



# S3 Turbo



WITH BROADBAND  
LAMBDA PROBE AND  
AUTOMATIC AIR CONTROL

# From a renowned company

For more than 55 years Froling has specialised in 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. Our extensive service network guarantees full coverage and reliability.

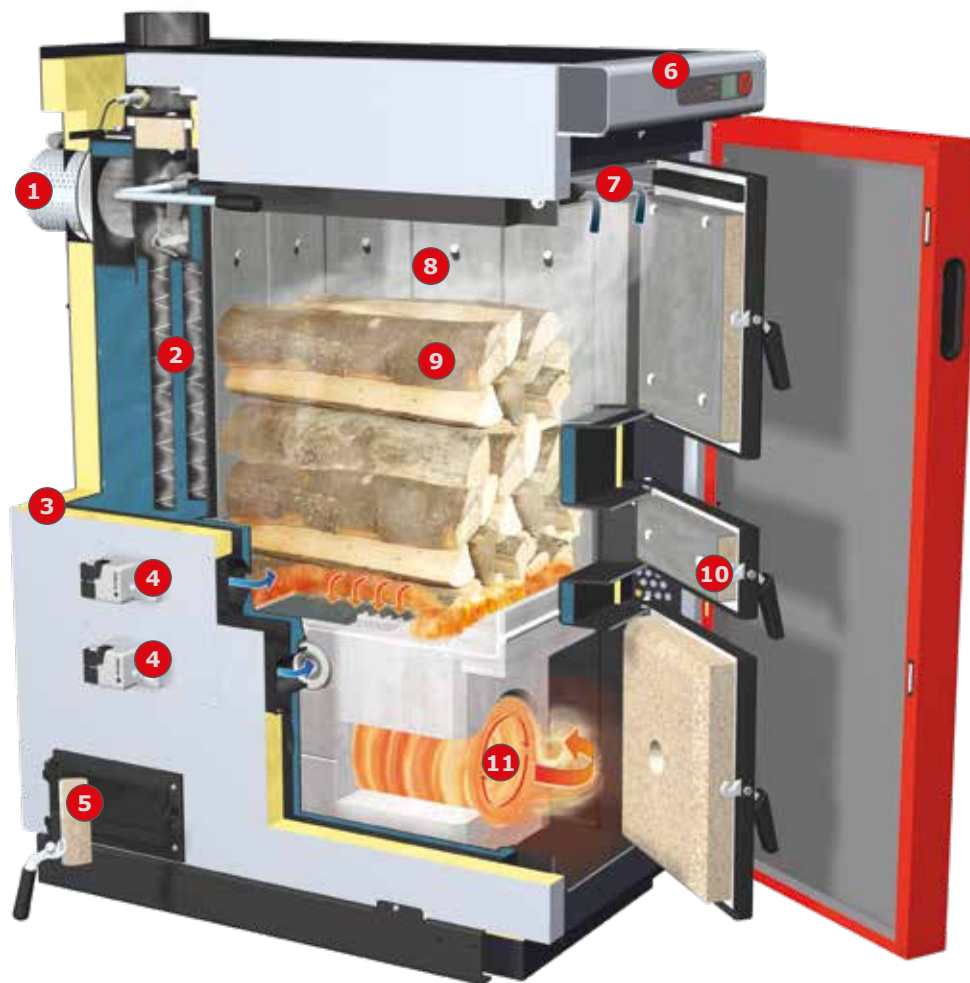
The Froling logo is displayed in white, three-dimensional lettering on a bright red metal building facade. The logo consists of the word "froling" in a lowercase, sans-serif font, followed by a red circle with a white highlight, suggesting a globe or a stylized 'O'.

## **S3 Turbo: Top-quality boiler technology at a very competitive price**

The S3 Turbo is North America's leading firewood boiler. It includes all features found on high-end European firewood boilers.

- Patented, cylindrical high-temperature turbulence combustion chamber for excellent combustion values.
- Separate pre-heating chamber door for easy pre-heating.
- Carbonisation gas extraction system for smoke-free reloading.
- Speed-regulated induced draught fan for output control and full operating safety.





## The firewood boiler with special benefits:

- 1 Speed-regulated induced draught fan for maximum ease of use.
- 2 WOS (efficiency optimisation system) for high efficiency and easy cleaning.
- 3 Top quality thermal insulation.
- 4 Manual adjusters (or actuators with Lambdatronic) for primary and secondary air.
- 5 Large maintenance openings for easy cleaning.
- 6 Lambdatronic controller
- 7 Carbonisation gas extraction system prevents flue gas from escaping during reloading.
- 8 Aprons (hot cladding) to protect the inner wall of the boiler for a longer service life.
- 9 Large fuel loading chamber for half-metre logs ensures long reloading intervals.
- 10 Separate pre-heating chamber door for easy pre-heating.
- 11 Patented high-temperature turbulence combustion chamber ensures low emissions.

# A successful design



**Feature: Large fuel loading chamber for half-metre logs**

- Advantages:
- Easy front-loading
  - Long combustion time
  - Long reloading intervals

The S3 Turbo can be loaded with half-metre firewood easily from the front. The loading chamber is 55 cm deep and has a generous reserve of space. Often it is only necessary to fill the boiler once a day. Strong steel guards protect the loading chamber and keep it clean.

**Feature: High-temperature turbulence combustion chamber**

- Advantages:
- Excellent combustion values
  - Low emissions
  - Much more environmentally friendly

Froling uses the patented, cylindrical high-temperature turbulence combustion chamber in the S3 Turbo. This means the boiler delivers excellent combustion values. The generous dimensions of the combustion zone guarantee low emissions. So by using a Froling S3 Turbo you are helping to keeping our air clean.

**Feature: WOS system**

- Advantages:
- Even greater efficiency
  - Easy cleaning from outside
  - Fuel savings

The WOS (efficiency optimisation system) 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: clean heating surfaces lower energy consumption.

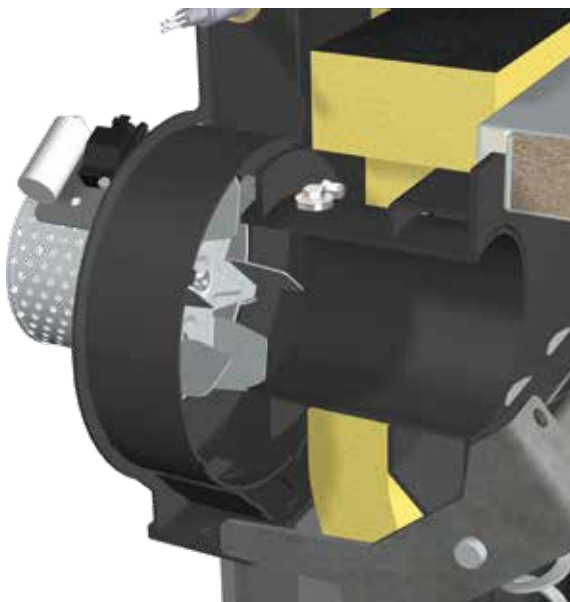
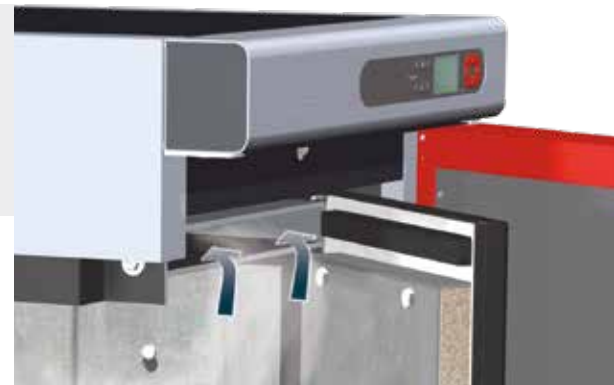




**Feature: Special carbonisation gas extraction system**

- Advantages:
- No flue gas escapes during reloading
  - The boiler room stays clean

The special carbonisation gas extraction system also prevents any gas from escaping when refilling. This is applicable at every stage of combustion. Enjoy modern heating with wood!



**Feature: Speed-regulated induced draught fan**

- Advantages:
- Easy to operate
  - Adapts to all operating conditions
  - Full operating safety

The primary and secondary air settings are adjusted by the technician during commissioning. The function-monitored induced draught fan enables the system to adjust to different operating conditions. This offers excellent output adjustment with full operating safety. In the S3 Turbo with broadband lambda probe the primary and secondary air settings are adjusted by means of servo-motors, ensuring that output is adapted to given requirements at every stage of combustion.

# System convenience

## S-Tronic Lambda



Advantages:

- Speed regulation and function monitoring of the induced draught fan for output adjustment
- Lambda control with broadband lambda probe
- Control of primary and secondary air via 2 servo-motors
- Integrated storage tank management
- Visual display with control keys for setting
- Can be used to control 2 mixed heating circuits
- Integrated boiler management



## Froling FRA room temperature sensor / RBG 3200/RGB 3200 Touch room console

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

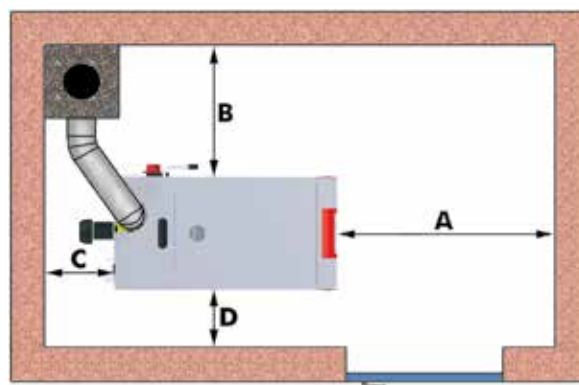
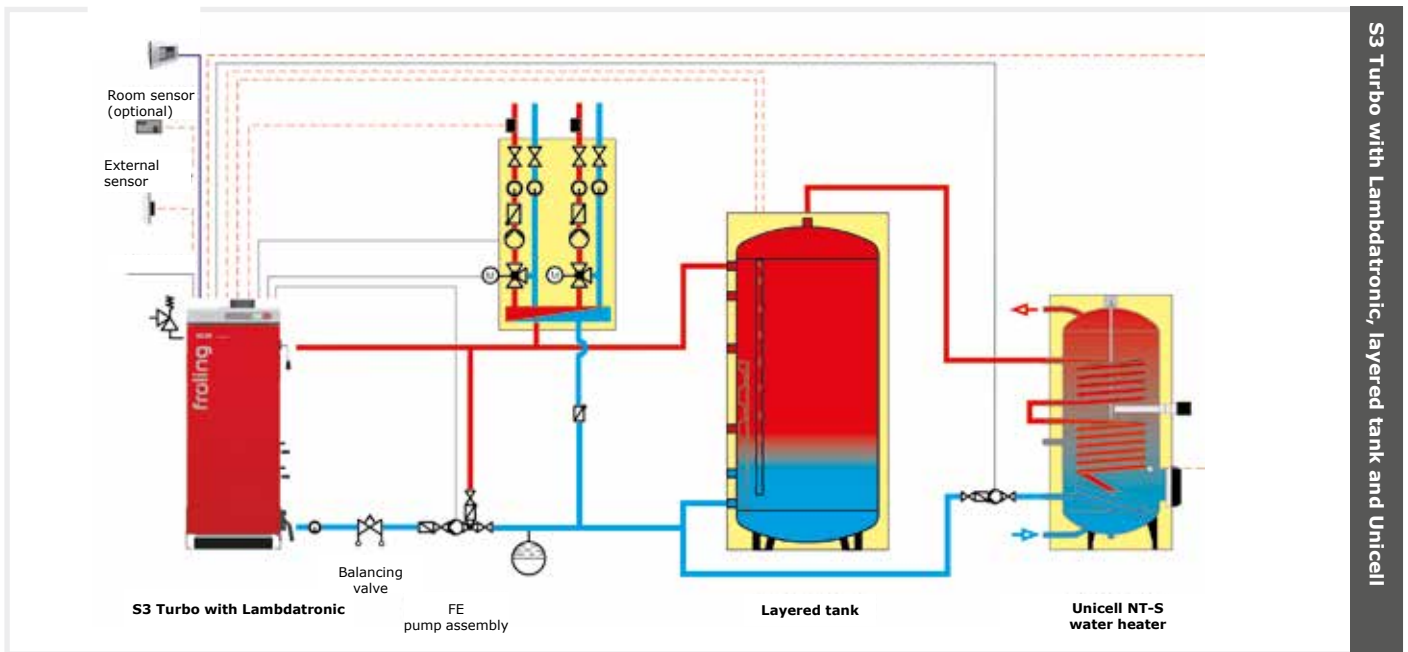
The **RBG 3200/RGB 3200 Touch room console** makes the system even easier to use. You can control the heating system easily from your living room. The important system data is clearly displayed and changes can be set at the push of a button.

## Firewood reload calculation

Too much firewood can result in fuel that is not completely burnt despite the storage tank being loaded. The integrated reload calculation 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.



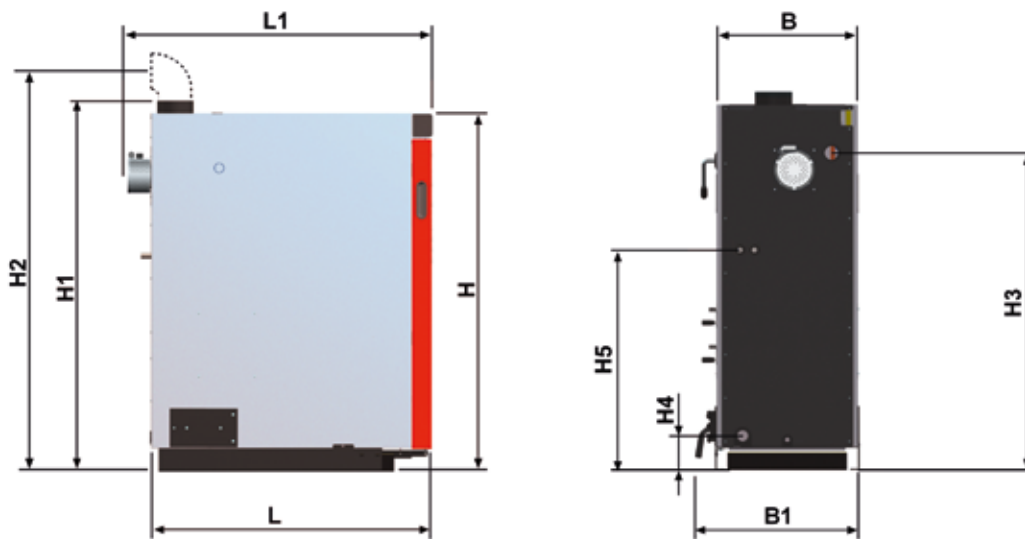
The **Lambdatronic controllers** allow for efficient energy management. Up to 4 storage tanks, up to 8 hot water tanks and up to 18 heating circuits can be integrated into the heating management system. You also benefit from the ability to integrate other means of energy production, such as solar panels.



| Minimum distances in the boiler room |                                     | 30-50                      |
|--------------------------------------|-------------------------------------|----------------------------|
| A                                    | Distance - front of boiler to wall  | 36" (900 mm)               |
| B                                    | Distance - side of boiler to wall   | 32" (800 mm <sup>1</sup> ) |
| C                                    | Distance - back to wall             | 14" (500 mm)               |
| D                                    | Distance - side of boiler to wall   | 9" (200 mm <sup>1</sup> )  |
|                                      | Distance between ceiling and boiler | 18" (460 mm)               |

<sup>1</sup> The side of the boiler where the WOS lever is located (B or D) should be at least 800 mm from the wall to allow easy access for connecting the appliance and for maintenance work (e.g. induced draught).

# Technical data



| Dimensions - S3 Turbo |  | [mm] | 30   | 50   |
|-----------------------|--|------|------|------|
| L                     | Length of boiler                           |      | 1160 | 1250 |
| L1                    | Total length including induced draught fan |      | 1260 | 1350 |
| B                     | Width of boiler                            |      | 570  | 670  |
| B1                    | Total width including side cleaning door   |      | 680  | 780  |
| H                     | Height of boiler                           |      | 1470 | 1570 |
| H1                    | Total height including flue gas pipe       |      | 1530 | 1630 |
| H2                    | Height of flue pipe connection             |      | 1635 | 1735 |
| H3                    | Flow connection                            |      | 1280 | 1380 |
| H4                    | Return connection                          |      | 140  | 140  |
| H5                    | Safety heat exchanger connection           |      | 890  | 970  |
|                       | Flue pipe diameter                         |      | 149  | 149  |

| Technical specifications - S3 Turbo           |              |  | 30         | 50         |
|---|--------------|--|------------|------------|
| Nominal output                                | [kW / Btu/h] |  | 30/102,500 | 50/170,000 |
| Fuel loading chamber capacity                 | [l/gal]      |  | 140/37     | 210/55     |
| Fuel loading door (width/height)              | [mm]         |  | 330/370    | 330/370    |
| Water capacity                                | [l/gal]      |  | 120/32     | 190/50     |
| Boiler weight incl. controller and insulation | [kg/lbs]     |  | 530/1170   | 620/1370   |

\* Composite label (boiler + controls)

Your Froling partner:



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