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

REPORT on Initial Product Type Testing
30-15816/T

Product:	Fireplace stove for wood
Type designation:	PAVLINA, LORENA, SERENA, MAURA
Customer:	Stove Italia srl Via del Santo 11/8 IT-35010 Loreggoa Italy
Manufacturer:	Stove Italia srl Via del Santo 11/8 IT-35010 Loreggoa Italy
Responsible employee:	Milan Holomek
Report issue date:	2022-01-03
Distribution list:	1 copy to the Customer 1 copy to the Engineering Test Institute

This activity was performed at SZU in Brno, based on these documents:

- Order B-75109 of 2021-12-15
- Contract B-75109/30

I. Description of product tested

These fireplace stoves for wood, PAVLINA, LORENA, SERENA, MAURA, are designed for burning wood, with the use of a burn-through system.
The fireplace stove for wood is a steel weldment. The combustion chamber is lined with ceramic fittings. In the stoking door there is a special "glass ceramic", which is resistant to high temperatures and thermal shocks. At the bottom of the combustion chamber there is a solid cast-iron grate and below it there is an ashpan.
Primary and secondary air is brought into the combustion chamber and can be regulated by levers under the door. The stove disposes of the option of supplying air for combustion through a central air supply (CPV) from an external room and does not consume air from the room where it is installed.

Basic technical data of hot-air stoves (Table 1)

Type	Main dimensions (mm)		Flue gas connector diameter (mm)	Nominal output (kW)	Fuel consumption (kg/h)
	Height	Diameter/width		Wood	Wood
PAVLINA	880	643	150	6.0	2.0
LORENA				8.0	2.8
SERENA	1100	506		8.0	2.5
MAURA				7.0	2.2

II. Samples tested

The following samples have been submitted for visual inspection, tests and evaluations:

(Table 2)

Type	Date	Sample reg. no.
PAVLINA	09-02-2015	0211.15.16066.003
LORENA	09-02-2015	0211.15.16079.002
SERENA	09-02-2015	0211.15.16066.001
MAURA	04-02-2015	0211.15.16074.000

The inspection, tests and evaluations of the product and technical documentation were carried out at SZU Brno Test Station in 02-03/2015 and 12/2021 by Josef Duchan.

III. Methods, results of tests and verifications

Measuring and test equipment:

No.	Description	Inventory number	Calibration valid until	Accuracy
1.	Barometer	112541	02.2019	see KL no. 6013-KL-K001-14
2.	Thermometer - ambient (Testo 608-H)	117044	02.2018	see KL no. 1072F/13
3.	Hygrometer (Testo 608-H)	117044	02.2018	see KL no. 1072F/13
4.	Draught gauge	117274	03.2015	see KL no. 1769F/13
5.	Scale HP-30 K	022333	10.2015	see KL no. 6051-KL-HO172-13
6.	Stopwatch	990806	10.2017	see KL no. 2953E-12
7.	THERM 5500-3	021990	02.2016	see KL no. 130015
8.	THERM 2285-2	021763	10.2015	see KL no. 120166
9.	Analytical scale SARTORIUS	021458	07.2015	see no. 6051-KL-H0410-11
10.	Calliper	115884	09.2016	see KL no. KL-D-1617/05/11
11.	Analyser of combustion products HORIBA ENDA – 680P	022305	x	+
12.	Elemental analyser PE 2400 CHNS	022107		
13.	Gravimat SHC 5 - TU	92-0002		

Note: × ... Verified with the use of calibration standards prior to measurement
+ ... ± 5 % of measured values

Measurement uncertainty

Parameter measured	Measurement uncertainty
Gas analysis	
CO	≤ 6% of the measured value
CO_2	≤ 2% of the measured value
Temperature	
Flue gas	≤ 5 K
Ambient room	≤ 1.5 K
Surface	≤ 2 K
Touchable areas	≤ 2 K
Mass	
Fuel consumption	± 20 g
Residue	± 5 g
Fuel load ≤ 7.5 kg	± 5 g
> 7.5 kg	± 10 g

"The stated extended measurement uncertainties are calculated as a factor of the measurement uncertainty and the extension coefficient, k=2, corresponding to the coverage certainty of 95% as regards standard classification. The uncertainties do not reflect the impact of sample taking and lack of homogeneity. The standard uncertainty was determined in accordance with Document EA 4/02."

Verified requirement: **Structural safety**

Requirement specification: ČSN EN 13240/A2:2005 Art. 4.2.1 ÷ 4.2.12

Sample tested: Hot-air stove for wood, type PAVLINA, LORENA, SERENA, MAURA

Test results: see the Table below

Required product properties	Requirement specification	Test result	Note
ČSN EN 13240/A2:2005 Art.:			
Flue spigot or socket For horizontal flue connection, the flue spigot/socket shall be designed to allow fitting, internal or external, over a length of at least 40 mm, of a flue gas connector. For vertical flue connection, the fitting shall overlap by at least 25 mm. NOTE For inset appliances (made for fireplace recesses) with a vertical chimney flue connection and where the manufacturer`s installation instructions specify, in addition to the flue gas connector, that an insulating mortar infill should be added around the connector to seal the appliance to the chimney flue, then in this case it is permissible for the flue spigot/socket overlap to be reduced to a minimum of 6 mm.	4.2.4	+	Upper ø 150 mm
Flueways The size of the flueway in its minimum dimension shall be not less than 30 mm except it shall be permissible to reduce it to not less than 15 mm for appliances designed only to burn fuels other than bituminous coals and peat briquettes, and where an access door(s) is provided for cleaning the flueway. It shall be possible to clean the flueways of the appliance completely using commercially available tools or brushes, unless special tools or brushes are provided by the appliance manufacturer.	4.2.5	+	
Control of flue gas If a flue damper is fitted it shall be of a type, which does not block the flue totally. The damper shall be easy to operate and incorporate an aperture within the blade, which in a continuous area occupies at least 20 cm^2 or 3 % of the cross-sectional area of the blade if this is greater. The position of the damper shall be recognizable from the setting of the device. If a draught regulator is fitted the minimum cross sectional area requirement shall not be applicable but the device shall be easily accessible for cleaning.	4.2.9	0	

*) Evaluation result:
+.... Requirement fulfilled
0.... Not applicable to the product in question

Accredited test number and title: 1029 **Test of heat output and efficiency**
1032 **Combustion test**

Test method: ČSN EN 13240/A2:2005 Art. A. 4.7, A. 4.8, A.4.9

Sample tested: Hot-air stove for wood, type PAVLINA, LORENA, SERENA, MAURA

Measuring equipment used: No. 1 ÷ 13 - Measuring and test equipment

Test results: PAVLINA with 1.0 m chimney extension

Date of testing: 2015-02-28	t_{ok} = see Table °C	r.v. = 35 %	p_a = 98.7 kPa
Place of testing: At SZU x	At the Manufacturer's premises ☐	At the Customer's premises ☐	*Other:*

Values measured and calculated: Nominal output	**Unit**	1	2	average		Limit acc. to EN 13240	Limit acc. to 15a B-VG	Limit acc. to I. BImSchV Stufe 2
Fuel used: beech wood	mm	250						
Combustion air setup – primary/secondary	%	0/100						
Fuel consumption	kg/h	2.080	2.040	2.060				
Input attained	kW	8.880	8.710	8.795				
Combustion air temperature	°C	17	18	17				
Flue draught	Pa	13	12	12				
Average flue gas temperature	°C	278	272	275				
CO_2	%	8.31	8.18	8.25				
CO – measured	%	0.1099	0.1146	0.1123				
CO – at O2 = 13%	%	0.0883	0.0928	0.0906		≤1.0		
CO – ati O2 = 13%	mg/Nm³	1103.0	1160.0	1131.5				≤ 1250
CO – at O2 = 0%	mg/UM	745.0	783.0	764.0			≤1100	
NO_x – measured	mg/Nm³	63.6	65.3	64.5				
NOx – at O2 = 13%	mg/Nm³	105.0	108.0	106.5				
NOx – at O2 = 0%	mg/UM	71.0	73.0	72.0			≤150	
OGC – measured	ppm	59.7	73.9	66.8				
OGC – at O2 = 13%	mg/Nm³	79.0	98.0	88.5				
OGC – at O2 = 0%	mg/UM	53.0	66.0	59.5			≤ 50	
Dust, measured	mg/Nm³	23.0	25.0	24.0				
Dust – at O2 = 13%	mg/Nm³	18.0	20.0	19.0				≤ 40
Dust – at O2 = 0%	mg/UM	12.5	13.7	13.1			≤ 35	
Chimney loss	%	23.20	22.97	23.09				
Loss of gas underburning	%	0.83	0.88	0.86				
Loss of solid underburning	%	0.50	0.50	0.50				
Efficiency	%	75.47	75.65	75.56		≥50	≥ 80	≥ 73
Total heat output achieved	kW	6.70	6.59	6.65				
Heat output uncertainty	kW	0.30	0.30	0.30				
Water heat output attained	kW	-	-	-				
Nominal heat output	kW	6.0						
Mass flow rate of dry combustion products	g/s	7.1	7.0	7.1	-			

Test results: SERENA with 1.0 m chimney extension

Date of testing: 2015-03-12	t_{ok} = see Table °C	r.v. = 36 %	p_a = 99.7 kPa
Place of testing: At SZU x	At the Manufacturer's premises ☐	At the Customer's premises ☐	*Other:*

Values measured and calculated: Nominal output	**Unit**					**Limit acc. to**		
		1	**2**	**average**		**EN 13240**	**15a B-VG**	**I. BImSchV Stufe 2**
Fuel used: beech wood	mm	250						
Combustion air setup – primary/secondary	%	0/100						
Fuel consumption	kg/h	2.660	2.880	2.770				
Input attained	kW	11.360	12.300	11.830				
Combustion air temperature	°C	17	17	17				
Flue draught	Pa	12	12	12				
Average flue gas temperature	°C	297	293	295				
CO_2	%	9.04	8.95	9.00				
CO – measured	%	0.1255	0.0939	0.1097				
CO – at O2 = 13%	%	0.1013	0.0766	0.0890		≤1.0		
CO – at O2 = 13%	mg/Nm³	1266.0	958.0	1112.0				≤ 1250
CO – at O2 = 0%	mg/UM	854.0	646.0	750.0			≤1100	
NO_x – measured	mg/Nm³	57.1	54.4	55.7				
NOx – at O2 = 13%	mg/Nm³	95.0	91.0	93.0				
NOx – at O2 = 0%	mg/UM	64.0	61.0	62.5			≤150	
OGC – measured	ppm	10.5	67.7	88.1				
OGC – at O2 = 13%	mg/Nm³	144.0	91.0	117.5				
OGC – at O2 = 0%	mg/UM	97.0	61.0	79.0			≤ 50	
Dust, measured	mg/Nm³	35.0	40.0	37.5				
Dust – at O2 = 13%	mg/Nm³	28.0	33.0	30.5				≤ 40
Dust – at O2 = 0%	mg/UM	19.1	22.0	20.6			≤ 35	
Chimney loss	%	23.18	23.13	23.16				
Loss of gas underburning	%	0.87	0.66	0.77				
Loss of solid underburning	%	0.50	0.50	0.50				
Efficiency	%	75.45	75.71	75.58		≥50	≥ 80	≥ 73
Total heat output achieved	kW	8.57	9.31	8.94				
Heat output uncertainty	kW	0.30	0.30	0.30				
Water heat output attained	kW	-	-	-				
Nominal heat output	kW	8.0						
Mass flow rate of dry combustion products	g/s	8.3	9.1	8.7	-			

Test results: LORENA with 1.5 m chimney extension

Date of testing: 2015-02-12	t_{ok} = see Table °C	r.v. = 25 %	p_a = 99.4 kPa
Place of testing: At SZU x	At the Manufacturer's premises ☐	At the Customer's premises ☐	*Other:*

Values measured and calculated: Nominal output	**Unit**					**Limit acc. to**		
		1	**2**	**average**		**EN 13240**	**15a B-VG**	**I. BImSchV Stufe 2**
Fuel used: beech wood	mm	250						
Combustion air setup – primary/secondary	%	0/45						
Fuel consumption	kg/h	2.56	2.59	2.575				
Input attained	kW	10.95	11.08	11.02				
Combustion air temperature	°C	19	20	19				
Flue draught	Pa	12	12	12				
Average flue gas temperature	°C	279	281	280				
CO_2	%	8.55	8.35	8.45				
CO – measured	%	0.10	0.10	0.10				
CO – at O2 = 13%	%	0.0867	0.0916	0.0891		≤1.0		
CO – at O2 = 13%	mg/Nm³	1083	1145	1113				≤ 1250
CO – at O2 = 0%	mg/UM	754	796	775			≤1100	
NO_x – measured	mg/Nm³	70	59	65				
NOx – at O2 = 13%	mg/Nm³	127	110	119				
NOx – at O2 = 0%	mg/UM	88	76	82			≤150	
OGC – measured	ppm	48	54	51				
OGC – at O2 = 13%	mg/Nm³	69	80	75				
OGC – at O2 = 0%	mg/UM	48	56	52			≤ 50	
Dust, measured	mg/Nm³	39	42	41				
Dust – at O2 = 13%	mg/Nm³	35	38	36				≤ 40
Dust – at O2 = 0%	mg/UM	24	26.4	25.2			≤ 35	
Chimney loss	%	23.35	23.83	23.59				
Loss of gas underburning	%	0.74	0.79	0.77				
Loss of solid underburning	%	0.50	0.50	0.50				
Efficiency	%	75.41	74.88	75.14		≥50	≥ 80	≥ 73
Total heat output achieved	kW	8.26	8.30	8.28				
Heat output uncertainty	kW	0.30	0.30	0.30				
Water heat output attained	kW	-	-	-				
Nominal heat output	kW	8.0						
Mass flow rate of dry combustion products	g/s	8.7	9	8.9	-			

Test results: MAURA with chimney 0.5 m

Date of testing: 2015-02-16	t_{ok} = see Table °C	r.v. = 40 %	p_a = 101 kPa
Place of testing: At SZU	At the Manufacturer's premises x	At the Customer's premises ☐	*Other:*

Values measured and calculated: Nominal output	Unit				Limit acc. to		
		1	2	average	EN 13240	15aB-VG	I.BImSchV 2
Fuel used: beech wood	mm		250				
Combustion air setup – primary/secondary/tertiary	%		0/60				
Fuel consumption	kg/h	2.220	2.170	2.195			
Input attained	kW	9.480	9.260	9.370			
Combustion air temperature	°C	20	20	20			
Flue draught	Pa	14	14	14			
Average flue gas temperature	°C	291	306	298			
CO_2	%	8.97	8.79	8.88			
CO – measured	%	0.10	0.06	0.08			
CO – at O2 = 13%	%	0.0880	0.0498	0.069	≤1.0		
CO – at O2 = 13%	mg/Nm³	1099.0	622.0	860.5			≤1250
CO – at O2 = 0%	mg/UM	742.0	420.0	581.0		≤1100	
NO_x – measured	ppm	74.4	71.7	73.1			
NOx – at O2 = 13%	mg/Nm³	129.0	127.0	128.0			
NOx – at O2 = 0%	mg/UM	87.0	86.0	86.5		≤150	
OGC – measured	ppm	77.5	27.1	52.3			
OGC – at O2 = 13%	mg/Nm³	108.0	38.0	73.0			
OGC – at O2 = 0%	mg/UM	73.0	26.0	49.5		≤60	
Dust, measured	mg/Nm³	32.0	21.0	26.5			
Dust – at O2 = 13%	mg/Nm³	27.0	18.0	22.5			≤40
Dust – at O2 = 0%	mg/UM	18.3	12.2	15.3		≤35	
Chimney loss	%	22.68	24.44	23.56			
Loss of gas underburning	%	0.73	0.41	0.57			
Loss of solid underburning	%	0.50	0.50	0.50			
Efficiency	%	76.09	74.65	75.37	≥50	≥80	≥73
Total heat output achieved	kW	7.21	6.92	7.07			
Water heat output attained	kW	-	-	-			
Nominal heat output	kW		7				
Mass flow rate of dry combustion products	g/s	7.0	7.0	7.0			

Fuel analysis

Fuel type	**Beech wood**			
Analytical indicator	Symbol	Unit	Value	Uncertainty
Calorific value	Q_j	[UM/kg]	15.370	0.14
Total water in original state	W^r_t	[% of mass]	14.03	0.10
Ash	A	[% of mass]	1.78	0.01
Carbon	C	[% of mass]	41.65	0.25
Hydrogen	H	[% of mass]	5.78	0.10

Note: Sample in original state

Accredited test number and title: **1031 Adjustability test**

Test method: ČSN EN 13240/A2:2005 Art. A. 4.8

Sample tested: Hot-air stove for wood, type PAVLINA, LORENA, SERENA, MAURA

Measuring equipment used: No. 1 ÷ 7 - Measuring and test equipment

Test results: PAVLINA

Date of testing: 2015-02-28	t_{ok} = see Table °C	r.v. = 35 %	p_a = 98.7 kPa
Place of testing: at SZU x	At the Manufacturer's premises ☐	At the Customer's premises ☐	*Other:*

Values measured and calculated	**Unit**	**Value**	**Limit**	**Note**
Fuel used: Hard firewood, length 25 cm	mm	beech		
Fuel consumption	kg/h	0.68		
Heat input attained	kW	2.9		
Room temperature and combustion air temperature	°C	17		
Flue draught	Pa	6	6 ± 1 Pa	
Average flue gas temperature	°C	241		
Combustion period	min	50		
Recovery capability, after time	min	up to 2		

Test results: LORENA

Date of testing: 2015-03-12	t_{ok} = see Table °C	r.v. = 36 %	p_a = 99.7 kPa
Place of testing: at SZU x	At the Manufacturer's premises ☐	At the Customer's premises ☐	*Other:*

Values measured and calculated	**Unit**	**Value**	**Limit**	**Note**
Fuel used: Hard firewood, length 25 cm	mm	beech		
Fuel consumption	kg/h	0.91		
Heat input attained	kW	3.9		
Room temperature and combustion air temperature	°C	17		
Flue draught	Pa	6	6 ± 1 Pa	
Average flue gas temperature	°C	233		
Combustion period	min	51		
Recovery capability, after time	min	up to 2		

Test results: SERENA

Date of testing: 2015-02-12	t_{ok} = see Table °C	r.v. = 25 %	p_a = 99.4 kPa
Place of testing: at SZU x	At the Manufacturer's premises ☐	At the Customer's premises ☐	*Other:*

Values measured and calculated	**Unit**	**Value**	**Limit**	**Note**
Fuel used: Hard firewood, length 25 cm	mm	beech		
Fuel consumption	kg/h	0.73		
Heat input attained	kW	3.1		
Room temperature and combustion air temperature	°C	20		
Flue draught	Pa	6	6 ± 1 Pa	
Average flue gas temperature	°C	250		
Combustion period	min	52		
Recovery capability, after time	min	up to 2		

Test results: MAURA

Date of testing: 2015-02-16	t_{ok} = see Table °C	r.v. = 44 %	p_a = 100 kPa
Place of testing: at SZU x	At the Manufacturer's premises ☐	At the Customer's premises ☐	*Other:*

Values measured and calculated	**Unit**	**Value**	**Limit**	**Note**
Fuel used: Hard firewood, length 25 cm	mm	beech		
Fuel consumption	kg/h	0.85		
Heat input attained	kW	3.63		
Room temperature and combustion air temperature	°C	20		
Flue draught	Pa	6	6 ± 1 Pa	
Average flue gas temperature	°C	268		
Combustion period	min	51		
Recovery capability, after time	min	up to 2		

Note: The appliance input is adjustable within the range of 33-100 % by gradually adjusting the primary combustion air supply regulator.

Accredited test number and title: **1028 Flue gas temperature and surface temperature test**

Test method: ČSN EN 13240/A2:2005 Art. A. 4.7, A. 4.9

Sample tested: Hot-air stove for wood, type PAVLINA, LORENA, SERENA, MAURA

Measuring equipment used: No. 1 ÷ 3, 7, 8 - Measuring and test equipment

Test results: PAVLINA

Date of testing:	2015-02-28		t_{ok} = see Table	°C	r.v. = 35	%	p_a = 98.7	kPa
Place of testing:	At SZU	x	At the Manufacturer's premises	☐	At the Customer's premises	☐	*Other:*	

Measured point	**Material**	**Temperature rise (K)**	
		Measured	**Limit acc. to ČSN EN**
Primary combustion air regulation	Metal	58*)	35
Secondary combustion air regulation	Metal	58*)	35
Door handle	Metal	40*)	35

Average combustion product temperature behind the branch	°C	339	-

Test results: LORENA

Date of testing:	2015-03-12		t_{ok} = see Table	°C	r.v. = 36	%	p_a = 99.7	kPa
Place of testing:	At SZU	x	At the Manufacturer's premises	☐	At the Customer's premises	☐	*Other:*	

Measured point	**Material**	**Temperature rise (K)**	
		Measured	**Limit acc. to ČSN EN**
Primary combustion air regulation	Metal	56*)	35
Secondary combustion air regulation	Metal	55*)	35
Door handle	Metal	38*)	35

Average combustion product temperature behind the branch	°C	319	-

Test results: SERENA

Date of testing: 2015-02-12	t_{ok} = see Table °C	r.v. = 25 %	p_a = 99.4 kPa
Place of testing: At SZU x	At the Manufacturer's premises ☐	At the Customer's premises ☐	*Other:*

Measured point	**Material**	**Temperature rise (K)**	
		Measured	**Limit acc. to ČSN EN**
Primary combustion air regulation	Metal	34	35
Secondary combustion air regulation	Metal	34	35
Door handle	Metal	42*)	35
Average combustion product temperature behind the branch	°C	339	-

Test results: MAURA

Date of testing: 2015-02-16	t_{ok} = see Table °C	r.v. = 44 %	p_a = 100 kPa
Place of testing: At SZU x	At the Manufacturer's premises ☐	At the Customer's premises ☐	*Other:*

Measured point	**Material**	**Temperature rise (K)**	
		Measured	**Limit acc. to ČSN EN**
Primary combustion air regulation	Metal	27	35
Secondary combustion air regulation	Metal	27	35
Door handle	Metal	47*)	35
Average combustion product temperature behind the branch	°C	319	-

NOTE: *)... Protective gloves are supplied to operate the door handle and the controller of ventilation grilles.
The table shows the maximum values achieved.

Accredited test number and title:	**1035**	**Thermal overload test – Temperature rise of the surrounding flammable materials**
Test method:	ČSN EN 13240/A2 Art. A. 4.7, A. 4.9.1	
Sample tested:	Hot-air stove for wood, type PAVLINA, LORENA, SERENA, MAURA	
Measuring equipment used:	No. 1 ÷ 8 - Measuring and test equipment	

Test results: PAVLINA

Date of testing:	2015-02-28		t_{ok} = see Table	°C	r.v. = 35	%	p_a =98.7	kPa
Place of testing:	at SZU	x	At the Manufacturer's premises	☐	At the Customer's premises	☐	*Other:*	

During nominal output test (A.4.7)

Test no.	Ambient temp.	Flue draught	Maximum temperature rise				Floor protector	Limit	Quantity of fuel
			Trihedron - distance mm						
			400	400	800	800			
-	°C	Pa	K						kg/h
1	17	12	42	42	51	40	2	65	2.06

During thermal overload test (A.4.9.2)

Test no.	Ambient temp.	Flue draught	Maximum temperature rise				Floor protector	Limit	Quantity of fuel
			Trihedron - distance mm						
			400	400	800	800			
-	°C	Pa	K						kg
1	19	15	44	44	53	45	2	65	3.36

NOTE: Trihedron placed 400 mm from the appliance rear wall.
Trihedron placed 400 mm from the appliance side wall.
Trihedron placed 800 mm from front and side glazed wall of the appliance.
Trihedron placed 800 mm above the appliance.

The tables show the maximum values achieved.

Test results: LORENA

Date of testing:	2015-03-12		t_{ok} = see Table °C		r.v. = 36 %		p_a =99.7 kPa
Place of testing:	at SZU	x	At the Manufacturer's premises	☐	At the Customer's premises	☐	*Other:*

During nominal output test (A.4.7)

Test no.	Ambient temp.	Flue draught	Maximum temperature rise				Floor protector	Limit	Quantity of fuel
			Trihedron - distance mm						
			400	800	800	800			
-	°C	Pa	K						kg/h
1	17	12	51	40	51	39	2	65	2.8

During thermal overload test (A.4.9.2)

Test no.	Ambient temp.	Flue draught	Maximum temperature rise				Floor protector	Limit	Quantity of fuel
			Trihedron - distance mm						
			400	800	800	800			
-	°C	Pa	K						kg
1	19	15	55	41	53	41	2	65	3.36

NOTE: Trihedron placed 400 mm from the appliance rear wall.
Trihedron placed 400 mm from the appliance side wall.
Trihedron placed 800 mm from front and side glazed wall of the appliance.
Trihedron placed 800 mm above the appliance.

The tables show the maximum values achieved.

Test results: SERENA

Date of testing:	2015-02-23		t_{ok} = see Table °C		r.v. = 25 %		p_a =100 kPa
Place of testing:	at SZU	x	At the Manufacturer's premises	☐	At the Customer's premises	☐	*Other:*

During nominal output test (A.4.7)

Test no.	Ambient temp.	Flue draught	Maximum temperature rise				Floor protector	Limit	Quantity of fuel
			Trihedron - distance mm						
			400	400	800	800			
-	°C	Pa	K						kg/h
1	19	12	61	61	56	44	2	65	2.58

During thermal overload test (A.4.9.2)

Test no.	Ambient temp.	Flue draught	Maximum temperature rise				Floor protector	Limit	Quantity of fuel
			Trihedron - distance mm						
			400	400	800	800			
-	°C	Pa	K						kg
1	20	15	63	63	58	49	2	65	2.92

NOTE: Trihedron placed 400 mm from the appliance rear wall.
Trihedron placed 400 mm from the appliance side wall.
Trihedron placed 800 mm from front and side glazed wall of the appliance.
Trihedron placed 800 mm above the appliance.

The tables show the maximum values achieved.

Test results: MAURA

Date of testing:	2015-02-16		t_{ok} = see Table °C		r.v. = 40 %		p_a =101 kPa
Place of testing:	at SZU	x	At the Manufacturer's premises	☐	At the Customer's premises	☐	*Other:*

During nominal output test (A.4.7)

Test no.	Ambient temp.	Flue draught	Maximum temperature rise - Trihedron - distance mm				Floor protector	Limit	Quantity of fuel
			400	400	800	800			
-	°C	Pa	K						kg/h
1	20	12	58	59	52	33	2	65	2.58

During thermal overload test (A.4.9.2)

Test no.	Ambient temp.	Flue draught	Maximum temperature rise Trihedron - distance mm				Floor protector	Limit	Quantity of fuel
			400	400	800	800			
-	°C	Pa	K						kg
1	22	15	60	60	53	30	2	65	2.92

NOTE: Trihedron placed 400 mm from the appliance rear wall.
Trihedron placed 400 mm from the appliance side wall.
Trihedron placed 800 mm from front and side glazed wall of the appliance.
Trihedron placed 800 mm above the appliance.

The tables show the maximum values achieved.

Tested by: Josef Duchan Date: 2022-01-03 Signed:

Reviewed by: Ing. Radek Machara Date: 2022-01-03 Signed:

IV. A list of referenced documents

- Order B-75109 of 2021-12-15
- Contract B-75109/30
- ČSN EN 13240:2002/A2:2005 – Roomheaters fired by solid fuel – Requirements and test methods
- ČSN EN 16510-1- Residential solid fuel burning appliances - Part 1: General requirements and test methods

Report compiled by: Ing. Jiří Dvořák

Person responsible for correctness of the Report:

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