

SIGMA DUAL



Sigma Dual Boiler is a device multifuel, designed to burn wood in the form of large pieces or sawdust pellets in the form of pellets. Thanks to a separate combustion chambers is not necessary to remove the pellet burner to burning wood. One controller supports two boilers: boiler on wood and pellet.



FUEL

- Recommended fuel: Wood (humidity of 15-20%)

Wood should be from deciduous trees like: Oak, Bebech, Acacia, Hornbeam, Ash, or softer wood like birch or poplar. As substitute can be use wood from coniferous.

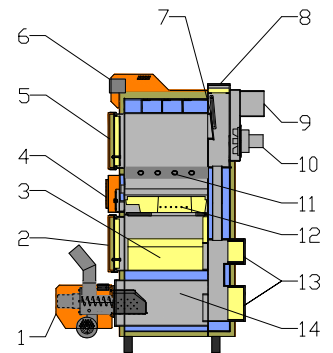
-Recommended fuel for MOC burner: pellet diameter 6 to 8 mm and of 5-30mm length (20% up to 45mm) and up to 2% ash content. Maximum humidity pellets should not exceed 10%. The calorific value of pellets should be greater than 17.5 MJ /



TECHNICAL DATE

Model			SIGMA Dual 20	SIGMA Dual 20
Lp.	Description	Unit	WOOD	PELLET
1	Nominal power *	kW	20	20-25
2	efficiency	%	89%	88%
3	Boiler class. PN-EN – 303-5	-	5	5
4	Flue gas temperature at nominal power	°C	160	210
5	Chimney pressure	Pa	15-20	15-20
6	Flue gases mass flux	g/s	15	
7	Water-side resistance; Δt=10K; Δt=20K	mbar	3,4; 1,4	3,4; 1,4
8	Maximum water temperature	°C	90	90
9	Min. inlet temperature	°C	55	55
10	Min. Outlet temperature	°C		
11	Water capacity	l	175	175
12	Pressure	bar	2	2
13	Loading chamber capacity	dm ³	115	300-700
14	loading chamber Dimensions	mm	circle with a diameter of 535 and 330	-
15	The minimum buffer tank capacity 700	l	700	-
16	Power consumption	W	90 (230V, 50 Hz)	532
17	Flue Gasek outlet diameter	mm	160	160
18	FUEL:			
	- type		wood	pellet
	-assortment	mm	length 100-150, diameter up to 130	6-8
	- disposable loading	kg	15-16	180-420
	- mass flux	kg/h	6,5	4,3
	- combustion time	h	2,3	42-98
19	CO Emission (O2=10%)/(O2=13%)	mg/m ³	850/620	340
20	OGC Emission (O2=10%)/(O2=13%)	mg/m ³	55/40	-
21	Dust Emission (O2=10%)/(O2=13%)	mg/m ³	101/104	-

BOILER CONSTRUCTION



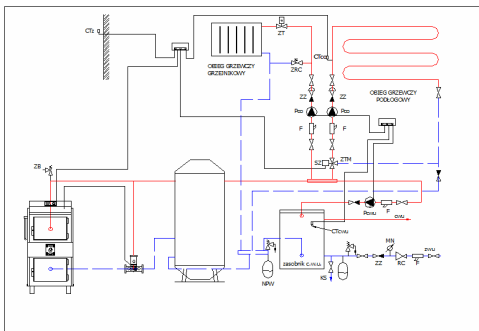
1. Pellet burner MOC
2. Combustion chambers door
3. The combustion chamber with ceramic insert
4. Air control
5. Loading door
6. Boiler controller
7. Easy firing up flap
8. Upper clearing hole
9. Flue outlet
10. fan
11. The primary air nozzles
12. Ceramic burner
13. Lower cleaning hole
14. The combustion chamber pellet burner

AUTOMATION

Supports domestic hot water pump and central heating pump, and working with a room thermostat



Installation diagram with a buffer tank



Boiler dimensions SIGMA DUAL 20:

Height - 1750mm, width - 750mm, Depth without the burner - 980 mm
depth with burner - 1310mm

ADVANTAGES OF THE BOILER

- Automatic combustion control
- 2-7days for one load combustion (pellets)
- Easy to use
- Expandable automation
- Dual furnace