

SENATOR CH

Condensing Central Heating Boilers
400 & 550 kW



central heating and hot water systems
Eco Heating Systems B.V.



Compact, robust and reliable



Advantages at a glance

- High efficiency
- Unique capacities: 400 and 550kW
- Operates on both natural and propane gas
- Robust, reliable and durable
- Space-saving dimensions: 3.3mW in 6,5m²
- Modulation range 1:8
- Double premix burner
- Built-in cascade controller for up to 6 boilers
- Built-in weather dependant temperature control
- Built-in 0-10V DC control connection
- Built-in Open-Therm connection
- Quick and easy installation
- Remote boiler status signal for Operating & Fault indication due to its 2 potential free contacts
- Suitable for Building Management Systems via 0-10V connection (BMS)
- Easy maintenance

The ultimate commercial boiler

Senator is the ultimate commercial boiler from Eco Heating Systems. This range consists two types of condensing floor standing boilers with capacities of 400kW and 550kW. In a cascade set up with 6 Senators it is easy to generate a capacity of 3.3mW in an area of around 6,5m².

High efficiency

The Senator boiler is an high efficient product with two special pre-mix burners which result in a great modulation ratio of 1:8. When combined with appropriate regulation equipment, it results in great savings in the energy consumption without any effect on the ambient temperature.

Reliable

State-of-the-art boiler design and use of high quality components make Senator very reliable. However, by integrating a two-chambered heat-exchanger, Eco Heating Systems offers more extra comfort and reliability.

Unique flue diameters

Senator is equipped with two strong ventilators which make it possible to integrate a flue outlet of 180mm in diameter on the boiler.

Due to this flue diameter, Senator excellently finds its place in the renovation projects. Possibility of installing the new flue piping into the existing flue-gas channels ensures savings from the renovation cost.

Your partner in central heating

You can rely on us

Built-in cascade controller

The Senator range is fitted with an integrated cascade control unit, which can sequence up to four boilers to their optimum efficiency without utilizing an external controller. For this reason, it is possible to set up an installation of 2.2 mW in an area of around 4,5m².

Easy installation

Senator is designed to be installed easily. Due to its space-saving design, it can be moved through standard doors without any problem. Furthermore, with two small wheels mounted under the boiler casing, Senator is very easy to relocate and fit in different spaces which makes it an optimal solution for renovation projects where space is limited.

Low noise level

Senator is a very silent boiler with its acoustic level limited to 46 dBA.



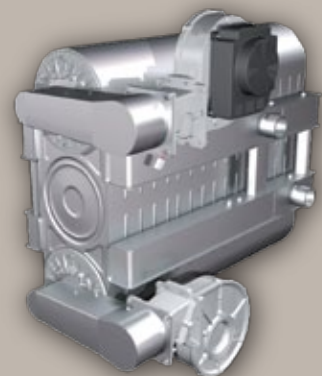
OEM solutions

Having a great experience in manufacturing and development of high-efficiency commercial boilers, Eco Heating Systems offers the possibility of private labelling to its partners.

It is either possible to take one specific range or the whole assortment of boilers and name it your own brand.

Besides private labelling, it is also possible for our partners to play an active role during the product development. Technical departments of our current partners have close contacts with our R&D department.

Because of this very precious input from all our partners worldwide, we can always ensure that our boilers maintain the highest quality standards.



Controllers

Controllers & thermostats

In general, different zones of large commercial buildings have different heating requirements. The sunny party of the building requires less heat compared to those in shade or the production area should be cooler than the offices.

Eco Heating Systems offers the EBC controller to tackle this problem. Equipped with the feature of giving each group a possibility to connect its own thermostat, this controller can be regulated/set according to the ambient heat required by the user.

Spaces that do not require heat demand, will not be heated unnecessarily which dramatically reduces the amount of fuel used and provides considerable energy savings.



Outside temperature control

With an optional outside temperature sensor, Eco Heating Systems' boilers can also be regulated depending on the outside temperature.

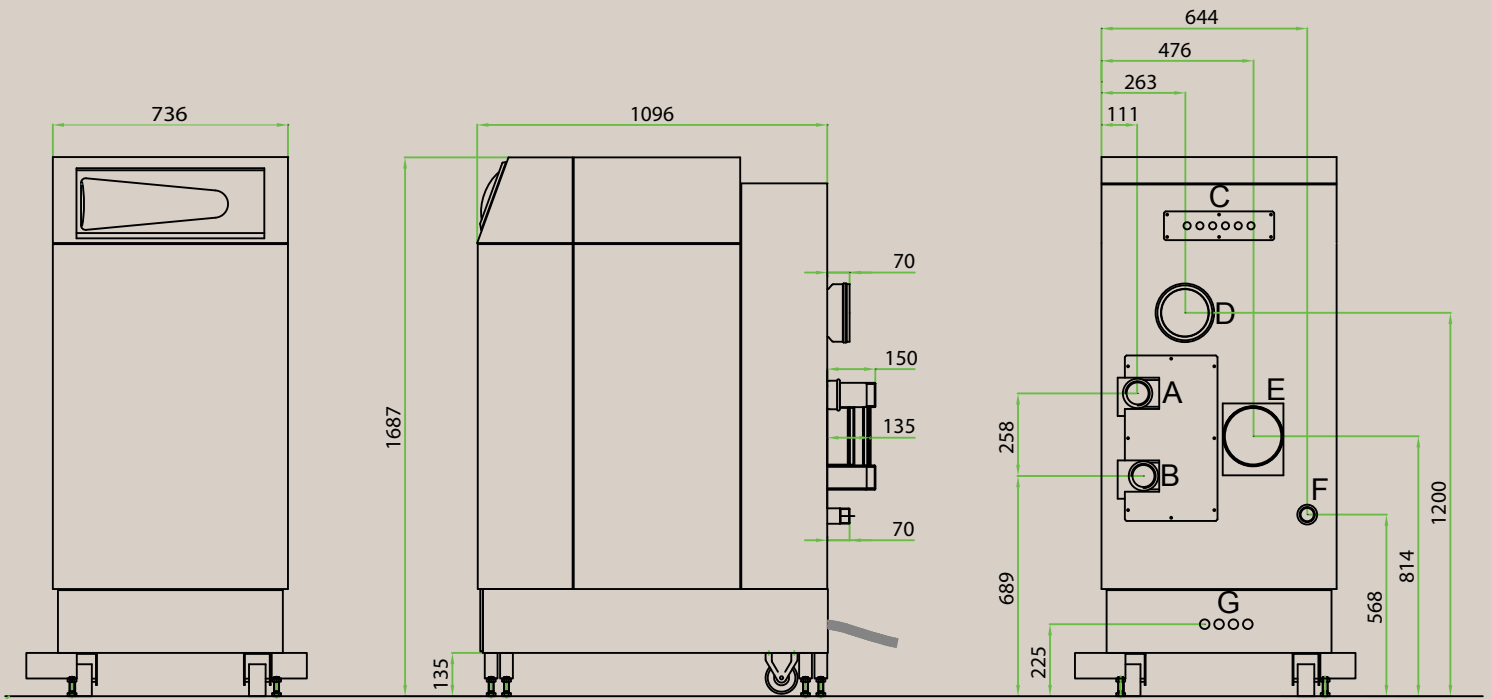
When the temperature changes outside, this information is sent to the boiler through the outside temperature sensor. Then accordingly, the boiler makes necessary adjustments in the room temperature, preventing extra fuel consumption.

Building management systems

Eco Heating Systems' boilers can completely be integrated into Building Management Systems (BMS) via the integrated 0-10V control connection.

Dimensions

Dimensions Senator 400 & 550 kW



Connection	Function	Diameter connection in inch/mm.	
		Senator 400 CH	Senator 550 CH
A	Flow	G 2½"	G 2½"
B	Return	G 2½"	G 2½"
C	Cable feed	Ø 22.5	Ø 22.5
D	Supply air connection	Ø 180	Ø 180
E	Flue terminal	Ø 180	Ø 180
F	Gas connection	G 2"	G 2"
G	Condensate discharge hose	Ø 25	Ø 25

Technical Specifications Senator			
Dimensions (h x w x d)	mm	1685 x 736 x 1225	
Classification		II2L3P	
Gas Appliance Type		B23; C13X; C23X; C33X; C43X; C53X; C63X; C83X	
Type Boiler		S 400	S 550
CH-Water content	Liter	30	43
Weight (empty)	Kg	400	450
Parallel flue/air inlet	mm	180/180	180/180
Central Heating			
Nominal input min	kW	50-400	68-550
Nominal input max.	kW	55,5 - 444,2	75,5 - 610,8
Nominal output at 100% 80/60°C	kW	48,3 - 386,4	66,1 - 535,2
Nominal output at 100% 50/30°C	kW	52,2 - 417,6	71,2 - 576,4
Nominal output at 30% 36/30°C	kW	54,1 - 432,5	73,7 - 596,8
Efficiency 40/30 °C DIN 4702/8	%	109,5%	
Technical Data			
Available pressure for the Flue system	Pa	200	200
Max. flue temperature	°C	90	
Pressure CH-system min./max.	Bar	1-4	
Standard components			
Cascade manager for 6 boilers		Standard	
Open Therm connection		Standard	
0-10 Volt connection		Standard	
Weatherdependant temperature controller**		Standard	
** Outside temperature sensor is an ancillary and must be purchased seperately			



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Eco Heating Systems is a dynamic company, focusing on development and production of commercial condensing boilers and direct-fired commercial condensing gas water heaters.

Combining our significant experience in the commercial heating field with the requirements of our partners, we have been producing superior quality products suitable for any commercial installation.

Our equipment, systems and services are dedicated to helping our partners to optimize the performance of their processes



Version : EN 2010-S0001