

T4



# Heating with Wood Chips and Pellets



From the very beginning, Froling has specialized in the efficient use of wood as an energy source. Today the Froling name stands for modern biomass heating technology. Froling's firewood, wood chip, and pellet boilers are successfully in operation all over Europe. All of our products are manufactured at our factories in Austria and Germany. Froling's service network ensures that we can handle all enquiries quickly.

## The fuels: wood chips and pellets



Wood chips are a fuel that is domestically produced, unaffected by economic crisis, and environmentally friendly. Wood chip production also guarantees jobs for local residents. This proves why wood chips are the perfect fuel, not just economically, but also from an ecological perspective. The leftover branches and treetops and the sawmill waste are shredded into wood chips. Quality classes are determined by the wood used.



Wood pellets are made of natural wood. The large quantities of wood shavings and sawdust from the wood processing industries are compacted and pelleted without being treated beforehand. Pellets have a high energy density 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, which unloads the pellets directly into the storage room.

## The new T4

User-friendly, compact, economical and safe:  
The new T4 from Froling meets all your needs.

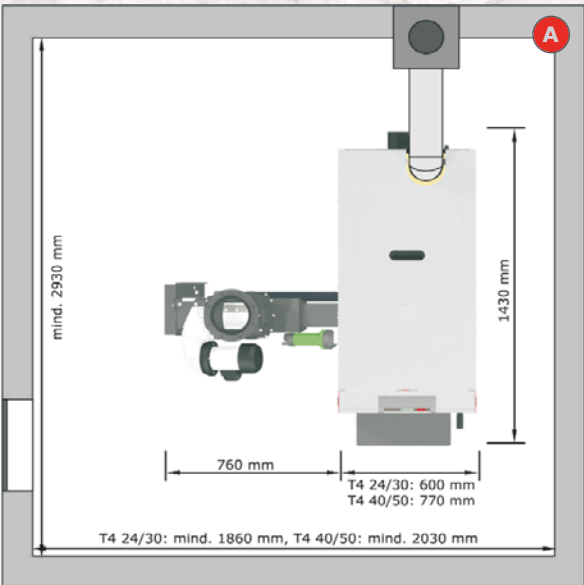
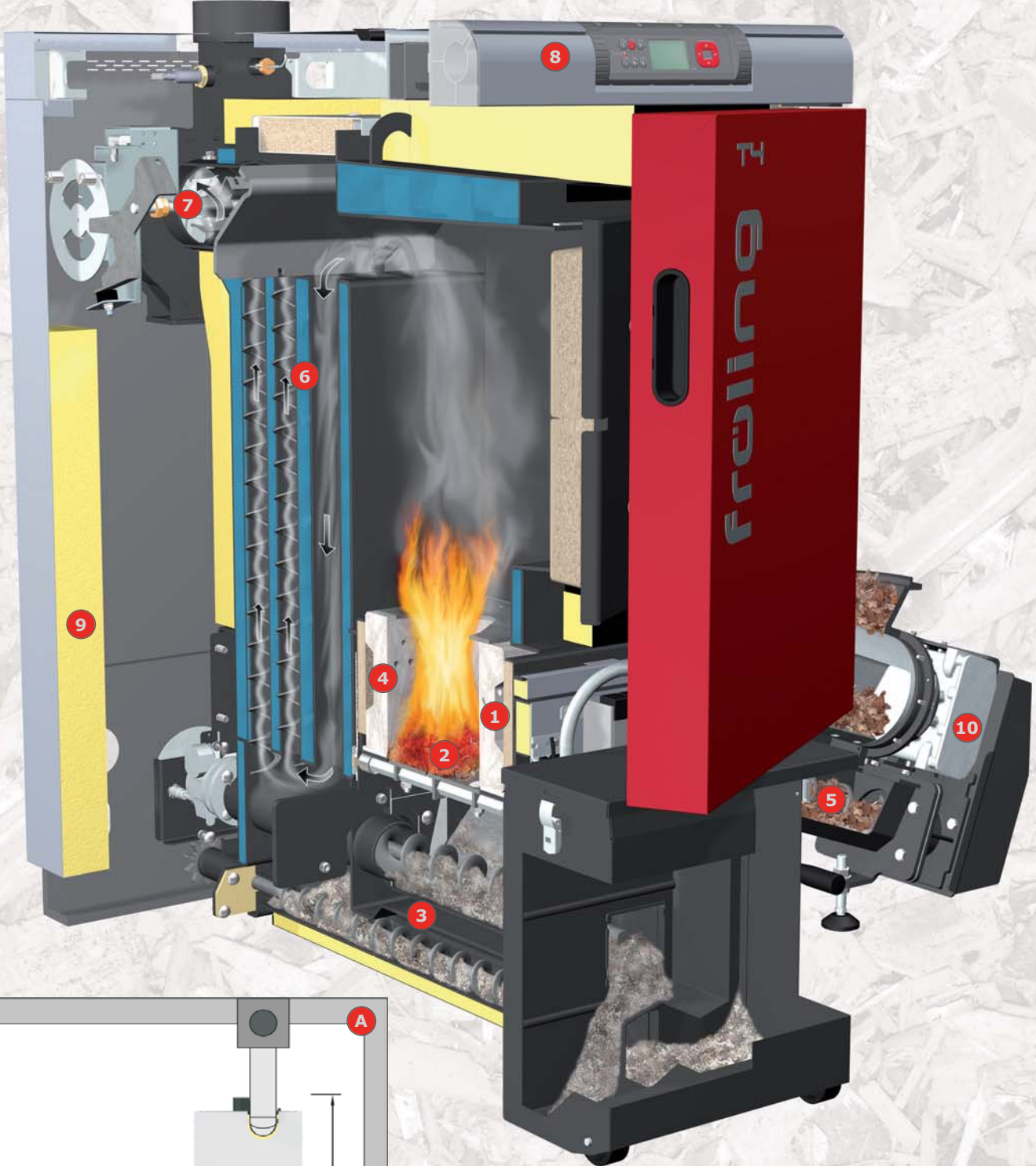
This boiler can efficiently burn both wood chips and pellets due to its well designed fully automatic system.

Froling also offers a wide range of fuel feeder systems for virtually all requirements. Optimum energy consumption is ensured by the detailed system engineering.

This means the Froling T4 can offer reliable, user-friendly heating!



# Robust technology with intelligent features





### The new Froeling T4 with special benefits:

- 1 Premium-quality high-temperature combustion chamber with firebrick lining for minimum emissions and optimal combustion at a high efficiency.
- 2 Two-part combustion grate consisting of a fixed grate section and the automatic tipping grate for cleaning away ash and foreign bodies.
- 3 Automatic ash removal from the combustion chamber and the heat exchanger to the generously large mobile ash container.
- 4 Underpressure-controlled combustion air supply with an actuator for primary and secondary air.
- 5 Stoker screw with coupled rotary valve for optimal fuel supply and maximum safety.
- 6 3-pass heat exchanger with Efficiency Optimisation System - WOS (turbulators for automatic cleaning of the heat exchanger pipes).
- 7 Induced draught fan with regulated speed and function monitoring for highest operating safety.
- 8 Lambdatronic H 3200 controller with innovative bus technology.
- 9 Fully insulated to minimize radiant heat loss.
- 10 Energy-saving drives (spur gears) for extremely low power consumption.
- A Minimal space requirement thanks to the compact layout of the unit.

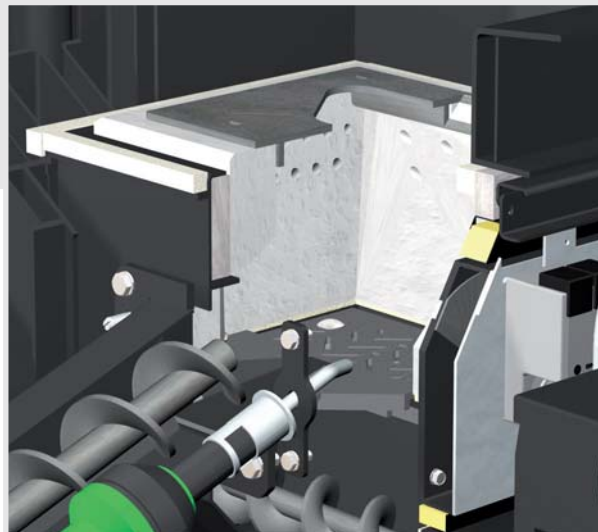
# A well-planned home

## **Feature: High-temperature combustion chamber with firebrick lining**

The benefits for you:

- Optimum burnout
- Very low emissions

The combustion chamber of the T4 is fully lined with high quality fireproof material (silicon carbide). This creates an unusually hot combustion zone, enabling optimum burnout and reducing harmful emissions to a minimum. The patented shaping of the combustion chamber stones gives the air supply in the combustion chamber a particularly good seal, without the need to use expensive wearing seals. The new shape of the combustion chamber stones also simplifies the maintenance of the combustion chamber, as they can be removed easily.



## **Feature: Perfect combustion control**

The benefits for you:

- Optimum emission values
- Economical fuel consumption
- Adapts automatically to changing fuel qualities

Combustion in the T4 is controlled exclusively by underpressure. Combined with the speed-regulated and function-monitored induced draught fan, this guarantees the highest operating safety. The innovative control of air distribution in the combustion zone is a new feature. Primary and secondary air are adjusted to the conditions in the combustion chamber optimally with a joint actuator. This, combined with the lambda controller, ensures that harmful emissions are kept to a minimum.

## **Feature: Simple assembly on-site**

The benefits for you:

- Quick assembly
- Compact
- Stoker unit on the left or right as desired.

The T4 is supplied assembled and wired. You just need to fit the stoker unit and connect the relevant discharge system to the rotary valve. This saves time and money. The carefully planned layout of the units reduces the space requirement to a minimum and also achieves a particularly compact design. This makes it possible to use the T4 even in particularly confined spaces.



The stoker unit can be on the left or the right.

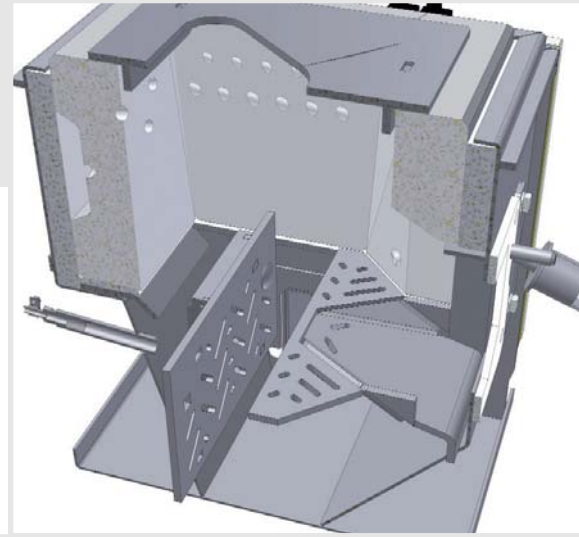


**Feature: Ingenious grate technology**

The benefits for you:

- Ideal combustion conditions
- Automatic self-cleaning

The combustion grate is divided in two to ensure optimal combustion of wood chips and pellets. The insertion grate remains stationary and ensures even distribution of the fuel in the combustion zone. The centrally supported tipping grate can pivot 90°, and it can be relied on to clean ash and foreign bodies from the combustion chamber. This grate is made of a special alloy to ensure a long service life.

**Feature: Quick to clean**

The benefits for you:

- Automatic ash removal
- Simple emptying of the ash container

The ash accumulated in the combustion chamber and the heat exchanger during combustion is automatically fed into a shared ash container. The boiler controller informs you when the ash bucket should be emptied. It is easy to handle thanks to its transport rollers and mounting bracket. A cover flap also ensures that no ash can fall out of the container during transportation.

**Feature: Stoker unit with rotary valve**

The benefits for you:

- Excellent burn back protection
- Reliable fuel feed
- Maximum energy efficiency

The highly compact stoker unit of the T4 comes with the patented Froling two-chamber rotary valve as standard. This combination ensures excellent burn back protection and reliable fuel feed to the combustion zone. The stoker unit and the rotary valve are driven by a shared energy-saving geared motor (with spur gears). This guarantees the highest level of energy efficiency.



# Systematically User-Friendly

## Feature: **Lambdatronic H 3200 controller**

- The benefits for you:
- The lambda control supplied as a standard part, gives precise combustion control
  - Large, clear control unit with adjustable viewing angle
  - Menu-based operation with online help
  - Boiler navigation from the living room



Froling takes you into the future with the new H 3200 boiler control unit. The control unit is optimised to fit requirements, and the individually adjustable viewing angle ensure that all operating statuses are clearly shown. The optimally organised menu structure makes it easy to operate. The essential functions can be selected simply by pressing a button.

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.

Another benefit is that the electrical cables are kept to a minimum.

The new **RBG 3200 room console** makes the system even more user-friendly. You can control the heating system easily from your living room. It is extremely easy to read off all the important values and status messages and to change settings at the push of a button.



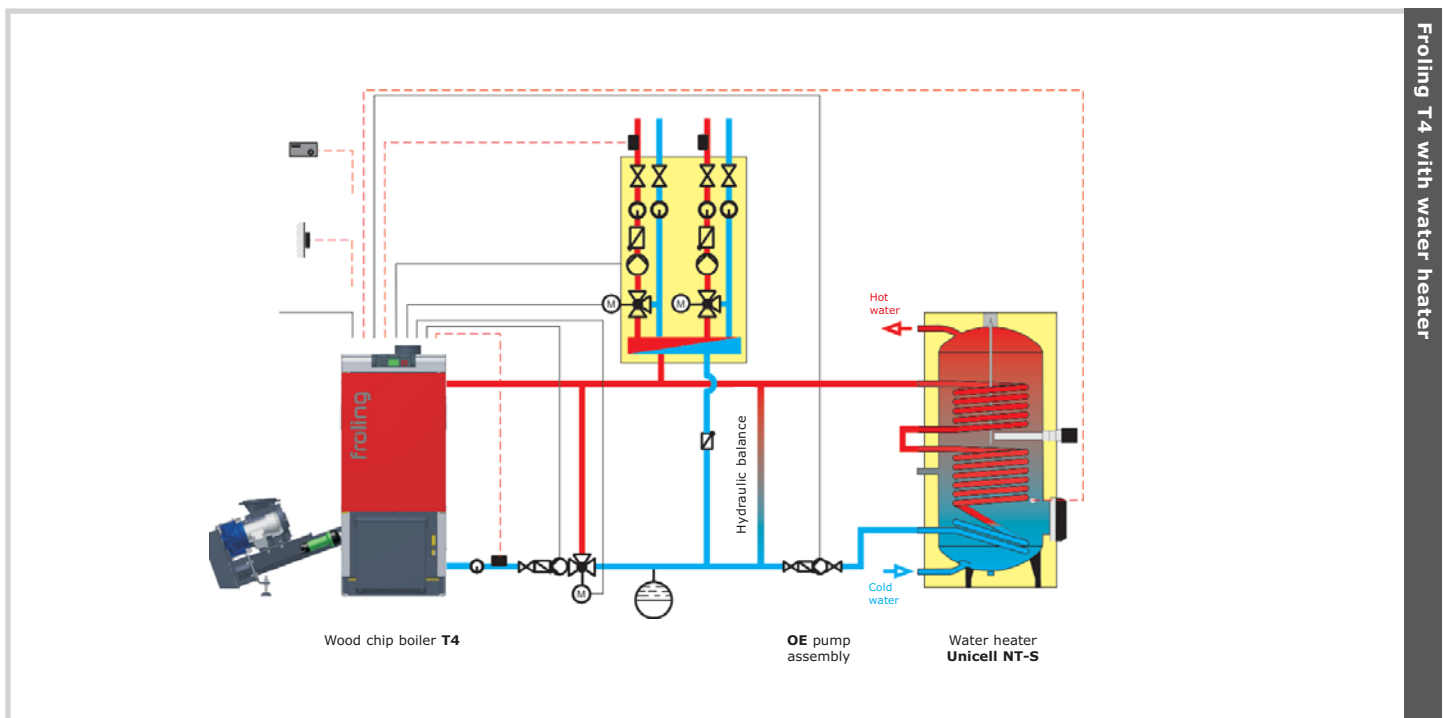
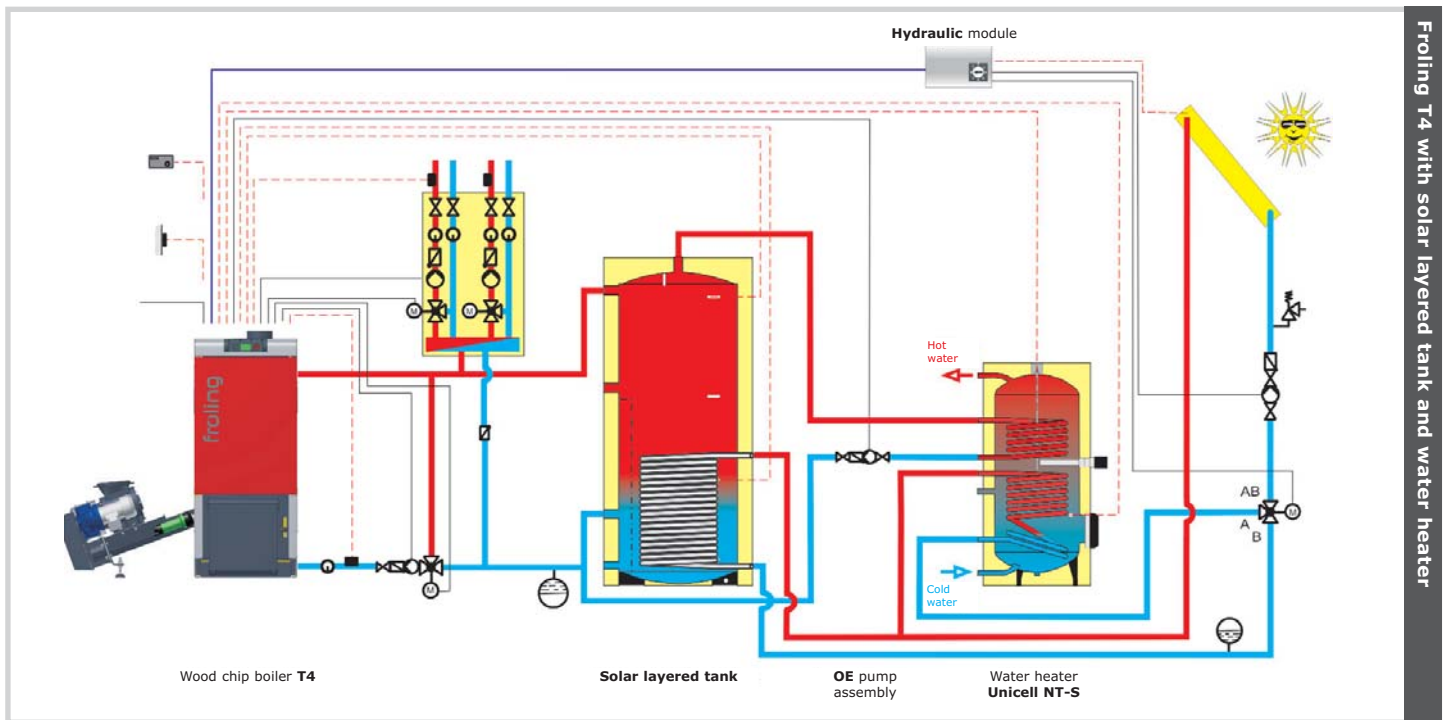


# Lambdatronic H 3200

**Feature: Systems engineering for optimum energy use**

- The benefits for you:
- Complete solutions for all your needs.
  - The components work perfectly together.
  - Incorporation of solar energy

Froling systems engineering enables efficient energy management. Up to 4 buffer tanks, up to 8 hot water tanks and up to 18 heating circuits can influence the heat management. You can also benefit from the option of connecting other types of energy production sources, such as solar energy panel systems.



# Wood chip feed systems

## Spring blade agitator (FBR)

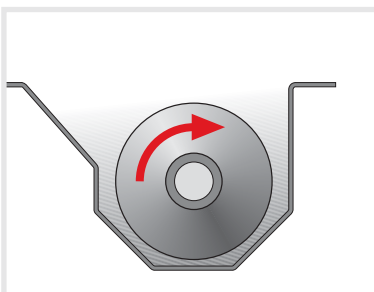


For discharging wood chips from the bunker with a maximum working diameter of 5.0 metres. The system is maintenance-free and it was designed specially for fuels with good pourability (e.g. wood chips G30/G50 to W35). The simple and effective design of the discharge system ensures smooth operation.

## Torsion arm agitator TGR



For discharging fuels from the bunker with a maximum working diameter of 6.0 metres. The system is low-maintenance, and it is specially designed for fuels that require a higher discharge output due to low pourability. The patented design ensures quiet and effective operation.



### Feeder trough

The special shape of the trough ensures that fuel transport runs smoothly. The system is easy to operate so it saves energy even when feeding in the maximum amount of pellets.



### Shear edge

A robust shear plate with a cutting edge breaks up larger pieces of fuel guaranteeing continuous fuel feed.

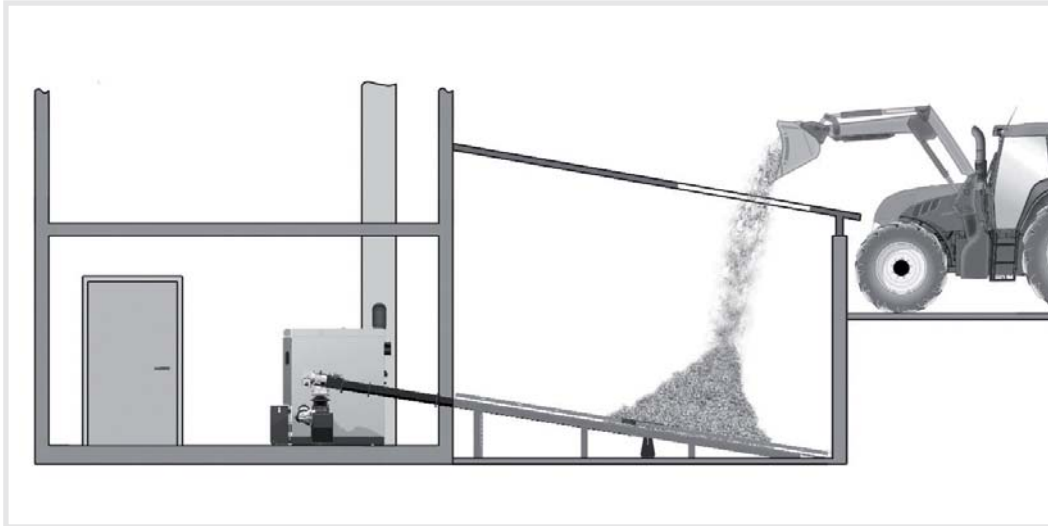


### Spring blades

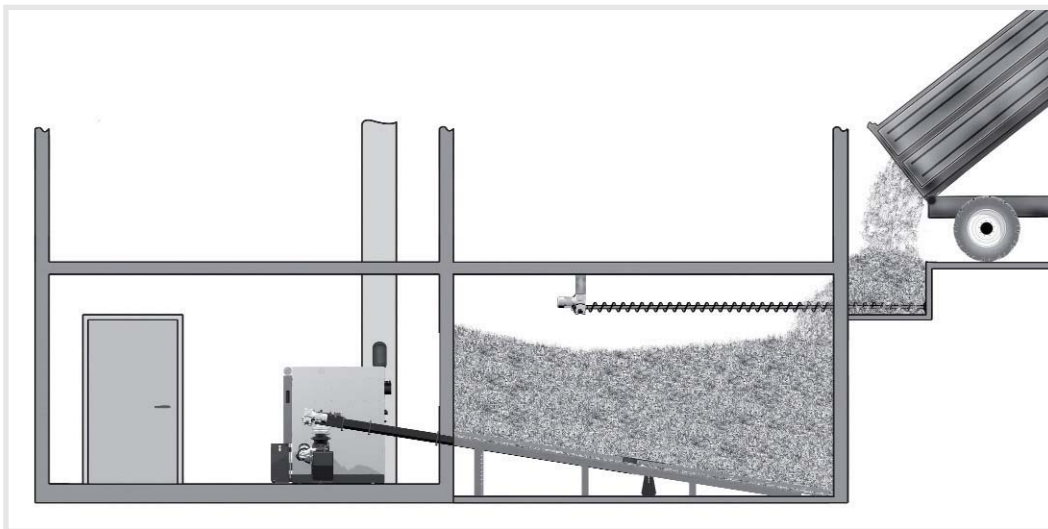
Two strong spring piles ensure even filling level of the feed screw. The robust tearing hooks loosen the fuel and ensure the store empties.

# Froeling discharge systems

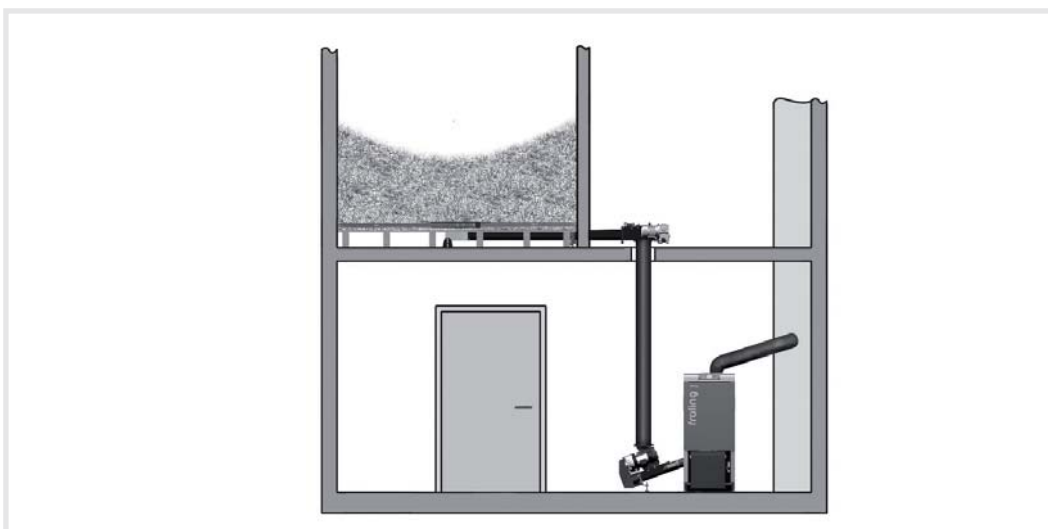
Some examples from a wide range of set-up options:



External store with option of direct loading into the fuel store. This storage area can be extended at a low cost.



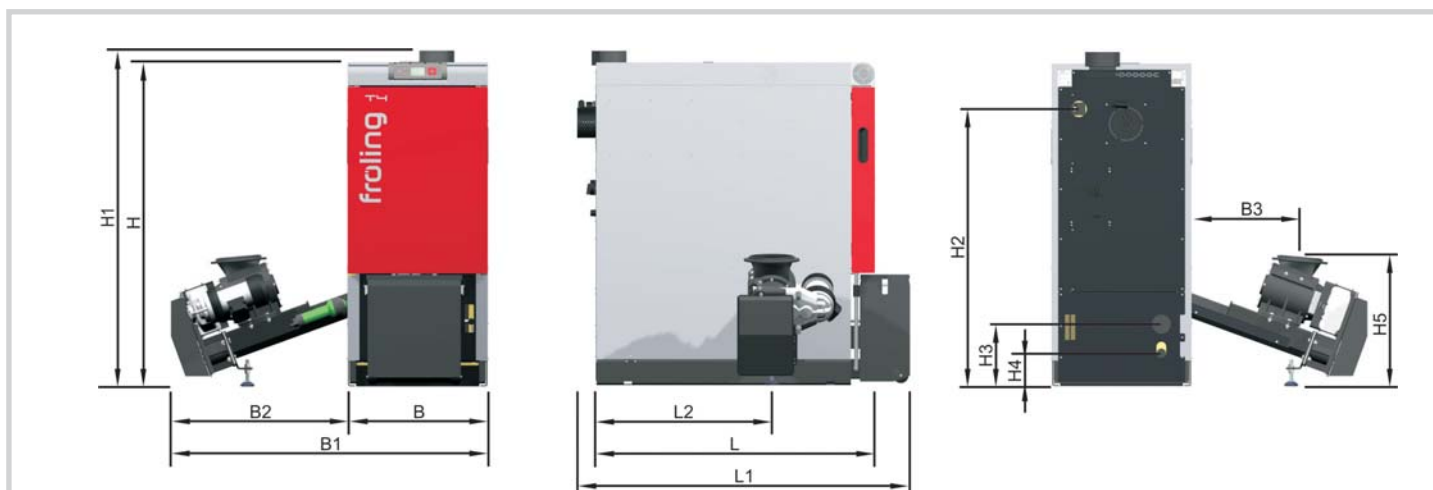
Store connected to bunker filling screw. Existing window openings (or similar) can be used as infeed openings.



Storage above the boiler room. Fuel is fed to the boiler using a downpipe.

The rotary valve that is strictly required is included in standard delivery.

# Technical specifications



DIMENSIONS			T4 24 / 30	T4 40 / 50
H	Height of boiler	[mm]	1390	1620
H1	Total height inc. flue gas pipe connection	[mm]	1440	1670
H2	Height of flow connection	[mm]	1195	1425
H3	Height of return connection	[mm]	270	270
H4	Height of drain	[mm]	140	140
H5	Height of stoker connection	[mm]	560	600
B	Width of boiler	[mm]	600	770
B1	Total width with stoker unit	[mm]	1360	1530
B2	Width of stoker unit	[mm]	760	760
B3	Distance from the side of the boiler to the stoker connection	[mm]	470	470
L	Length of boiler	[mm]	1200	1200
L1	Total length with ID fan and ash container	[mm]	1430	1430
L2	Distance from the back of the boiler to the stoker connection	[mm]	760	760

TECHNICAL SPECIFICATIONS		T4 24	T4 30	T4 40	T4 50
Nominal heat output	[kW]	24	30	40	50
Heat output range	[kW]	7,2 - 24	9 - 30	12 - 40	15 - 50
Power connection	[V / Hz]	400 / 50	400 / 50	400 / 50	400 / 50
Electrical fuse	[A]	20	20	20	20
Weight of the boiler (inc. stoker unit, exc. water)	[kg]	620	640	840	860
Boiler water capacity	[liters]	105	105	160	160
Maximum permitted operating temperature of the boiler	[°C]	90	90	90	90
Maximum permitted operating pressure	[bar]	3	3	3	3
Flue gas pipe diameter	[mm]	150	150	150	150

**Other sizes available on request**

You can find further technical details and tips in our detailed planning documentation "Heating with Wood chips".

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