



# S4 Turbo





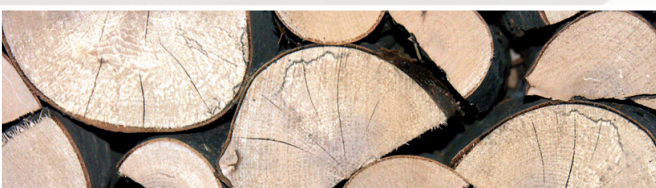
# Heating with firewood

For more than 50 years, Froling has specialised in efficiently using wood as a source of energy. Today the name Froling stands for modern biomass heating technology. The 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. The extensive service network ensures that Froling can satisfy customer needs and inquiries in a timely manner.



froling

## The fuel: Firewood (up to 56 cm)



Wood is a natural and ecologically desirable fuel. It is CO<sub>2</sub> neutral, highly sustainable, and not subject to 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 various types of wood used determine the various wood classes.



# S4 Turbo



## **S4 Turbo: The new generation of firewood boilers.**

Discover the world of modern firewood boiler technology! Froling's experienced engineers set high standards for the S4 Turbo firewood boiler and have achieved their goals.

- Efficiency Optimisation System (WOS) as standard
- Durable silicon carbide combustion chamber with long combustion zone for very low emissions.
- Quick heating-up with special air ducts (optional: automatic ignition)
- Easy cleaning and ash removal from the front of the boiler.
- Modular control technology with bus system
- Pellet unit can be added at any time on the S4 Turbo F (15-40 kW)

S4 Turbo 15 | 22 | 28 | 34 | 40 | 50 | 60



# The latest technology



S4 Turbo F with pellet flange (optional)

S4 Turbo F with pellet unit

## Pellet unit can be added any time

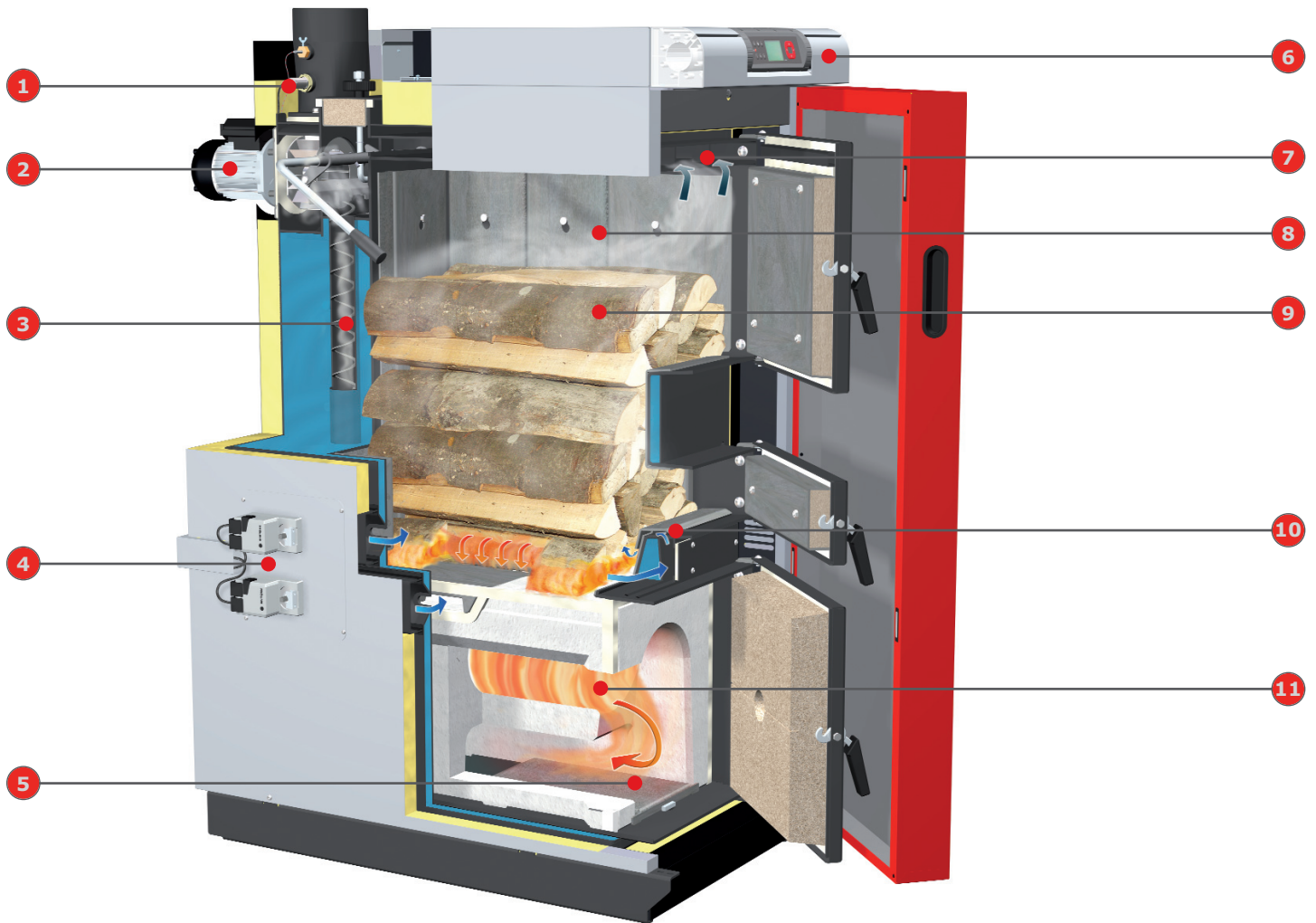
The S4 Turbo F with pellet flange is the ideal solution for people who are currently only burning firewood. It can easily be converted to a dual fuel boiler by fitting the pellet unit at any time (up to 40 kW).

## Modular design

The S4 Turbo F has 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. Due to the modular construction, the S4 Turbo F with pellet flange can be fitted with a pellet unit at any time.



# S4 Turbo



## The firewood boiler with special benefits:

- 1 Broadband lambda probe for optimal combustion.
- 2 Speed-regulated, low-noise induced draught fan for maximum ease of use.
- 3 WOS system (Efficiency Optimisation System) as standard, for high efficiency and user-friendly cleaning from outside.
- 4 Servo-motors as standard for automatic control of primary and secondary air.
- 5 Large maintenance openings for easy cleaning from the front.
- 6 New bus control concept with Lambdatronic S 3200 microprocessor control.
- 7 Carbonisation gas extraction system prevents smoke escaping during reloading.
- 8 Cladding to protect the inner wall of the boiler and for a longer service life.
- 9 Large fuel loading chamber for logs up to 56 cm in length guarantees longer periods between refilling.
- 10 Quick heating-up with special air ducts (optional: automatic ignition).
- 11 Durable silicon carbide combustion chamber with long combustion zone for very low emissions.



# The next generation



**Feature:** Large fuel loading chamber for logs up to 56 cm long with cladding

- Advantages:
- Easy loading
  - Long-lasting combustion
  - Long reloading intervals

The S4 Turbo allows burning of firewood up to a length of 56 cm for all system output sizes. It is filled conveniently from the front of the unit and due to a large fuel loading chamber long refilling intervals are possible. Often it is only necessary to fill the boiler once a day. A cladding protects the interior walls of the boiler, guaranteeing a long service life.

**Feature:** New combustion chamber shape

- Advantages:
- Very long combustion zone
  - Reduced emissions
  - Much more environmentally friendly

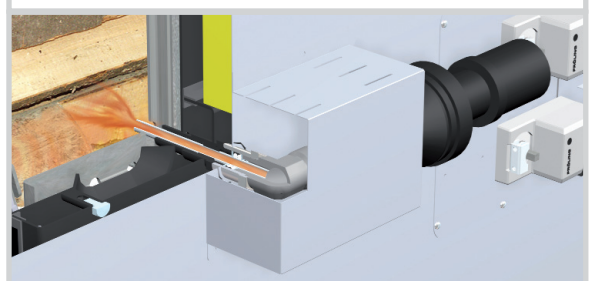
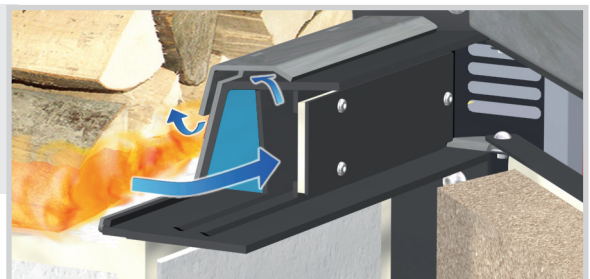
Froling has refined the traditional cylindrical combustion chamber shape and is setting new standards with an optimised heating gas duct. The exceptionally long combustion zone guarantees very low emissions. By using this firewood boiler technology, you are making a considerable contribution to maintaining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

**Feature:** Quick heating-up

- Advantages:
- Just load the boiler, light the fuel, close the door and feel the heat
  - No smoke is produced in the boiler room.
  - Automatic ignition (optional)

A unique design: The ignition door on the S4 Turbo can be closed immediately after ignition due to a special primary air duct. A striking difference to traditional systems.

And to make life even easier, you can choose the optional **automatic ignition**. Heating with firewood can be so convenient!





# S4 Turbo



## Feature: WOS system as standard

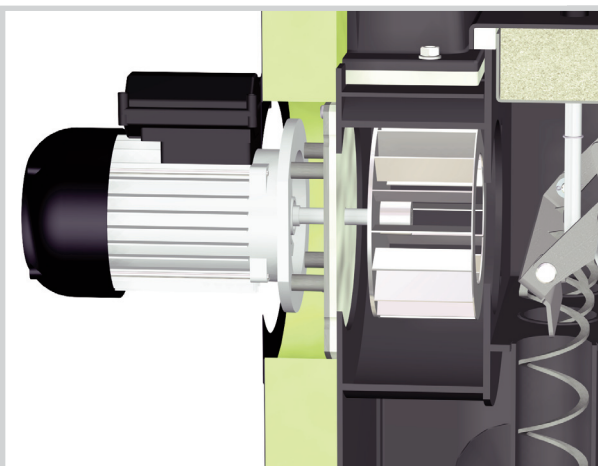
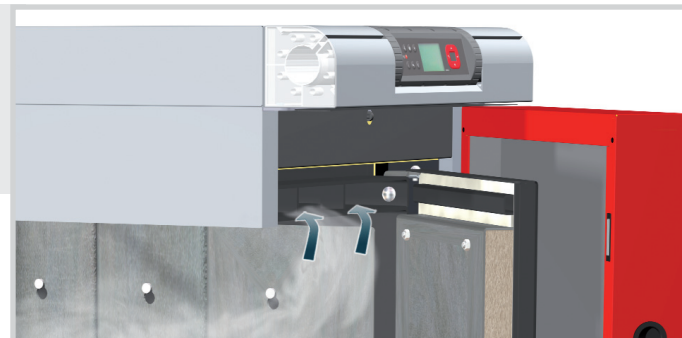
- Advantages:
- Heightened efficiency
  - Easy cleaning from outside
  - Fuel savings

We never compromise on ease of use. The WOS (Efficiency Optimization System), a standard part of the S4 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 outside. An additional benefit of this mechanism is that it ensures higher efficiency and fuel savings.

## Feature: Special carbonisation gas extraction system

- Advantages:
- No smoke escapes during re-filling
  - The boiler room stays clean

The specialised carbonisation gas extraction system prevents smoke from escaping even while topping off during refill. This is applicable at every stage of combustion.



## Feature: Speed-regulated induced draught fan

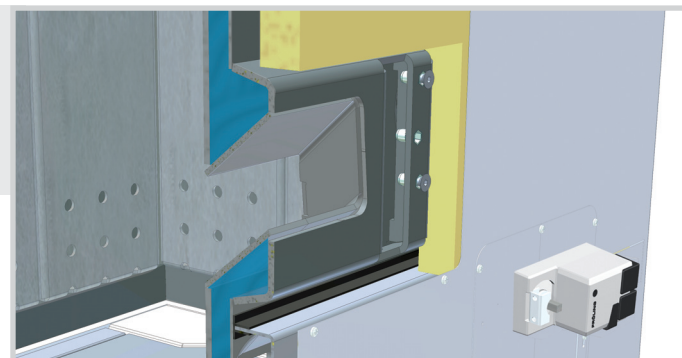
- Advantages:
- Maximum ease of use
  - Problem-free boiler start
  - Constant stabilisation of combustion

The speed-regulated induced draught fan is a standard component of the unit, which ensures exact air quantity and constant underpressure throughout combustion. This speed regulation device stabilises combustion throughout the process of heating and adjusts the output according to requirements. The induced draught fan operates almost noise free and is energy efficient.

## Feature: Pellet flange for the S4 Turbo F (optional)

- Advantages:
- Pellet unit can be added at any time.
  - Two systems perfectly combined.

The S4 Turbo F with pellet flange is the ideal solution for people who are currently only burning firewood. It can easily be converted to a dual fuel boiler by fitting the pellet unit at any time.





# Systematic convenience

## Feature: **Lambdatronic S 3200 control**

- Advantages:
- Exact combustion control with broadband lambda control as standard
  - Large, clear control unit with adjustable viewing angle
  - Boiler navigation from the living room



With the new S 3200 boiler control, Froling is taking a step into the future. The control unit is optimised to fit any requirement. An individually adjustable viewing angle ensures that all operating statuses are clearly displayed. The lambda control provides precise combustion control. The menu structure is ideally organised to ensure easy operation. All essential functions can be selected by simply pressing a button.

The **Froling bus** system makes it possible to install extension modules in any location. The console controls can be installed wherever needed: on the boiler, heating manifold, storage tank, in the living room, or in an adjacent building. Additionally, electric cables are kept to a minimum. Only a bus cable is needed to control the room consoles.



By using the Froling **room temperature sensor FRA** the most important modes of the heating circuits can be adjusted. The adjusting wheel allows you to change the room temperature by up to +/- 3° C.

For even more convenience you can use the **RBG 3200 room console** and the new **RBG 3200 Touch**. You can control the heating system from the comfort of your living room. The important system data is clearly displayed and changes can be set by pushing a button.





## NEW: Room console with touch display



The **RBG 3200 Touch room console** has a modern touchpad interface. The menu structure is organised and easy to use without prior instruction. The 4.3" colour screen shows the most important functions at once and even automatically adjusts the background lighting depending on conditions.

### Feature: **Froling SMS box**

- Advantages:
- Alarm messages via SMS
  - Active boiler control

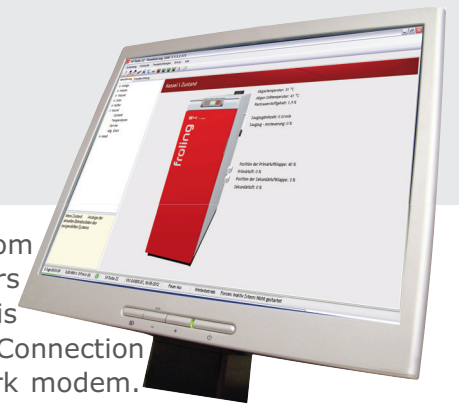
This system is available for all Froling boilers that are automatically fed and allows monitoring & controlling of the boiler by SMS. The SMS box can be directly programmed from a mobile phone. It has two error message inputs and two remote switch outputs. Alarm and message text can be adjusted as required. This includes switching the heating on and off to changing modes (e.g. from non-operating mode to operating mode – only in connection with room temperature sensor). An automatic response confirms the execution of the command that was sent.



### Feature: **Froling visualisation software 3200**

- Advantages:
- Monitor and operate from your PC
  - Boiler data is recorded
  - Remote control via modem

The optional boiler visualisation software enables easy boiler control from a computer. The desired operating conditions and customer parameters can be displayed and adjusted as necessary. Easy programming is guaranteed through the Windows interface menu with its easy set-up. Connection to the visualisation software can be done by using a telephone network modem. By using this option the heating system can be monitored from any location. Additionally, it is also possible to connect to an existing LAN by using an optional adapter.



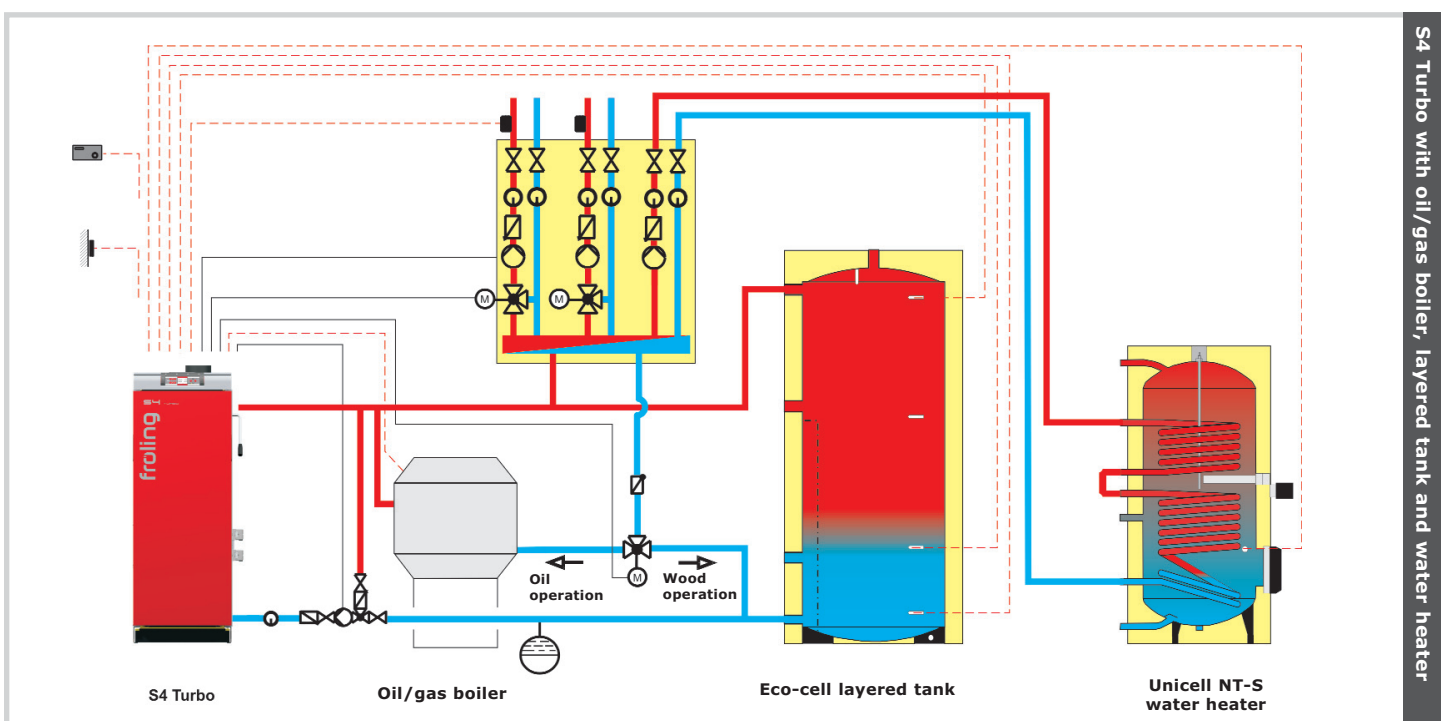
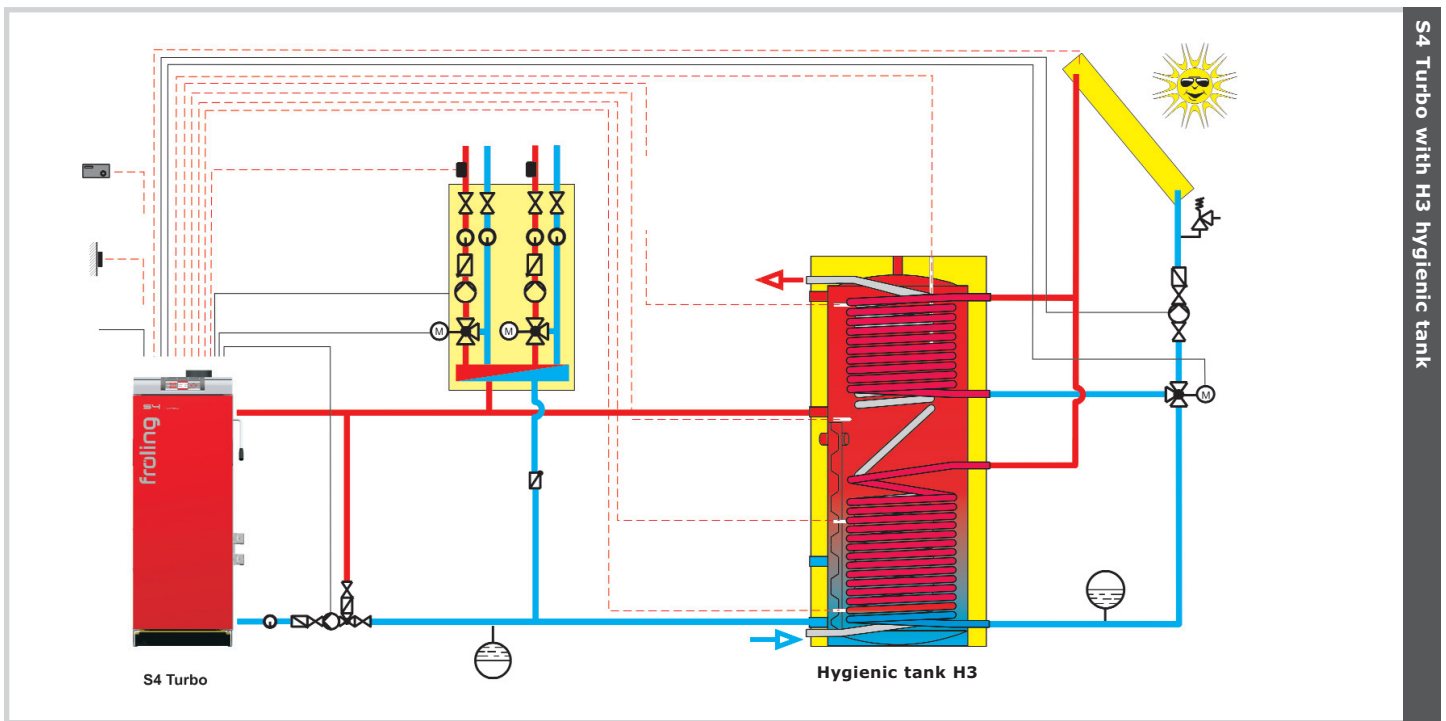


# S4 Turbo

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

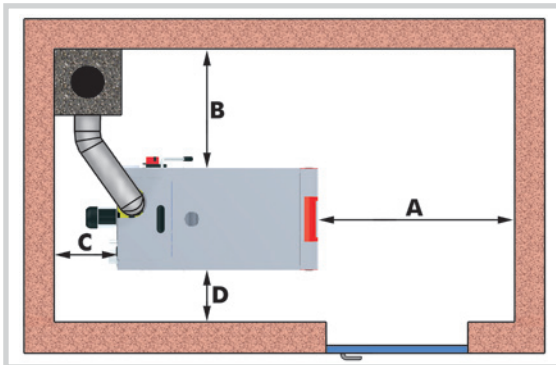
- Advantages:
- Complete solutions for all requirements
  - The components work perfectly together
  - Integrated solar power

Froiling systems engineering offers efficient energy management. Up to 4 storage tanks, 8 hot water tanks, and 18 heating circuits can influence the heat management system. An additional benefit is the ability to integrate alternative means of energy production, such as solar panels.

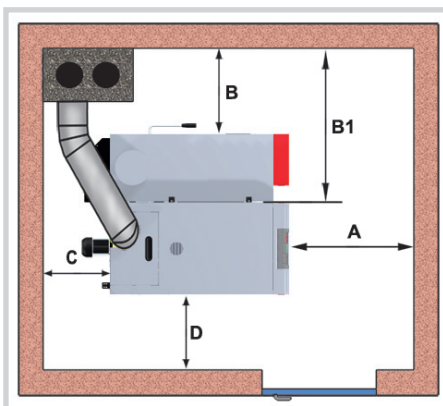




## Minimum distances in the boiler room



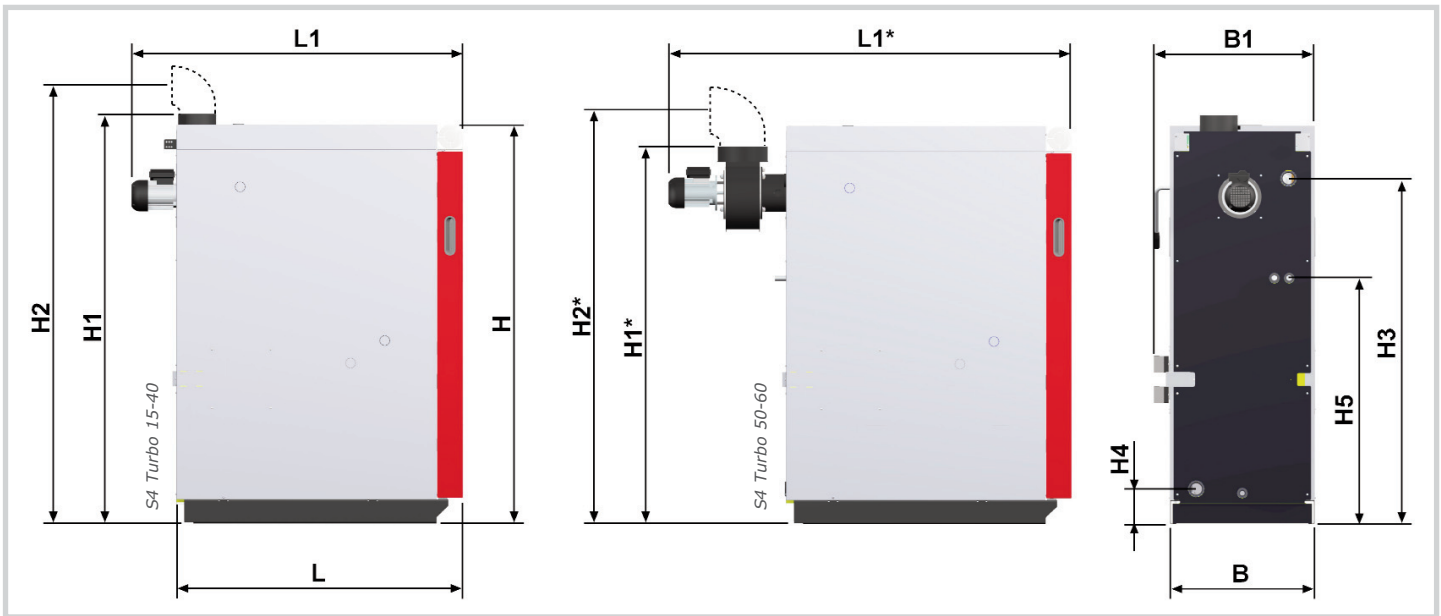
Minimum distances - S4 Turbo			15 - 60
A	Distance between insulated door and wall	[mm]	800
B	Distance - boiler side with WOS lever to wall	[mm]	800
C	Distance between rear of boiler and wall for S4 Turbo 15 - 40		500
	Distance between rear of boiler and wall for S4 Turbo 40 - 60	[mm]	800
D	Distance - boiler side to wall	[mm]	200



Minimum distances - S4 Turbo F			15 - 60
A	Distance between insulated door and wall	[mm]	800
B	Distance - boiler side with WOS lever and pellet unit to wall	[mm]	700
B1	Distance - boiler side without pellet unit to wall	[mm]	1130
C	Distance between rear of boiler and wall	[mm]	500
D	Distance between side of boiler and wall	[mm]	200



# Technical specifications



Dimensions - S4 Turbo (F)		15	22	28	34	40	50	60
L	Length of boiler	1125	1125	1125	1215	1215	1215	1215
L1	Total length inc. induced draught fan	1300	1300	1300	1390	1390		
L1*	Total length inc. induced draught fan						1680	1680
B	Width of boiler	570	570	570	670	670	670	670
B1	Total width inc. servo-motors	635	635	635	735	735	735	735
H	Height of boiler	1565	1565	1565	1565	1565	1565	1565
H1	Total height, inc. flue gas pipe	1610	1610	1610	1610	1610		
H1*	Height of induced draught unit housing						1480	1480
H2	Height of flue gas pipe connection	1830	1830	1830	1830	1830		
H2*	Height of flue gas pipe connection						1700	1700
H3	Flow connection	1360	1360	1360	1360	1360	1360	1360
H4	Return connection	140	140	140	140	140	140	140
H5	Safety heat exchanger connection	970	970	970	970	970	960	960
	Flue gas pipe diameter	150	150	150	150	150	150	150

\*) dimensions indicated for S4 Turbo 50/60 only; all dimensions in mm

Technical specifications - S4 Turbo (F)		15	22	28	34	40	50	60
Nominal output	[kW]	15	22	28	34	40	50	60
Boiler efficiency	[%]	92.3	92.7	92.8	92.9	93.0	94	94.9
Power consumption	[W]	105	105	125	110	110	140	140
Dust	[mg/m <sup>3</sup> ]	11	13	12	10	9	11	12
Fuel loading chamber capacity	[l]	145	145	145	190	190	200	200
Fuel loading door (width/height)	[mm]	360 / 380	360 / 380	360 / 380	360 / 380	360 / 380	360 / 380	360 / 380
Water capacity	[l]	115	115	115	175	175	170	170
Boiler weight	[kg]	640	645	650	735	745	793	803

\*) Technical performance data in accordance with the test report from TÜV Austria Services GmbH

Your Froling partners:

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