



Strojírenský zkušební ústav, s.p.
(Engineering Test Institute, Public Enterprise)
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Testing Laboratory 1045.1 accredited by the CAI pursuant to ČSN EN ISO/IEC 17025:2018

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TEST REPORT

30-17274/1/T

Product: Fireplace stove for wood

Type designation: SAYA

Customer: MCZ GROUP SPA
Via La Croce, 8
33074 Vigonovo di Fontanafredda
ITALY

Manufacturer: MCZ GROUP SPA
Via La Croce, 8
33074 Vigonovo di Fontanafredda
ITALY

Report issue date: 2024-10-16

Distribution list: 1 copy to the Customer
1 copy to the Engineering Test Institute

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:	SAYA						
Measuring equipment used:	see Chapter III						
Date of test:	2020-07-15						
Ambient conditions:	<table style="width:100%; border:none;"> <tr> <td style="text-align:center;">27.0 °C</td> <td style="text-align:center;">36.0 %</td> <td style="text-align:center;">99.9 kPa</td> </tr> <tr> <td style="text-align:center;">Temperature</td> <td style="text-align:center;">Relative humidity</td> <td style="text-align:center;">Barometric pressure</td> </tr> </table>	27.0 °C	36.0 %	99.9 kPa	Temperature	Relative humidity	Barometric pressure
27.0 °C	36.0 %	99.9 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	150				
Combustion air setting	%	30 open				
Fuel consumption	kg/hour	3.09	2.84	2.89	2.94	
Achieved input	kW	13.3	12.2	12.4	12.7	
Ambient temperature in the room and combustion air temperature	°C	26	28	28	27	
Chimney draught	Pa	13	11	12	12	
Combustion product average temperature	°C	300	292	305	299	
Flue gas outlet temperature	°C	359				
CO ₂	%	9.60	11.32	12.18	11.03	
CO – measured	%	0.0672	0.0800	0.1332	0.0935	
CO – at O ₂ = 13 %	%	0.0536	0.0561	0.0858	0.0652	
CO – at O ₂ = 13 %	mg/Nm ³	670	702	1073	815	≤ 1500
CO – at O ₂ = 0 %	mg/MJ	462	484	740	562	
NO _x – measured	ppm	62	74	68	68	
NO _x – at O ₂ = 13 %	mg/Nm ³	101	107	90	99	≤ 200
NO _x – at O ₂ = 0 %	mg/MJ	70	74	62	69	
OGC – measured	ppm	23	23	30	25	
OGC – at O ₂ = 13 %	mg/Nm ³	33	29	36	33	≤ 120
OGC – at O ₂ = 0 %	mg/MJ	23	20	25	23	
Chimney loss	%	22.2	18.6	18.3	19.7	
Loss of gas underburning	%	0.5	0.5	0.7	0.5	
Loss of solid underburning	%	0.5	0.5	0.5	0.5	
Efficiency	%	76.9	80.4	80.5	79.3	
Total heat capacity achieved	kW	10.2	9.8	10.0	10.0	
Uncertainty of total heat output	kW	0.3	0.3	0.3	0.3	
Nominal capacity	kW	10.0				
Mass flow rate of dry combustion products	g/s	9.4	7.4	7.0	7.9	

CO ₂	%	10.58	11.95	14.01	12.18	
Dust– measured	mg/Nm ³	35	48	90	58	
Dust– at O ₂ = 13 %	mg/Nm ³	26	32	51	36	≤ 40
Dust– at O ₂ = 0 %	mg/MJ	19	23	40	28	