

Report No. K23902018Z1
Residential space heating appliances
Initial type test
-Renaming-
DIN EN 14785
Type:
Ecofire Michelle 6
Ecofire Michelle 8
Ecofire Michelle 10

Company: Palazzetti Lelio S.p.A.

2018



This accreditation is valid only for the listed standards as stated in the accreditation annex of D-PL-11120-04-00

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Publication of page 2 is permitted.

The test results presented in this report refer solely to the test object stated as described on page 2. The report does not represent a general statement about the serial production of the test object and gives not an authorization for use of a TÜV Rheinland test- / certification mark.

Initial Type Testing
Residential space heating appliances fired by wood pellets
-Pellet stove-
DIN EN 14785: September 2006
Correction 1 DIN EN 14785:10.2007

Applicant/contractor: Palazzetti Lelio S.p.A.
Via Roveredo, 103
I-33080 Porcia (PN)

Type designations: Ecofire Michelle 6
Ecofire Michelle 8
Ecofire Michelle 10

Type of appliance: Residential space heating appliance fired by wood pellets without water heat exchanger with fan assisted flue discharge with internal fuel hopper

Type designations	Ecofire Michelle 6	Ecofire Michelle 8	Ecofire Michelle 10
Total heat input in kW	3,3 – 6,8	3,3 – 8,9	3,3 – 11,4
Space heat output in kW	3,1 – 6,3	3,1 – 8,0	3,1 – 10,0

Water heat output: Not applicable

Fuels: Wood pellets

Remarks: Room sealed appliances

Test results:

The technical requirements cl. 4-8 of the above mentioned standard are fulfilled. The local applicable installation conditions are to be observed.

The electrical safety cl. 5.9. of the standard was not a part of this initial type testing.

The presumption of conformity with the relevant European Directives could only be confirmed by full compliance with Annex ZA.

Additional details are documented in the initial report K23402018T1.

Cologne, 04.07.2018
432/pom

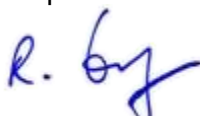
TÜV Rheinland Energy GmbH
Test Centre according to Construction Product
Regulation 305/2011(CPR)
Notified Body: 2456

Expert

Report released after review



Dipl.-Ing. A. Pomp



Dipl.-Ing. R. Verbert

Residential space heating appliances fired by wood pellets, Initial Type Test in accordance with the regulation 305/2011 conformity certification system no. 3

1. Task

The Test Centre for Energy Appliances was instructed to execute an renaming on the above mentioned pellet stoves.

Basic Palazzetti Lelio S.p.A. I-33080 Porcia (PN) K23402018T1	New Palazzetti Lelio S.p.A. I-33080 Porcia (PN) Report K 23902018Z1
AP021B_0_06	Ecofire Michelle 6
AP021B_0_08	Ecofire Michelle 8
AP021B_0_10	Ecofire Michelle 10

2. Testing

The practical combustion tests were carried out in the laboratory in Thiene on the on the 13th until 18th April 2018 on models AP021B_0_06 and AP021B_0_10. AP021B_0_08 combustion data are linearly interpolated between AP021B_0_06 and AP021B_0_10 by Palazzetti Lelio S.p.A. (report K23902018T1). Palazzetti ensures that modifications on the above mentioned products were not carried out.

2.1 Resume of test results

Ecofire Michelle 6		Nominal	Partial	Requirement
Mass of the test fuel fired hourly	kg/h	1,37	0,66	-
Flue gas mass flow	g/s	4,8	3,0	-
Flue gas temperature	°C	122,6	87,7	-
Flue draught	mbar	0,12	0,10	0,12/0,10 +/-0,02
CO ₂ -concentration	Vol.-%	9,7	7,4	-
O ₂ -concentration	Vol.-%	10,8	13,3	-
CO-concentration	ppm	62	189	-
CO-emission (at 13%-O ₂)	mg/m ³	61	244	500/750
CO-emission	mg/kWh	140	565	-
CO-emission	mg/MJ	39	157	-
NO _x -concentration	ppm	91	69	-
NO _x -emission (at 13%-O ₂)	mg/m ³	147	146	-
NO _x -emission	mg/kWh	339	339	-
NO _x -emission	mg/MJ	94	94	-
CnHm-concentration measured acc. CEN/TS 15883	ppm	1	2	-
CnHm-emission (at 13%-O ₂)	mg/m ³	2	3	-
CnHm-emission	mg/kWh	4	7	-
CnHm-emission	mg/MJ	1	2	-
Dust concentration measured acc. CEN/TS 15883 and EN13284-1	mg	7	6	-
Dust emission (at 13%-O ₂)	mg/m ³	17	20	-
Dust emission	mg/kWh	40	46	-
Dust emission	mg/MJ	11	13	-
Total heat output	kW	6,3	3,1	-
Water heat output	kW	-	-	-
Space heat output	kW	6,3	3,1	-
Efficiency	%	92,5	93,6	75/70 (EN14785)

Ecofire Michelle 8 (interpolated)		Nominal	Partial	Requirement
Mass of the test fuel fired hourly	kg/h	1,79	0,66	-
Flue gas mass flow	g/s	5,9	3,0	-
Flue gas temperature	°C	156,5	87,7	-
CO ₂ -concentration	Vol.-%	10,3	7,4	-
O ₂ -concentration	Vol.-%	10,2	13,3	-
CO-concentration	ppm	54	189	-
CO-emission (at 13%-O ₂)	mg/m ³	51	244	500/750
CO-emission	mg/kWh	118	565	-
CO-emission	mg/MJ	33	157	-
NOx-concentration	ppm	96	69	-
NOx-emission (at 13%-O ₂)	mg/m ³	147	146	-
NOx-emission	mg/kWh	340	339	-
NOx-emission	mg/MJ	94	94	-
CnHm-concentration measured acc. CEN/TS 15883	ppm	2	2	-
CnHm-emission (at 13%-O ₂)	mg/m ³	3	3	-
CnHm-emission	mg/kWh	6	7	-
CnHm-emission	mg/MJ	1	2	-
Dust concentration measured acc. CEN/TS 15883 and EN13284-1	mg	7	6	-
Dust emission (at 13%-O ₂)	mg/m ³	18	20	-
Dust emission	mg/kWh	42	46	-
Dust emission	mg/MJ	11	13	-
Total heat output	kW	8,0	3,1	-
Water heat output	kW	-	-	-
Space heat output	kW	8,0	3,1	-
Efficiency	%	90,4	93,6	75/70 (EN14785)

Ecofire Michelle 10		Nominal	Partial	Requirement
Mass of the test fuel fired hourly	kg/h	2,29	0,66	-
Flue gas mass flow	g/s	7,2	3,0	-
Flue gas temperature	°C	196,8	87,7	-
Flue draught	mbar	0,12	0,10	0,12/0,10 +/-0,02
CO ₂ -concentration	Vol.-%	11,0	7,4	-
O ₂ -concentration	Vol.-%	9,5	13,3	-
CO-concentration	ppm	45	189	-
CO-emission (at 13%-O ₂)	mg/m ³	39	244	500/750
CO-emission	mg/kWh	91	565	-
CO-emission	mg/MJ	25	157	-
NO _x -concentration	ppm	103	69	-
NO _x -emission (at 13%-O ₂)	mg/m ³	148	146	-
NO _x -emission	mg/kWh	341	339	-
NO _x -emission	mg/MJ	95	94	-
CnHm-concentration measured acc. CEN/TS 15883	ppm	3	2	-
CnHm-emission (at 13%-O ₂)	mg/m ³	4	3	-
CnHm-emission	mg/kWh	8	7	-
CnHm-emission	mg/MJ	2	2	-
Dust concentration measured acc. CEN/TS 15883 and EN13284-1	mg	8	6	-
Dust emission (at 13%-O ₂)	mg/m ³	19	20	-
Dust emission	mg/kWh	44	46	-
Dust emission	mg/MJ	12	13	-
Total heat output	kW	10,0	3,1	-
Water heat output	kW	-	-	-
Space heat output	kW	10,0	3,1	-
Efficiency	%	88,0	93,6	75/70 (EN14785)

Ecofire Michelle ...			
Maximum temperatures at trihedron:			
- Right side	°C	53,4	65 K over t_{ambient}
- Back side	°C	49,3	65 K over t_{ambient}
- Front side 100 cm	°C	49,0	65 K over t_{ambient}
- Front side bottom	°C	46,7	65 K over t_{ambient}
Distances:			
- Backside-Pelletstove	mm	20	
- Side-Pelletstove	mm	200	
- Front-Pelletstove	mm	1000	
Ambient temperature	°C	23,4	
Max. temperature in fuel hopper	°C	68,1	65 K over t_{ambient}
Max. temperature of operating tools (handle of fuel hopper)	°C	53,4	35 K over t_{ambient}

Detachable handle for firedoor available.

Ecofire Michelle ...		Before mechanical and thermal tests	After mechanical tests	After mechanical and thermal tests	Limit
Leakage test of combustion room at 5 Pa	m ³ /h	0,39	0,4	0,42	-
Leakage test of combustion room at 10 Pa	m ³ /h	0,54	0,6	0,65	2,0
Leakage test of combustion room at 15 Pa	m ³ /h	0,7	0,83	0,85	-
Leakage test of combustion room at 50 Pa (acc. EN613, cl. 6.2.2.2)	m ³ /h	1,46	-	-	2,9

Leakage test has been carried out without additional flue gas exhaust pipes / air inlet combustion pipes.

3. Statement of the test results

The appliances

Ecofire Michelle 6
Ecofire Michelle 8
Ecofire Michelle 10

of

Palazzetti Lelio S.p.A.

complies with the requirements acc. DIN EN 14785: September 2006. The results of the basic initial type test (see report K23402018T1) are not affected by the renaming.

The electrical safety cl. 5.9. of the standard was not a part of this initial type testing.

The presumption of conformity with the relevant European Directives could only be confirmed by full compliance with Annex ZA.

This statement was given based on the documentation submitted by the manufacturer and the tested sample. The statement is valid only for products / appliances which are manufactured according to the tested specimen.

4 Test documents

A 1	Declaration of identical construction Michelle...	08/06/2018
A 2	Type label- Michelle ...	
A 3	Drawing- Michelle ...	
A 4	DOP - Michelle ...	08/06/2018