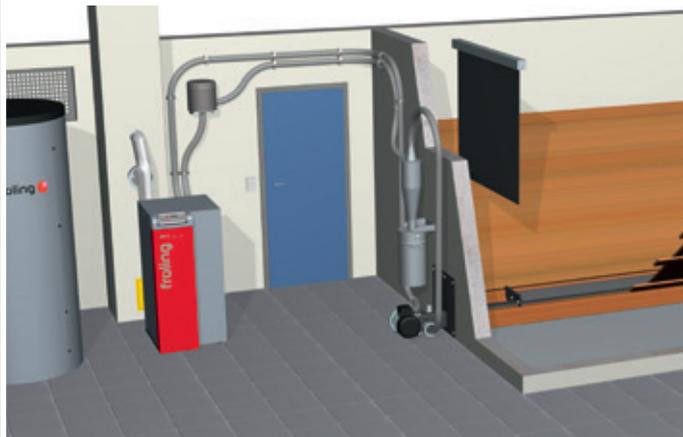
Bag silo



The bag silo systems come in eight different sizes and offer a flexible, simple way of storing pellets.

There are other advantages to using a bag silo: it is easy to assemble and dust-proof and you can fit rainproof and sun proof covers and install the silo outside if required.

Suction screw system



The Froling suction screw system is the ideal solution for rectangular rooms with front-end removal.

The deep and horizontal position of the discharge screw means the space in the room is used optimally and complete emptying of the store is guaranteed. Combined with a suction system from Froling it also enables flexible boiler setup.



Pellet mole®

This pellet discharge system is easy to install and makes full use of the store space. The Pellet mole® draws the pellets from above, ensuring an optimum fuel feed to the boiler. The "mole" moves automatically into every corner of the store to empty it as efficiently as possible.



External suction module

An external suction module is used for automatic fuel feed from the store to the pellet container. The suction module is fitted in the return line in any position.



Pellet suction probe

The patented suction probes developed by Froeling are distributed around the store area and ensure that emptying is reliable and even. The changeover between the probes can be manual (Eco pellet box) or fully automatic (Comfort pellet box).



Pellet filling pipes

The pellets are delivered by tanker and blown into the store through a filling pipe. The second pipe is used for controlled and dust free removal of the escaping air.

Option: Fuel tuning with the PST pellet deduster

Wood pellets are clean and of very high quality. Any remaining wood dust can be filtered from the fuel simply and conveniently using the PST pellet deduster. This optimises the efficiency of the combustion zone over the years.

The PST pellet deduster can be fitted in any position in the return air line of the pellet suction system. The suction cyclone design means that the dust particles are separated from the return air and deposited internally in the container.

The container is convenient to remove and transport to the emptying point. The system can be retrofitted at any time and it is maintenance-free.



Systematic convenience

Feature: **Lambdatronic P 3200 control**

- Advantages:
- exact combustion control with lambda control as standard
 - large, clear control unit
 - control the heating from your living room with a room console (optional)
 - new boiler console with touch display



With the new Lambdatronic P 3200 boiler controller with touch display, Froling is taking a step into the future. Intelligent control management makes it possible to connect up to 18 heating circuits, up to 4 storage tanks and up to 8 hot water storage tanks. The control unit ensures that the operating statuses are clearly shown. The menu structure is ideally organised to allow easy operation. All essential functions can be selected by simply pressing icons on the colour display.

The **Froling bus system** makes it possible to install extension modules at any location. The local controls can be installed wherever they are needed: at the boiler, at the heat distributor, at the tank, in the living room or in the house next door. Additionally, electric cables are kept to a minimum. Only a bus cable is needed to control the room consoles.



By using the Froling **FRA room temperature sensor** the main modes of the corresponding heating circuit can be easily adjusted and selected. The adjusting wheel allows you to change the room temperature by up to $\pm 3^{\circ}\text{C}$.

For even more convenience there's the **RBG 3200 room console** and the new **RBG 3200 Touch**. You can control the heating system easily from your living room. Important system data is clearly displayed and changes can be set by pushing a button.



Room console with touch display



The **RBG 3200 Touch room console** has an impressive modern touchpad interface. The menu structure is intuitive and easy to use. The 4.3" colour screen shows the most important functions at a glance and automatically adjusts the background lighting to the conditions.



NEW: froeling-connect.com online control

Froling's new online control, froeling-connect.com, allows you to check and control your Froling boiler with boiler touch display anytime anywhere. You can read or modify the main status information and settings easily and conveniently online (from your PC, smartphone, tablet PC, etc.). You can also specify which status messages you would like to receive by text message or email. The new froeling-connect.com service allows the owner of the heating system to enable additional users – for example the installer, a neighbour, etc. – to access the boiler and monitor the heating system, during holidays for instance.



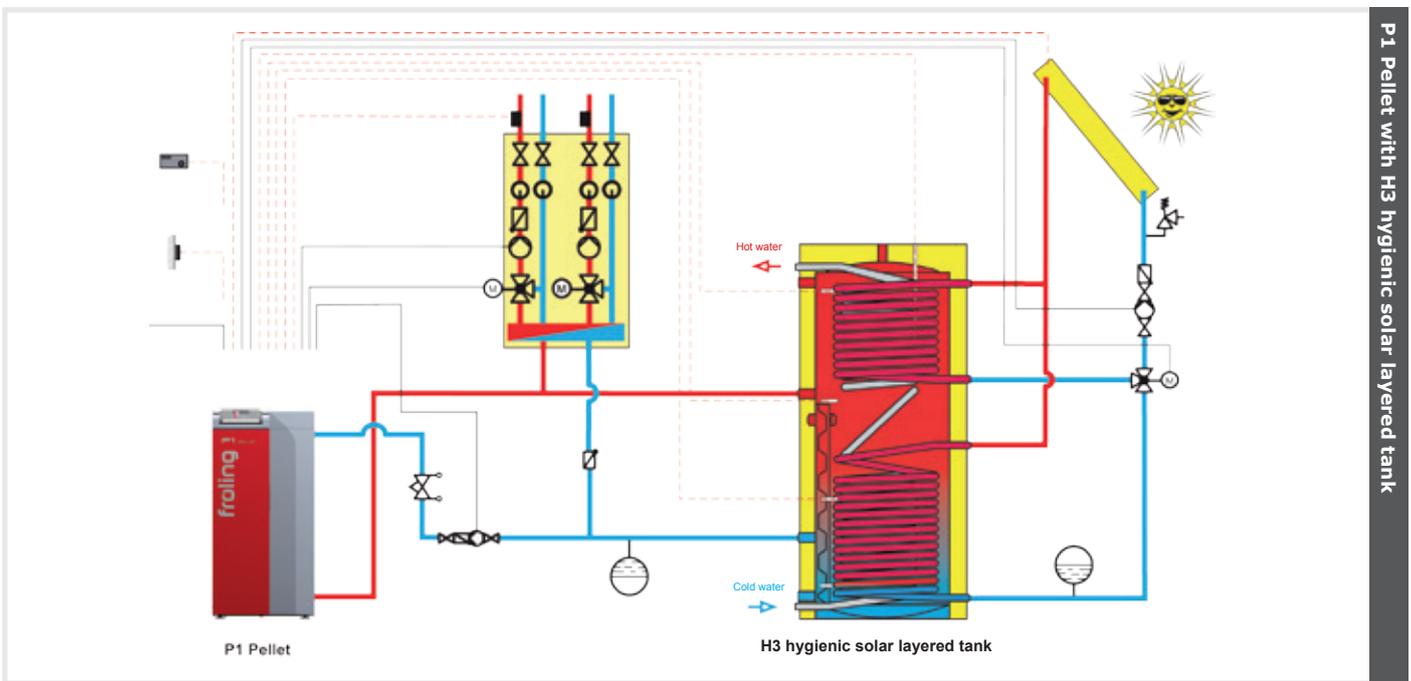
System requirements:

- Froling boiler with boiler touch display
- Froling boiler internet connection via network
- Internet connection (preferably broadband)
- Web-enabled terminal device (smartphone/tablet PC/laptop/PC) with web browser

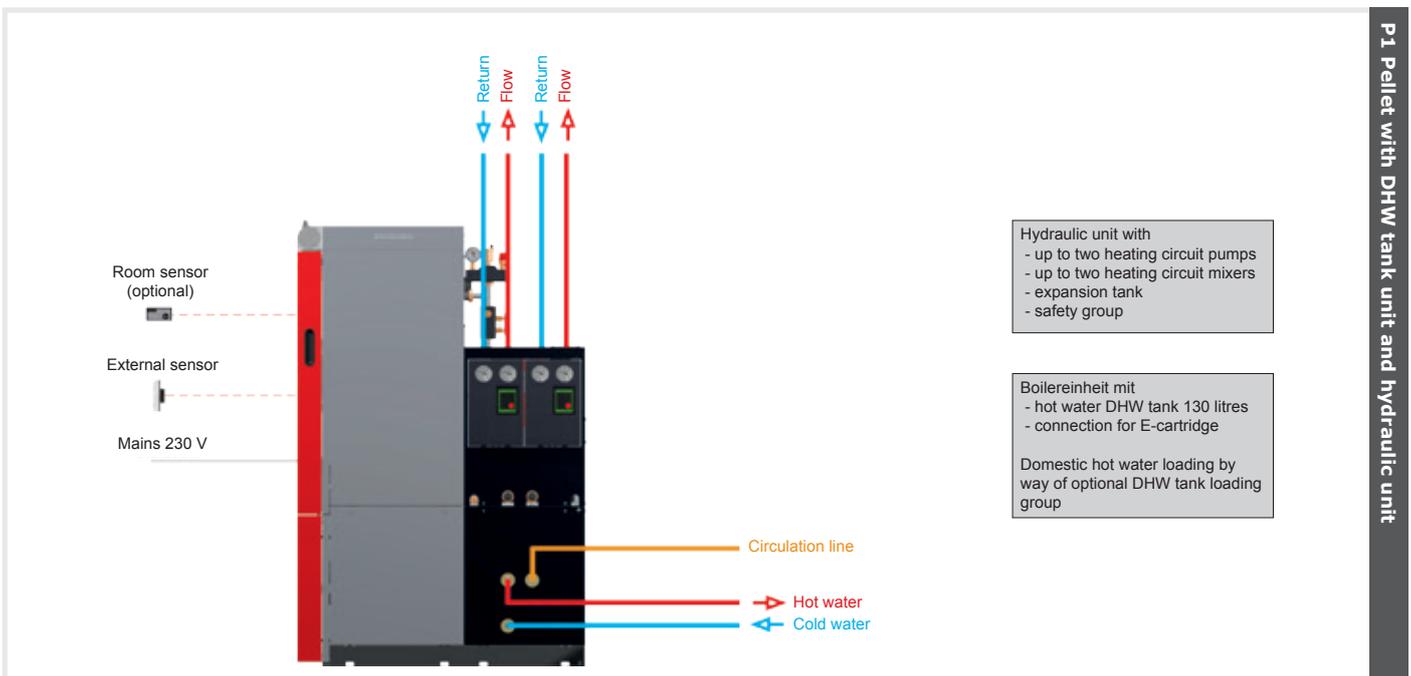
Feature: systems engineering for optimum energy consumption

- Advantages:
- complete solutions for all requirements
 - the components work perfectly together
 - integrated solar power

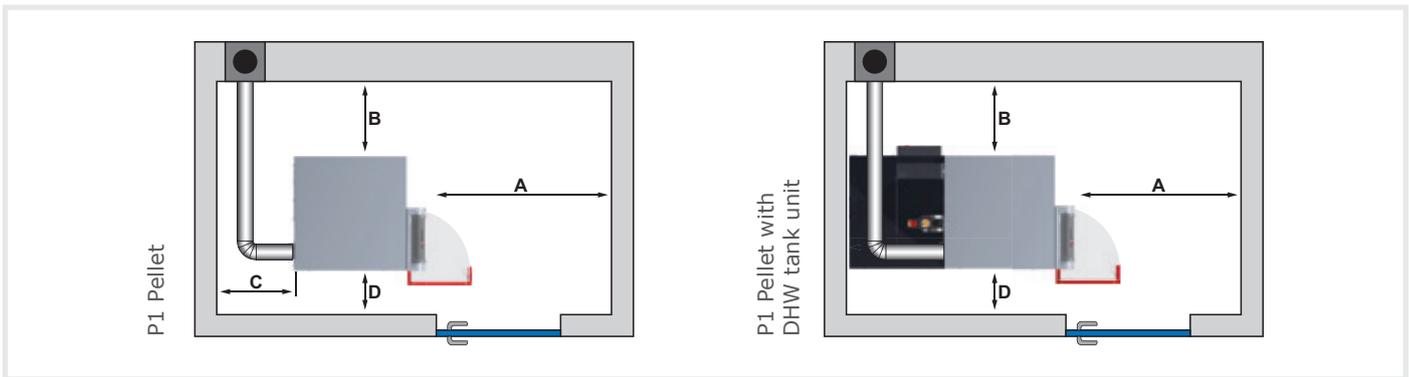
Froiling systems engineering offers efficient energy management. Up to 4 storage tanks, up to 8 hot water tanks and up to 18 heating circuits can influence the heat management. You also benefit from the ability to integrate other means of energy production, such as solar panels.



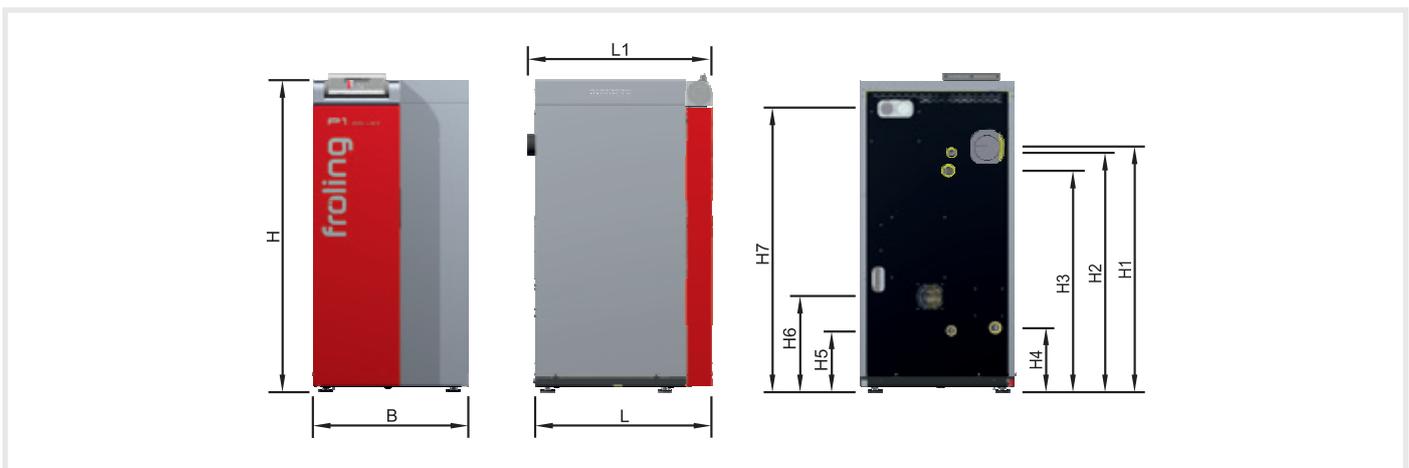
P1 Pellet with H3 hygienic solar layered tank



P1 Pellet with DHW tank unit and hydraulic unit

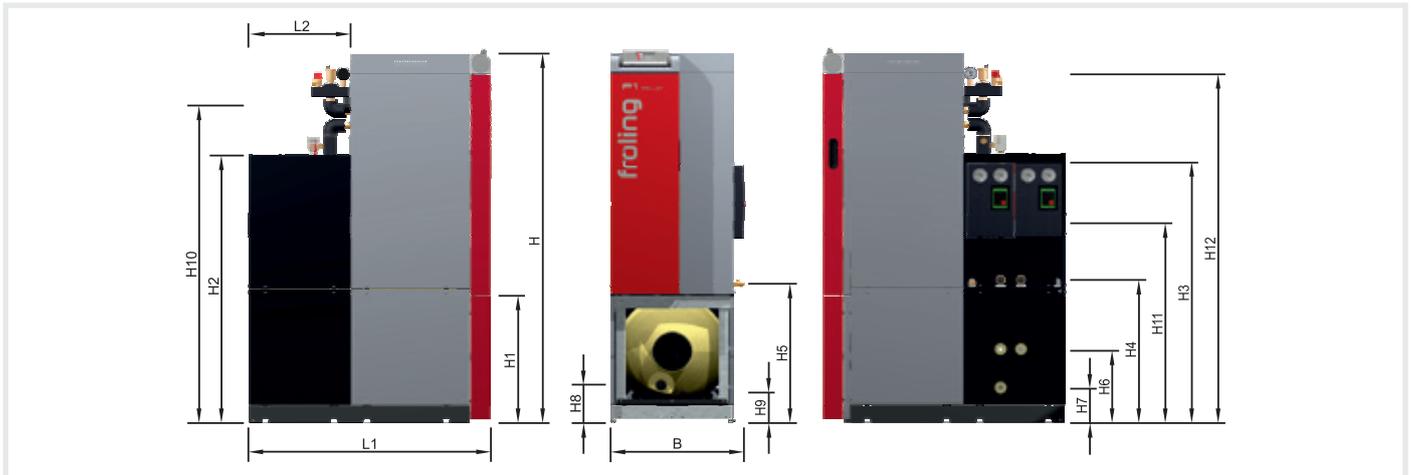


Minimum distances in the boiler room - P1 Pellet (7-20)		without DHW tank unit and hydraulic unit	with DHW tank unit and hydraulic unit
A	Distance between insulated door and wall	[mm] 600	600
B	Distance between side of boiler and wall	[mm] 300	300
C	Distance between rear of boiler and wall	[mm] 300	-
D	Distance between side of boiler and wall	[mm] 100	100
Minimum space (length x width)		[mm] 1540 x 1000	1740 x 1000



Dimensions - P1 Pellet		7 - 10	15 - 20
L	Length of boiler	[mm] 650	650
L1	Total length incl. flue gas pipe connection	[mm] 680	685
B	Width of boiler	[mm] 600	750
H	Height of boiler	[mm] 1200	1200
H1	Height, flue gas pipe connection	[mm] 960	940
H2	Height, ventilation connection	[mm] 940	935
H3	Height, return connection	[mm] 870	870
H4	Height, flow connection	[mm] 250	290
H5	Height, drainage connection	[mm] 240	95
H6	Height, supply air connection (for room air-independent operation)	[mm] 370	360
H7	Height, suction system connection	[mm] 1110	1110
Flue spigot diameter		[mm] 100	130

Technical specifications



Dimensions - P1 Pellet [mm]	7 - 10	15 - 20
L1 Length, DHW tank unit	1150	1150
L2 Length, hydraulic unit	500	500
B Width, boiler with hydraulic unit	660	810
H Overall height of boiler with DHW tank unit	1810	1810
H1 Height, DHW tank unit	630	630
H2 Height, DHW tank unit with hydraulic unit	1330	1330
H3 Height of flow/return connection of the heating circuits	1260	1260
H4 Height of flow/return connection of the boiler	710	710
H5 Height of the drainage connection of boiler	690	690
H6 Height of the hot water/circulation connection of the DHW tank unit	350	350
H4 Height of the cold water supply connection of the DHW tank unit	160	160
H8 Height, electronic heating cartridge	185	185
H9 Height, DHW tank unit drainage connection	165	165
H10 Height, flue pipe connection	1570	1550
H11 Height of supply air connection (for room air-independent operation)	980	970
H12 Height, suction system connection	1720	1720

Technical specifications - P1 Pellet	7	10	15	20
Nominal output [kW]	7	10	15	20
Heat output range [kW]	2 - 7	2 - 10	4.5 - 15	6 - 20
Electrical connection [V/Hz/A]	230V / 50Hz / fused C16A			
Weight [kg]	approx. 200	approx. 200	approx. 250	approx. 250
Total boiler capacity (water) [l]	approx. 25	approx. 25	approx. 38	approx. 38
Pellet container capacity [l]	35	35	41	41
Ash drawer/box capacity [l]	13	13	18	18
Domestic hot water volume with optional boiler block [l]	130			

Your Froling partner:



**Heizkessel- und Behälterbau GesmbH
A-4710 Grieskirchen, Industriestr. 12**

AUT: Tel. +43 (0) 7248 606 • Fax +43 (0) 7248 606-600
GER: Tel. +49 (0) 89 927 926-0 • Fax +49 (0) 89 927 926-219
Email: info@froeling.com • Internet: www.froeling.com