

**NEW!**

**S5** TURBO

FIREWOOD BOILER 22 - 48 KW



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 CO<sub>2</sub> 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 CO<sub>2</sub>-neutral fuel
- Ideal for all types of house
- More convenience and reliability

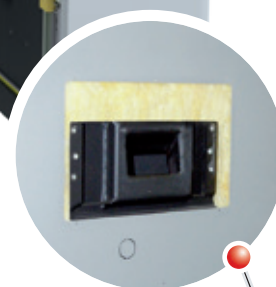
Discover the world of modern firewood boiler technology! Our experienced engineers have set themselves high targets for the new S5 Turbo, and they have implemented them:

#### **Pellet unit can be added any time**

The S5 Turbo with pellet flange is the ideal solution for people who are currently only burning firewood. Thanks to its modular design, the pellet unit can be retrofitted at any time.

#### **Modular design**

The new S5 Turbo boasts important advantages even before it is put into the boiler room. It is so compact that installing it is child's play, even in confined boiler rooms. Thanks to its modular design with just a single flue gas pipe, it is particularly easy to retrofit a pellet unit at any time.



Pellet flange

**NEW!**



Flue pipe connection can be rotated to horizontal or vertical orientation

Speed-regulated induced draught fan

**NEW!**

Integrated particle separator (electrostatic precipitator) available as an option

WOS system  
(Efficiency Optimisation System)  
for optimum cleaning of the heat exchanger pipes

Large fuel loading chamber for logs up to half a metre long (up to 56 cm)

**NEW!**

Optimised V-combustion chamber made of silicon carbide for even better efficiency and lower emissions





## S5 TURBO FIREWOOD BOILER

**NEW!**

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

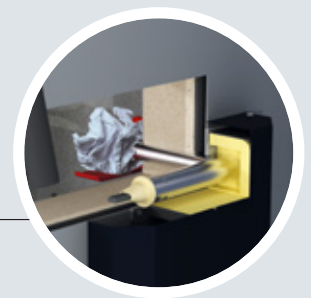
Carbonisation gas extraction system prevents smoke escaping during reloading

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

Large fuel loading chamber doors

**NEW!**

Automatic ignition with silent ceramic igniter (optional)



Quick heating-up with special air ducts (optional: automatic ignition)

Large maintenance openings for easy cleaning from the front

## Large fuel loading chamber for 50 cm logs

The new S5 Turbo allows for the burning of firewood up to a length of 56 cm for all output sizes. It is conveniently filled from the front, and the large fuel loading chamber ensures long intervals between reloading. Often it is only necessary to fill the boiler once a day. A cladding, which can be removed easily for cleaning, protects the interior walls of the boiler, guaranteeing a long service life.

- Advantages:
- Easy to fill
  - Long combustion time
  - Long lifespan

**NEW!**

## Silicon carbide combustion chamber with new geometry

Froling has refined the traditional V-shaped combustion chamber and is setting new standards with an optimised heating gas duct. The exceptionally long combustion zone guarantees very low emissions. By using this firewood boiler technology, you are making a considerable contribution to maintaining clean air in our environment. The robust construction and the use of silicon carbide as a material for the high temperature combustion chamber enable a longer service life.

- Advantages:
- Very long combustion zone
  - Reduced emissions
  - Greater efficiency

## 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)

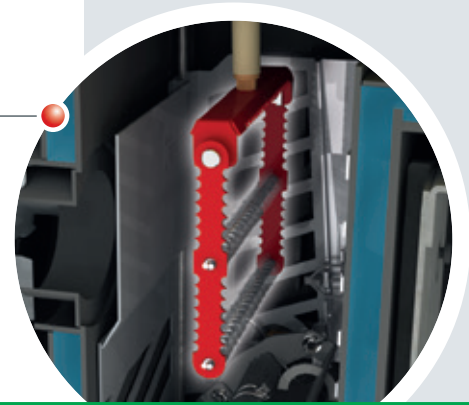
**NEW!**

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

## Special carbonisation gas extraction system

The special carbonisation gas extraction system also prevents any flue gas from escaping during refilling - whatever the combustion phase.

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

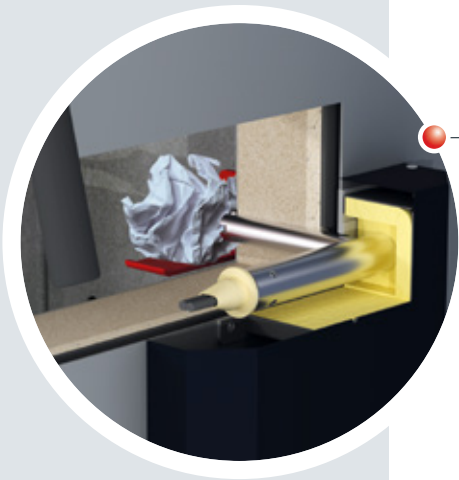




### Unique automatic heat-up function (with manual ignition)

A unique design! Unlike traditional systems, the pre-heating chamber door on the S5 Turbo can be closed immediately after ignition due to a special primary air duct.

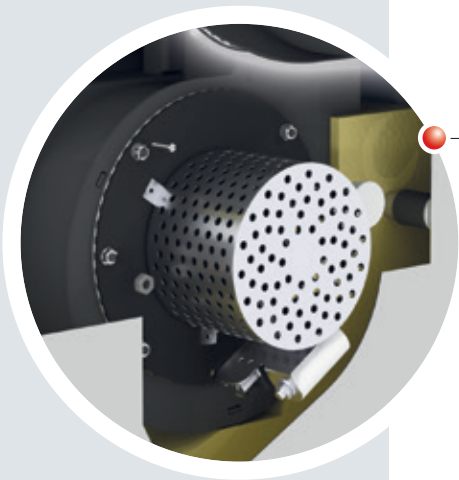
- Advantages:
- Load, light, close the door and feel the heat
  - No smoke is produced in the boiler room



### Automatic ignition (optional)

For even greater convenience, opt for the 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



### Speed-regulated induced draught fan

The integrated induced draught fan is a standard component of the unit, which further enhances the reliability of the S5 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
  - Smooth boiler start
  - Continuous stabilisation during combustion



### Standard WOS system

We never compromise on ease of use. The WOS (Efficiency Optimisation System), a standard part of the S5 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:
- Even greater efficiency
  - Easy cleaning from outside
  - Savings on fuel

**NEW!** Available with automatic WOS system as option

# 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.

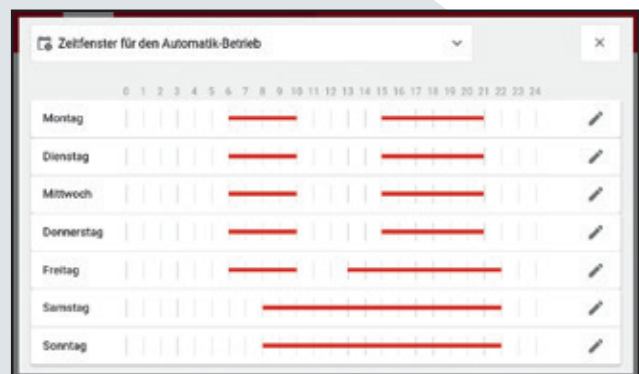
- Advantages:
- Precise combustion control by a Lambda controller using a Lambda probe
  - Connection of heating circuits, water heaters and storage tanks-  
Managementsystemen
  - Integration capability for a solar panel system
  - LED frame for status display with illuminated presence detection
  - 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](http://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 (for instance 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.

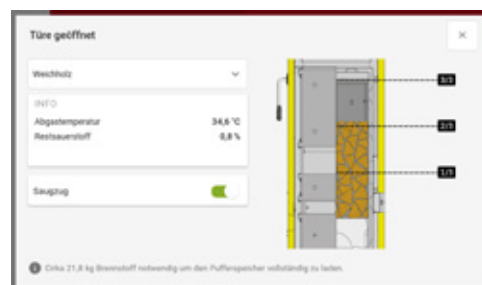
## Wood types

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.

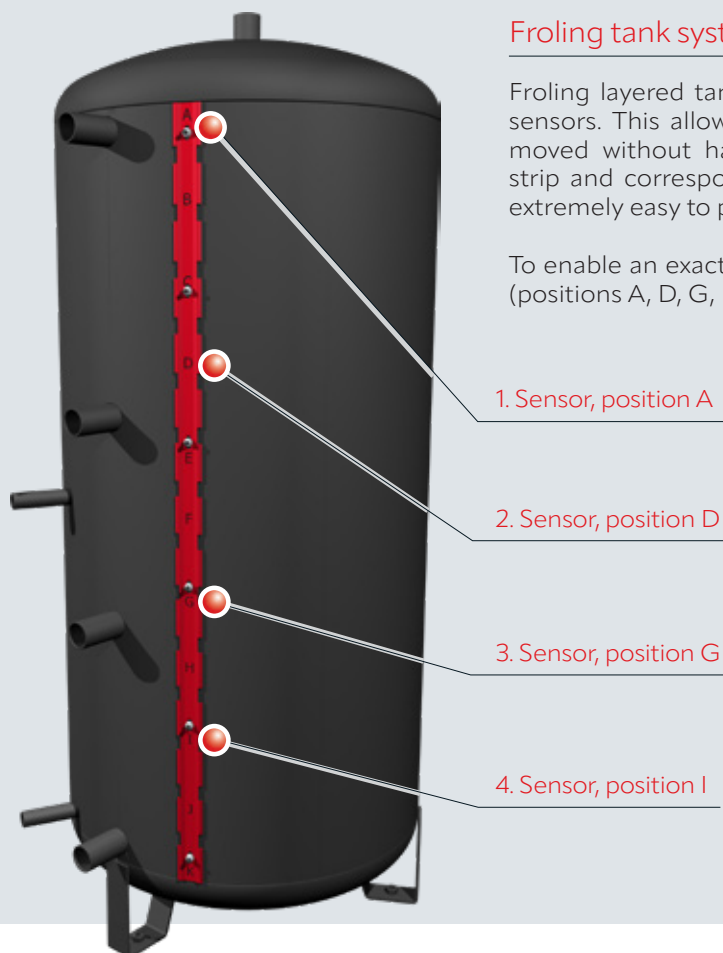
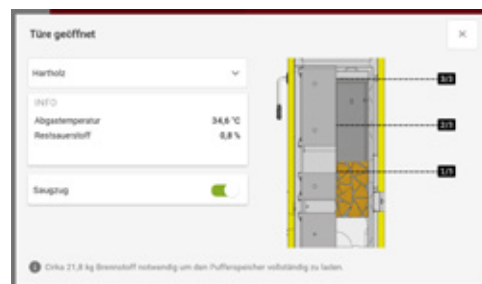
In order to achieve the same heating value, more softwood is needed than hardwood. For customers who only have limited storage capacity, hardwood is therefore particularly suitable for heating.

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



## Fröling tank systems with sensor strip

Fröling 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 Fröling 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!

**NEW!**

## 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

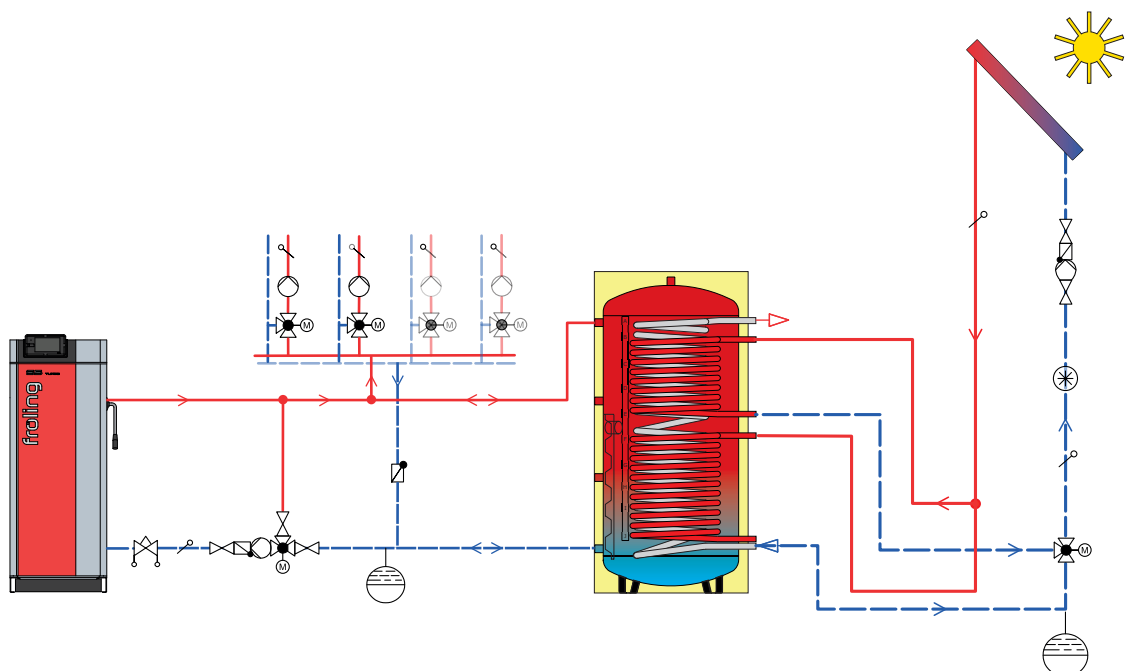
Set for measuring heat quantity, consisting of one volume-pulse transmitter ETW-S 2.5, one collector sensor and two contact-sensors for recording flow and return temperatures.

## SYSTEM TECHNOLOGY FOR EFFICIENT USE OF ENERGY

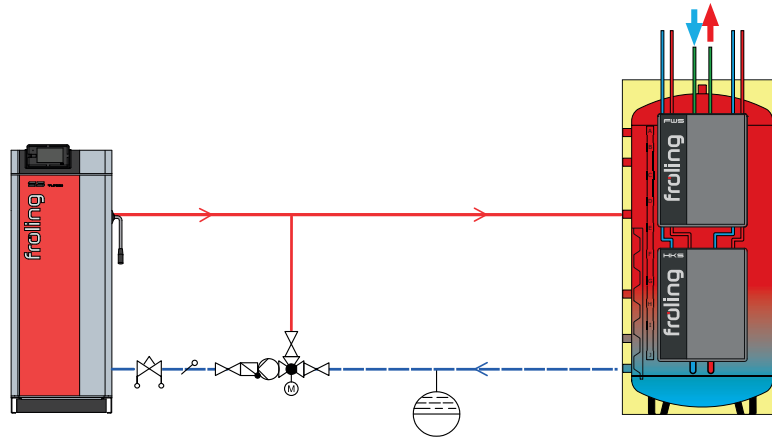
Froling systems engineering offers efficient energy management. Any number of storage tanks, hot water tanks and heating circuits can be included in the heat management system. You can also benefit from the ability to integrate other means of energy production such as solar panel systems.

- Advantages:
- Complete solution for all requirements
  - Perfectly matched components
  - Integration of solar power

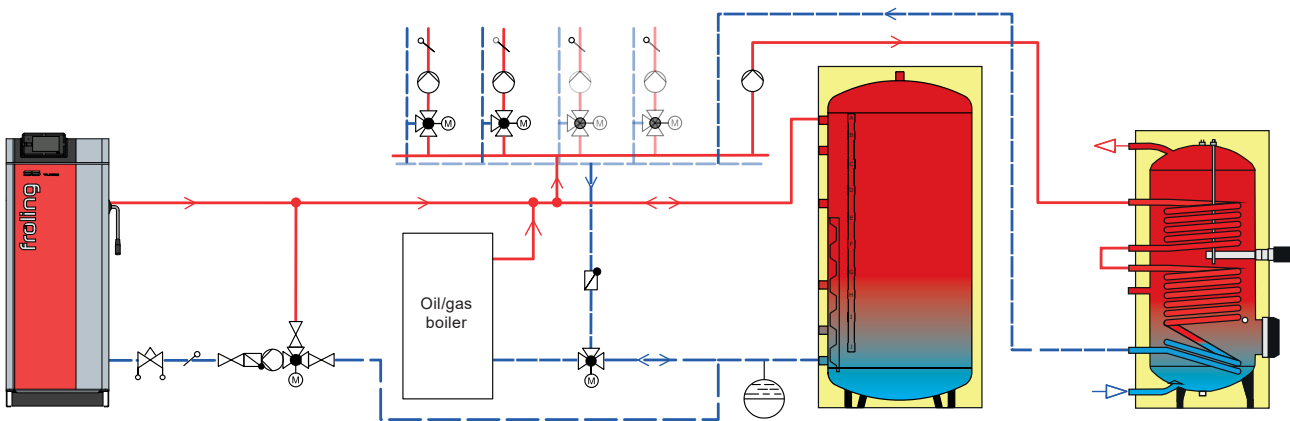
### S5 Turbo with H3 hygienic solar layered tank and solar connection



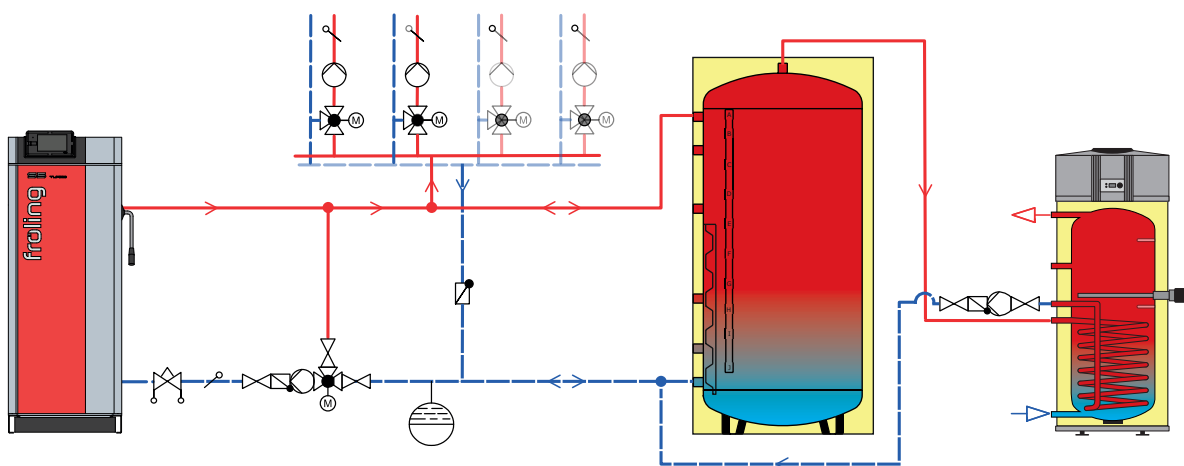
S5 Turbo with HS modular layered tank, FWS fresh water station and HKS heating circuit station



S5 Turbo with oil/gas boiler, layered tank and water heater

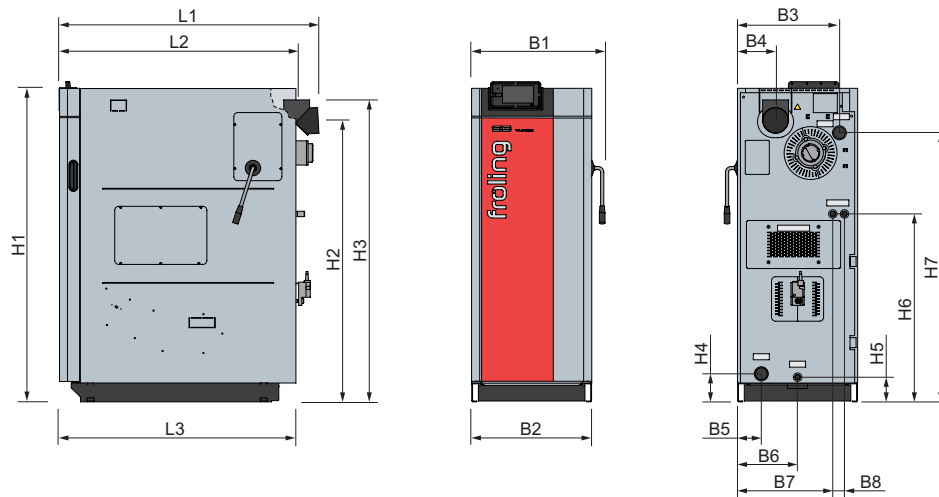


S5 Turbo with layered tank and domestic hot water pump



The schematic configurator (partner area) makes it possible to realise many other hydraulic connection options!

# DIMENSIONS & TECHNICAL SPECIFICATIONS



Dimensions in mm - S5 Turbo	22	30	34	40	48
L1 Length of the boiler (flue gas pipe connection at rear)	1305	1305	1335	1335	1335
L2 Clearance from the flue gas pipe top connection to the front face of the boiler	1185	1185	1215	1,215	1215
L3 Length of boiler	1180	1180	1210	1210	1210
B1 Overall width of boiler including WOS lever	685	685	770	770	770
B2 Width of boiler	600	600	700	700	700
B3 Clearance from flow connection to side of boiler	510	510	555	555	555
B4 Clearance from flue gas pipe connection to side of boiler	190	190	190	190	190
B5 Clearance from return connection to side of boiler	120	120	120	120	120
B6 Clearance from drainage connection to side of boiler	300	300	350	350	350
B7 Clearance from safety heat exchanger connection to side of boiler	475	475	515	515	515
B8 Clearance between safety heat exchanger connections	60	60	75	75	75
H1 Height of boiler	1565	1,565	1615	1615	1615
H2 Height, connection for rear flue gas pipe	1405	1405	1455	1455	1455
H3 Height, flue gas pipe top connection	1520	1520	1570	1570	1570
H4 Height, return connection	140	140	140	140	140
H5 Height, drainage connection	125	125	125	125	125
H6 Height of safety heat exchanger connection	940	940	990	990	990
H7 Height of flow connection	1345	1345	1395	1395	1395
Flue gas pipe diameter	129	129	149	149	149

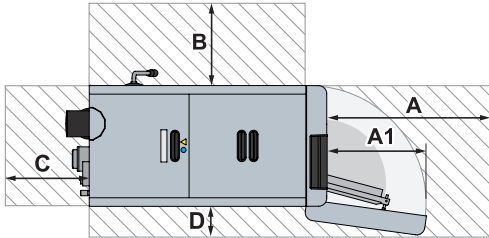
Technical data - S5 Turbo	22	30	34	40	48
Nominal output [kW]	22	30	34	40	48
Energy label <sup>1</sup>	A*	A*	A*	A*	A*
Fuel loading chamber capacity [l]	145	145	200	200	200
Fuel loading door (width/height) [mm]	380 / 360	380 / 360	380 / 360	380 / 360	380 / 360
Water capacity [l]	115	115	175	175	175
Boiler weight [kg]	635	640	765	770	775

<sup>1</sup> Efficiency label (boiler + controller)

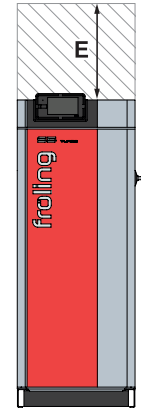
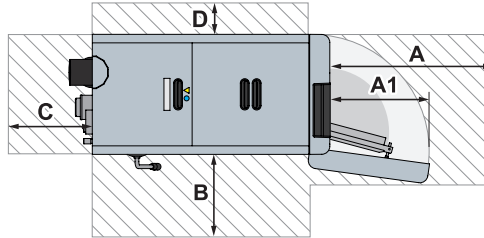
This satisfies the ecological design requirements of VO (EU) 2015/1189, Annex II, Point 1.

# OPERATING AND MAINTENANCE AREAS

WOS lever on the right-hand side of the boiler



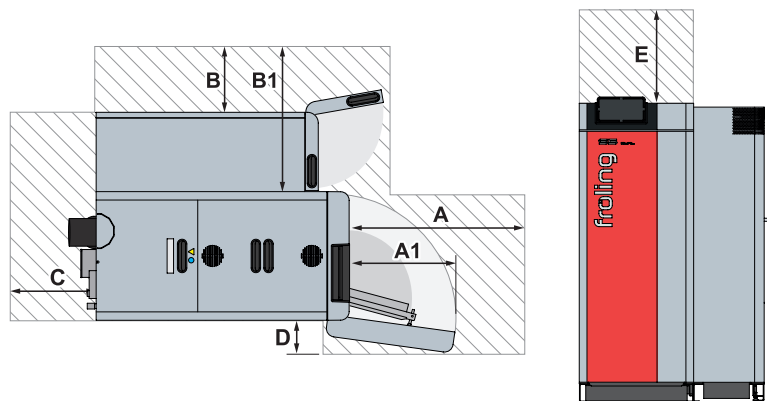
WOS lever on the left-hand side of the boiler



Recommended clearances in mm - S5 Turbo	22	30	34	40	48
A Insulated door to the wall	800	800	800	800	800
A1 Door swing area	550	550	650	650	650
B Boiler side with WOS lever to wall	400 <sup>1</sup>	400 <sup>1</sup>	500 <sup>1</sup>	500 <sup>1</sup>	500 <sup>1</sup>
C Back side to the wall	400	400	400	400	400
D Side of boiler to the wall	150	150	150	150	150
E Maintenance area above the boiler	500 <sup>2</sup>	500 <sup>2</sup>	500 <sup>2</sup>	500 <sup>2</sup>	500 <sup>2</sup>

<sup>1</sup> For the S5 Turbo 34 - 48 kW with automatic WOS, the maintenance range can be reduced to 400 mm.

<sup>2</sup> Maintenance area for removing the WOS springs upwards



Recommended clearances in mm - S5 Turbo	22	30	34	40	48
A Insulated door to the wall	800	800	800	800	800
A1 Door swing area	550	550	650	650	650
B Boiler side with WOS lever to wall	300 <sup>1</sup>	300 <sup>1</sup>	300 <sup>1</sup>	300 <sup>1</sup>	300 <sup>1</sup>
B1 Firewood boiler to the wall	670	670	670	670	670
C Back side to the wall	400	400	400	400	400
D Side of boiler to the wall	150	150	150	150	150
E Maintenance area above the boiler	500 <sup>2</sup>	500 <sup>2</sup>	500 <sup>2</sup>	500 <sup>2</sup>	500 <sup>2</sup>

<sup>1</sup> The right maintenance area can be reduced to 100 mm in exceptional circumstances, provided access to the rear of the boiler is guaranteed. In this case, the boiler can only be serviced from the rear. The maintenance area at the rear (C) is increased to 500 mm.

<sup>2</sup> 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
S5 Turbo	22 - 48 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

Fröling Heizkessel- und Behälterbau Ges.m.b.H.

A-4710 Grieskirchen, Industriestr. 12

AT: Tel +43 (0) 7248 606-0

Fax +43 (0) 7248 606-600

DE: Tel +49 (0) 89 927 926-0

Fax +49 (0) 89 927 926-219

E-mail: [info@froeling.com](mailto:info@froeling.com)

Internet: [www.froeling.com](http://www.froeling.com)

