



59K/105/CDV

**COMMITTEE DRAFT FOR VOTE (CDV)
PROJET DE COMITÉ POUR VOTE (CDV)**

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Titre : CEI 61591 A1 Ed. 1.0: Hottes de cuisine à usage domestique - Méthodes de mesure de l'aptitude à la fonction

Title : IEC 61591-A1 Ed 1.0: Household range hoods -Methods for measuring performance

Note d'introduction

Les figures 3 et 3a manquaient dans le CD, elles ont été rajoutées dans le présent CDV.

Introductory note

Figures 3 and 3a were missing in the CD, these have now been added to the CDV

ATTENTION	ATTENTION
CDV soumis en parallèle au vote (CEI) et à l'enquête (CENELEC)	Parallel IEC CDV/CENELEC Enquiry

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1 Scope

After the first paragraph Insert:

It can also be used for range hoods with external blowers, if these blowers are controlled by the range hood and the blower is defined in the technical documentation (e.g. name plate data) and instructions for installation.

Add to the last indent:

(IEC 60704-2-13)²⁾

Insert the following footnote:

2) IEC 60704-2-13:2000, Household and similar electrical appliances – test code for the determination of airborne acoustical noise – Part 2-13: Particular requirements for range hoods

3 Definitions

Insert the following new definition:

3.5 Grease absorption factor

Add at the end of 3.5:

Note : To the grease filter belong all detachable coverings, filter frames, supports or the like, which are located in the air stream and are intended to be removed for cleaning.

3.8

external blower

blower, which is mounted separately from the range hood

6 General conditions for measurements

6.2 Installation

Replace the current text by the following:

The range hood and the external blower, if applicable, is (are) installed in accordance with the manufacturer's instructions.

The maximum sized duct according to the instructions is to be used to connect to the blower.

6.3 Supply voltage

In the first line, between "hood" and "is", insert:

and the external blower, if applicable,

In the second sentence, between "hood" and "is", insert:

and the external blower, if applicable,

9 Length of the supply cord

In the first sentence, between "the range hood" and "and the plug", insert:

or the external blower

In the second sentence between "if the range hood" and "is for direct", insert:

or the external blower

10 Mass of the range hood

In the first sentence between "The mass of the range hood" and "including any filters", insert:

and the external blower,

11 Volumetric airflow

At the end of the second paragraph, insert:

The odour extraction filter is installed for the test.

In the last sentence of the 6th paragraph after "for discharge into" replace the remaining sentence with the following:

a flue, which has the following pressure drop depending on the diameter of the air outlet orifice:

- 100 mm :	30 Pa	working point 3
120 - 125 mm :	15 Pa	working point 2
150 - 160 mm :	5 Pa	working point 1

when there is an airflow of 200m³/h and a pressure drop of 5, 15 or 30 Pa"

In the first line of the 8th paragraph, replace:

"working points 1 or 2 for both" by "working point given for the actual diameter for both"

12 Grease absorption

After the end of the first paragraph, insert:

Note: To the grease filter belong all detachable coverings, filter frames, plates or supports, which are intended to be removed for cleaning.

For range hoods with an external blower the external blower does not need to be mounted during the grease absorption test. The desired airflow rate can instead be achieved by using the auxiliary fan and controlling the air flow with a suitable device.

In the third paragraph, after the 1st sentence, insert:

The frame of the absolute filter shall not pick up any humidity.

In the first sentence of the 5th paragraph, replace:

"A suitable hob is placed approximately" by "A suitable hob element is placed"

After the first sentence of the 5th paragraph, insert:

A uncoated commercially available pan is used with a solid bottom and a minimum thickness of 8 mm (figure 3a). The pan shall be of the same diameter as the hob element.

At the end of the 5th paragraph, insert:

The temperature is measured by a thermocouple with steel tube of class 2 or equivalent and should have a suitable diameter. For mounting the thermocouple see figure 3a.

Replace the second sentence of the 6th paragraph by:

The auxiliary fan is adjusted to the working point linked to the largest diameter the range hood allows in delivery condition. (Figure 2)

Delete "NOTE 2"

Renumber "NOTE 3" to "NOTE 2"

Renumber "NOTE 4" to "NOTE 3"

13 Odour extraction

In the last sentence of first paragraph, replace:

"is adjusted to working point 1 (see Figure 2)." by

"is adjusted to the actual working point (see clause 11 and figure 2)."

Delete "NOTE 1"

In the second paragraph, after the fourth sentence, insert:

It is in this case also necessary to have an exhaust air duct system incorporating a shut-off valve, an airflow meter and in most cases an auxiliary fan. For range hoods with an external blower the external blower does not need to be mounted during the odour extraction test. The desired airflow rate can instead be achieved using the auxiliary fan.

In the last sentence of the second paragraph, delete:

"An example of "

Renumber "NOTE 2" to "NOTE 1"

Insert after the 3rd sentence of the 2nd paragraph:

The kitchen furniture cabinets shall be sealed from the rest of the air in the test room.

NOTE 2 – When testing **air-extraction range hoods**, measures should be taken to prevent the inlet-air from being contaminated with MEK from the outlet-air.

In the third paragraph replace:

“left-hand hotplate, the inside temperature of its base being maintained”
by

“left-hand hob element, having the same base diameter as the pan. The temperature in the base of the pan, 40 mm from its side, shall be maintained”

Insert the following new NOTE 3 and NOTE 4 after the third paragraph:

NOTE 3 – The specifications of the pan are the same as for the grease absorption test (see clause 12 and figure 3a).

NOTE 4 – The characteristics of the test room (C1) can be measured without any range hood being installed.

Renumber "NOTE 3" to "NOTE 5"

Renumber "NOTE 4" to "NOTE 6"

In the 7th paragraph, replace:

“15 s of the time originally taken when determinating C1.” by “30 minutes \pm 15 s.”

“grille closed and” by “grille closed, shut-off valve closed and”

Renumber "NOTE 5" to "NOTE 7"

Renumber "NOTE 6" to "NOTE 8"

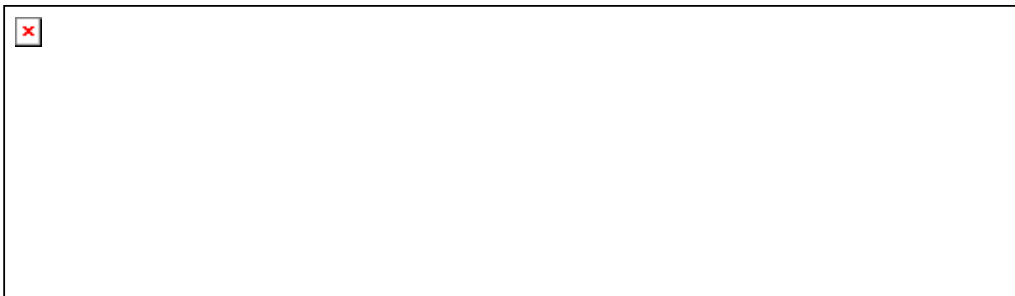
At the last sentence of the clause, insert:

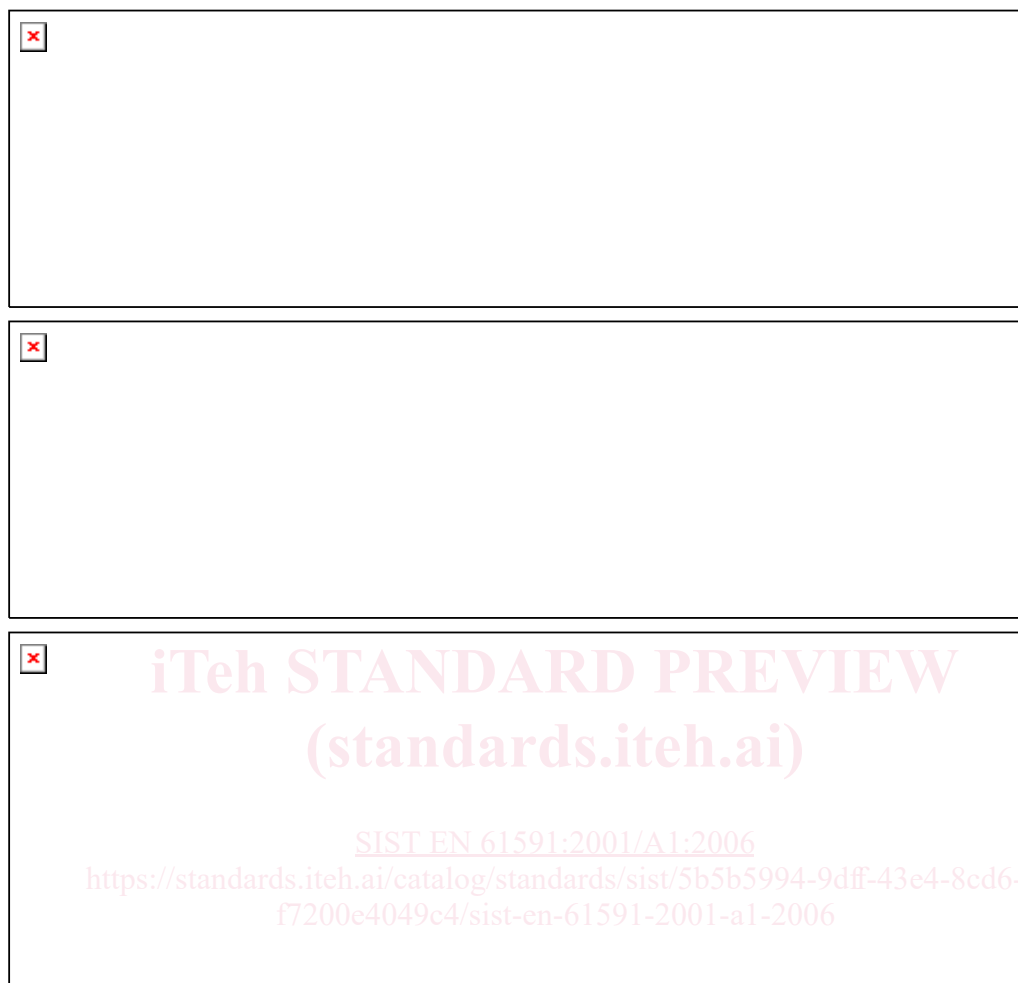
Island range hoods (directly mounted on the ceiling) are tested as wall mounted range hoods.
The cabinets on both sides are removed.

Figure 1

Replace the current Figure 1 and NOTE, by the following new Figure 1 and NOTE:

NOTE – A duct having a overall length of 5 times the diameter of the air-outlet of the range hood is fitted between the chamber and the range hood. A length of 1 times the diameter should remain inside the compensation chamber.





Key

a	5 times the diameter of the pipe	6	Baffle
1	Air extraction range hood with internal blower	7	Static pressure gauge
2	Range hood	8	Recirculating-air range hood with internal blower
3	Pressure compensation chamber	9	Range hood with external blower with in-house use
4	Orifice plate for airflow measurement	10	External blower
5	Auxiliary fan	11	Range hood with external blower for outside use

Figure 1 – Measurement of air flow

Figure 2

Replace the current FIGURE 2 by the following new FIGURE 2 together with the NOTE below.



Key

X Pressure (Pa)

Y Air flow m^3/h

1 Typical curve for range hood

2 Theoretical pressure air flow curve for
the $\text{Pressure} \approx (\text{Air flow})^2$

3 Working points

Figure 2 – Pressure/air flow curve

NOTE For testing large range hoods (e.g. island range hoods) the dimensions of the test compartment has to be adjusted to the dimensions of the product.



Key

(Dimensions in millimetres)

- | | | | |
|---|--|----|--|
| 1 | Variable auxiliary fan | 7 | Dosing pump for adding drops of corn oil |
| 2 | Absolute filter with removable filter insert | 8 | Range hood |
| 3 | Pressure gauge | 9 | Pan |
| 4 | Compensation chamber | 10 | Hob |
| 5 | Intermediate shelf with openings according to the outlet of the hood | 11 | Vertically adjustable table |
| 6 | Dosing pump for adding drops of distilled water | 12 | min 50 revolving |

Figure 3 – Arrangement for the grease absorption test