

Boilers with manual loading

**OPOP**  
partner for your heating

# H4 EKO-D MAX H4 EKO-D MAX S

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

The intelligent wood boiler combines classic heating with modern technologies that guarantee its high efficiency with low fuel consumption. The construction of the boiler allows to add logs up to 53 cm long. A large hopper with a volume of up to 201 l extends the burning time of the fuel per load and thus reduces the frequency of loading.

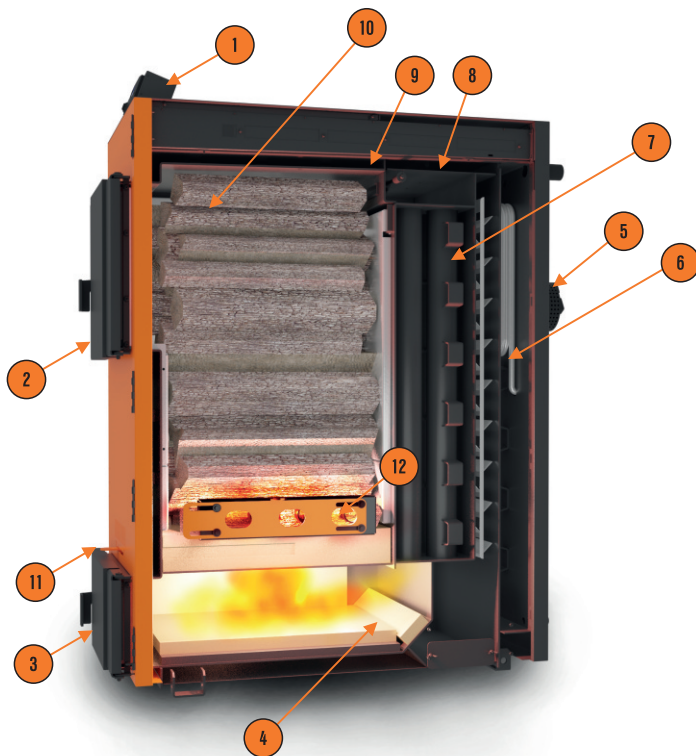
The boiler is equipped with a control unit that controls the combustion process and an exhaust fan that regulates the output. The unique flat hot concrete burning surface ensures high-quality fuel burning without arching.

Cleverly solved flue gas extraction during application thanks to the exhaust flap.



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, heat 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 heat 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 / H<sub>2</sub>O max. 20%; length of logs up to 53 cm

#### Easy operation

- The construction solution of the boilers allows you to add logs up to 53 cm long, and this applies to all outputs of this series. This will reduce the time needed to prepare the wood.
- The boiler has a large hopper that can hold a large amount of wood for one load. The volume of the loading chamber is from 137 to 201 l depending on the power. This reduces the frequency of loading.
- The unique flat hot concrete bottom of the loading chamber makes it possible to create a large hot layer, which ensures high-quality fuel burning for long hours and without vaulting.
- A smart solution for extracting flue gas during loading – the boilers are equipped with an exhaust flap that ensures smoke is sucked into the chimney.
- Reduction of tarring in the loading chamber – part of the primary combustion air is brought to the upper part of the loading chamber in order to prevent the condensation of vapors in the hopper and thus reduce tarring.
- Simple setting and operation of the boiler, which is already set to the required output from the factory.
- The boiler includes a cooling loop that protects the boiler from overheating.
- Easy maintenance and cleaning 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 hopper reduce the frequency of loading fuel.
- Low electricity consumption.
- The accumulation tank will reduce the frequency of filling even more and it is a condition for the correct operation of the boiler.
- It satisfies the 5th emission class conditions and meets the conditions of ecodesign.
- High-quality combustion produces very low emissions even without the use of a lambda probe or other devices.

#### Long life

- Long-life electronic elements 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.
- Loading chamber protection - the combustion chamber of the boiler is equipped with shielding plates that protect the heat exchanger from the effects of fumes created in the combustion chamber.

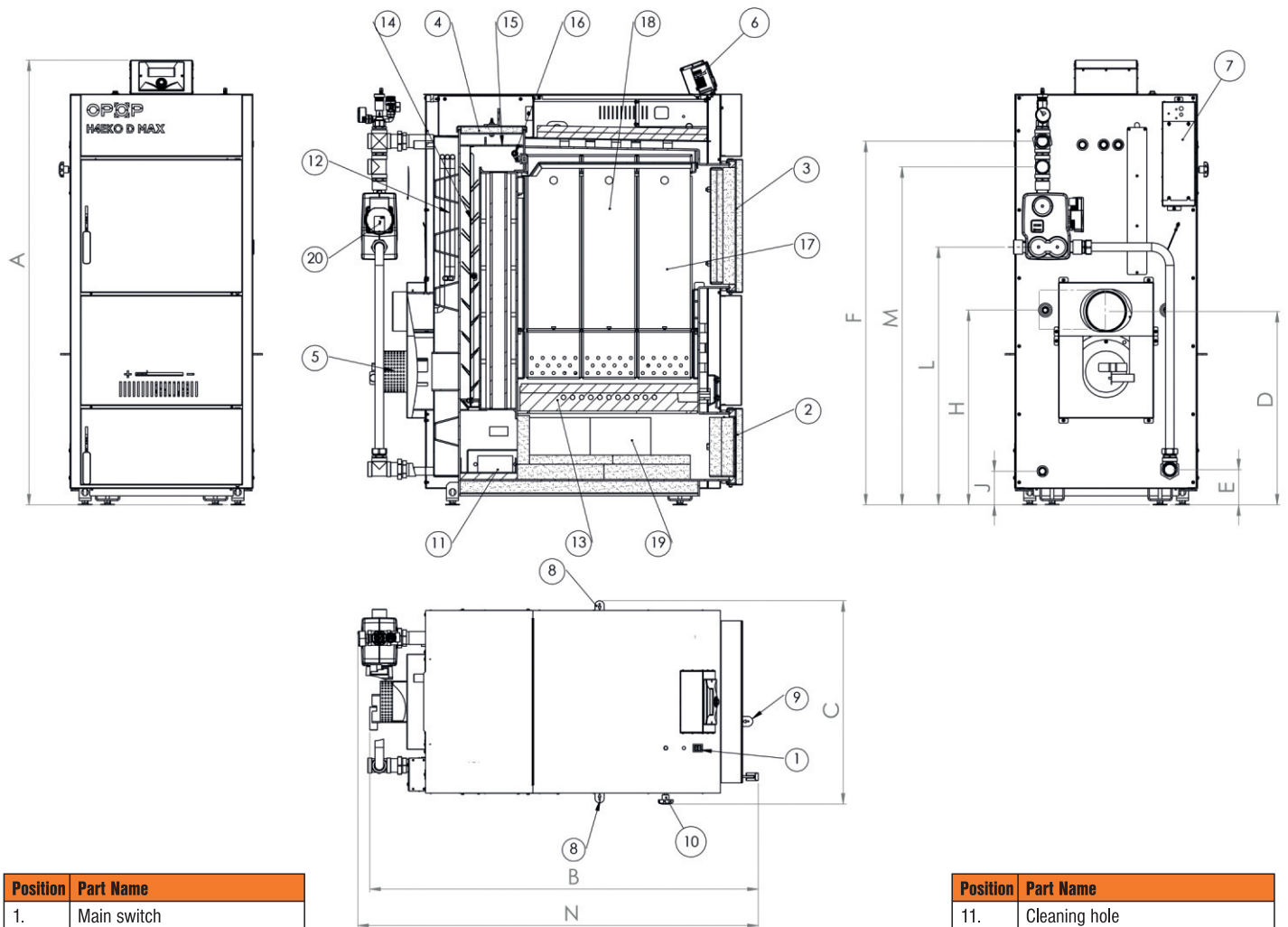
### Accessories

- The hydraulic set simplifies the installation of OPOP boilers and thus shortens the time required to connect the boiler to the heating system. Designed only for the H4 EKO-D MAX 25 and 35 kW version.
- Internet module – connects the boiler with an application that continuously monitors the operation of the boiler and stores its activity history.

Possibility of connection	H4 EKO-D MAX	H4 EKO-D MAX S
CH pump	YES	YES
DHW pump	YES	YES (with Modul EU +1 TUV)*
Additional pump	YES	YES (with Modul EU +1 TUV)*
Pump of mixing valve 1	YES	YES (with Modul EU +1 TUV)*
Pump of mixing valve 2	YES (with Modul EU +1 TUV)*	YES (with Modul EU +1 TUV)*
Mixing valve 1	YES	YES (with Modul EU +1 TUV)*
Mixing valve 2	YES (with Modul EU +1 TUV)*	YES (with Modul EU +1 TUV)*
Storage tank	YES (with temp. sensor)	YES (pomocí tep. čidla)
Ekviterm controll	YES	YES (with Modul EU +1 TUV)*
Room thermostat RT10/other thermostat	YES	YES (with Modul EU +1 TUV)*
Internet/mobile app control	YES (with internet. modul)	NO
Boiler temperature sensor	YES	YES
Safety sensor	YES	YES
Hot water sensor	YES	YES (with Modul EU +1 TUV)*
Mixing valve sensor	YES	YES (with Modul EU +1 TUV)*
Storage tank sensor	YES	YES
Outside temperature sensor	YES (with sensor)	YES (with Modul EU +1 TUV)*
Fan	Modulated fan speed	On/Off operation
Electronic detection of fuel in hopper	YES	NO
Ability to maintain steady glow layer	YES	NO
Electronic control unit	Control boiler and all elements of heating system.	Can control boiler, pump, DHW and storage tank

\* Modul EU +1 TUV – optional accessories.

Technical parameters	Boiler type					
		H425 EKO-D MAX H425 EKO-D MAX S	H435 EKO-D MAX H435 EKO-D MAX S	H442 EKO-D MAX H442 EKO-D MAX S	H449 EKO-D MAX H449 EKO-D MAX S	H455 EKO-D MAX H455 EKO-D MAX S
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 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
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
Noise emission	dB	42,3 ± 3,2 dB				



Position	Part Name
1.	Main switch
2.	Ash door
3.	Filling door
4.	Cleaning door
5.	Exhaust fan
6.	Control unit-display
7.	Box with electronic
8.	Primary air regulation
9.	Secondary 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.	Loading shaft
19.	Combustion chamber
20.	Hydraulic set*

\*Must be ordered separately.

		H425 EKO-D MAX H425 EKO-D MAX S	H435 EKO-D MAX H435 EKO-D MAX S	H442 EKO-D MAX H442 EKO-D MAX S	H449 EKO-D MAX H449 EKO-D MAX S	H455 EKO-D MAX H455 EKO-D MAX S
Outlet/inlet socket (outside thread)		G1 1/4"	G1 1/4"	G1 1/4"	G1 1/4"	G1 1/4"
Cooling loop connection (inside thread)		G 1/2"	G 1/2"	G 1/2"	G 1/2"	G 1/2"
Draining and filling connection (inside thread)		G 1/2"	G 1/2"	G 1/2"	G 1/2"	G 1/2"
A – total boiler height	[mm]	1465	1465	1465	1605	1605
B – total boiler depth	[mm]	1283	1283	1283	1323	1323
C – boiler width	[mm]	670	670	670	670	670
D – flue location	[mm]	637	637	637	637	637
E – water inlet location	[mm]	116	116	116	116	116
F – water outlet location	[mm]	1200	1200	1200	1340	1340
H – cooling loop location	[mm]	641	641	641	785	785
J – location of drain valve	[mm]	50	50	50	50	50
Boiler body wall thickness (water/flame)	[mm]	5	5	5	5	5
Boiler body wall thickness (water)	[mm]	3	3	3	3	3