SPECIFICATIONS FOR THE

NF ELECTRICITE PEFORMANCE MARK

N° LCIE 103-13 / G Amendment 1

DIRECT-ACTING ROOM

HEATERS

Introduction

This amendment A1 to the specifications 103-13G does not make any substantive change, in particular concerning the prescriptions to be respected.

This amendment boils down to a few editorial improvements which allow ambiguities of understanding to be removed when carrying out the tests.

This amendment therefore has no impact on the products already admitted to the mark on the basis of the LCIE 103-13G specifications, the licenses already issued remaining valid.

Dates

Date of Application of Specification LCIE 103-13/G Amendment 1	15/07/2020
Date of Withdrawal of LCIE 103-13/G Specifications *	Not Applicable
Latest Manufacturing Date for Products Certified under Specification 103-13/G.	Not Applicable

*** CTF Laboratories recognized within the framework of the NF mark to carry out performance tests according to the specifications 103-13G must install the new air intake vents in accordance with the recommendations of appendix 1 as of the implementation place of this amendment, and no later than 12/31/2020.**

1 Scope

The following changes are made to the specifications:
- The ~~double text crossed~~ out in red corresponds to the deleted text
- The blue text corresponds to the added text

Page 5:
§2.2 Definitions of User-Accessible Functions

Replace the last paragraph with the text below

~~The testing sequence is set out in Appendix 5~~. The test sequences are defined in Annex 5.

Page 10:
$ 3.2.2 Specific requirements

Replace the first paragraph with the text below:

For measurements of the minimum average heating of active surface, the surface considered is the rectangle encompassing all the heating surfaces of the front face of the appliance (excluding air outlets, see Annex 6). In fact, if their surface is not heating, any bands (side "cheeks" - upper - lower), must be excluded from this rectangle ((see § 3.4.2 "Minimum percentage of active surface" for the characterization of a non-heating surface).

Page 14:
$ 3.4.2 Specific requirements

Maximum surface temperature dispersal [2)]

Replace the first paragraph with the text below:

When measuring surface dispersal, the temperature stability and the minimum average heating of the active surface, the area considered is the rectangle encompassing all the heating surfaces of the front face of the appliance (excluding air outlets see Annex 6). In fact, if their surface is not heating, any bands (side "cheeks" - upper - lower), must be excluded from this rectangle ((see § 3.4.2 "Minimum percentage of active surface" for the characterization of a non-heating surface).

A mesh to define the measurement zones is made by "dividing" into 1 / 16th the maximum height and width of this surface. Nine measurement zones are defined (see Annex 6). In each of these nine zones and in all points accessible to the conical gauge shown in Figure 2 Annex 3, the thermocouple is placed in the center of each zone.
In the case where the center of a zone is not opposite material, or would be opposite a non-~~active~~ heating surface, the measurement is made in projection towards the nearest measurement point corresponding to an ~~active~~ heating surface. In the case where 2 points correspond to this projection, the coldest point is taken into consideration (determination using an infrared camera).
For any point located at the edge of a heating ~~active~~ or non-~~active~~ heating surface, the measurement is made at 20mm from the edge of the latter.
For tubular devices with a diameter of less than 40mm, the measuring point is the center of the tube.

The end of the paragraph remains unchanged

Minimum percentage of active area [3)]

Replace all of the text with the text below:

This percentage is the ratio between the ~~active~~ surface ~~(projected from the front panel)~~ the sum of all heating surfaces and the sum of all the ~~active~~ heating and non-heating ~~active~~ surfaces of the equipment shown in front view~~(projected from the front panel)~~.

The manufacturer declares the different surfaces (~~active~~ heating and non-heating~~active~~) in a diagram in front view ~~of the front panel~~ and for each equipment. For ratio calculation, only the air outlets are not taken into consideration. In fact, any headbands (side - upper - lower cheeks) are taken into account. The surfaces of the recessed parts are not taken into account.

Non-heating ~~active~~ surfaces whose surface is less than 625cm² or whose smaller side is less than 25cm are considered as non-heating ~~active~~ without verification.

For each non-heating ~~active~~ surface whose surface is greater than 625cm² and whose smallest side is greater than 25cm, the average temperature rise, at the 100% running rate, is calculated as follows:

- ✓ The area taken into consideration is the rectangle encompassing the non- heating ~~active~~ surface considered.

- ✓ A mesh to define the measurement zones is made by "dividing" into 1 / 16th the maximum height and width of this surface. Nine measurement zones are defined (see Annex 6). In each of these nine zones and in all points accessible to the conical gauge shown in Figure 2 Annex 3, a probe for measuring the surface temperature is applied successively in the center of each zone. This leads to measuring the temperature rise in nine points of the non-active zone.

- ✓ In the case where the center of a zone is not facing material, or is facing an heating ~~active~~ surface, the measurement is made in projection towards the closest measurement point corresponding to this non heating ~~active~~ surface. In the case where 2 points correspond to this projection, the hottest point is taken into consideration (determination using an infrared camera).
- ✓ For any point on the edge of an heating ~~active~~ or non- heating ~~active~~ surface, the measurement is made at 20mm from the edge of the surface.
- ✓ For tubular design devices with a diameter of less than 40mm, the measuring point corresponds to the center of the tube.

In order for the surface to be considered as no-heating ~~inactive~~, it is necessary that its average heating calculated by considering the heating of the nine points is <25K. In the opposite case, the surface is classified as heating ~~active~~ surface.

The measurement may be carried out in a test cell during the tests of § 2.4.3.

The minimum heating ~~active~~ area percentage values in Table 3.4.2 are the average values of all products in a range declared and defined by the applicant.

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Annex 1

Annex A: Climatic Chamber

~~In order to adapt the heat loss in the climatic chamber to the power of the heater to be tested, Appendix A "Climatic Chamber" shall be amended as follows:~~

~~Replace the 3rd line with:~~

~~In the exterior wall there is a window measuring at least 3 m x 1.5 m with a thermal transmission coefficient not exceeding 6 W/m².K (a simple window with a thickness of 8 mm is considered satisfactory). The wall below the window shall be at least 0.8 m high with a thermal transmission coefficient no greater than 0.7 W/m².K. The remainder of the external wall has a thermal transmission coefficient not exceeding 1 W/m².K. The other walls and the ceiling have a thermal transmission coefficient not exceeding 0.6 W/m².K.~~
~~*The concrete slab floor shall have a minimum thickness of 40 cm and be laid such that the entire structure is quasi-adiabatic.*~~

The tests are carried out using the climatic test room B.

Replace the first sentence of the 4th line with:

Cold air from the refrigeration system is supplied to the testing chamber via ~~at least two~~ four air inlets placed symmetrically above the window

The air vents are of type ATLANTIC reference EA 30 PAC 2 BL Code 422421. These vents are fixed on an adapter plate which allows to close the openings present.

The center of the outlets is aligned with the center of the air inlets. The upper edge of the vents is located 90mm from the ceiling of the test chamber

~~Replace the 5th line with:~~
~~The air exchange between the refrigeration chamber and the testing chamber shall be:~~
~~1 test chamber volume per hour for heaters with a rated power equal to or lower than 1000 W.~~
~~4 test chamber volumes per hour for heaters with a rated power of above 1000 W.~~

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APPENDIX 5
~~Testing Order and~~ Sequences of the Test

The "Comfort", "Lowering", "Frost-free" and "Maximum setpoint-Lowering" sequences can be performed independently of each other. The order of each sequence must be respected.