

Report No. K34082023Z1
Residential space heating appliances
Initial type test
-Renaming-
DIN EN 14785

Type:
ECOFIRE NADINE 9
ECOFIRE NADINE 13
ECOFIRE NADINE 9 PRO 2
ECOFIRE NADINE 13 PRO 3

Company: Palazzetti Lelio S.p.A.
Trademark: Palazzetti

2023



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) |
| Trademark: | Palazzetti |
| Type designation: | ECOFIRE NADINE 9, ECOFIRE NADINE 13 ECOFIRE NADINE 9 PRO 2, ECOFIRE NADINE 13 PRO 3 |
| Type of appliance: | Residential space heating appliance fired by wood pellets without water heat exchanger with fan assisted flue discharge with internal fuel hopper |
| Total heat input | ECOFIRE NADINE 9 (PRO 2): 3,5-9,9 kW ECOFIRE NADINE 13 (PRO 3): 3,5-14,6 kW |
| Space heat output | ECOFIRE NADINE 9 (PRO 2): 3,2-9,0 kW ECOFIRE NADINE 13 (PRO 3): 3,2-13,2 kW |
| Water heat output: | Not applicable |
| Fuels: | Wood pellets |

Remarks: Room sealed stove

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 K31232021T1

Cologne, 29.08.2023
667/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. M. Reibold

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

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

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|---|--|
| Basic Palazzetti Lelio S.p.A. I-33080 Porcia (PN) Reports K31232021T1 | New Palazzetti Lelio S.p.A. I-33080 Porcia (PN) Report K 34082023Z1 |
| AP400S_1_09 AP400S_1_13 | ECOFIRE NADINE 9 ECOFIRE NADINE 9 PRO 2 ECOFIRE NADINE 13 ECOFIRE NADINE 13 PRO 3 |

2. Testing

The practical tests were performed by CMC Centro Misure Compatibilità S.r.l., via della Fisica 20 Thiene (VI), on the 19th - 20th - 21th - 22th - 23th of July, on the 28th of September and on the 22th - 23th - 24th - 26th of November 2021 (report K31232021T1). Palazzetti Lelio S.p.A. ensures that modifications on the above mentioned products were not carried out.

2.1 Resume of test results

| ECOFIRE NADINE 9 ECOFIRE NADINE 9 PRO 2 | | Nominal | Partial | Requirement |
|--|-------------------|----------------|----------------|--|
| Mass of the test fuel fired hourly | kg/h | 2,053 | 0,735 | - |
| Flue gas mass flow | g/s | 5,46 | 3,77 | - |
| Flue gas temperature | °C | 167,7 | 109,1 | - |
| Flue draught | mbar | 0,10 | 0,10 | 0,12/0,10 +/-0,02 or declared value |
| CO ₂ -concentration | Vol.-% | 12,7 | 6,3 | - |
| O ₂ -concentration | Vol.-% | 8,2 | 14,7 | - |
| CO-concentration | ppm | 29 | 189 | - |
| CO-emission (at 13%-O ₂) | mg/m ³ | 22 | 298 | 500/750 |
| CO-emission | mg/kWh | 49 | 671 | - |
| CO-emission | mg/MJ | 14 | 186 | - |
| NO _x -concentration | ppm | 77 | 22 | - |
| NO _x -emission (at 13%-O ₂) | mg/m ³ | 99 | 57 | - |
| NO _x -emission | mg/kWh | 223 | 128 | - |
| NO _x -emission | mg/MJ | 62 | 36 | - |
| CnHm-concentration measured acc. to CEN/TS 15883 | ppm | 1 | 2 | - |
| CnHm-emission (at 13%-O ₂) | mg/m ³ | 1 | 4 | - |
| CnHm-emission | mg/kWh | 2 | 8 | - |
| CnHm-emission | mg/MJ | 1 | 2 | - |
| Dust concentration measured acc. to CEN/TS 15883 and EN13284-1 * | mg | 2 | 2 | - |
| Dust emission (at 13%-O ₂) | mg/m ³ | 5 | 7 | - |
| Dust emission | mg/kWh | 11 | 16 | - |
| Dust emission | mg/MJ | 3 | 4 | - |
| Total heat input | kW | 9,9 | 3,5 | - |
| Total heat output | kW | 9,0 | 3,2 | - |
| Water heat output | kW | - | - | - |
| Space heat output | kW | 9,0 | 3,2 | - |
| Efficiency | % | 91,2 | 89,9 | 75/70 (EN14785) |

| ECOFIRE NADINE 13 ECOFIRE NADINE 13 PRO 3 | | Nominal | Partial | Requirement |
|--|-------------------|----------------|----------------|--|
| Mass of the test fuel fired hourly | kg/h | 3,040 | 0,735 | - |
| Flue gas mass flow | g/s | 6,38 | 3,77 | - |
| Flue gas temperature | °C | 224,1 | 109,1 | - |
| Flue draught | mbar | 0,10 | 0,10 | 0,12/0,10 +/-0,02 or declared value |
| CO ₂ -concentration | Vol.-% | 16,4 | 6,3 | - |
| O ₂ -concentration | Vol.-% | 4,5 | 14,7 | - |
| CO-concentration | ppm | 56 | 189 | - |
| CO-emission (at 13%-O ₂) | mg/m ³ | 34 | 298 | 500/750 |
| CO-emission | mg/kWh | 75 | 671 | - |
| CO-emission | mg/MJ | 21 | 186 | - |
| NO _x -concentration | ppm | 100 | 22 | - |
| NO _x -emission (at 13%-O ₂) | mg/m ³ | 99 | 57 | - |
| NO _x -emission | mg/kWh | 223 | 128 | - |
| NO _x -emission | mg/MJ | 62 | 36 | - |
| CnHm-concentration measured acc. to CEN/TS 15883 | ppm | 2 | 2 | - |
| CnHm-emission (at 13%-O ₂) | mg/m ³ | 2 | 4 | - |
| CnHm-emission | mg/kWh | 4 | 8 | - |
| CnHm-emission | mg/MJ | 1 | 2 | - |
| Dust concentration measured acc. to CEN/TS 15883 and EN13284-1 * | mg | 9 | 2 | - |
| Dust emission (at 13%-O ₂) | mg/m ³ | 15 | 7 | - |
| Dust emission | mg/kWh | 34 | 16 | - |
| Dust emission | mg/MJ | 9 | 4 | - |
| Total heat input | kW | 14,6 | 3,5 | - |
| Total heat output | kW | 13,2 | 3,2 | - |
| Water heat output | kW | - | - | - |
| Space heat output | kW | 13,2 | 3,2 | - |
| Efficiency | % | 90,1 | 89,9 | 75/70 (EN14785) |

Temperatures

| ECOFIRE NADINE ... | | | Requirement |
|--|----|------|--|
| Maximum temperatures at trihedron: | | | |
| - Side | °C | 55,1 | $\leq 65 \text{ K over } t_{\text{ambient}}$ |
| - Back side | °C | 42,7 | $\leq 65 \text{ K over } t_{\text{ambient}}$ |
| - Front side | °C | 68,3 | $\leq 65 \text{ K over } t_{\text{ambient}}$ |
| - Floor | °C | 44,3 | $\leq 65 \text{ K over } t_{\text{ambient}}$ |
| Distances: | | | |
| - Backside-Pelletstove | mm | 50 | |
| - Side-Pelletstove | mm | 300 | |
| - Front-Pelletstove | mm | 800 | |
| Ambient temperature | °C | 28,9 | |
| Max. temperature in fuel hopper | °C | 85,0 | $\leq 65 \text{ K over } t_{\text{ambient}}$ |
| Max. temperature of operating tool 1 (handle of fuel hopper) | °C | 59,6 | $\leq 35 \text{ K over } t_{\text{ambient}}$ |
| Max. temperature of operating tool 2 (control panel) | °C | 52,2 | $\leq 60 \text{ K over } t_{\text{ambient}}$ |

Leakage tests

| ECOFIRE NADINE ... | | Before mechanical and thermal tests | After mechanical tests | After mechanical and thermal tests | Limit |
|---|------|-------------------------------------|------------------------|------------------------------------|-------|
| Leakage test of combustion room at 5 Pa | m³/h | < 0,3 | < 0,3 | < 0,3 | - |
| Leakage test of combustion room at 10 Pa | m³/h | 0,4 | 0,4 | 0,4 | 2,0 |
| Leakage test of combustion room at 15 Pa | m³/h | 0,5 | 0,5 | 0,5 | - |
| Leakage test of combustion room at 50 Pa (acc. to EN613, cl. 6.2.2.2) | m³/h | 1,5 | 1,5 | 1,5 | 2,5 |

All the appliances are sealed for Germany (typ FC62x) and for France requirements (acc. to EN613, cl. 6.2.2.2).

3. Statement of the test results

The appliances

**ECOFIRE NADINE 9
ECOFIRE NADINE 13
ECOFIRE NADINE 9 PRO 2
ECOFIRE NADINE 13 PRO 3**

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 K31232021T1) 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 | Declarations of identical construction | 25/07/2023 |
| A 2 | Type labels | |
| A 3 | Drawing | |
| A 4 | DOP's | 24/07/2023 |