



Modern Heating Equipment

# PELLET AND WOOD BURNING

BOILERS



ECONOMICS



ECOLOGY



SAFETY



COMFORT AND MODERNITY



[www.hkslazar.pl](http://www.hkslazar.pl)

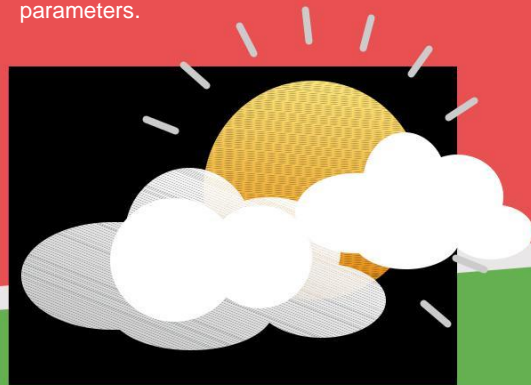
## Lambda probe

An advanced logarithm controls the operation of the boiler adapting it to current conditions which ensures the highest efficiency at the full power range. This guarantees savings, a clean exchanger and simple regulation.



## Weather control

An advanced controller monitors operation of the boiler and the entire boiler plant including pumps, valves, buffer, boiler and an additional boiler. This ensures that all devices form an integrated system guaranteeing maintenance of optimal parameters.



## BAFA

The boiler is on the German BAFA list thanks to its low emission and high efficiency.



Ecology



## Environmentally friendly

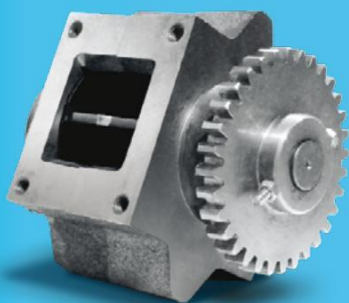
All boilers are laboratory tested in a testing unit with EU accreditation and attain the highest emission and efficiency parameters.

## Stainless steel

The first-class materials used in the production of the burner guarantee its long-term durability and excellent performance.

## Sluice

The best protection against back-fire into the fuel tank.



Safety



## Touch-pad panel

An advanced driver from an intuitive touch panel, variable weather settings over a one week programme. This helps to adjust the boiler's operation to the individual needs of the User.



## Automatic Cleaning

Steel cleaning brushes, located in the heat exchanger, clean the surface; this increases the efficiency of the boiler. In addition, they cause turbulence in the exhaust gases which raises the level of heat transfer.

## Vacum

With the VACUM pneumatic pellet transport system, pellets are automatically fed from the larger fuel tank into the boiler; this makes the boiler's operation even simpler.



## Compact Design

The boiler's small dimensions allow it to fit into most boiler rooms.

## Mechanical Cleaning of the Burner

The burner is systematically subjected to automatic cleaning for optimal combustion thus relieving the user of tedium..!

## Hydraulic Equipment

The boiler is equipped with a hydraulic kit so its installation is quick and does not take up any space in the boiler room.

## Automatic fire-alarm, automatic cleaning of the burner, automatic cleaning of the heat exchanger.

Ease of use, perfect combustion, high efficiency and visible savings are guaranteed by automation of operation.

## Internet

Through the internal network or the external econet24.com server, we can monitor the current parameters of the boiler and the hydraulic system and can change most of the user and service settings. This gives us an historical perspective of the most important parameters and alarms. We are able to receive e-mail messages regarding alarms. The controller can be connected via cable or WiFi.



# SMART FIRE 11

Highly Efficient Pellet Boiler, Compact in Design, Modern in Style.



## PARAMETER:

thermal efficiency  
 rating power  
 power range  
 width (type of fuel tank - width)  
 height (type of fuel tank - height)  
 depth (type of fuel tank - depth)  
 water capacity  
 diameter of the exhaust gas outlet ext. / int.  
 recommended chimney diameter  
 required chimney draught  
 flow and return connection  
 maximum operating pressure \* - depending on the model  
 average temperature of the exhaust gas at maximum power  
 average temperature of exhaust gases at minimum power  
 maximum recommended temperature of the exhaust gas  
 maximum temperature of the exhaust gas  
 recommended boiler temperature  
 minimum temperature 'of' return water  
 fuel tank capacity

## UNIT:

%  
 kW  
 kW  
 mm  
 mm  
 mm  
 dm<sup>3</sup>  
 mm  
 mm  
 Pa / mbar  
 inch  
 bar  
 °C  
 °C  
 °C  
 °C  
 °C  
 °C  
 °C  
 dm<sup>3</sup>

## SF 11:

91.1%  
 10.2  
 3.0 ÷ 10.2  
 165 L - 535  
 165 L - 1660  
 165 L - 845  
 34  
 101/93  
 100 ÷ 110  
 1 ÷ 5 / 0.01 ÷ 0.05  
 1  
 1.5 / 3.0 \*  
 125  
 60  
 180  
 85  
 65 ÷ 80  
 55  
 165



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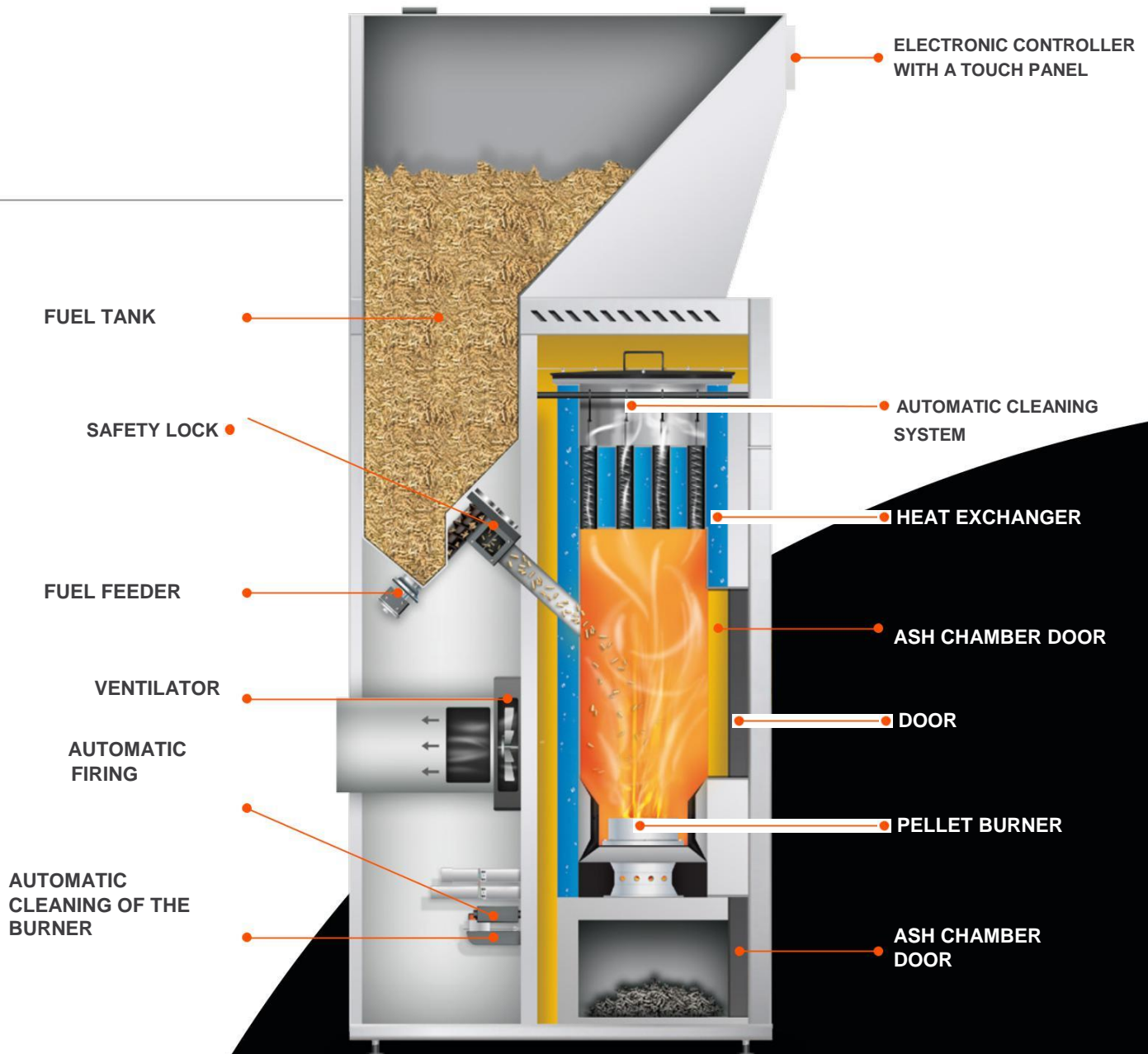
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Security



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**91.1%**  
**Thermal**  
**Efficiency!**



Pellet Boilers ●

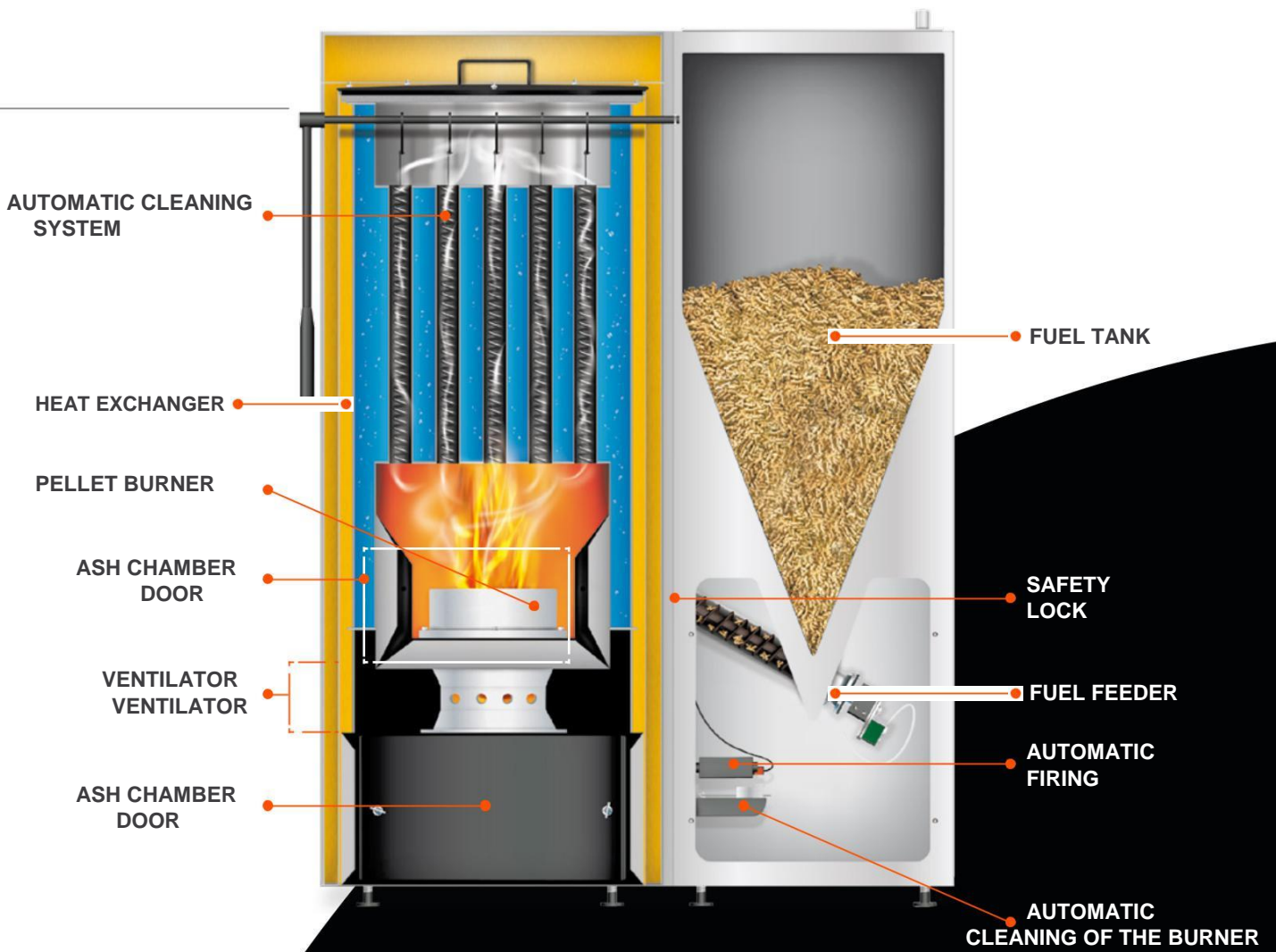
# SMART FIRE 15/22/41

Highly Efficient Pellet Boiler with Automatic Operation and Modern, Convenient Control.



PARAMETER:	UNIT:	SF 15:	SF 22:	SF 41:
thermal efficiency	%	92.0%	90.6%	90.0%
rating power	kW	15	22	41
power range	kW	4.5 ÷ 15	6.6 ÷ 22	12 ÷ 41
width (type of fuel tank - width)				
150 L	mm	860	860	1090
240 L	mm	1040	1040	1270
470 L	mm	1320	1320	1550
height (type of fuel tank - height)	mm	1480	1480	1480
depth (type of fuel tank - depth)				
150 L	mm	740	740	800
240 L	mm	740	740	800
470 L	mm	835	835	835
water capacity	dm <sup>3</sup>	36	49	110
diameter of the exhaust gas outlet ext. / int.	mm	120 / 110	120 / 110	160/150
recommended chimney diameter	mm	120 ÷ 130	120 ÷ 130	160
required chimney draught	Pa / mbar	1 ÷ 8 / 0.01 ÷ 0.08	1 ÷ 8 / 0.01 ÷ 0.08	1 ÷ 5 / 0.01 ÷ 0.05
flow and return connection	inch	1	1	1
maximum operating pressure * - depending on the model	bar	1.5 / 3.0 *	1.5 / 3.0 *	1.5 / 3.0 *
average temperature of the exhaust gas at maximum power	°C	120	130	110
average temperature of exhaust gases at minimum power	°C	55	60	65
the maximum recommended temperature of the exhaust gas	°C	180	180	180
the maximum temperature of the exhaust gas	°C	85	85	85
recommended boiler temperature	°C	65 ÷ 80	65 ÷ 80	65 ÷ 80
minimum temperature of return water	°C	55	55	55





**92-90%**  
**Thermal**  
**Efficiency!**



Pellet Boilers ●

# SMART FIRE 69/81

Highly Efficient Pellet Boiler with Automatic Operation and Modern, Convenient Control.



## PARAMETER:

thermal efficiency  
 rating power  
 power range  
 width (type of fuel tank - width)  
 height (type of fuel tank - height)  
 depth (type of fuel tank - depth)  
 water capacity  
 diameter of the exhaust gas outlet ext. / int.  
 recommended chimney diameter  
 required chimney draught  
 flow and return connection  
 maximum operating pressure \* - depending on the model  
 average temperature of the exhaust gas at maximum power  
 average temperature of exhaust gases at minimum power  
 the maximum recommended temperature of the exhaust gas  
 the maximum temperature of the exhaust gas  
 recommended boiler temperature  
 minimum temperature of return water  
 fuel tank capacity

## UNIT:

%  
 kW  
 kW  
 mm  
 mm  
 mm  
 dm<sup>3</sup>  
 mm  
 mm  
 Pa / mbar  
 inch  
 bar  
 °C  
 °C  
 °C  
 °C  
 °C  
 °C  
 °C  
 dm<sup>3</sup>

## SF 69:

92.5%  
 69  
 20.7 ÷ 69.0  
 300 L - 1300  
 300 L - 1980  
 300 L - 1560  
 290  
 200/190  
 200  
 10 ÷ 20 / 0.1 ÷ 0.2  
 1¼  
 1.5 / 3.0 \*  
 95  
 70  
 180  
 85  
 65 ÷ 80  
 55  
 300

## SF 81:

91.5%  
 81  
 24.3 ÷ 81.0  
 300 L - 1300  
 300 L - 1980  
 300 L - 1560  
 285  
 200/190  
 200  
 10 ÷ 20 / 0.1 ÷ 0.2  
 1¼  
 1.5 / 3.0 \*  
 110  
 70  
 180  
 85  
 65 ÷ 80  
 55  
 300



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**92.5-91.5%**  
**Thermal**  
**Efficiency!**



Wood-fired Boilers

# HOLZ MASTER

Highly Efficient Wood Boiler with Modern and Convenient Control.



## PARAMETER:

thermal efficiency  
rating power  
fuel consumption at rated power  
width  
height  
depth  
diameter of the exhaust gas outlet ext. / int.  
flow and return connection  
maximum operating pressure \* - depending on the model  
required chimney draught  
the maximum temperature of the exhaust gas  
average temperature of the exhaust gas at nominal power  
recommended boiler temperature  
noise level

## UNIT:

%  
kW  
kg/h  
mm  
mm  
mm  
mm  
inch  
bar  
Pa  
°C  
°C  
°C  
dB

## HM 20:

90.7%  
20  
~ 5.5  
770  
1565  
1075  
160/150  
1 1/4  
1.5 / 3.0 \*  
5 + 15 / + 0.05 0.15  
80  
140  
70 + 80  
below 75



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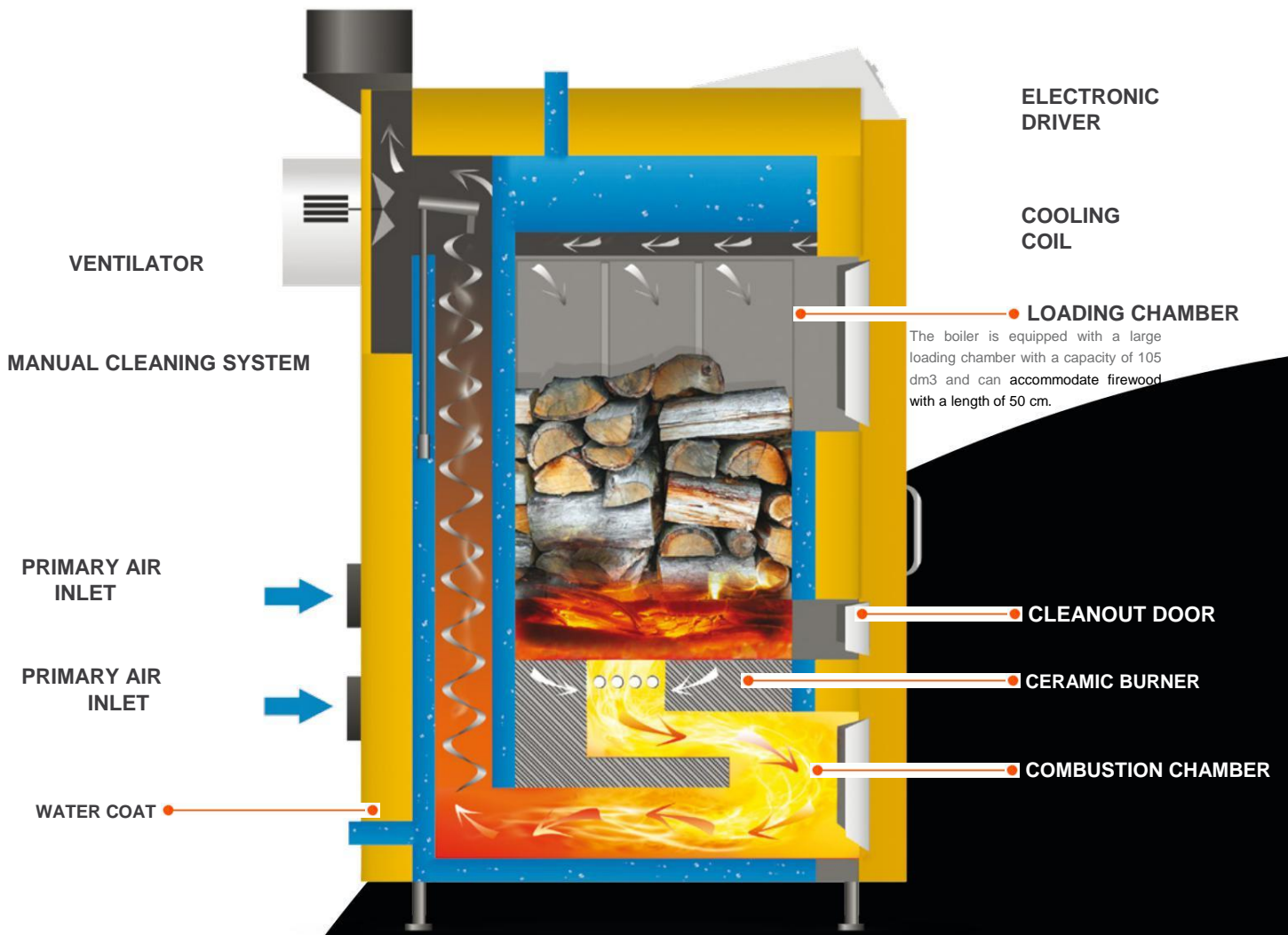
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The Security



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**90.7%**  
Thermal  
Efficiency!

Pellet Boilers •

# FOCUS PELLET

Highly Efficient Pellet Boiler. Fitted to Customer **Specifications**



## PARAMETER:

thermal efficiency  
 rating power  
 power range  
 width (type of fuel tank - width)  
 height (type of fuel tank - height)  
 depth (type of fuel tank - depth)  
 water capacity  
 diameter of the exhaust gas outlet ext. / int.  
 recommended chimney diameter  
 required chimney draught  
 flow and return connection  
 maximum operating pressure \* - depending on the model  
 average temperature of the exhaust gas at maximum power  
 average temperature of exhaust gases at the minimum power  
 maximum recommended temperature of the exhaust gas  
 maximum temperature of the exhaust gas  
 recommended boiler temperature  
 minimum temperature of return water  
 fuel tank capacity

## UNIT:

%  
 kW  
 kW  
 mm  
 mm  
 mm  
 dm<sup>3</sup>  
 mm  
 mm  
 Pa / mbar  
 inch  
 bar  
 °C  
 °C  
 °C  
 °C  
 °C  
 °C  
 °C  
 °C  
 °C  
 dm<sup>3</sup>

## PF21:

91.1%  
 18  
 5.4 ÷ 18.0  
 555  
 1215  
 1115  
 53  
 120/110  
 120 - 130  
 5 ÷ 10 / ÷ 0.05 0.10  
 1  
 1.5 / 3.0 \*  
 120  
 60  
 180  
 85  
 65 ÷ 80  
 55  
 270/300/400/500/900/1480



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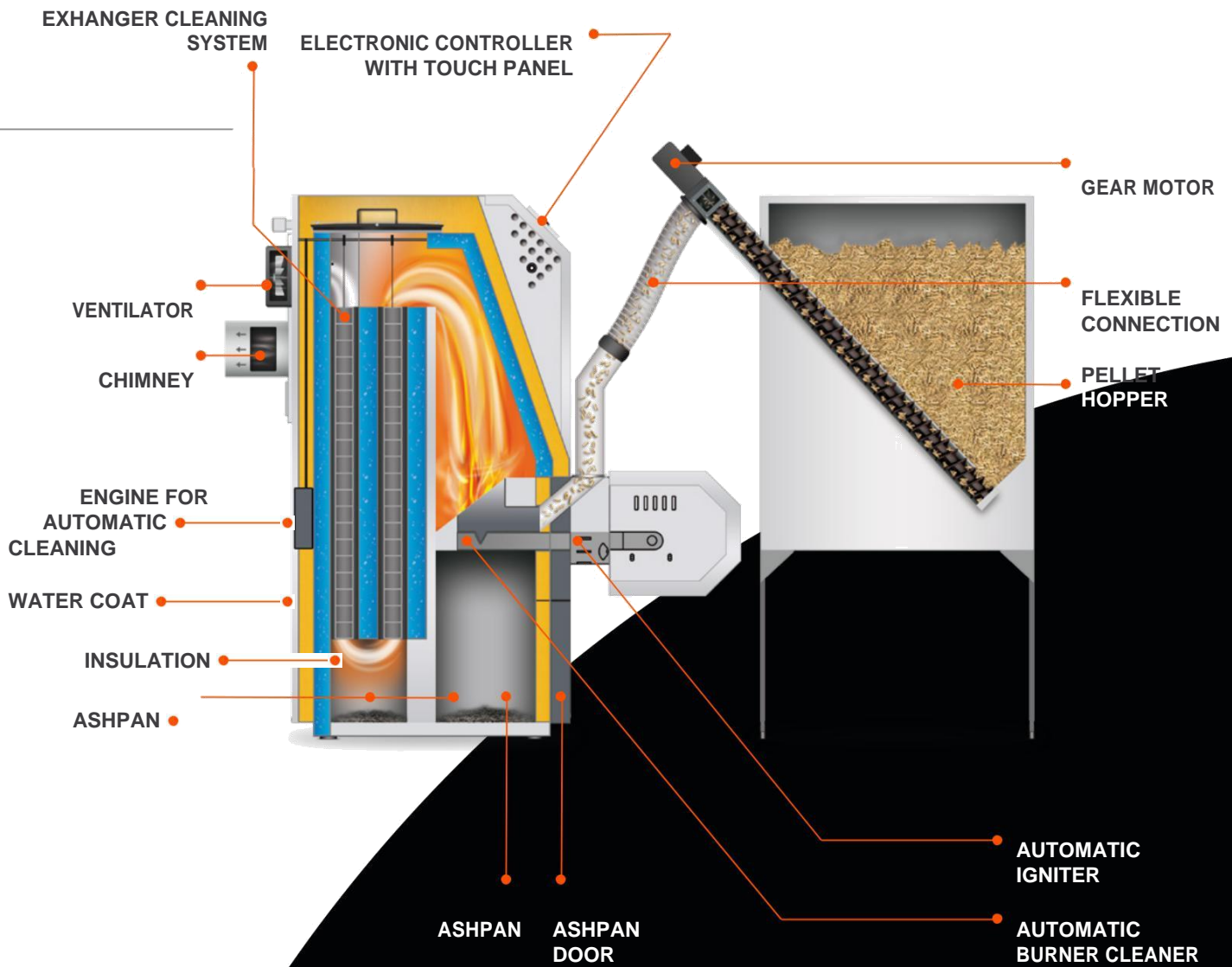
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**91.1%**  
**Thermal**  
**Efficiency!**



Pellet Boilers ●



# COSTA

Modern Pellet Boilers with Ease of Control.



## PARAMETER:

thermal efficiency  
rating power  
power range  
fuel consumption at rated power  
width  
height  
depth  
ext. diameter of the exhaust gas outlet  
average temperature of the exhaust gas for nominal output  
average temperature of the exhaust gas at reduced power  
exhaust gas mass flow at nominal power  
CO emission at nominal power (for 13% O<sub>2</sub>)  
chimney draught required  
noise level  
supply voltage  
electrical insulation  
power consumption - ventilators + gear motor  
power consumption - igniter  
ambient temperature range  
ambient humidity range

## UNIT:

%  
kW  
kW  
kg/h  
mm  
mm  
mm  
Mm  
°C  
°C  
g/s  
mg/m<sup>3</sup>  
Pa / mbar  
dB  
W  
W  
°C  
%

## COSTA:

85.5  
7.5  
4 - 7.5  
about 1.8  
500  
930  
520  
80  
190  
125  
7  
233  
1 + 5 / 0.01 + 0.05  
below 75  
1 PEN ~50Hz 230V TN-S  
IP 20  
135  
170  
15 + 40  
10 + 90%



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**85.5%**

**Thermal  
Efficiency!**

**HKS** **lazar**<sup>®</sup>



# Standard / Optional Equipment:

	SF 11	SF 12	SF 15	SF 22:
TOUCH PANEL	S	S	S	S
WEATHER ADJUSTMENT (SMARTFIRE 2 CIRCUITS, HOLZMASTER 1 CIRCUIT)	S	O	S	S
SENSORS (EXTERNAL, HOT WATER, BUFFER, CIRCUITS, BOILER)	S	S	S	S
CONTROL FOR 2 ADDITIONAL CIRCUITS	O	O	O	O
CONTROL FOR THE BUFFER	S	O	S	S
INTERNET MODULE	O	O	O	O
LAMBDA PROBE	O	O	O	O
AUTOMATIC CLEANING EXCHANGER	S	S	O	O
SAFETY LOCK	S	S	S	S
HYDRAULIC EQUIPMENT	S	S	S	S
VACUM	O	O	O	O
STAINLESS STEEL BURNER	S	S	S	S
MECHANICAL CLEANING OF THE BURNER	S	S	S	S
EXHAUST VERTEX	S	S	S	S
PRESSURE 1.5 BAR	S	S	S	S
WORKING PRESSURE 3 BAR	O	O	O	O



S standard / O option - for extra charge / - inaccessible

**SF 41:**      **SF 69:**      **SF 81**      **PF 21**      **HM 20**      **COSTA**

S      S      S      S      -      -

S      S      S      O      S      -

S      S      S      S      S      -

O      O      O      O      O      -

S      S      S      O      S      -

O      O      O      O      O      -

O      O      O      O      -      -

O      S      S      O      -      -

S      S      S      -      -      -

S      S      S      S      S      -

O      O      O      O      -      -

S      S      S      S      ceramic      S

S      S      S      S      -      -

S      S      S      S      S      -

S      S      S      S      S      -

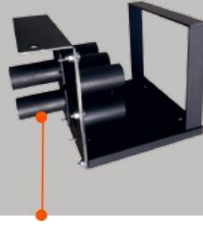
O      O      O      O      O      -

# The **VACUM** Pellet Transport System



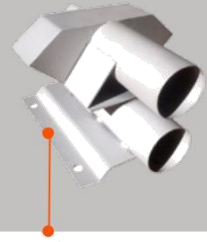
## ● **VACUM PELLETT TRANSPORT SYSTEM -**

Pneumatic pellet choke from the larger tank to the SmartFire boiler.  
Includes: engine, suspension, independent regulator and housing.



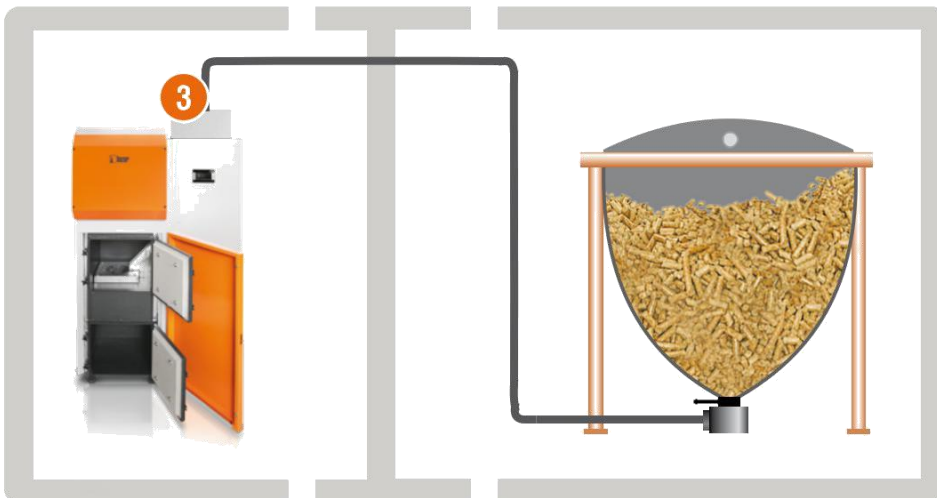
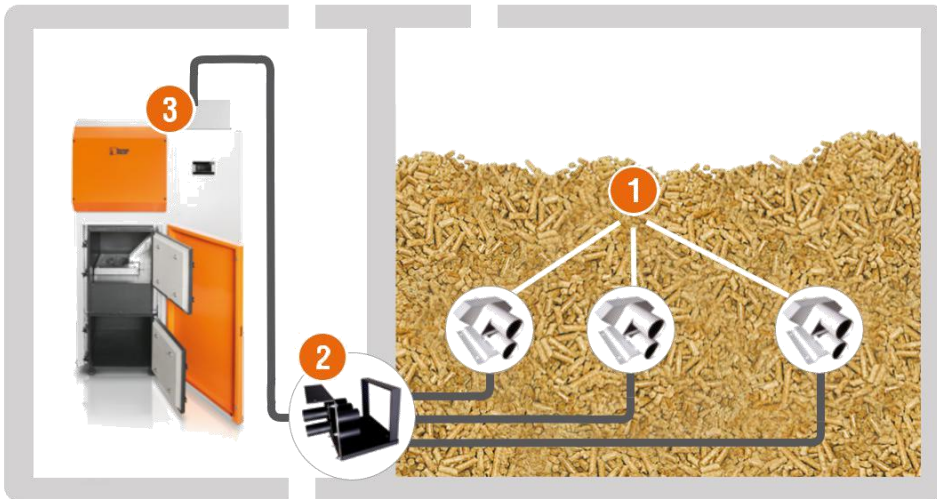
### **SEPARATOR**

This device allows installation of several suction probes in the larger bin for ease of use throughout.



### **SUCTION PROBE**

This device, installed in the additional pellet tray, draws the fuel in smoothly.

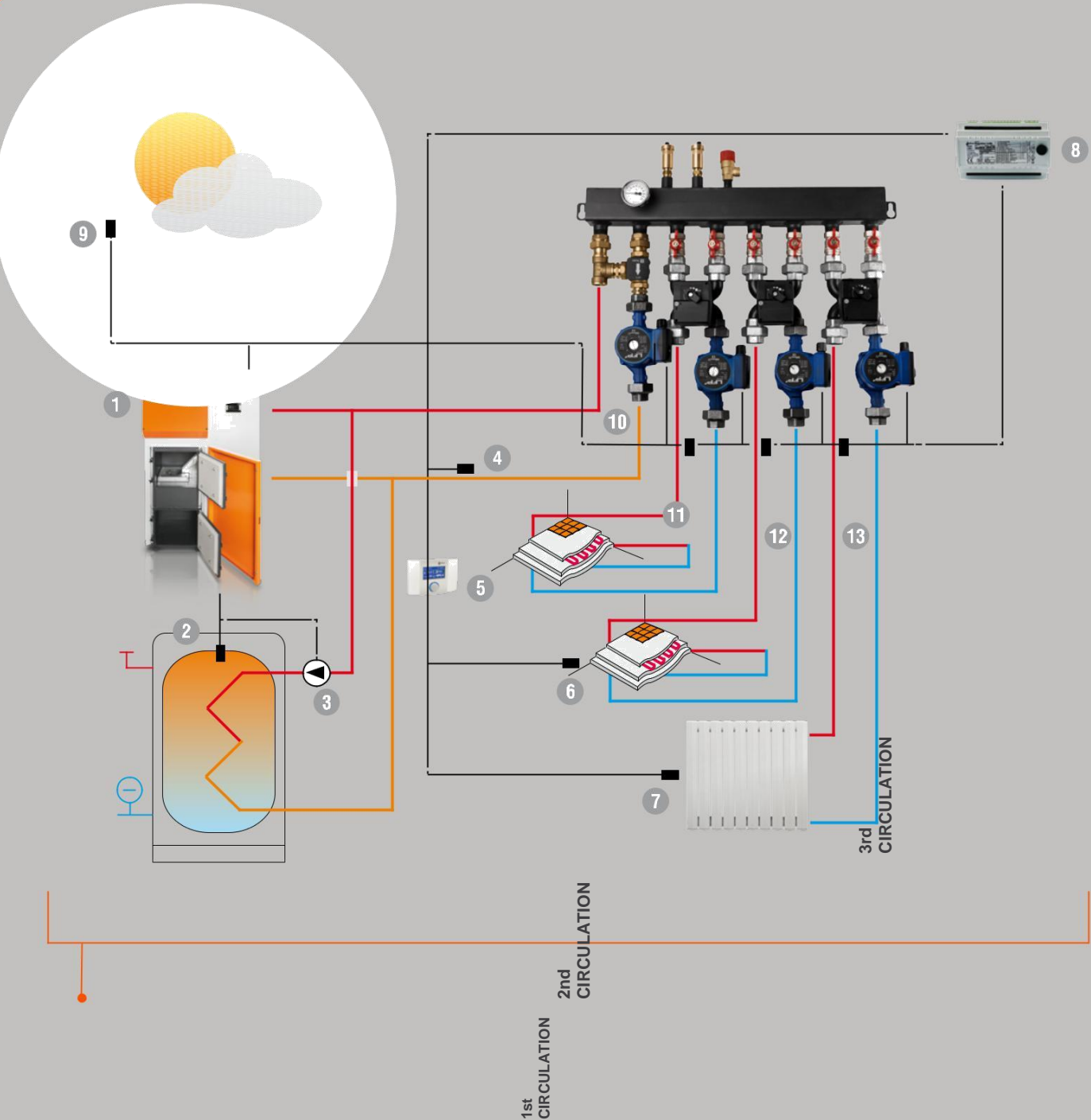


### **DESCRIPTION:**

1. Suction probe
2. Separator
3. Vacuum



# Diagram showing the Three Heating Circuits using the 1-3 CIRCULATION DISTRIBUTOR



**DESCRIPTION:**

1. Boiler
2. Temperature sensor of the hot water storage tank
3. Circuit pump for the hot water storage tank
4. Return temperature sensor
5. Room panel with circuit 1 sensor
6. Room sensor for circuit 2
7. Room sensor for circuit 3
8. Module 800 S
9. Outside temperature sensor
10. Circulation boiler, TV-valve
11. Circuit 1 (pump, 4D valve with actuator, temperature sensor)
12. Circuit 2 (pump, 4D valve with actuator, temperature sensor)
13. Circuit 3 (pump, 4D valve with actuator, temperature sensor)

The hydraulic diagram shown does not replace the installation as designed and is only an illustration.



## MANUFACTURER

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