SOLARFOCUS

maximus 150 - 300 kW

boiler for pellets and woodchips

REMOTE ACCESS AND ASSISTANCE · HEA REMOTE ACCESS AND ASSISTANCE · HEA
Compatible with SOLARFOCUS CONNECT

Zero Emission Technology

- Electrostatic fine dust collector
- Flue gas recirculation
- Industrial reciprocating grate

5 YEAR SYSTEM GUARANTEE

- Future-proof thanks to electrostatic dust collector
- Best emission values
- Industrial reciprocating grate

Choosing the right heating system is an important decision that will have an impact for many years to come. The maximus pellet or wood chip boiler is a heat generator for large applications, particularly for industrial systems, apartment buildings and for cascade solutions.

For fuel that grows back

5-year system guarantee

We are committed to reducing heating costs and ensuring safe operation. To guarantee efficient operation, all components must work in conjunction with one another.

Which is why SOLARFOCUS is providing a 5-year system guarantee for all components supplied by SOLARFOCUS. Requirement: A heat generator, a tank (buffer cylinder or domestic hot water tank) and at least one accessory (e.g. pump group, fresh water module).

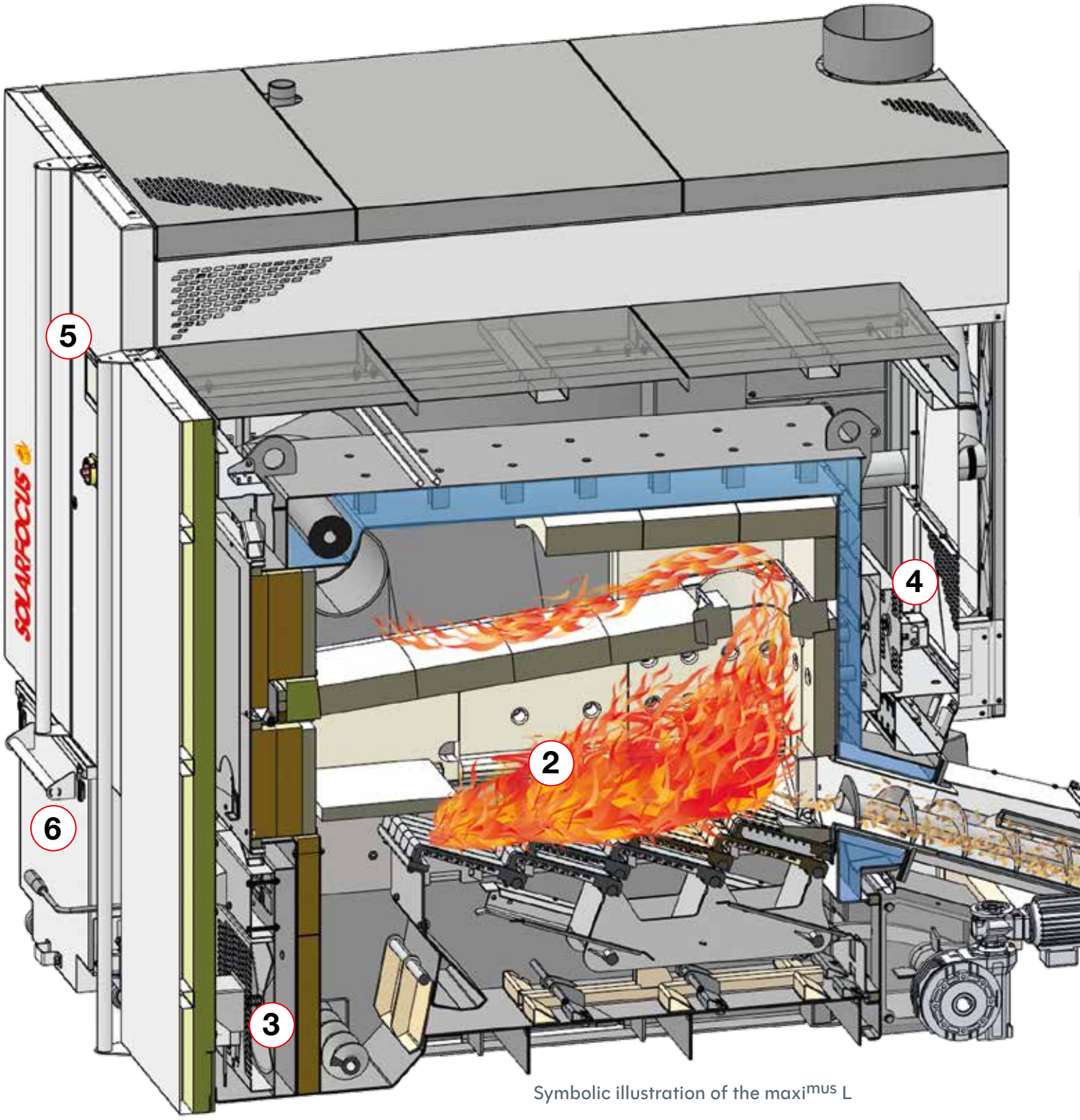
Detailed information can be found at
www.solarfocus.com

The high-performance biomass boiler

A belief in innovation is what characterises the maxi[mus] boiler. A reciprocating grate transports fuel to the combustion chamber for trouble-free firing. The boiler can therefore be heated by different fuels, such as pellets or wood chips, with outstanding efficiency and the lowest emissions.

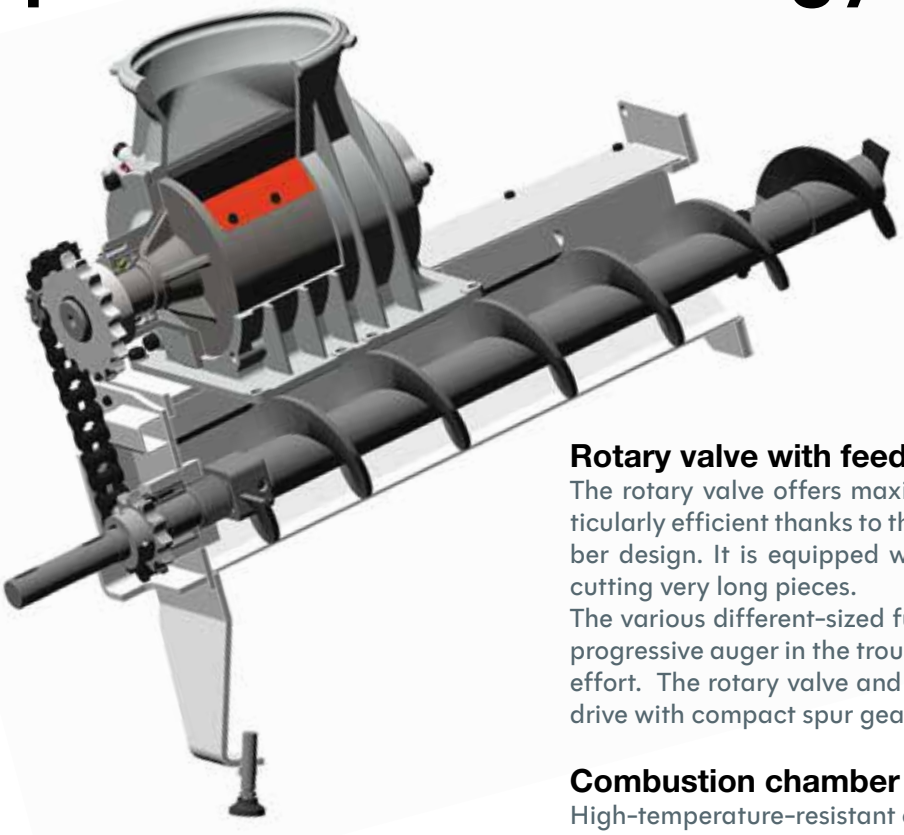
The integrated flue gas recirculation ensures steady, boiler-friendly combustion, even for very dry materials.

An electrostatic dust filter is used to clean the flue gases. This filter is automatically cleaned at regular intervals. Both technologies are integrated as standard. The ID fan with EC motor technology and the lambda sensor ensure efficient, clean combustion at both full and partial load operation.



Symbolic illustration of the maxi[mus] L

Sophisticated technology in detail



Suitable fuel:

- ✔ Wood chips ISO 17225-4, P16S-P31S (G30-G50), maximum 40% water content
- ✔ Pellets ISO 17225-2-A1, ENplus A1

Rotary valve with feeder unit (1)

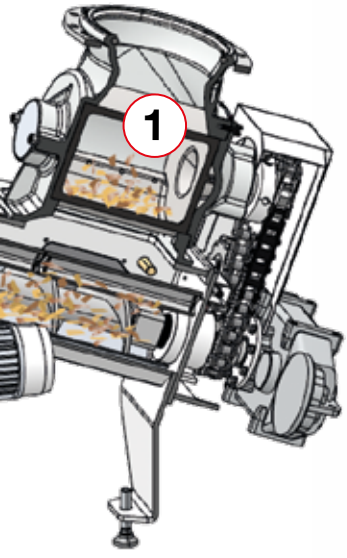
The rotary valve offers maximum burn-back protection and is particularly efficient thanks to the generously dimensioned single chamber design. It is equipped with exchangeable hardened blades for cutting very long pieces.
The various different-sized fuels are transported into the boiler by a progressive auger in the trough, with special geometry and minimum effort. The rotary valve and the feeder unit have a shared, efficient drive with compact spur gear.

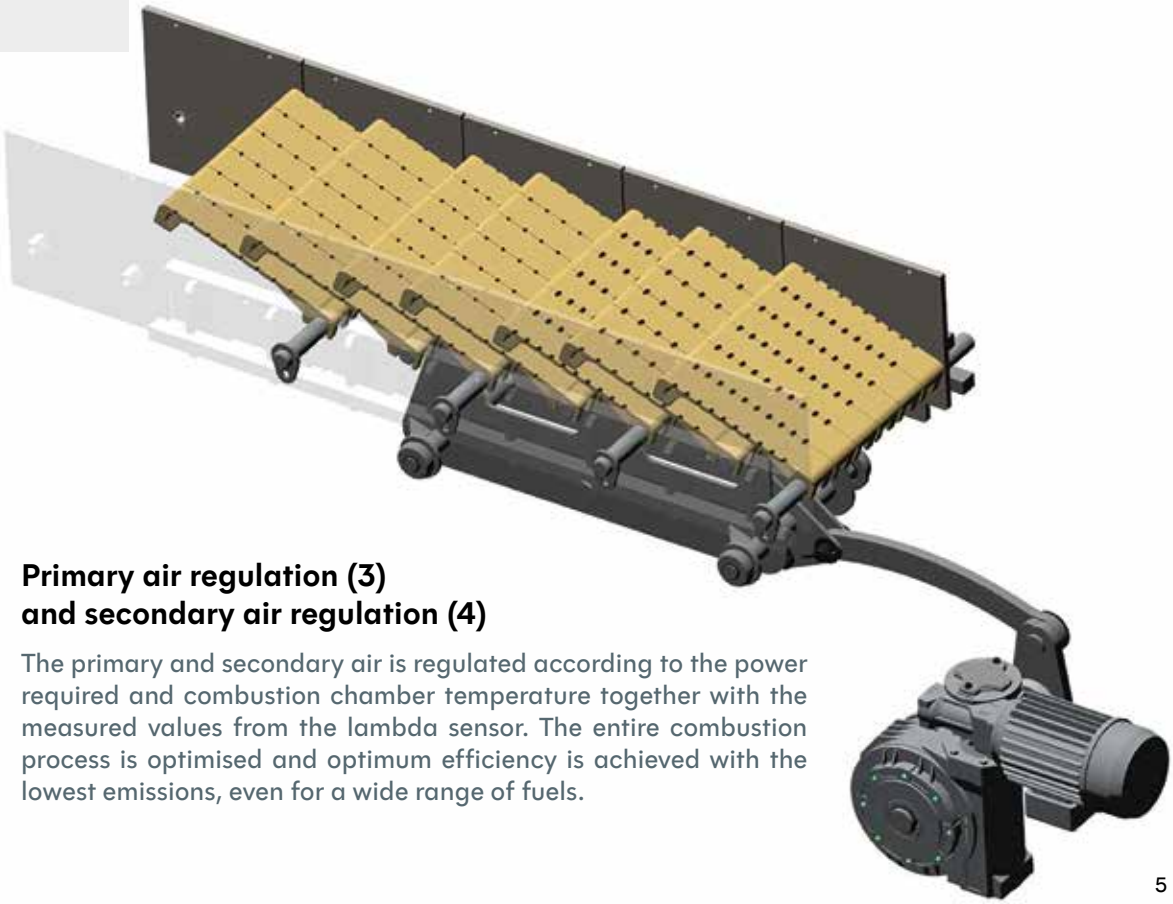
Combustion chamber with reciprocating grate (2)

High-temperature-resistant combustion chamber with reciprocating grate. The reciprocating grate moves at different speeds depending on the material composition and output, ensures clean combustion, even for difficult materials, and prevents formation of slag.

Legend:

1. Feed with rotary valve
2. Combustion chamber with reciprocating grate
3. Primary air regulation
4. Secondary air regulation
5. eco$^{manager-touch}$ control
6. Ash box





Primary air regulation (3) and secondary air regulation (4)

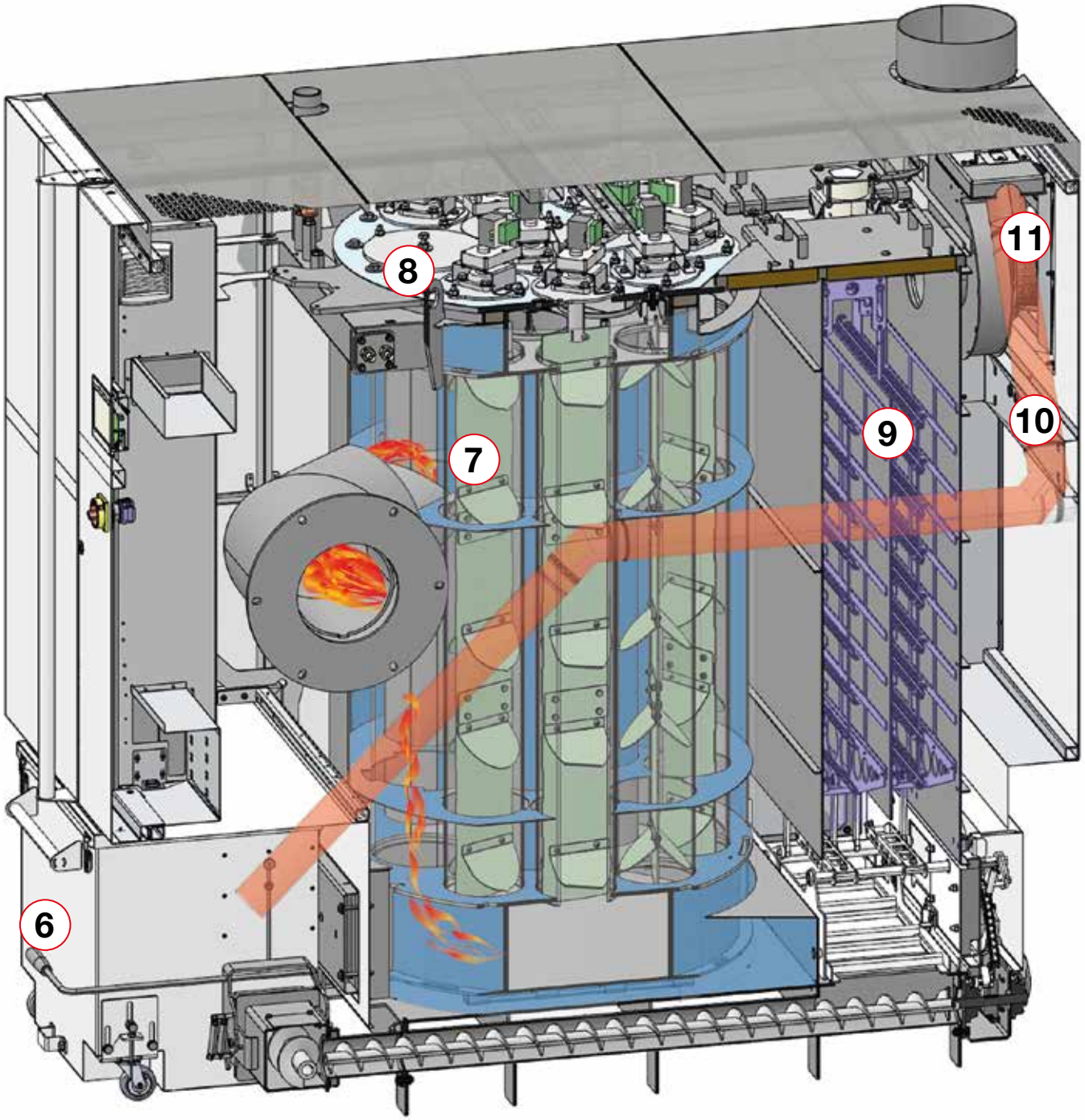
The primary and secondary air is regulated according to the power required and combustion chamber temperature together with the measured values from the lambda sensor. The entire combustion process is optimised and optimum efficiency is achieved with the lowest emissions, even for a wide range of fuels.

Innovative heat exchanger
with integrated electrostatic dust collector

In the heat exchanger, the majority of the flue gas temperature is transferred to the heating water. The lower the temperature of the flue gas, the higher the efficiency. For this reason, cleaning the heat exchanger surfaces is crucial for ensuring low fuel consumption.

At SOLARFOCUS, patented turbulators are used for this. A rotating scraping edge regularly cleans the heat exchanger surfaces after each combustion. Compared to other systems, the cleaning process does not generate a lot of noise. The cooled flue gas then flows into the integrated electrostatic dust collector. This collects the last remaining dust particles out of the flue gas stream. Thanks to this pioneering innovation, dust emissions of less than 2.5 mg/Nm³ can be achieved. The accumulated flue ash is transported forwards by means of an auger to a shared ash box.

The heat exchanger for the maximum L commercial boiler is supplied separately from the burner due to its size. The heat exchanger and burner are supplied as one unit for the smaller variants.



Symbolic illustration of the maxi[mus] L

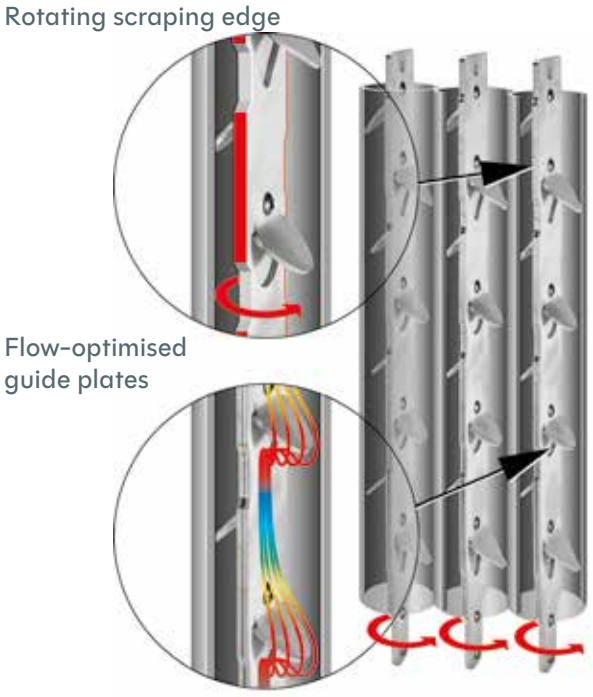
Sophisticated technology in detail

Ash box (6)

The generously-sized ash box is used to collect all the ash from the reciprocating grate, heat exchanger cleaning, and electrostatic dust collector.
The ash can also be transported to larger, external containers to extend the ash emptying intervals.

Heat exchanger cleaning (7)

Turbulators with flow-optimised guide plates clean the heat exchangers automatically and ensure low flue gas temperatures.

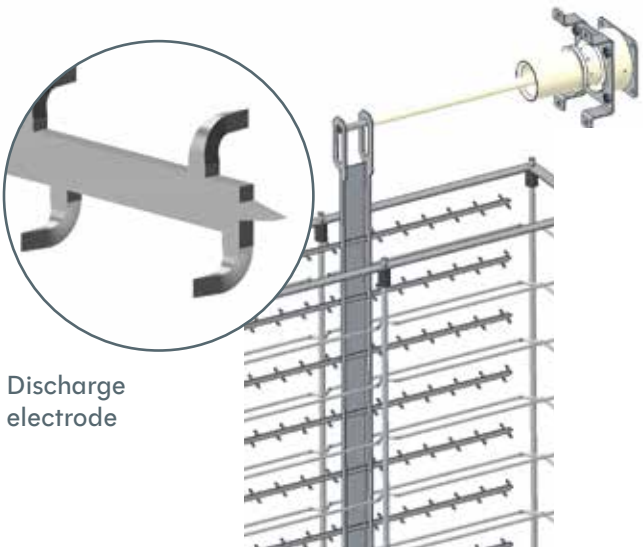


Lambda sensor (8)

We have been Lambda technology experts since 1981. Guarantees energy-saving combustion by adjusting to the fuel.

Electrostatic dust collector (9)

To filter the last remaining dust particles from the flue gas stream, SOLARFOCUS has developed an electrostatic dust collector, which is integrated as standard. A special discharge electrode with a high voltage of up to 30 kV ionises the fine dust particles, which then form a layer of dust deposits on the collection electrode. The discharge and collection electrodes are cleaned fully automatically together with the heat exchanger cleaning. External cleaning facilities, which frequently incur additional costs, are therefore no longer necessary.



Recirculation control (10)

Flue gas recirculation is integrated in the boiler as standard in order to lower the combustion chamber temperature for particularly dry materials, such as pellets. Mixing flue gas with primary air lowers the combustion chamber temperature considerably and thereby extends the service life of the parts exposed to flames.

ID fan with EC motor technology (11)

The speed-controlled ID fan with stainless steel impellers enables modulated operation of the heating boiler. The EC technology (electronically commutated motor) guarantees maximum efficiency, even in partial load operation.

Legend:

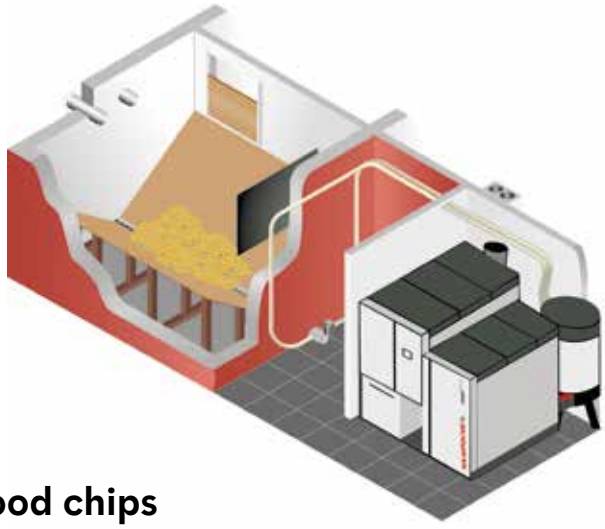
1. Ash box
2. Heat exchanger cleaning
3. Lambda sensor
4. Electrostatic dust collector
5. Recirculation control
6. ID fan with EC motor technology

Filling and storage options

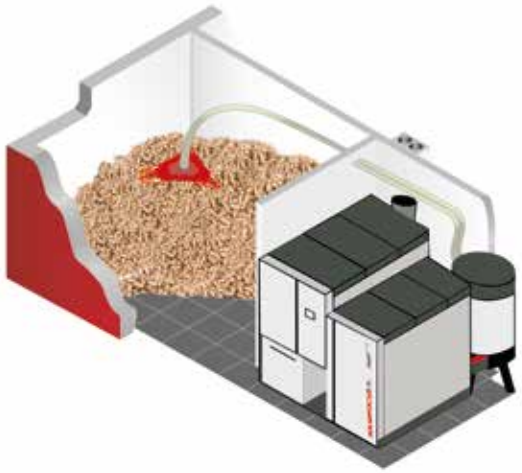
Pellets

SOLARFOCUS provides a variety of options for supplying the fuel to the boiler. Pellets are usually sucked into the intermediate pellet store by a closed suction system. A mole or a suction auger can be used to remove the pellets from the storage area. The mole is particularly advisable if you do not want to install a sloping floor. Alternatively, pellets can also be extracted via an agitator. Speak to a SOLARFOCUS technician about your particular scenario.

Suction system with suction auger



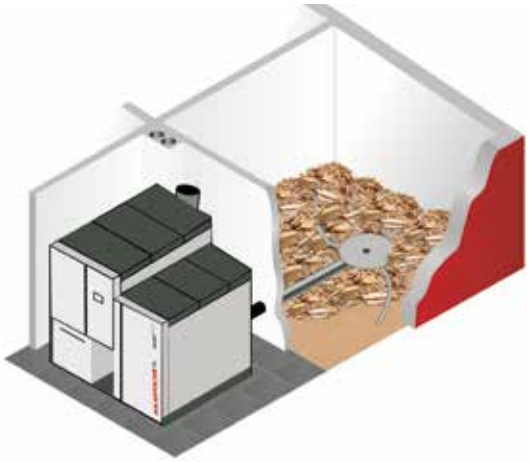
Suction system with mole



Wood chips

Wood chips are transported as standard with direct extraction and a three-arm leaf spring agitator. The leaf spring agitator is available with a diameter of up to 4.5 m. Articulated arm agitators up to 6 m are available for larger diameters. The maximum wood chip cone height is 5 meters. To overcome different heights, angled gaps or greater distances, a variety of ascending augers are available. Up to two ascending augers can be combined with direct agitator extraction. For existing wood chip agitators or pendulum screws, a custom transition piece can be manufactured for third-party extraction systems following consultation with a SOLARFOCUS technician.

Direct extraction with leaf spring agitator up to Ø 4.5 m or with articulated arm agitator up to Ø 6.0 m

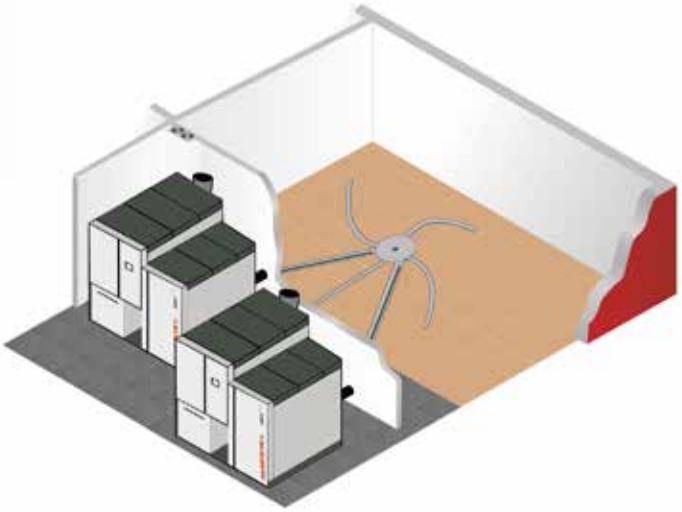


Downpipe extraction system

Cascade system up to 1.8 MW

With the help of the cascade connection, up to 6 boilers can be connected to one another and controlled according to demand. Therefore a total output of up to 1,8 MW for combustion of pellets can be achieved.

Tandem extraction is suitable for up to two boilers and for a common extraction system. The agitator and the two extraction augers are each controlled separately. The proven three-arm leaf spring agitator with a diameter of up to 4.5 m is available as the agitator.

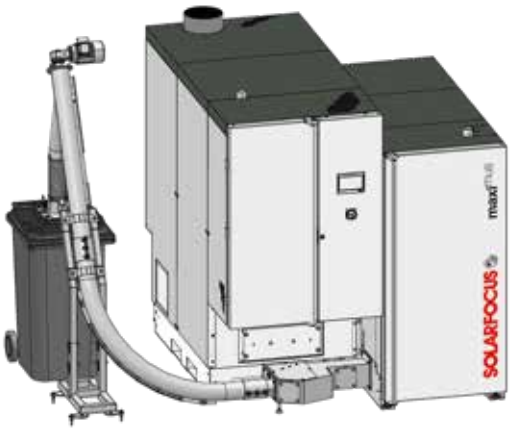


Ash extraction systems

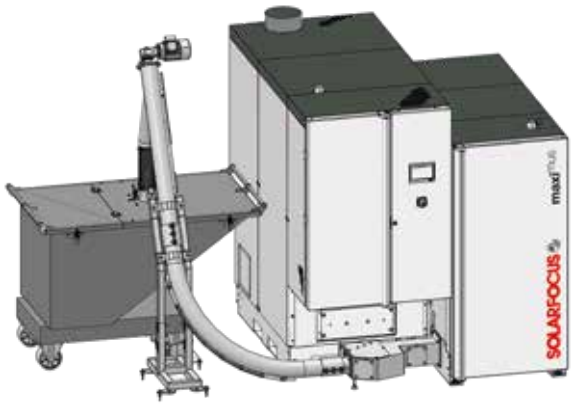
Automatic extraction of ash

The accumulated ash can be transported away in three different ways. The boiler is supplied with an ash box with a capacity of 160 l as standard. Alternatively, the ash can be collected in a 240 l standard bin or a 600 l tipping container. With the aid of a transition piece, the ash is conveyed into the container by a shaftless screw conveyor and separate drive. The system can be positioned either in front of or to the left of the boiler.

With 240 l standard bin



With 600 l tipping container



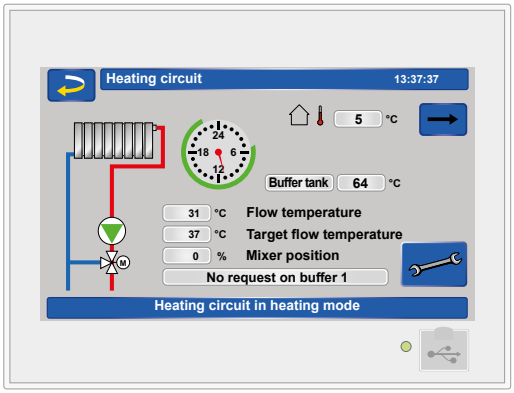
Intuitive control

Controller for the entire heating system

- Intuitive control unit with 7" touch display
- Takes the weather forecast into account
- All controlled via a screen

Clear operation for the entire heating system

With its intuitive ecomanager-touch control system, SOLARFOCUS offers outstanding user-friendliness. The state-of-the-art control system is incredibly easy to use, with a touchscreen to control the boiler and the whole heating system. This allows all SOLARFOCUS products within a heat network to be linked and synchronised as effectively as possible.



Intelligent heating system thinks about the future

The weather forecast feature (weatherman) is integrated as standard. This top innovation brings the user not only added convenience, but also helps save money. The control accesses live data from a weather server and uses this to tell the boiler when to heat – or when to remain inactive, because sunshine is expected.

Smart home integration

All SOLARFOCUS boilers have a LAN and a Modbus TCP interface as standard. This makes it easy to integrate the boiler into a network and control it remotely via PC, tablet or smartphone.

LOXONE

SOLARFOCUS products also communicate with the LOXONE smart home control system using an integrated Modbus TCP interface. No additional SOLARFOCUS extensions are required for the connection to the miniserver.

KNX

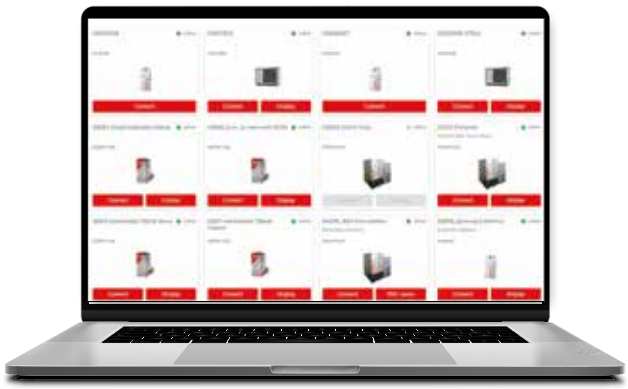
The ecomanager-touch can be connected to a KNX control system using a converter from KNX to Modbus TCP. The converter required for this is available from your trusted KNX partner.

SOLARFOCUS CONNECT

SOLARFOCUS-Connect

Is a fee-based platform that provides the customer with full remote access to the ecomanager-touch via VNC. With SOLARFOCUS Connect, you can see your boiler display on your smartphone, tablet or PC as if you were standing right in front of it. It is connected via a secure VPN channel, so only authorised users have access to it.

If you have any questions for the heating engineer in charge or a SOLARFOCUS technician, you can grant them temporary access to the controller. This means that questions or settings can be explained live on the display. And it also enables more targeted, faster remote diagnoses in order to provide you with better assistance and avoid anyone having to be called out.



mySOLARFOCUS

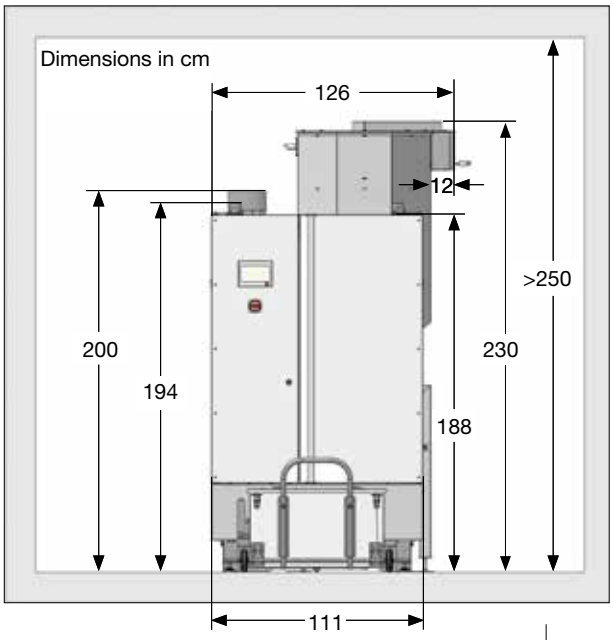
The free mySOLARFOCUS app allows you to control the most important functions of your heating system remotely. For example, you can select different operating modes (holiday mode, automatic mode or reduced mode) of the heating circuits and you can control the temperatures of the hot water and buffer tanks. The current status line of the heat generator is also displayed.

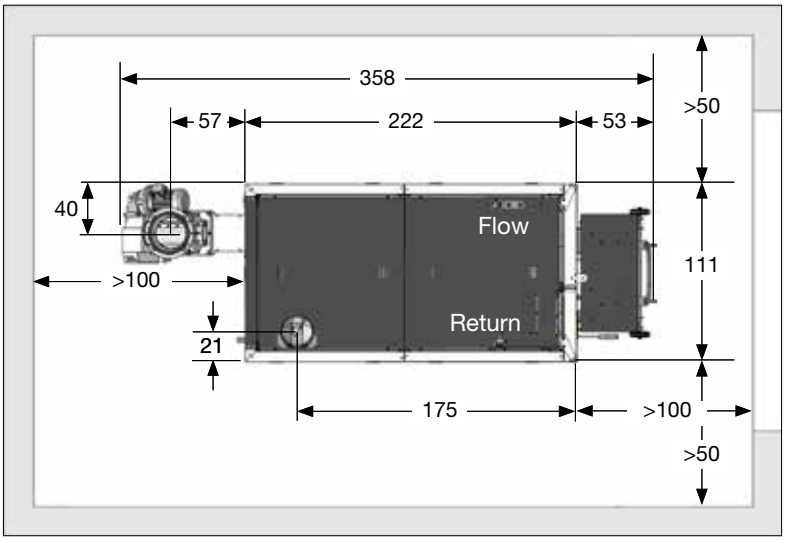
My SOLARFOCUS

If a solar thermal system with a heat meter is also installed, the current and historical solar yields can also be shown. Push notifications to your smartphone give you important information. It's quick and easy to set up the app on your smartphone, and it's available for Android and iOS.

Technical data and dimensions

maximus M 110 - 200

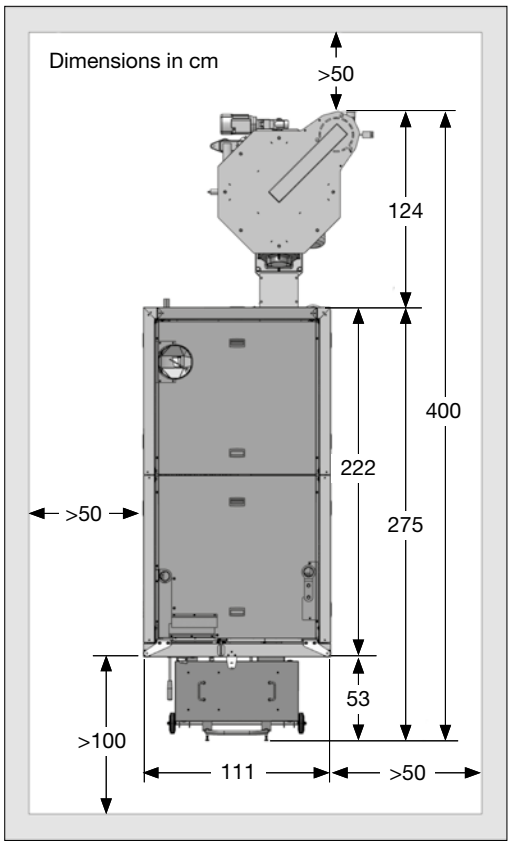


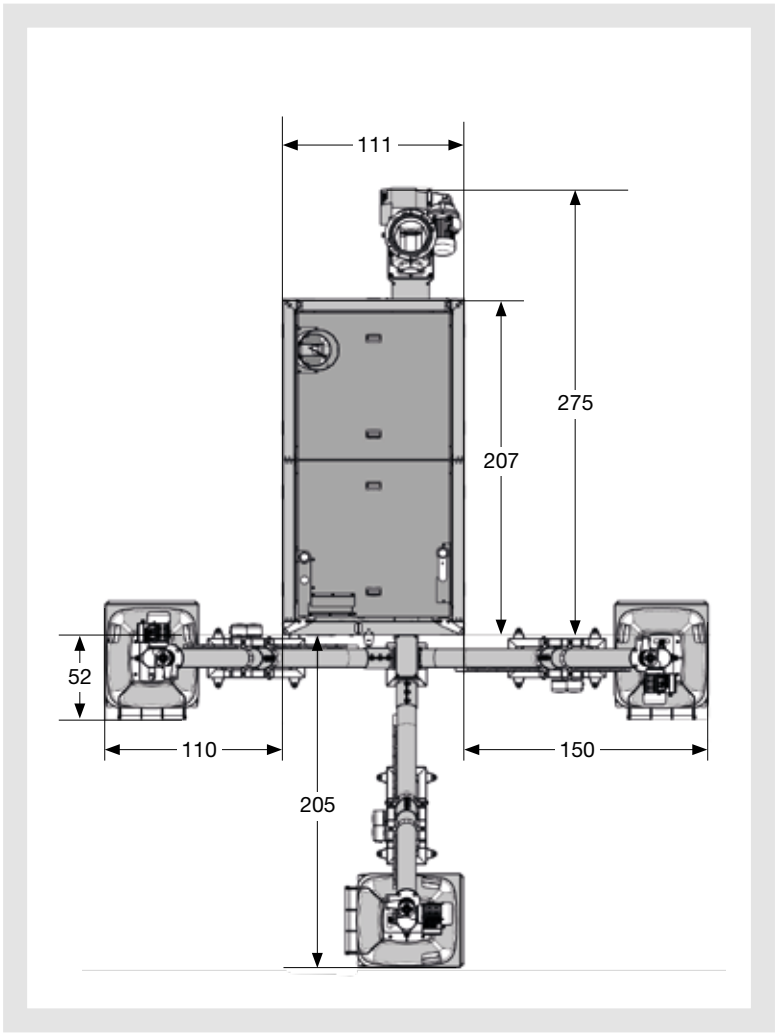


		Pellets		Wood chips	
maximus M		**150**	**200**	**150**	**185**
Power range	[kW]	44.7 - 149	60 - 200	44.7 - 149	55.2 - 184
Boiler class		5	5	5	5
Dimensions					
Width	[cm]	111	111	111	111
Height without intermediate pellet store	[cm]	188	200	200	200
Depth	[cm]	222	222	222	222
Minimum room height	[cm]	250	250	250	250
Transport dimension without cladding - width	[cm]	99	99	99	99
Transport dimension - height	[cm]	207	207	207	207
Flue gas side					
Flue gas pipe DM	[cm]	20	25	20	25
Height up to flue gas pipe - upper edge	[cm]	200	200	200	200
Minimum draught requirement	[Pa]	5	5	5	5
Flue gas mass flow full load	[g/s]	98	130	98	120
Max. flue gas temperature full load	[°C]	140	140	140	140
Weight					
Feeder unit weight (incl. rotary valve)	[kg]	230	230	230	230
Total weight	[kg]	2250	2250	2250	2250
Water side					
Water content	[l]	391	391	391	391
Operating temperature	[°C]	70 - 90	70 - 90	70 - 90	70 - 90
Maximum permissible temperature	[°C]	90	90	90	90
Max. permissible operating pressure	[bar]	3	3	3	3
Boiler flow/boiler return connection	["]	G 2" ET			
Thermal overload protection connection	["]	G 1/2" ET			
Drain connection	["]	G 1" ET			
Electrical connection					
Power supply, fuse	[V]	400 V AC, 16 A, 3 P + N + PE			
Fuel					
Fuel		Pellets ISO 17225-2-A1, ENplus A1		Wood chips ISO 17225-4, classes A1, A2, B1; sizes P16S-P31S (G30-G50), water content max. 40%	
Ash box	[l]	90	90	90	90

Dimensions

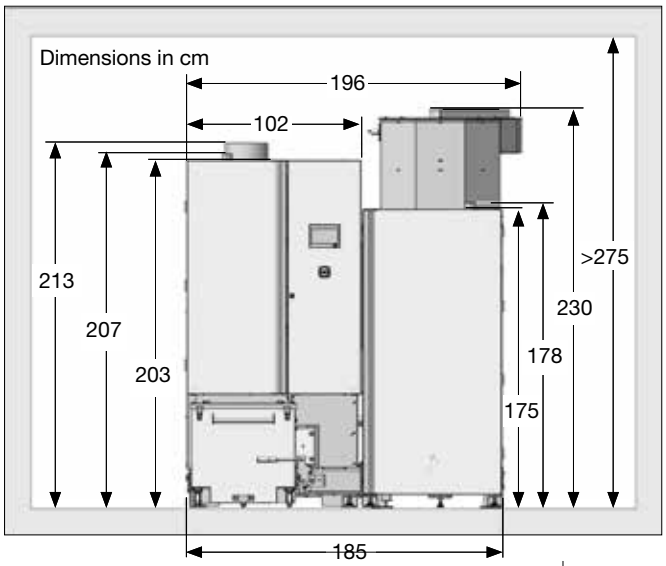
maximus M 110 - 200 with intermediate pellet store

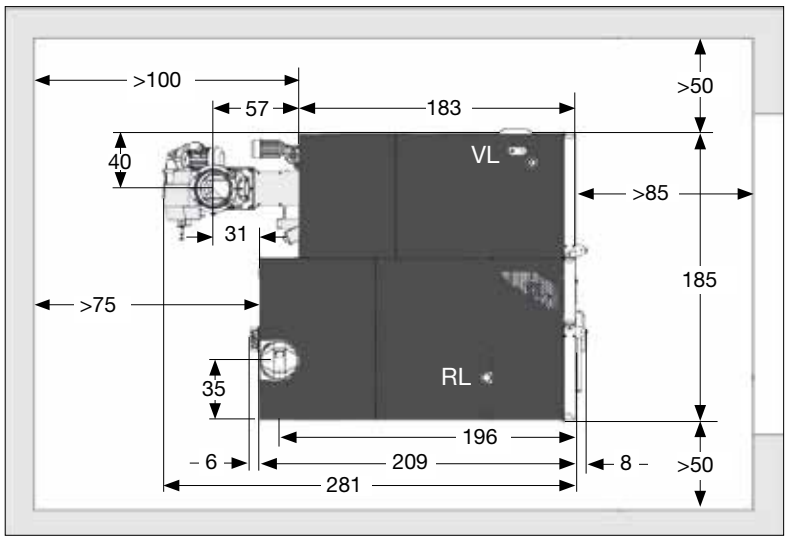




Technical data and dimensions

maximus L 150 - 300

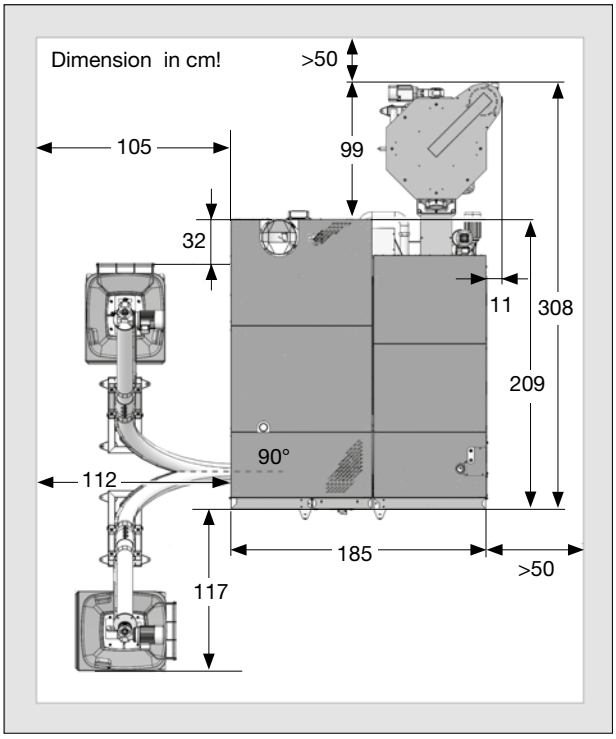


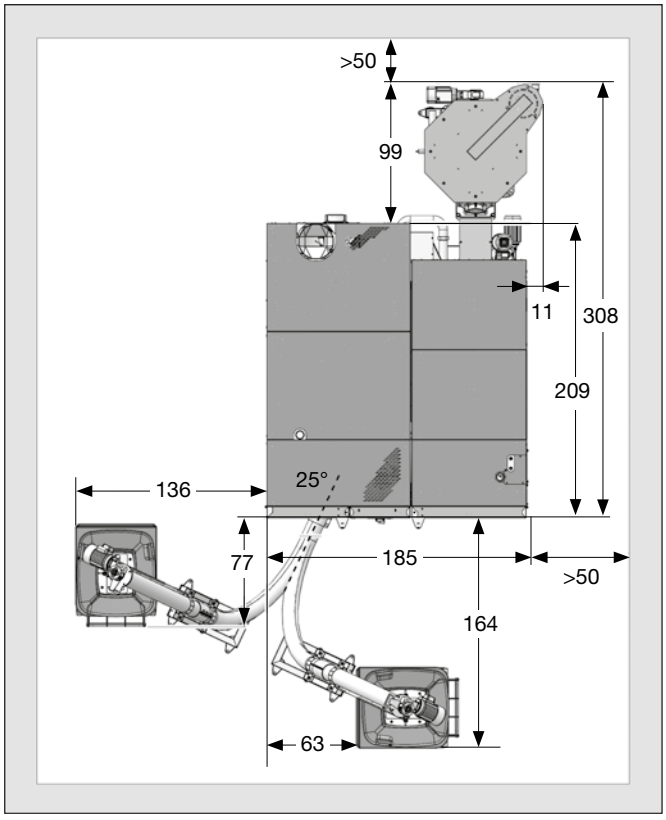


		Pellets			Wood chips	
maximus L		**200**	**250**	**300**	**200**	**250**
Power range	[kW]	44.7 - 201	44.7 - 250	44.7 - 299	44.7 - 201	44.7 - 250
Boiler class		5	5	5	5	5
Dimensions						
Width	[cm]	185	185	185	185	185
Height without intermediate pellet store	[cm]	203	203	203	203	203
Depth	[cm]	209	209	209	209	209
Minimum room height	[cm]	275	275	275	275	275
Burner transport dimension - width	[cm]	90	90	90	90	90
Heat exchanger transport dimension - width	[cm]	100	100	100	100	100
Heat exchanger transport dimension - height	[cm]	210	210	210	210	210
Flue gas side						
Flue gas pipe DM	[cm]	25	25	25	25	25
Height up to flue gas pipe - upper edge	[cm]	213	213	213	213	213
Minimum draught requirement	[Pa]	5	5	5	5	5
Flue gas mass flow full load	[g/s]	126.0	157.6	189.1	130.5	156.7
Max. flue gas temperature full load	[°C]	140	140	140	140	140
Weight						
Burner weight	[kg]	1450	1450	1450	1450	1450
Heat exchanger weight	[kg]	1600	1600	1600	1600	1600
Feeder unit weight (incl. rotary valve)	[kg]	230	230	230	230	230
Total weight	[kg]	3280	3280	3280	3280	3280
Water side						
Water content	[l]	565	565	565	565	565
Operating temperature	[°C]	70 - 90	70 - 90	70 - 90	70 - 90	70 - 90
Maximum permissible temperature	[°C]	90	90	90	90	90
Max. permissible operating pressure	[bar]	3	3	3	3	3
Boiler flow/boiler return connection	["]	G 2" ET				
Thermal overload protection connection	["]	G 1/2" ET				
Drain connection	["]	G 1" ET				
Electrical connection						
Power supply, fuse	[V]	400 V AC, 16 A, 3 P + N + PE				
Fuel						
Fuel		Pellets ISO 17225-2-A1, ENplus A1			Wood chips ISO 17225-4, classes A1, A2, B1; sizes P16S-P31S (G30-G50), water content max. 40%	
Ash box	[l]	160	160	160	160	160

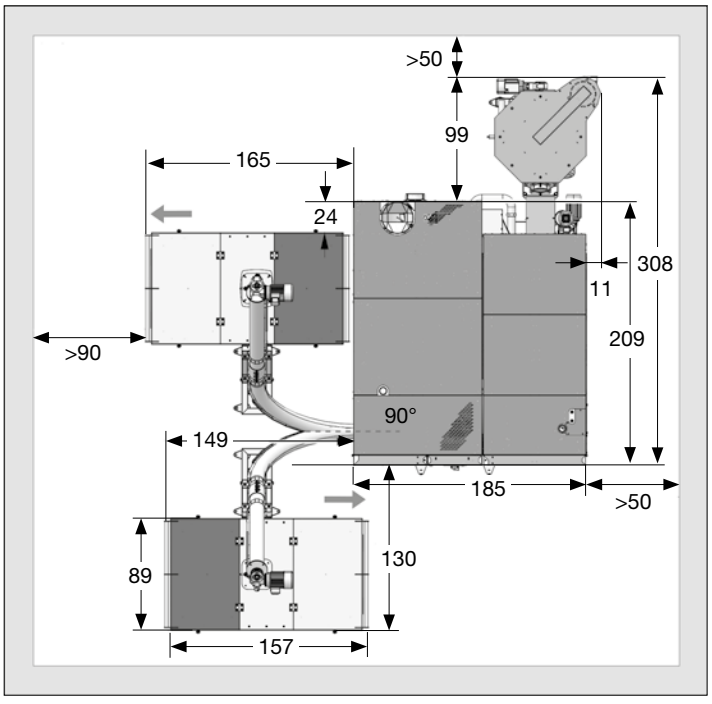
Ash extraction systems

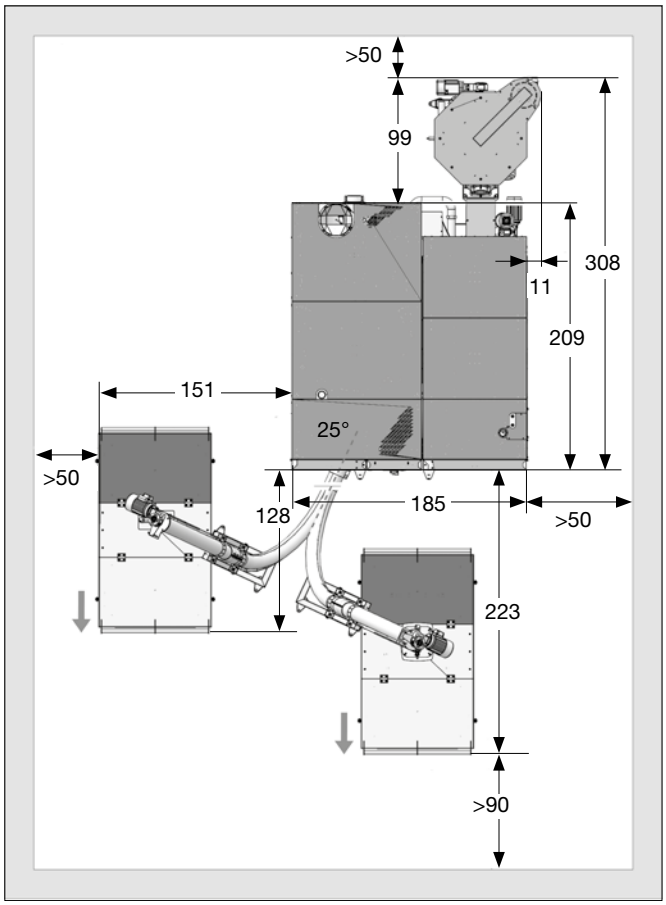
Standard bin 240 l





Tipping container 600 l





SOLARFOCUS

Pellet boiler

pelletelegance:	10 to 24 kW
octoplus:	15 to 22 kW
ecotopzero:	15 to 24 kW
pellettop:	35 to 70 kW
ecopellzero:	50 to 120 kW
maximus:	150 to 300 kW

Dual fuel boiler for wood and pellets

therminator II combi:	22 to 60 kW

Log wood boiler

therminator II SH:	18 to 60 kW

Wood chip boiler

ecohackzero:	30 to 120 kW
maximus:	150 to 250 kW

Air source heat pump

vampair PRO 08 - 10
vampair PRO 12 - 15
vampair PRO 20
vampair ECO 08 - 15

Solar energy system

CPC collector
Sunnyline
SUNeco

Photovoltaic system

PV modules
Batteries
Heat pump and PV

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