

NEW!

S2 TURBO

FIREWOOD BOILER 15 - 20 kW



A+

BETTER HEATING

INNOVATIVE
AND CONVENIENT

froling 



ENVIRONMENTALLY
RESPONSIBLE HEATING,
ECONOMICALLY
ATTRACTIVE



Wood is a home-grown and environmentally friendly fuel, that is highly sustainable. It is CO₂-neutral and is not affected by international crises. The production of firewood and pellets ensures stable jobs in the industry. Looking at it from an environmental and economical point of view, wood is the ideal fuel. The quality class is determined by the wood used.

Froling has been working for sixty years on the efficient use of wood as a source of energy. Today the name Froling stands for 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 enquiries quickly.

GUARANTEED
QUALITY AND
RELIABILITY
FROM AUSTRIA

- International pioneer in technology and design
- Sophisticated fully automatic operation
- Excellent environmental compatibility
- Environmentally responsible energy efficiency
- Renewable and CO₂-neutral fuel
- Ideal for all types of house
- More convenience and reliability

Latest generation efficiency and convenience

The S2 Turbo firewood boiler combines the latest technology with the strengths of tried and tested systems, providing reliable heat at the highest level. The new LTC 5000 control system with 7" glass touch display offers even more options when it comes to controlling the boiler. The swivelling flue pipe connection makes adapting to different types of installation possible, considerably facilitating installation. Optionally, an integrated particle separator ensures even lower emissions and fulfils the highest requirements for environmental friendliness. Proven features such as efficient carbonisation gas extraction, the speed-controlled induced draught fan, high efficiency, long refilling intervals and low power consumption make the S2 Turbo a solution that is as economical as it is practical. Heating with firewood can be so convenient!

Pellet unit can be added any time

Froling offers a flexible solution for people who may want to use pellets in future: the S2 Turbo comes with a pellet flange as standard, which means that the pellet unit can be retrofitted at any time. This is supplied fully insulated and ready to plug in.

- Advantages:
- Pellet unit can be retrofitted at any time (pellet flange as standard)
 - Firewood and pellet systems perfectly combined



S2 TURBO FIREWOOD BOILER

NEW!

Flue pipe connection can be rotated to horizontal or vertical orientation

Speed-regulated induced draught fan

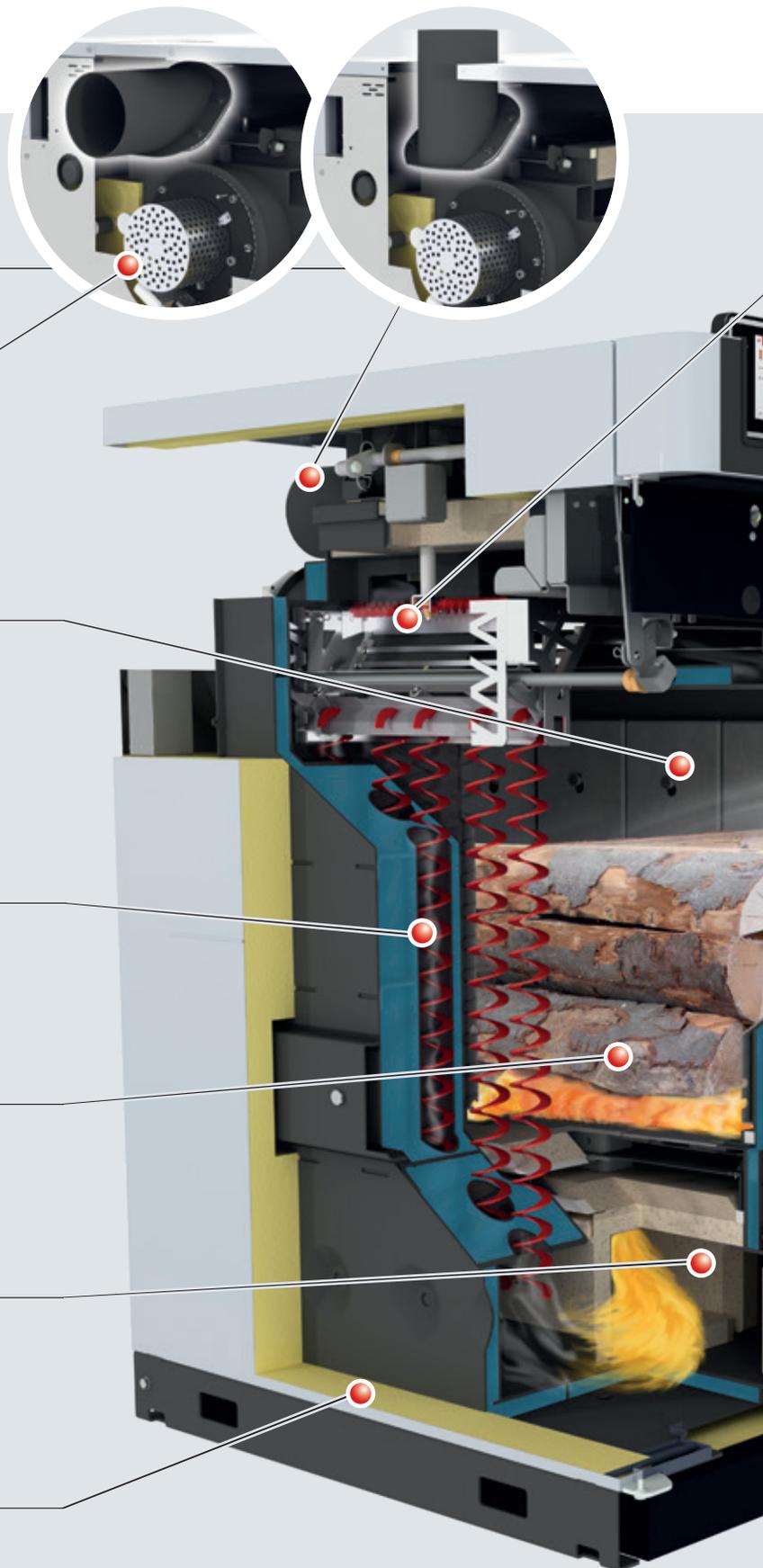
Suspension lip to protect the inner wall of the boiler and guarantee that the logs slide through

Manual/automatic WOS system (efficiency optimisation system) for optimum cleaning of the heat exchanger pipes

Large fuel loading chamber for 50 cm wood blocks (up to 56 cm)

High-temperature firebrick-lined combustion chamber (Easy to replace individual bricks)

High-quality insulation for minimal radiant heat loss



THE LATEST TECHNOLOGY

NEW!

Integrated **particle separator (electrostatic precipitator)** available as an option

NEW!

Lambdatronic 5000 controller with **7" glass touch display** for even easier operation

Carbonisation gas extraction system prevents smoke escaping during reloading

NEW!

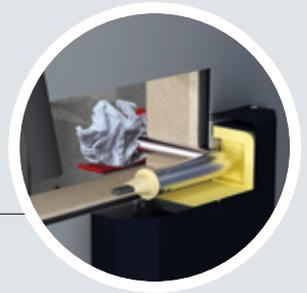
Automatic ignition with silent ceramic igniter (optional)

Special automatic pre-heating with regulated air ducts

Servo-motor for automatic control of heating, primary and secondary air

Air-cooled fuel loading chamber and cleaning door to minimise radiant heat loss

Large cleaning port door for easy ash removal and cleaning from the front



INTELLIGENT DESIGN DOWN TO THE LAST DETAIL

Integrated particle separator (electrostatic precipitator) available as an option

The optionally available particle separator (electrostatic precipitator) can be retrofitted at any time. This means that the fine dust emissions from the boiler, which are very low in any case, can be reduced to a level close to the limit of measurement. Cleaning down is fully automatic.

- Advantages:
- Can be retrofitted on site
 - Quick installation
 - Combined cleaning of the separator surfaces with heat exchanger optimisation system (WOS)
 - Cleaning the electrode using an impact device
 - Fulfils the funding guidelines in Germany (entitlement to the emissions reduction surcharge)

Unique automatic heating-up

A unique design! Unlike traditional systems, the pre-heating chamber door on the S2 Turbo can be closed immediately after ignition due to a special primary air duct.

- Advantages:
- Load, light, close the doors, heat
 - No smoke is produced in the boiler room

Automatic ignition

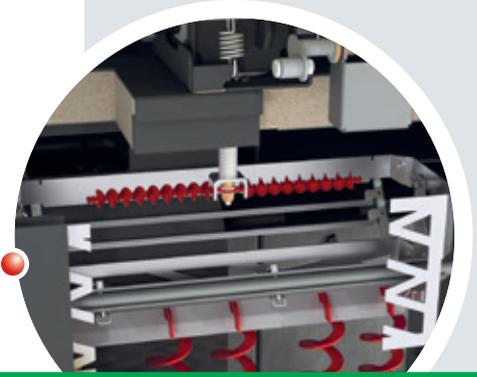
If you want even more convenience, you can opt for the optional automatic ignition with silent ceramic igniter. Heating with firewood can be so convenient!

- Advantages:
- No manual lighting necessary
 - No smoke is produced in the boiler room

Special carbonisation gas extraction system

The integrated carbonisation gas duct flap makes pre-heating even easier. The flap is closed manually before lighting to provide a better draught during the pre-heating process. The carbonisation gas duct flap opens automatically when the fuel loading chamber door is closed. This then reactivates the carbonisation gas extraction system, thus preventing smoke and gas from escaping when reloading.

- Advantages:
- Easy pre-heating
 - No escape of smoke during re-filling
 - Boiler room stays clean



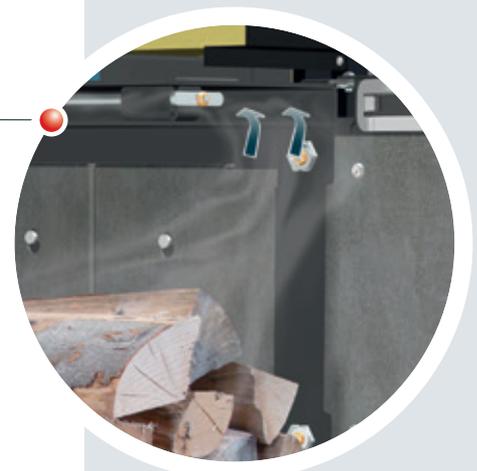
NEW!

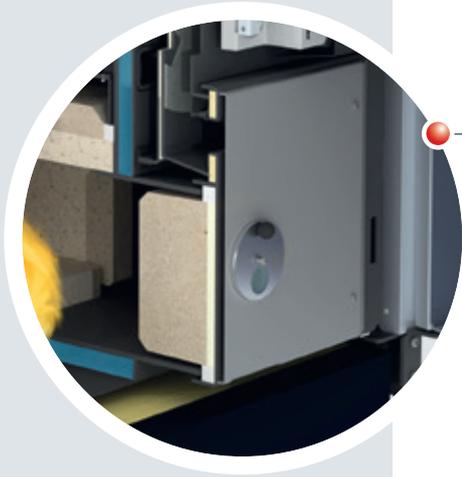
Integrated particle separator (electrostatic precipitator) can be added at any time



NEW!

Available with optional automatic Ignition





Air-cooled fuel loading chamber and cleaning doors

Thanks to the new air duct concept, the combustion air is taken in via the fuel loading chamber and combustion chamber doors. This air cooling ensures low temperatures at the boiler's operating elements, thus offering optimum convenience for the user. Furthermore, the low radiant heat losses guarantee excellent efficiency.

- Advantages:
- Maximum ease of use
 - Low radiant heat losses
 - High efficiency



high-temperature firebrick-lined combustion chamber

The hot combustion zone in the combustion chamber keeps emissions levels low. The new shape of the combustion chamber makes it especially easy to clean. Furthermore, its new construction makes maintaining the combustion chamber a breeze as the firebricks are very easy to replace.

- Advantages:
- Low emissions
 - Easy cleaning
 - Long lifespan



Speed-regulated induced draught fan

The integrated induced draught fan is a standard component of the unit, which further enhances the reliability of the S2 Turbo. This means that the boiler can be started easily even if the chimney is cold. The speed regulation device in the induced draught fan stabilises combustion throughout the heating process and adjusts the output according to requirements.

- Advantages:
- Maximum ease of use
 - Problem-free starting of the boiler
 - Continuous stabilisation during combustion



Standard WOS system

We never compromise on ease of use. The WOS (Efficiency Optimization System), a standard part of the S2 Turbo, consists of special turbulators which are placed in the heat exchanger pipes. The lever arm mechanism ensures easy cleaning of the heating surfaces from the outside. This means clean heating surfaces and thus greater efficiency and lower fuel consumption. Optionally, the WOS can be driven automatically (automatic as standard with integrated particle separator).

- Advantages:
- Ever greater efficiency
 - Easy cleaning from outside
 - Savings on fuel

NEW! Available with optional automatic WOS system

INDIVIDUAL CONTROLLER FOR THE HEATING SYSTEM



Lambdatronic 5000 controller

With the new Lambdatronic 5000 boiler controller and the modern **7" glass touch display**, Fröling is moving into the future. The new design is impressive, not only for its intuitive operation but also its numerous new features. The most important components can be freely selected in the tile overview and information and error messages can be customised. This makes operating and running the system even simpler and easier to understand. The intelligent control management enables the virtually unlimited integration of heating circuits, hot water tanks and storage tanks.

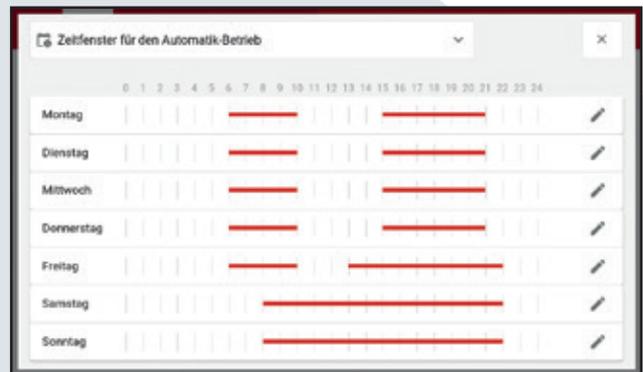
- Advantages:
- Precise combustion control by a Lambda controller using a Lambda probe
 - Connection of heating circuits, water heaters and storage tanks- Managementsystemen
 - Integration capability for a solar panel system
 - LED frame for status display with illuminated presence detection
 - Simple, intuitive operation
 - Always up-to-date thanks to remote updates
 - Various SmartHome solutions (e.g. Loxone, Modbus TCP) Remote control from the living room (room console) or via the Internet (froeling-connect.com)



SIMPLE & INTUITIVE OPERATION



Overview of the installed systems in a tile display



Heating time control for individual determination of heating times

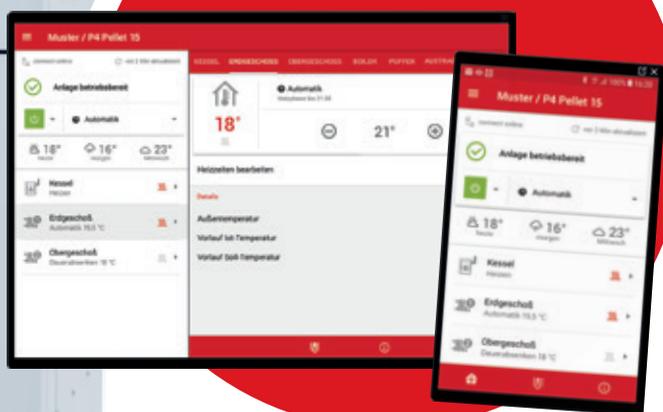


EVERYTHING AT A GLANCE AT ALL TIMES WITH FROLING CONNECT

The Froling "Connect" App allows you to check and control your Froling boiler online from anywhere at any time. You can read and modify the main status information and settings easily and conveniently online. You can also specify which status messages you want to be informed of via push notification or e-mail (e.g. in the event of faults).

Once the boiler has been connected to the internet and activated, the system can be accessed 24/7 from anywhere using a web-enabled device (mobile, tablet, PC, etc.). The app is available in the Android Play Store and iOS App Store.

NEW! Desktop version with even more options



- Simple and intuitive operation of the boiler
- Status values can be viewed and changed in seconds
- Individual naming of the heating circuits
- Changes of status are transmitted directly to the user (e.g. by e-mail or push notifications)
- No additional hardware required (such as an Internet gateway)

SMART HOME

Enjoy smart, convenient and peace-of-mind living with the Smart Home connection options from Froling.



Integration of Loxone possible



Modbus

The system can be integrated into a building management system via the Froling mod bus interface.



FIREWOOD RELOAD CALCULATION

Efficient heating with intelligent reload calculation from Fröling. The current status of the system is visible at all times via the 7" touch display and can be used through simple parameterization of the storage tank type and the storage tank volume.

Taking into account the current storage tank charge, the boiler control calculates the missing energy. When the boiler door is opened, the required amount of fuel for loading the storage tank is displayed in kilogrammes.

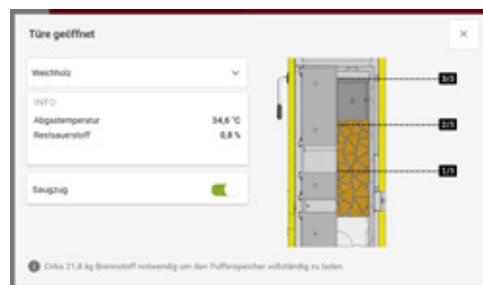
Wood types

Different types of wood with the same water content differ mainly in terms of weight. There are lighter (softwood) and heavier (hardwood) types of wood. In relation to weight, all types of wood have an almost identical heating value with the same water content.

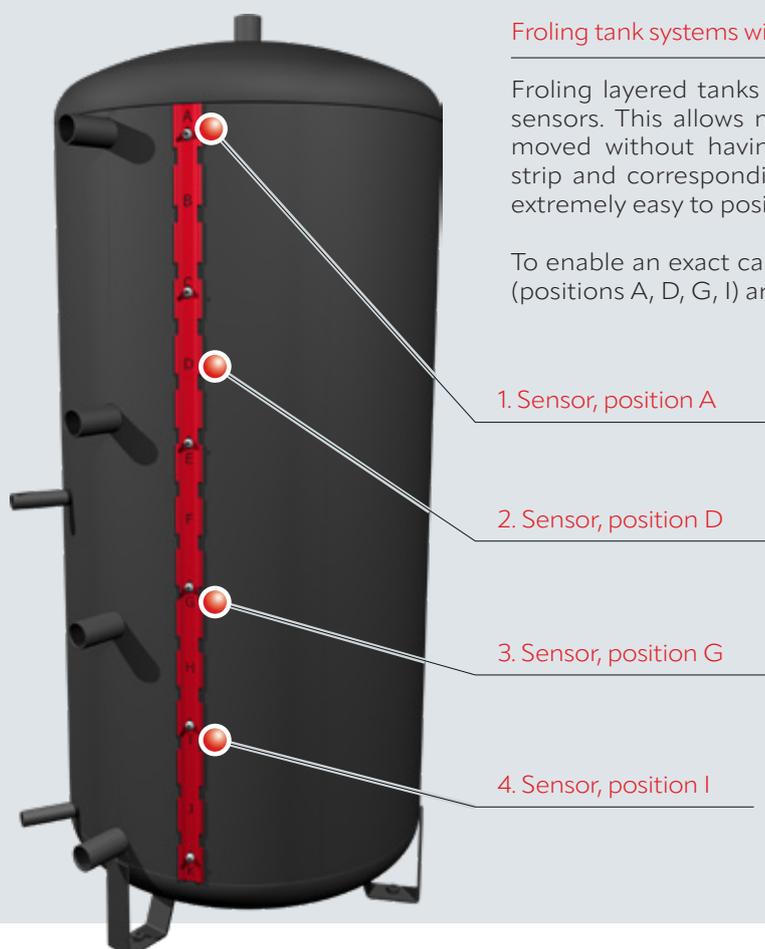
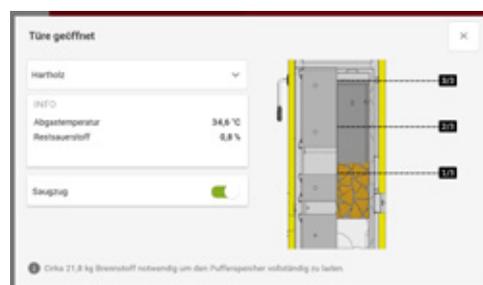
In order to achieve the same heating value, more softwood is needed than hardwood. For customers who only have limited storage capacity, hardwood is therefore particularly suitable for heating.

Examples of softwood: spruce, fir, pine, larch, poplar, willow
 Examples of hardwood: oak, copper beech, ash, maple, birch, bird cherry

Display for softwood



Display for hardwood



Froling tank systems with sensor strip

Froling layered tanks have a terminal strip for optimal positioning of the sensors. This allows multiple sensors to be positioned at any height and moved without having to empty the tank. The labelling of the sensor strip and corresponding Froling connection diagrams makes the sensors extremely easy to position and offer lots of different options.

To enable an exact calculation of the reload quantities, a total of 4 sensors (positions A, D, G, I) are attached to the terminal strip.



Correct positioning of the sensors on the terminal rail is crucial for optimum operation of the system!

THE PERFECT COMBINATION

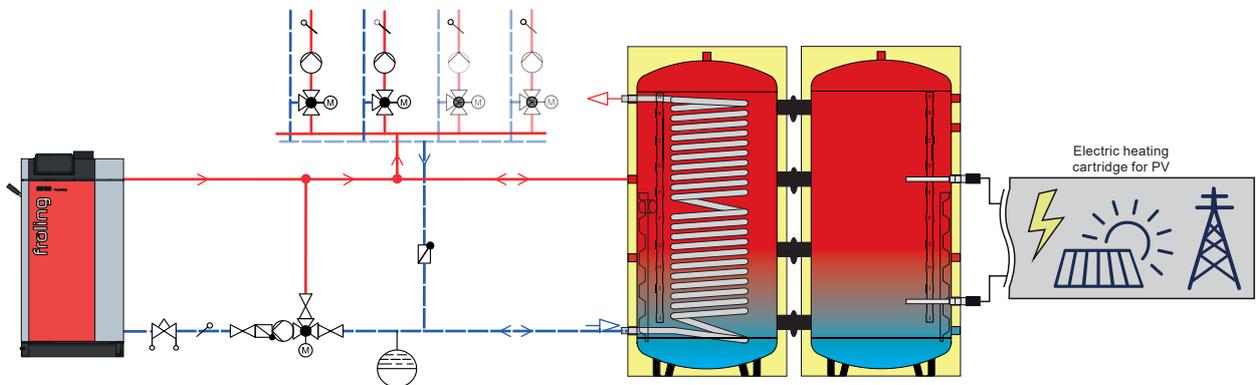
Please see also our "Tank systems" brochure

SYSTEMS ENGINEERING FOR OPTIMUM ENERGY CONSUMPTION

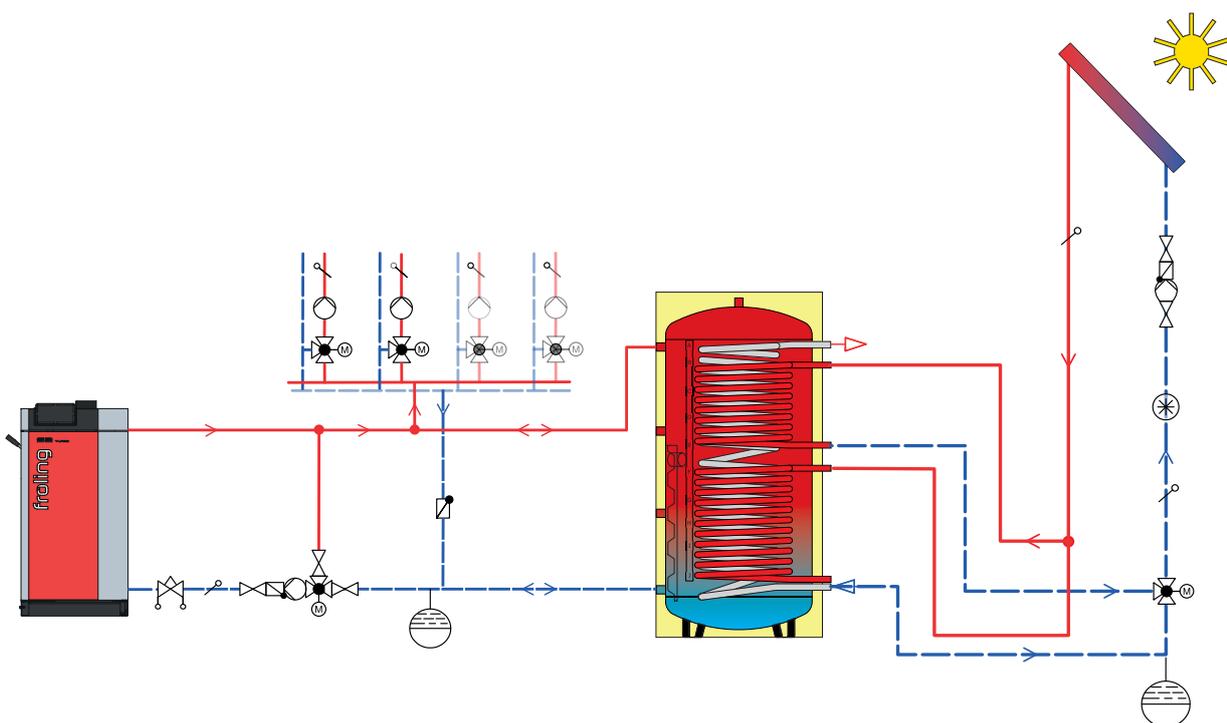
Froeling systems engineering offers efficient energy management. Any number of storage tanks, hot water tanks and heating circuits can be included in the heat management system. You can also benefit from the ability to integrate other means of energy production such as solar panel systems.

- Advantages:
- Complete solution for all requirements
 - Components perfectly matched to each other
 - Integration of solar power

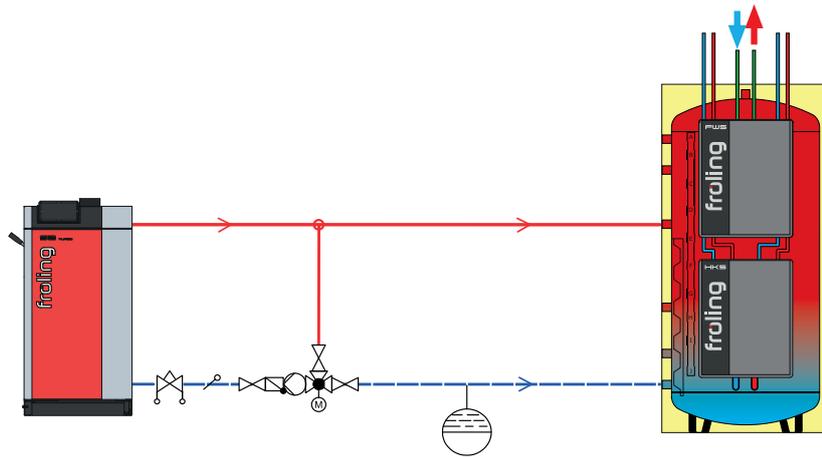
S2 Turbo with H2 hygienic layered tank and two electric heating cartridges (communicating with each other)



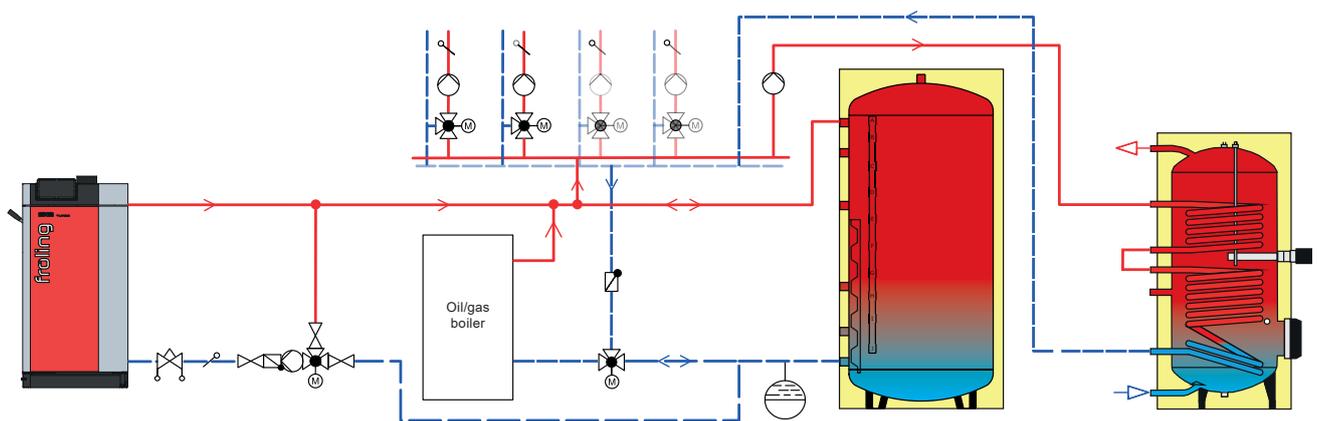
S2 Turbo with H3 hygienic solar layered tank and solar connection



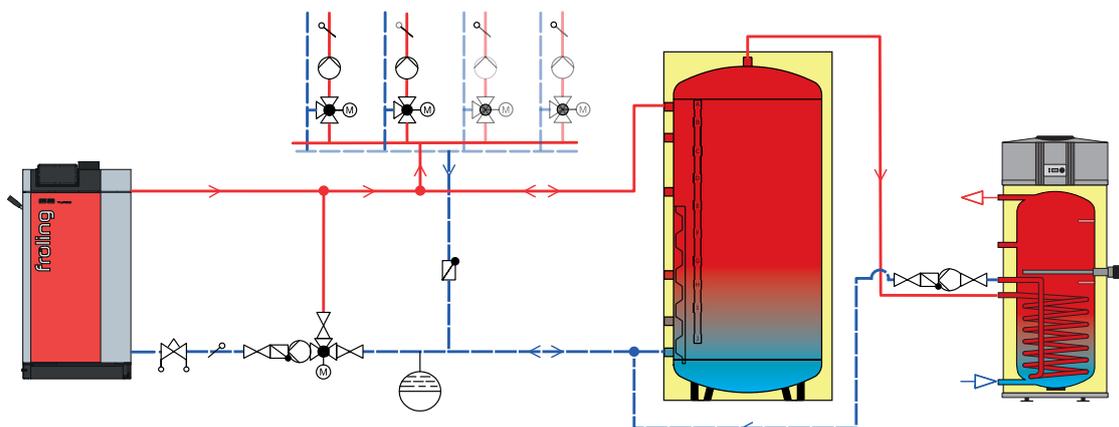
S2 Turbo with HS modular layered tank, FWS fresh water station and HKS heating circuit station



S2 Turbo with oil/gas boiler, layered tank and water heater



S2 Turbo with layered tank and domestic hot water pump



ACCESSORIES FOR EVEN GREATER CONVENIENCE



RBG 5000 room console

The new RBG 5000 room console makes the system even more convenient. The heating system can be conveniently navigated from the living room, all important values and status messages can be easily read and all settings can be made with a single touch on the display. The RBG 5000 can be conveniently integrated via LAN/PoE or WLAN.

Room controller (digital)

The most important operating modes and temperatures of the assigned heating circuit can be displayed and set or selected very easily with the room controller, which measures just 8 x 8 cm. By continuously balancing the setpoint and actual temperature in the room, the room controller ensures the desired cosy temperature and adjustment of the heating circuit flow temperature.



Room temperature sensor (analogue)

The room temperature sensor measures the room temperature and passes this on to the boiler. This ensures perfectly matched operation of the boiler. The temperature can also be shown on the boiler display, on the room console or in froeling-connect (app or web interface).



Heating circuit module

With wall casing and contact sensor as heating circuit control for up to two mixer heating circuits.



Hydraulic module

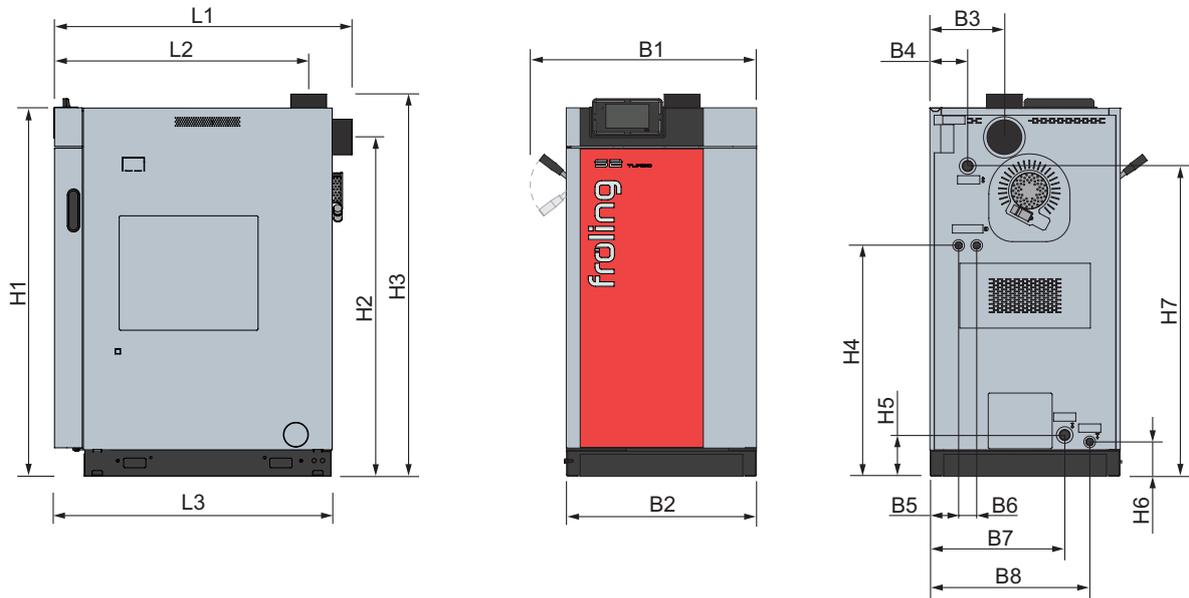
With wall casing and two immersion sensors to control one or two pumps and one isolating valve with up to six sensors.



WMZ solar package

Set for measuring heat quantity, consisting of one volume -pulse transmitter ETW-S 2.5, one collector sensor and two contact-sensors for recording flow - and return-temperatures.

DIMENSIONS & TECHNICAL DATA

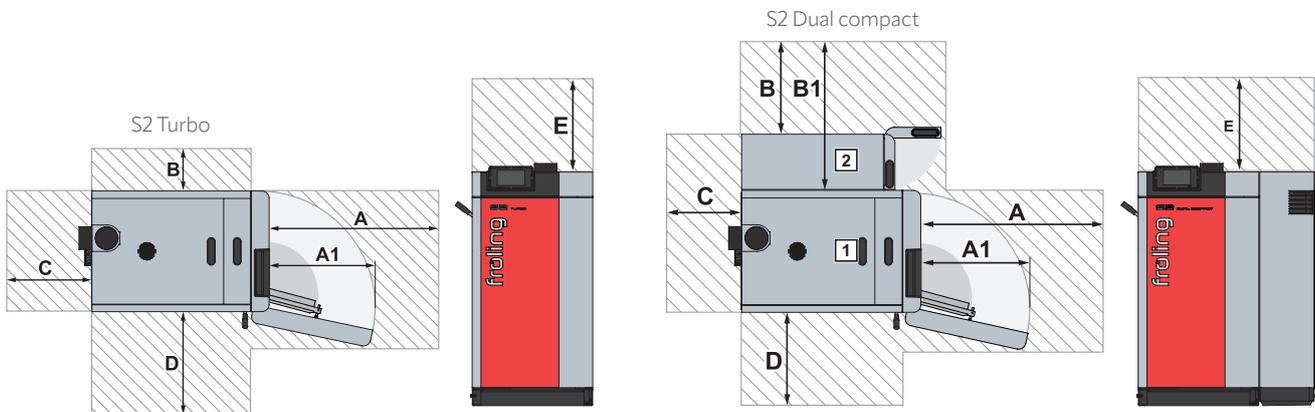


Dimensions in mm - S2 Turbo	15	20
L1 Length of the boiler (flue gas pipe connection at rear)	1070	1070
L2 Distance from the flue gas pipe top connection to the front face of the boiler	915	915
L3 Length, boiler	1000	1000
B1 Overall width of boiler incl. WOS lever	830	830
B2 Width of boiler	685	685
B3 Distance between flue gas pipe connection and side of boiler	270	270
B4 Distance between flow connection and side of boiler	135	135
B5 Distance between safety heat exchanger connection and side of boiler	105	105
B6 Distance between safety heat exchanger connections	65	65
B7 Distance between return connection and side of boiler	485	485
B8 Distance between drainage connection and side of boiler	575	575
H1 Height of boiler	1335	1335
H2 Height of rear connection for the flue gas pipe	1230	1230
H3 Height of flue gas pipe top connection	1385	1385
H4 Height, safety heat exchanger connection	840	840
H5 Height, return connection	150	150
H6 Height, drainage connection	125	125
H7 Height, flow connection	1,125	1,125
Flue gas pipe diameter	129	129

Technical data - S2 Turbo		15	20
Nominal output	[kW]	15	20
Energy rating label*		A ⁺	A ⁺
Power connection	[V/Hz/A]	230V / 50Hz / fused C16A	
Power consumption	[W]	41	42
Weight of boiler incl. insulation and control	[kg]	490	500
Dimensions of fuel loading door (width/height)	[mm]	350 / 360	
Fuel loading chamber capacity	[l]	80	

* Efficiency label (boiler + controller)

OPERATING AND MAINTENANCE AREAS



Minimum clearances in mm - S2 Turbo		15	20
A	Clearance from front of boiler to wall	800	800
A1	Door swing area	550	550
B	Clearance from side of boiler to wall	200	200
C	Clearance from back side to wall	400	400
D	Clearance from side of boiler to wall	500 (200 ¹)	500 (200 ¹)
E	Maintenance area above the boiler	500 ²	500 ²

Minimum clearances in mm - S2 Dual compact		15	20
A	Clearance from front of boiler to wall	800	800
A1	Door swing area	550	550
B	Clearance from boiler side with pellet unit to wall	500	500
B1	Clearance from boiler side without pellet unit to wall	815	815
C	Clearance from back side to wall	400	400
D	Clearance from side of boiler to wall	500 (200 ¹)	500 (200 ¹)
E	Maintenance area above the boiler	500 ²	500 ²

¹ The heat exchanger for the boiler is accessible for maintenance only from the front

² Maintenance area for removing the WOS springs upwards



Pellet boiler

PE1 Pellet	7 - 35 kW	P5 Pellet	12 - 105 kW
PE1c Pellet	16 - 22 kW	PT4e	100 - 350 kW



Firewood boiler

S2 Turbo	15 - 20 kW
S3 Turbo	20 - 45 kW
S4 Turbo	22 - 60 kW

Dual fuel boiler

S2 Dual compact	15 - 20 kW
SP Dual	22 - 40 kW



Wood chip boiler / large systems

T4e	20 - 350 kW	TMe	350 - 550 kW
Turbomat	150 - 550 kW	Lambdamat	650 - 1500 kW



Heat and electricity from wood

CHP fixed bed gasifier system	46 - 56 kW (power consumption)
	95 - 115 kW (thermal output)

Your Fröling partner

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