

Clean Heating, Naturally STREBEL

# TURBOTEC ADVANCED WOOD GASIFYING BOILERS



Renewables

## Key Features:

- ① High tech wood-gasifying with lambda control system
- ② High efficiency, low emissions
- ③ Burning process controlled precisely with microprocessors in the lambda control unit achieving max performance
- ④ Minimum demand of wood - maximum economical usage
- ⑤ Convenient operation, generous filling-chamber, long burning duration
- ⑥ Suitable for a variety of heating systems with versatile system components
- ⑦ Experienced engineers on hand to offer technical advice and support
- ⑧ Austrian production - Europe's leading log gasifying boiler range

## Environmentally friendly heating from Strebel

**As a European leader in biomass heating products, Strebel offers a comprehensive range of highly efficient wood biomass boilers which along with heat stores and fuel storage options provide a complete renewable energy heating system for the domestic and commercial market.**

Our range of Strebel Turbotec wood gasifying boilers provides the efficient burning of wood with low emissions and complies with stringent pollution legislation. The boilers make the most of the many benefits of using a natural, renewable resource - wood in particular offers you an environmentally friendly, economic choice that can be sourced locally and easily and cleanly stored.

## The Strebel Turbotec range

**The Turbotec boilers are designed to burn a wide range of different wood heating material and can be used to heat domestic and commercial buildings. All kinds of dry untreated (natural) wood, in varying sizes, are suitable for the lambda control boilers and the burning process is adapted to output demand and also safely and efficiently takes care of low heat requirements.**

Additionally, the lambda control allows the combustion of all elements from just loaded logs to the advanced blue flame burning of the gas which is produced from the wood. Blue-flame technology produces a blue to pink gas flame within the flame canal which is situated below the "in boiler baked fuel". Accurate trimming of primary and secondary air maintains a clean combustion burn from loading to full burn out of the fuel. Furthermore, you'll also benefit from minimal making up of the fire, as all the boilers are equipped with a wide log loading chamber that enables easy loading and can facilitate burn time periods of over 8 hours.

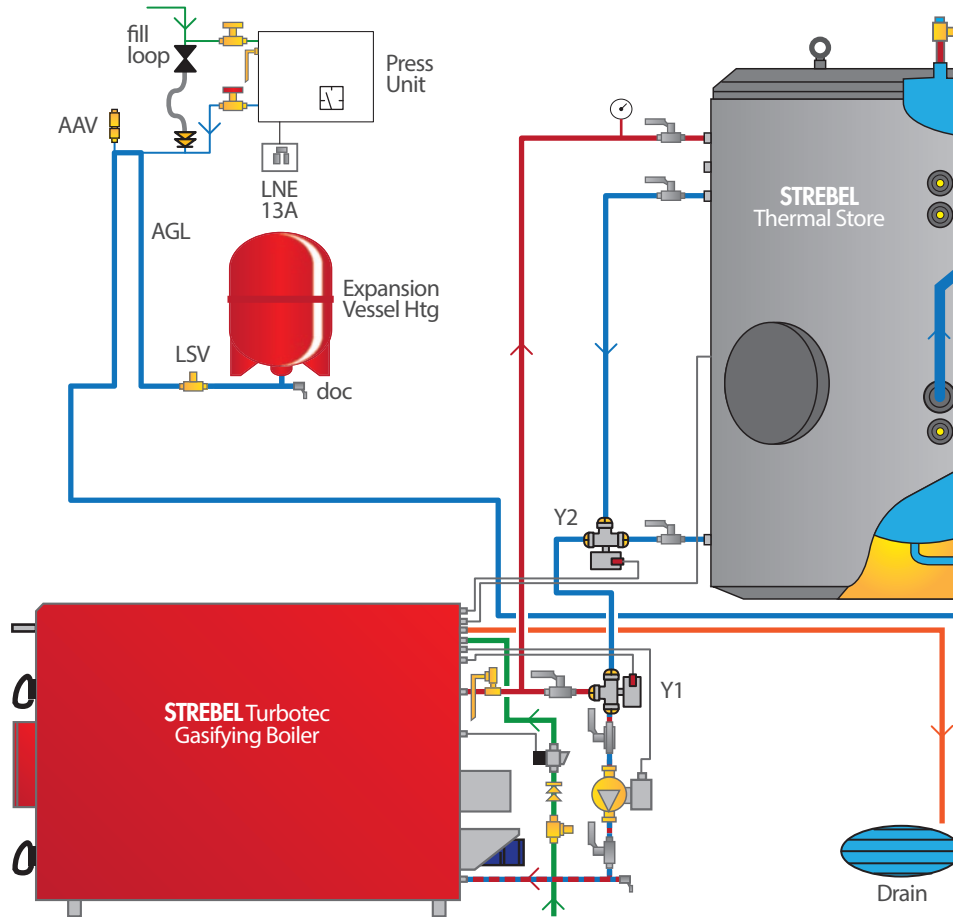
The Turbotec Boiler is available in versions LC-E, LC1, LC1-BSB & LC2-BSB. The TT LC-E is delivered with full lambda combustion controls providing accurate trimming of air to give blue-flame burning. The LC1 includes all the features of LC-E but with the added digital control of Heat Store supervision (Y2) and Boiler anti-corrosion control (Y1) of the return water temperature. Additionally, an extra standard feature included is an electronic door solenoid, preventing the loading door from opening until permitted by the digital controller.

The TT LC1-BSB & LC2-BSB are innovative market leading log boiler controllers, which include all the features of LC-E & LC1, but come complete with a large, multi-line display. The BSB function gives the ability to input wood type and allows the controller, with the use of 4 sensors, to give the user more control throughout the buffer and system and will indicate when the next load will be required.

The ability to control system circuits with the LC1-BSB & LC2-BSB; such as hot water & solar thermal integration - with weather compensation capabilities - gives proof to this ingenious controller and it's many advantages for the user.

A full range of accessories are available to fully complement the Strebel range of wood gasifying boilers, including back end protection valves, heat store valves, pressurisation units, expansion vessels and heat stores.

### Strebel Turbotec typical layout



As with all wood burning boilers, back end protection is required to maintain 60°C water return temperature

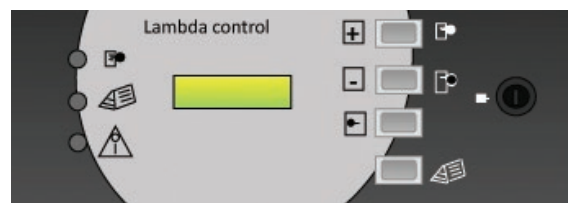
**THE LC-E DIGITAL CONTROL:** This is exclusively used on the TT LC-E Boiler maintaining full combustion control via the lambda sensor. With total supervision of all combustion stages this control drives all air input devices and tests, in real time, the resulting combustion. The resulting wood gas blue flame delivers peak efficiency with low pollution levels, therefore helping to protect our environment.



LC-E Digital Control

### THE LC1 LAMBDA CONTROL:

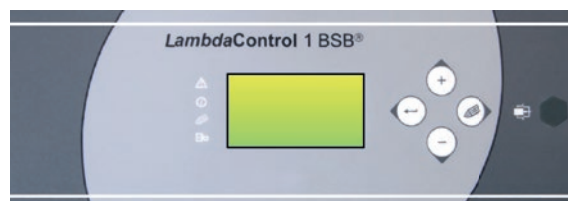
By utilising the latest digital technology the LC1 control offers all the benefits of the TT LC-E control with the added ability of digitally controlling the boiler system hydraulics. Back end anti-corrosion protection device management is completely taken care of with second by second detection of the boiler return temperature.



LC-1 Lambda Control

### THE ADVANCED LC1 BSB & LC2 BSB LAMBDA CONTROL:

The TT LC1-BSB & LC2-BSB include all the features of LC-E & LC1, but come complete with a large, multi-line display. The BSB function allows the input of wood type and means the controller, via 4 sensors, gives the user more control and indicates when the next load will be required. System circuits such as hot water & solar thermal can also be controlled with the LC1-BSB & LC2-BSB.



LC1-BSB & LC2-BSB Lambda Control

## Strebel Turbotec range comparison chart

Boiler Model	Features			
	LC-E	LC1	LC1 BSB	LC2 BSB
Fully Insulated Steel Body	✓	✓	✓	✓
Full Digital Controller	✓	✓	✓	✓
Lambda Controlled Combustion	✓	✓	✓	✓
Electronic Door Solenoid	#	✓	✓	✓
Heat Exchanger Cleaning	#	#	#	#
Thermal Control of Y1 & Y2 Valves	✓			
Electrical Control of Y1 & Y2 Valves		✓	✓	✓
Remote Refuelling Signal		✓	✓	✓
Full Electronic Control of Thermal Store Temperature		✓	✓	✓
Large Multiline Display			✓	✓
Optimising Parameters for Type of Wood and Water Content		✓	✓	✓
Optimising of the Ignition and Burn off Situation in the Boiler		✓	✓	✓
Automatic Ignition			#	#
Control of Single Heating Circuit (Weather Compensated)			#	✓
Control of Two Heating Circuits (Weather Compensated)			#	✓
Living Room Control			#	✓
Hot Water control				✓
Integration of Thermal Solar Control			#	✓
Automatic Switch on Backup Boiler		✓	✓	✓

✓ Standard  
# Optional Extras



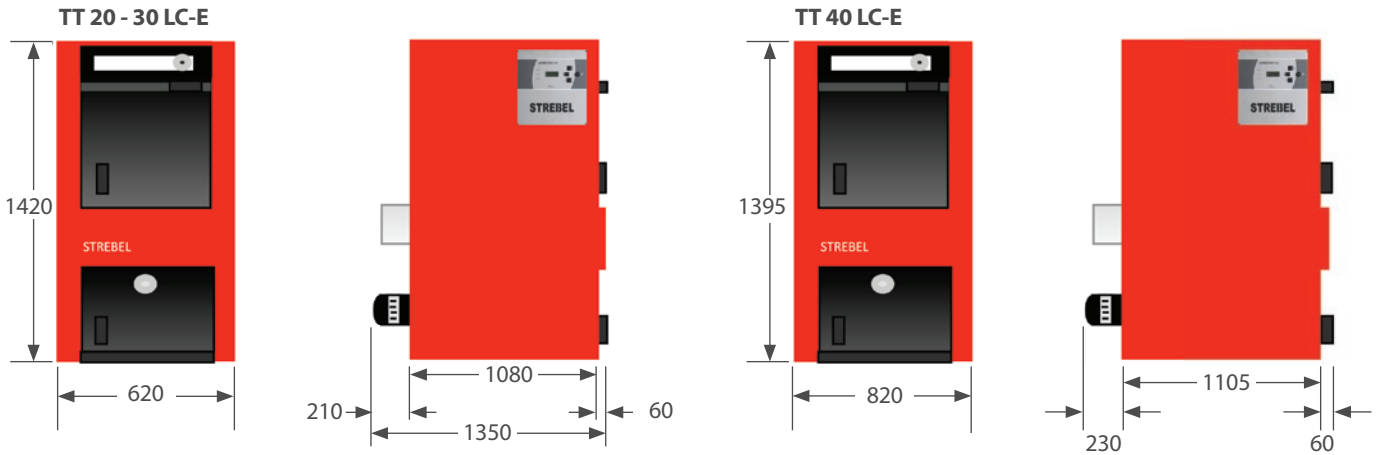
The wood burners are constructed to Strebel's high quality standards and are made from robust parts. Additionally, they are fully insulated with the body of the boiler being made from 6mm strong special steel. Their well thought out design also makes servicing easy with simple access to internal flue-ways, air dampers, control devices and the modulating combustion fan.

As part of our ongoing commitment to providing you with the best possible service, when choosing a Strebel Turbotec boiler we will provide you with comprehensive technical expertise and full back-up at the planning stage and throughout the lifetime of your chosen product. Furthermore full training is available on site at your location.

And as with all Strebel products, our boilers come with the full backing of our experienced service team.

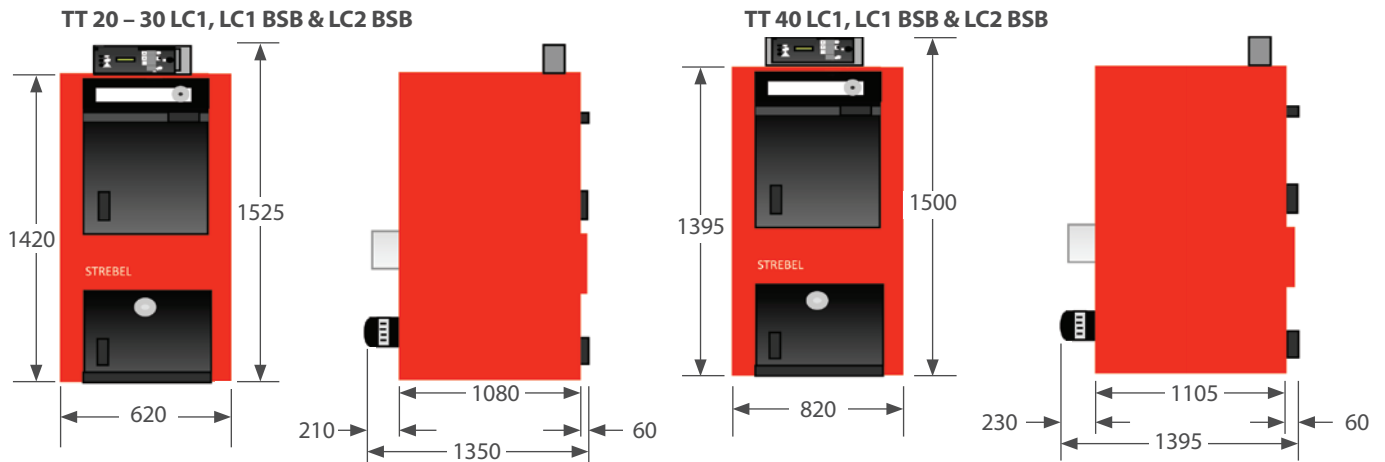
### Strebel Turbotec LC-E Technical Specifications

The Turbotec LC-E boiler is delivered with full lambda combustion controls providing accurate trimming of air to give blue-flame burning.



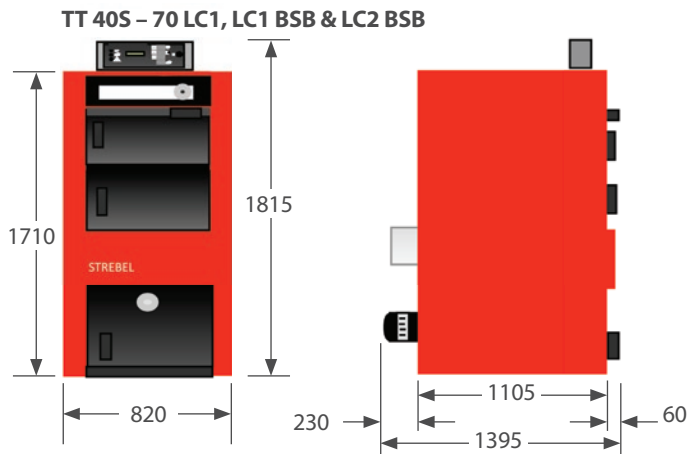
### Strebel Turbotec 20 to 40 LC1, LC1 BSB & LC2 BSB Technical Specifications

The Turbotec 20 to 40 LC1, LC1 BSB & LC2 BSB boilers are equipped with full control of all combustion elements via adjustable parameters made at the time of commissioning using the advanced digital controller. The digital control supervises and fully controls the boiler back end protection where the hydraulics are fitted with the relevant valves. There is further advanced control with the heat store: first heating the store top then, when a predetermined temperature is reached, the relevant hydraulics are operated for complete supervised heating of the full heat store.



### Strebel Turbotec 40S to 70 LC1, LC1 BSB & LC2 BSB Technical Specifications

The Turbotec 40S to 70 LC1, LC1 BSB & LC2 BSB boilers give higher outputs and enjoy the full controllability of the advanced digital controller.



		TECHNICAL SPECIFICATIONS LC-E			
Boiler Model		TT 20	TT 25	TT 30	TT 40
Output	kW	20	25	30	40
Efficiency	%	91.0	90.8	90.6	90.1
Dimensions:					
Length	mm	1350	1350	1350	1395
Width	mm	620	620	620	820
Height	mm	1420	1420	1420	1395
Weight	kg	515	515	515	710
Filling Volume	Litre	150	150	150	190
Load Door Sizes	cm	60 34	60 34	60 34	36 54
Flue Temp	°C	158	160	163	169
Flue Diameter	mm	150	150	150	180
Maximum Log Length	mm	600	600	600	600
Flow & Return	inch	1 <sup>1/4</sup>	1 <sup>1/4</sup>	1 <sup>1/4</sup>	1 <sup>1/4</sup>
Recommended Thermal Store Size	Litre	1000	1500	1500	2000

(Dimensions + feed type, ash container size, etc.) Models and dimensions are subject to change.

		TECHNICAL SPECIFICATIONS LC1, LC1 BSB & LC2 BSB			
Boiler Model		TT 20	TT 25	TT 30	TT 40
Output	kW	20	25	30	40
Efficiency	%	91.0	90.8	90.6	90.1
Dimensions:					
Length	mm	1350	1350	1350	1395
Width	mm	620	620	620	820
Height	mm	1525	1525	1525	1500
Weight	kg	515	515	515	710
Filling Volume	Litre	150	150	150	190
Load Door Sizes	cm	60 34	60 34	60 34	36 54
Flue Temp	°C	158	160	163	169
Flue Diameter	mm	150	150	150	180
Maximum Log Length	mm	600	600	600	600
Flow & Return	inch	1 <sup>1/4</sup>	1 <sup>1/4</sup>	1 <sup>1/4</sup>	1 <sup>1/4</sup>
Recommended Thermal Store Size	Litre	1000	1500	1500	2000

(Dimensions + feed type, ash container size, etc.) Models and dimensions are subject to change.

		TECHNICAL SPECIFICATIONS LC1, LC1 BSB & LC2 BSB			
Boiler Model		TT 40S	TT 50	TT 60	TT 70
Output	kW	40	50	60	70
Efficiency	%	90.1	90.2	90.4	90.5
Dimensions:					
Length	mm	1395	1395	1395	1395
Width	mm	820	820	820	820
Height	mm	1815	1815	1815	1815
Weight	kg	925	925	515	710
Filling Volume	Litre	290	290	290	290
Load Door Sizes	cm	36 54	36 54	36 54	36 54
Flue Temp	°C	169	176	183	169
Flue Diameter	mm	180	180	180	180
Maximum Log Length	mm	600	600	600	600
Flow & Return	inch	1 <sup>1/4</sup>	1 <sup>1/4</sup>	1 <sup>1/4</sup>	1 <sup>1/4</sup>
Recommended Thermal Store Size	Litre	2000	3000	3000	4000

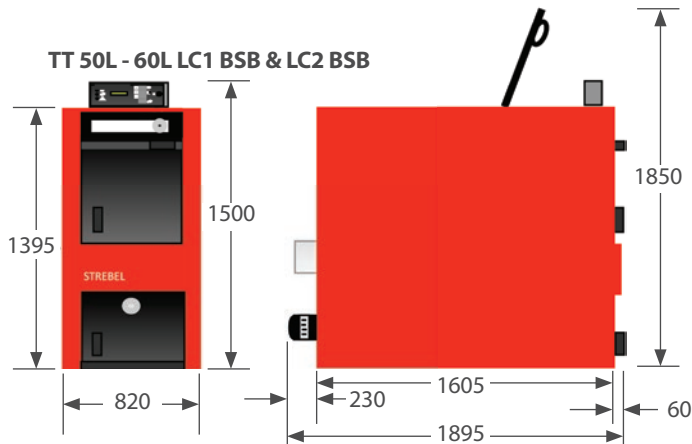
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## Strebel Turbotec 50L to 60L LC1 BSB & LC2 BSB Technical Specifications

The Turbotec 50L to 60L LC1 BSB & LC2 BSB boilers boast larger stoking volume with the added advantage of an optional top mounted log loading door including all the stated benefits of the LC1 & LC2 BSB range.



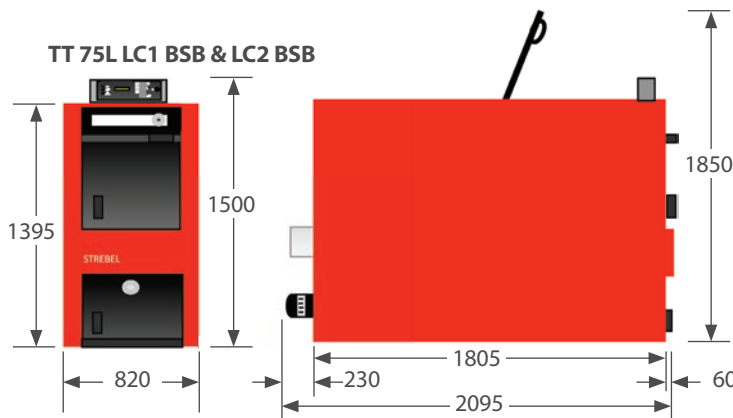
### TECHNICAL SPECIFICATIONS LC1 BSB & LC2 BSB

Boiler Model		TT 50L	TT 60L
Output	kW	50	60
Efficiency	%	91.0	90.0
Dimensions:			
Length	mm	1895	1895
Width	mm	820	820
Height	mm	1500	1500
Weight	kg	940	940
Filling Volume	Litre	340	340
Load Door Sizes	cm	36 54	36 54
Flue Temp	°C	167	186
Flue Diameter	mm	180	180
Maximum Log Length	mm	1100	1100
Flow & Return	inch	1 <sup>1/4</sup>	1 <sup>1/4</sup>
Recommended Thermal Store Size	Litre	3000	3000

(Dimensions + feed type, ash container size, etc.) Models and dimensions are subject to change.

## Strebel Turbotec 75L LC1 BSB & LC2 BSB Technical Specifications

The Turbotec 75L boiler with the added advantage of an optional top mounted log loading door and capacity for stoking wood with a length up to 1300mm, including all the stated benefits of the LC1 & LC2 BSB range.



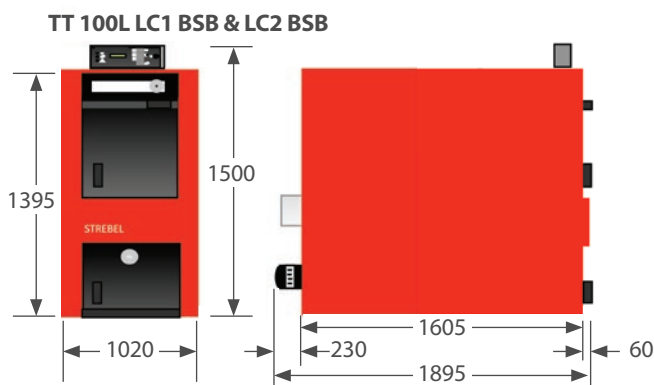
### TECHNICAL SPECIFICATIONS LC1 BSB & LC2 BSB

Boiler Model		TT 75L
Output	kW	60
Efficiency	%	90.0
Dimensions:		
Length	mm	2095
Width	mm	820
Height	mm	1500
Weight	kg	1080
Filling Volume	Litre	400
Load Door Sizes	cm	36 54
Flue Temp	°C	186
Flue Diameter	mm	200
Maximum Log Length	mm	1300
Flow & Return	inch	1 <sup>1/4</sup>
Recommended Thermal Store Size	Litre	3000

(Dimensions + feed type, ash container size, etc.) Models and dimensions are subject to change.

## Strebel Turbotec 100L LC1 BSB & LC2 BSB Technical Specifications

The top-of-the-range Turbotec 100L boiler has the highest output and all the stated benefits of the LC1 & LC2 BSB range.

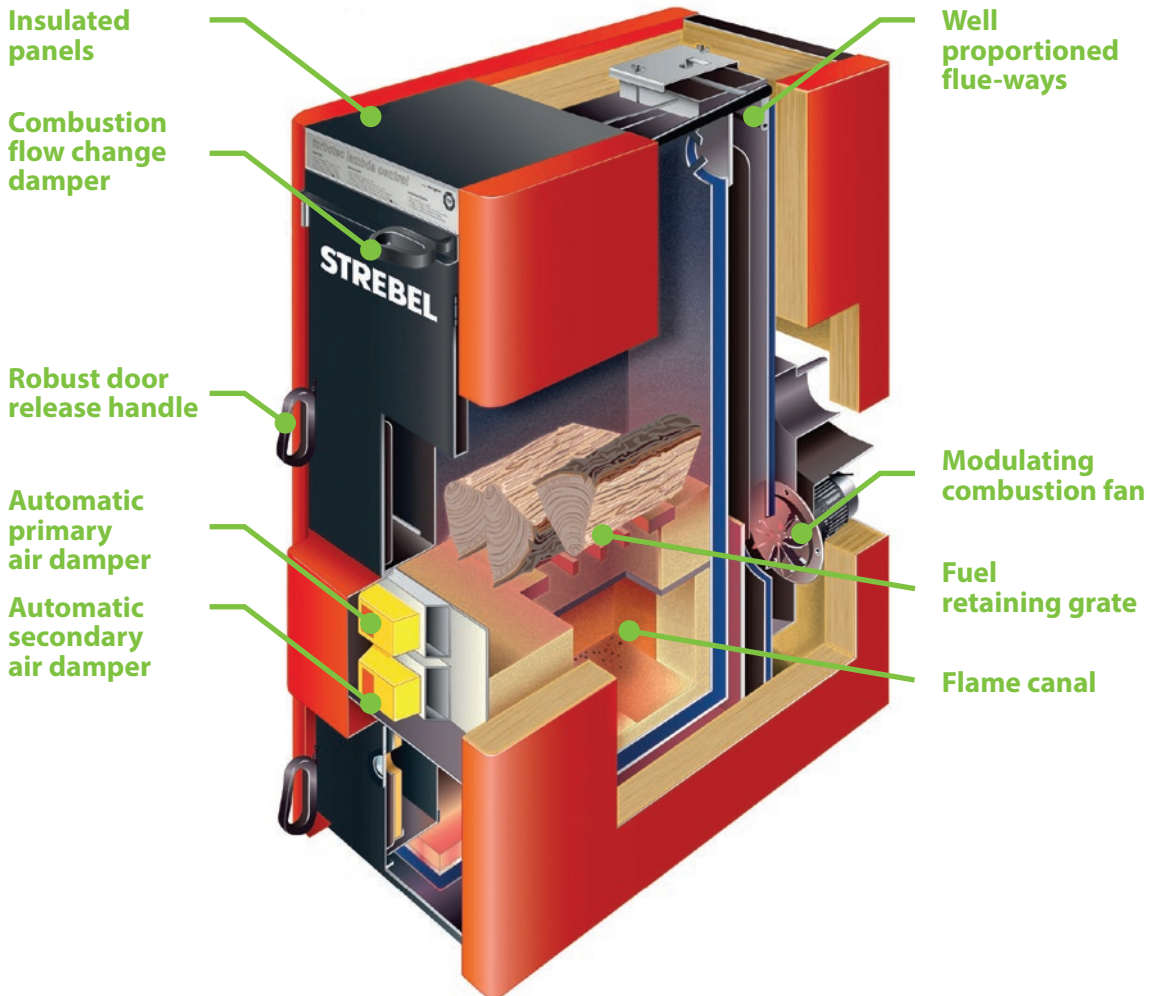


### TECHNICAL SPECIFICATIONS LC1 BSB & LC2 BSB

Boiler Model		TT 100L
Output	kW	93
Efficiency	%	91.9
Dimensions:		
Length	mm	1895
Width	mm	1020
Height	mm	1500
Weight	kg	1200
Filling Volume	Litre	460
Load Door Sizes	cm	36 54
Flue Temp	°C	169
Flue Diameter	mm	200
Maximum Log Length	mm	1100
Flow & Return	inch	1 <sup>1/2</sup>
Recommended Thermal Store Size	Litre	8000

(Dimensions + feed type, ash container size, etc.) Models and dimensions are subject to change.

## Strebel Turbotec advanced wood gasifying boilers: Boiler design



### Why choose Strebel?

Strebel Ltd is one of the UK's leading suppliers of commercial heating and hot water solutions. Backed up by our European Heritage and years of experience in heating technology, we can supply you with the very latest innovative, energy efficient and diverse portfolio of heating products across our sector.

By offering you an extensive range of intelligent heating solutions, tailored to meet your individual requirements and supported by our highly professional technical and service team, we can provide you with real tangible benefits in the most efficient and practical way possible.

Please visit our website for further information on our products and services. [www.strebel.co.uk](http://www.strebel.co.uk).

#### Strebel Ltd.

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