

Boilers with manual loading

OPOP
partner for your heating

H4 EKO-D MAX 25-55 kW

Due to their power range of 25-55 kW, the boilers are intended for heating family houses and medium-sized buildings.

The intelligent wood boiler combines classic heating with modern technologies. The unique design of the boiler ensures perfect combustion of fuel with maximum heat efficiency of 90%.

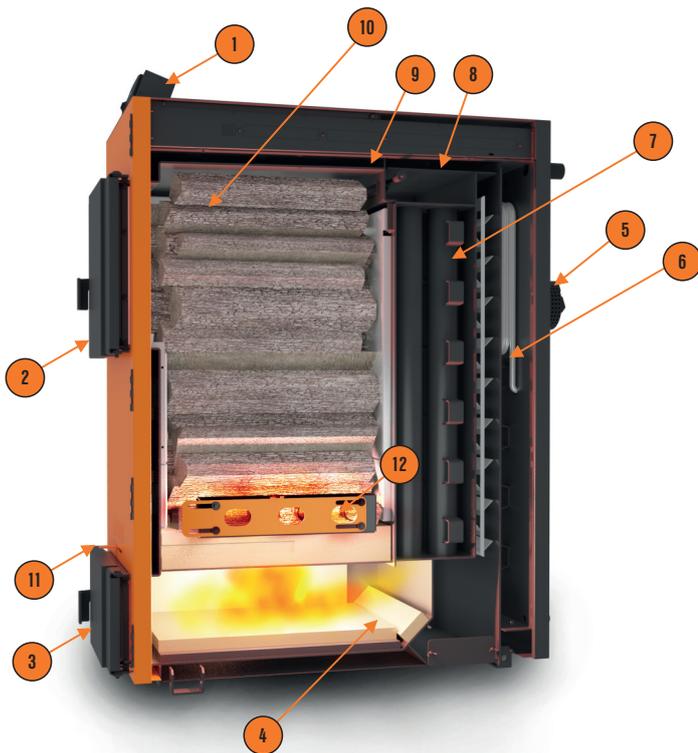
The boiler control unit controls not only the combustion process but also all elements of the heating system. No additional expenses for heating circuit control systems or hot water heating are thus necessary.

The boiler can be connected online and with the eModul application you can then monitor its operation via mobile phone.



ECO
DESIGN

5-YEARS
GUARANTEE



1. Control unit with intuitive operation.
2. Large loading door from the front of the boiler.
3. Ashtray door for collecting ash.
4. Combustion chamber with refractory concrete bricks for min. emission.
5. The exhaust fan draws air through the primary and secondary air flaps into the loading chamber, nozzle, boiler exchanger and then into the flue gas path.
6. The cooling loop protects the boiler against overheating.
7. Lamellar exchanger of the boiler ensuring high efficiency.
8. Cleaning door for access to the boiler exchanger.
9. An exhaust flap, which ensures smoke extraction from the loading chamber. And thus smoke can not escape into the room during loading of wood.
10. The loading chamber can hold a large amount of wood.
11. Secondary air flap ensures low emissions and high wood burning efficiency.
12. Primary air flaps on both sides of the boiler. They ensure adequate boiler performance.

Power: 25-55 kW

Fuel: wood, chopped / H₂O max. 20%; length of logs up to 53 cm

Easy operation

- The boiler has a large loading chamber and is intended for burning wood even half a meter long.
- Simple setting and operation of the boiler, which is already set to the required output from the factory. Before flooding, all you have to do is set the primary and secondary air flaps to the marked line and you can start heating with certainty of the required output.
- Boiler output regulation is controlled by fan speed modulation. The output is modulated according to the current and required water temperature in the system in the range from approximately 50 to 100%, when limiting the primary air supply, the output is regulated from approximately one third.
- Electronic control unit - the control unit can control not only the boiler, but also all elements of the heating system. So you don't have to pay extra for superior modules controlling mixing valves, hot water heating or storage tank. Everything is provided by the boiler control unit itself.
- Possibility to connect to the web - for an additional fee, the boiler can be connected to the Internet and monitor its operation, history or change settings via phone or PC.
- The boiler includes a cooling loop that protects the boiler against overheating.
- Fuel burn-out signaling in the loading chamber - a message about running out of fuel is displayed in the upper right corner of the control unit display. The customer thus knows without any problem when he can open the boiler and add fuel. In addition, when you connect the boiler to the Internet, you can see the display of fuel burning out of fuel on your mobile phone.
- Adding fuel without smoke in the boiler room - when the exhaust flap is opened, the fan speeds up and it then sucks the smoke from the loading chamber into the chimney through the flap. This takes about 10 to 20 seconds, after which you can open the door without smoke escaping into the room.
- The boiler is able to maintain a steady-burning layer - in this case, the customer has a choice. Either it can quickly heat the water in the storage tank with maximum boiler output and perfect combustion with high efficiency and maximum fuel utilization. Which will bring him, for example, one day without the need for flooding in the boiler. The second option is to try to keep the hot layer in the boiler as long as possible so that the boiler does not go out.
- The boiler is easy to maintain and clean thanks to simple access to the heat exchanger.

Economical and ecological operation

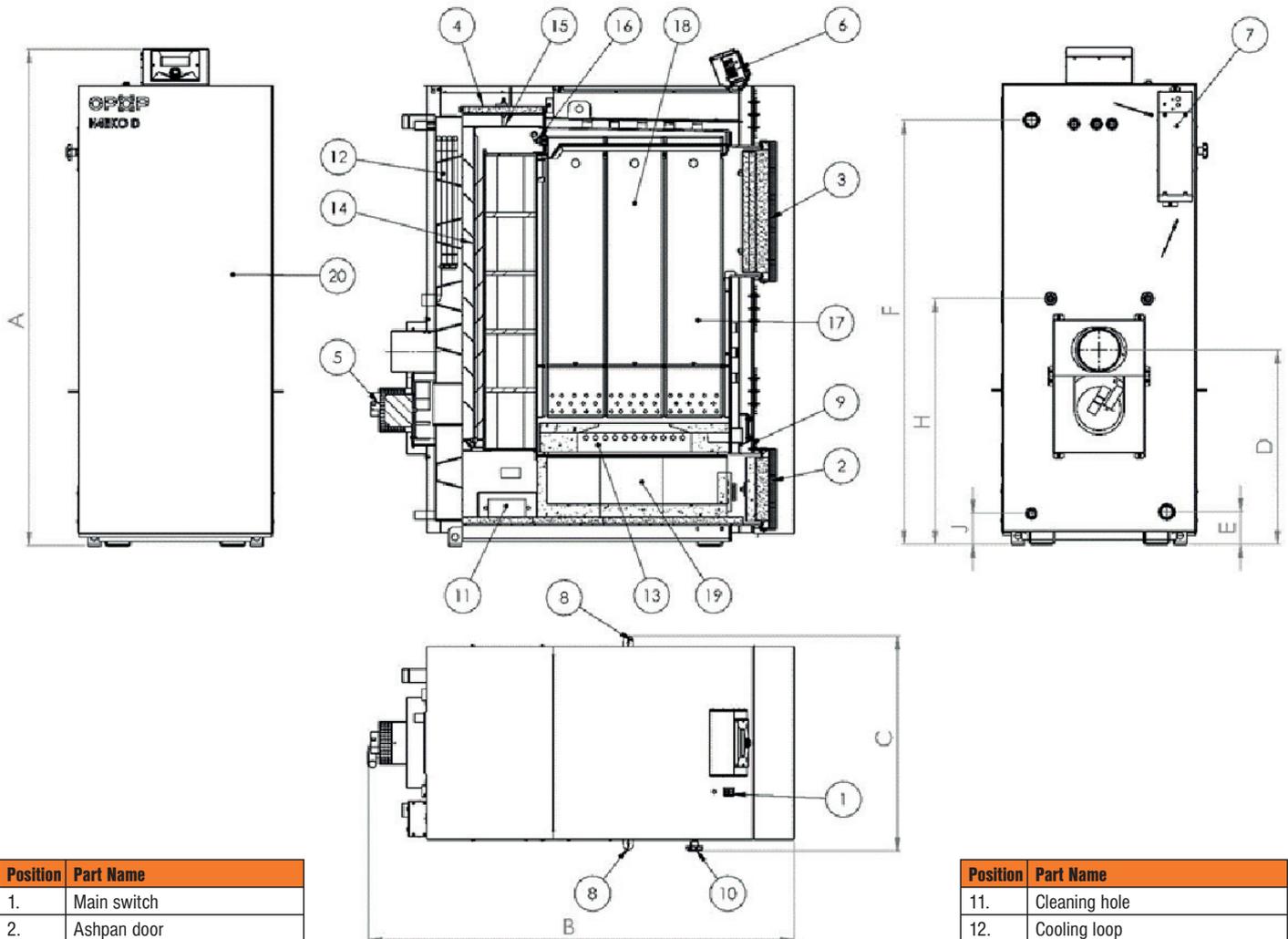
- The boiler has a high efficiency of up to 90.5%, which means efficient use of fuel energy.
- Low wood consumption together with a large loading chamber reduce the frequency of adding fuel.
- The storage tank will further reduce the loading frequency, when its connection is a necessary for the correct operation of the boiler.
- Boiler meets the conditions of ecodesign and 5th emission class.
- High-quality combustion produces very low emissions even without the use of a lambda probe or other devices.

Long life

- Electronic elements with a long life are used in the boiler.
- 5-year warranty on the heat exchanger when the boiler is installed by a trained installation company in accordance with the operating instructions.
- Protection of the combustion chamber - the loading chamber of the boiler is equipped with protection plates that protect the heat exchanger from the effects of fumes created in the loading chamber.



Technical parameters	Boiler type						
		H425 EKO-D MAX	H435 EKO-D MAX	H442 EKO-D MAX	H449 EKO-D MAX	H455 EKO-D MAX	
Boiler type							
Rated heat output	[kW]	25	35	42	49	55	
Efficiency	[%]	90,5	89,5	89,1	90,0	90,0	
Required chimney draft	[mbar]	0,12	0,19	0,17	0,18	0,18	
Weight	[kg]	513	510	510	570	570	
Ecodesign		Yes	Yes	Yes	Yes	Yes	
Boiler class according to ČSN EN 303-5		5	5	5	5	5	
Water volume	[litre]	145	145	145	161	161	
Flue diameter	[mm]	130	130	130	130	130	
Fuel consumption	[kg/hour]	6,03	8,9	10,8	12,5	14,2	
Heating water temperature range	[°C]	65 - 85	65 - 85	65 - 85	65 - 85	65 - 85	
Fuel shaft volume	[litre]	137	170	170	201	201	
Filling door dimensions (HxW)	[cm]	40 x 34	40 x 45	40 x 45	40 x 45	40 x 45	
Maximum log length	[cm]	53	53	53	53	53	
Burning time at nominal output	[hour]	> 4	> 4	> 4	> 4	> 4	
Flue gas temperature at nominal heating output	[°C]	109,6	133	153	140	143	
Maximum heating water pressure	[MPa]	0,2	0,2	0,2	0,2	0,2	
Heating water test pressure	[MPa]	0,4	0,4	0,4	0,4	0,4	
Warranty fuel		Wood – A, dry wood with a calorific value of 15–17 MJ/kg, diameter 80–150 mm and humidity 12–20 %					
Flue gas mass flow	[kg/s]	0,01530	0,0246	0,0293	0,031	0,0327	
CO at 10% O2	[mg/m ³]	169	200	91	-	174	
Dust at 10% O2	[mg/m ³]	22	16	30	-	50	
IP code	IP	20	20	20	20	20	
Rated electrical input	[W]	29	44	42	42	42	
Maximum electrical input	[W]	52	52	52	52	52	
Standby input power	[W]	4	4	4	4	4	
Voltage supply	[V/A/Hz]	230/2/50	230/2/50	230/2/50	230/2/50	230/2/50	
Boiler hydraulic loss at $\Delta T = 20 K$	[mbar]	5,556	5,556	7,989	7,761	7,533	
Boiler hydraulic loss at $\Delta T = 10 K$	[mbar]	22,18	22,18	31,21	28,64	26,07	
Noise emission	dB	42,3 ± 3,2 dB					



Position	Part Name
1.	Main switch
2.	Ashpan door
3.	Filling door
4.	Cleaning door
5.	Exhaust fan
6.	Operating unit
7.	Control unit
8.	Secondary air regulation
9.	Primary air regulation
10.	Chimney flap control

Position	Part Name
11.	Cleaning hole
12.	Cooling loop
13.	Refractory nozzle
14.	Turbulator (H416, H420EKO-D 1x; H425EKO-D 2x)
15.	Cleaning flap
16.	Smoke flap
17.	Filling shaft spacers
18.	Filling shaft
19.	Combustion chamber
20.	Front cover

		H425 EKO-D MAX	H435 EKO-D MAX	H442 EKO-D MAX	H449 EKO-D MAX	H455 EKO-D MAX
Outlet/inlet sleeve (male thread)		G1 1/4"				
Cooling loop connection (female thread)		G 1/2"				
Draining and filling connection (female thread)		G 1/2"				
A - total boiler height	[mm]	1411	1411	1411	1551	1551
B - total boiler depth	[mm]	1283	1283	1283	1323	1323
C - boiler width	[mm]	670	670	670	670	670
D - flue location	[mm]	607	607	607	607	607
E - water inlet location	[mm]	102	102	102	102	102
F - water outlet location	[mm]	1324	1324	1324	1324	1324
H - cooling loop location	[mm]	628	628	628	768	768
J - location of drain valve	[mm]	97	97	97	97	97
Boiler body wall thickness (water/flame)	[mm]	5	5	5	5	5
Boiler body wall thickness (water)	[mm]	3	3	3	3	3