

ZADAR

Test objective:	Hygiene, health and the environment Safety and accessibility in use Energy economy and heat retention		
Exact name of the test procedure:	1.4*, 1.5* - Tests of tightness, pressure resistance, thermal technical parameters, combustion efficiency, safety functions		
Test method:	ČSN EN 16510-1 ed. 2:2023, Art. A.4, A.4.1, A.4.2, A.4.3, A.4.4, A.4.6, A.4.7, A.4.10.4, A.6.2.1		
Sample tested:	ZADAR		
Measuring equipment used:	see Chapter III		
Date of test:	2021-06-28		
Ambient conditions:	25.0 °C	45.0 %	98.7 kPa
	Temperature	Relative humidity	Barometric pressure

Variables measured and calculated: Nominal heat output	Unit	Tests n.				Limit according to:
		1	2	3	Average	ČSN EN 16510-2-1:2023
Fuel used: Beech wood	mm	330				
Combustion air setting – primary/secondary	%	33.5				
Fuel consumption	kg/hour	3.37	3.35	3.35	3.36	
Achieved input	kW	14.0	13.9	13.9	13.9	
Ambient temperature in the room and combustion air temperature	°C	27	25	25	25	
Chimney draught	Pa	12	12	12	12	
Combustion product average temperature	°C	269	265	266	267	
Flue gas outlet temperature	°C	320				
CO ₂	%	11.34	11.50	12.20	11.68	
CO – measured	%	0.0924	0.0795	0.1330	0.1016	
CO – at O ₂ = 13 %	%	0.0642	0.0546	0.0856	0.0681	
CO – at O ₂ = 13 %	mg/Nm ³	802	683	1070	852	≤ 1500
CO – at O ₂ = 0 %	mg/MJ	554	472	740	589	
NO _x – measured	ppm	102	93	98	98	
NO _x – at O ₂ = 13 %	mg/Nm ³	146	132	129	136	≤ 200
NO _x – at O ₂ = 0 %	mg/MJ	101	91	89	94	
OGC – measured	ppm	41	34	63	46	
OGC – at O ₂ = 13 %	mg/Nm ³	53	43	75	57	≤ 120
OGC – at O ₂ = 0 %	mg/MJ	37	30	52	40	
Chimney loss	%	17.2	16.9	16.1	16.7	
Loss of gas underburning	%	0.5	0.5	0.7	0.6	
Loss of solid underburning	%	0.5	0.5	0.5	0.5	
Efficiency	%	81.8	82.2	82.7	82.2	
Total heat capacity achieved	kW	11.4	11.4	11.5	11.5	
Uncertainty of total heat output	kW	0.2	0.2	0.2	0.2	
Nominal capacity	kW	11.0				
Mass flow rate of dry combustion products	g/s	8.5	8.4	7.9	8.3	

CO ₂	%	11.98	12.39	12.80	12.39	
Dust – measured	mg/Nm ³	38	43	39	40	
Dust – at O ₂ = 13 %	mg/Nm ³	25	28	24	26	≤ 40
Dust – at O ₂ = 0 %	mg/MJ	18	20	17	19	