



AMK Technical Bulletin 001

Kitchen furniture – Surface temperatures – Requirements and test methods

Edition 10/2022

For AMK members
(manufacturers of kitchen furniture, appliances, sinks and accessories, as well as dealers),
surveyors and test institutes

Preface

AMK Technical Bulletins represent information provided by the AMK Working Group Technology & Standardisation. This information contains tried-and-tested recommendations and requirements according to the state of the art as well as relevant standards and legislation. As long as requirements are defined, these are subject to the reservation that equivalent technical solutions are also possible and can be agreed.

AMK Technical Bulletins are prepared by representatives from industry, test institutes, by the science and research communities, as well as by publicly appointed and sworn surveyors.

AMK Technical Bulletins are available to all AMK members, test institutes and surveyors free of charge to apply on a voluntary basis.

The AMK Technical Bulletin 001, edition 10/2022, was elaborated by the AMK Working Group Technology & Standardisation.

The AMK Technical Bulletin 001 was developed to largely prevent complaints at the interface between furniture and appliance, whereby recommendations are given for the installation of built-in electric ovens/cookers and temperature limits are set for furniture components found in the sphere of influence of the installed built-in electric oven/cooker.

This AMK Technical Bulletin replaces the AMK Technical Bulletin 001, edition 07/2007.

Amendments

In comparison with the AMK Technical Bulletin 001, edition 07/2007, the following amendments have been made:

- a) installation situation of appliance next to side panel added;
- b) Technical Bulletin brought up to the latest technical status;
- c) layout changed.

Version history

The following former editions of the AMK Technical Bulletin 001 exist:

- Edition 07/2007
- Edition 05/2003
- Edition 09/2002
- Edition 07/1999
- Edition 10/1997

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AMK Technical Bulletin 001

1. Area of application

This AMK Technical Bulletin specifies requirements and test methods for load bearing materials, coatings, edging material, adhesives, installation situations (dimensions) and the heat emission of the electric oven/cooker.

2. Standards and literature references

DIN EN 60335-1:2020-08; VDE 0700-1:2020-08, Household and similar electrical appliances – Safety – Part 1: General requirements

DIN EN 60335-2-6:2021-02; VDE 0700-6:2021-02, Household and similar electrical appliances – Safety – Part 2-6: Particular requirements for stationary cooking ranges, hobs, ovens and similar appliances

3. Installation of the appliance

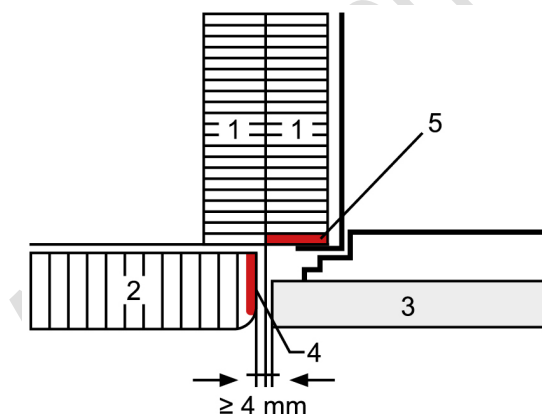
The built-in electric oven/cooker is to be fitted into the installation opening (niche) according to the appliance manufacturer's installation instructions and connected to the electrical supply according to the applicable regulations.

The built-in appliance must be centrally aligned and installed.

The gap on the left and right between the front of the appliance and the furniture front must be at least 4 mm in each case (see Figure 1).

The gap between the front of the appliance and the side panel, when being installed at the end of a row or in a tall cabinet in conjunction with end panels, must be at least 2 mm in each case (see Figure 2).

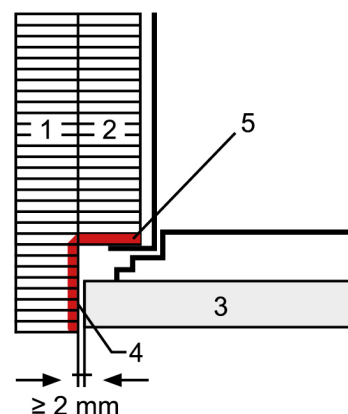
When checking the furniture surface temperatures in the event of a claim on site, deviations from the intended installation or other conditions that may influence the result of measurements are to be recorded in the protocol (e.g. lack of seal due to warping, deviations from central installation, room temperature, setting temperature of the appliance, back wall of the body closed/open).



Key

- 1 Body (side wall)
- 2 Furniture front
- 3 Appliance front
- 4 Measurement area of narrow surface of furniture front
- 5 Measurement area of narrow surface of body

Figure 1 – Installation situation of appliance front –



Key

- 1 Side panel
- 2 Body (side wall)
- 3 Appliance front
- 4 Measurement area of side panel
- 5 Measurement area of narrow surface of body

Figure 2 – Installation situation of appliance front –

furniture front**side panel****4. Test method****4.1 Appliance manufacturer**

The test setup according to DIN EN 60335-1:2020-08, 11.3 and DIN EN 60335-2-6:2021-02, 11.8 is to be used.

4.2 Kitchen furniture manufacturer

The test specimen is placed into a heating cabinet with forced circulating air and tested as follows. Attention must be paid to even air and temperature distribution. It must be ensured that the test specimen reaches the following temperatures during the test:

Level 1:	1 hour	(50 ± 2) °C
Level 2:	1 hour	(60 ± 2) °C
Level 3:	4 hours	(75 ± 2) °C

After each temperature level, the test specimen is assessed immediately after being taken out of the heating cabinet.

4.3 Test on site**4.3.1 General**

To determine the maximum temperature on site, thermocouples with a limit deviation of ± 2.5 K (tolerance of the thermocouple guaranteed by the manufacturer) are used.

4.3.2 Operating conditions

The built-in electric cooker is operated at the rated voltage without switching on the hobs.

On built-in electric ovens with top and bottom heat, the temperature is set to (240 ± 5) °C, on built-in electric cookers with hot air to (220 ± 5) °C. The oven temperature is determined in the centre of the baking muffle.

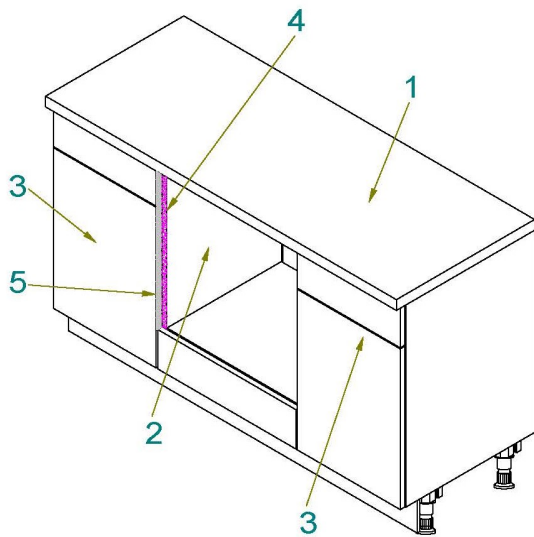
The temperature is measured (baking muffle empty) after an operating time of 90 min.

On built-in electric ovens/cookers with a pyrolysis device, an additional temperature measurement is taken at the maximum setting. The maximum temperature during the cycle is to be recorded.

The room temperature should be (23 ± 2) °C. Discrepancies must be recorded in the test report.

4.3.3 Temperature measuring points

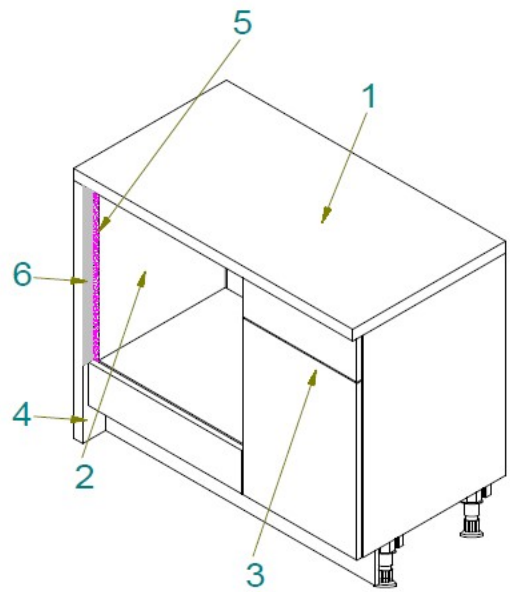
The temperatures at the narrow surfaces of the furniture parts are to be determined in the marked area, see Figure 3 to Figure 6. From experience, the highest temperatures occur in this area when the oven is being operated. The damaged area is to be included as a measuring point for the assessment.



Key

- 1 Worktop
- 2 Body
- 3 Furniture front
- 4 Measuring area on the narrow surface of the body (both sides)
- 5 Measuring area on the narrow surface of the furniture front (both sides, if present)

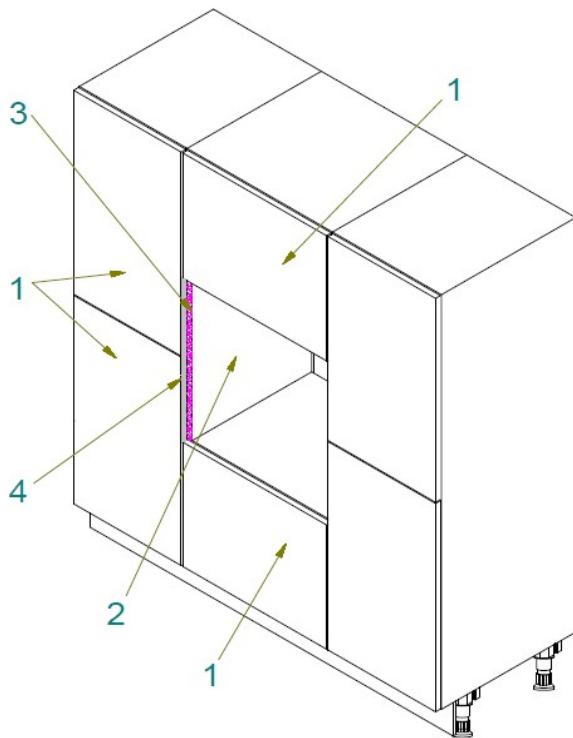
Figure 3 – Measuring area (both sides) – Installation situation of appliance front – furniture front



Key

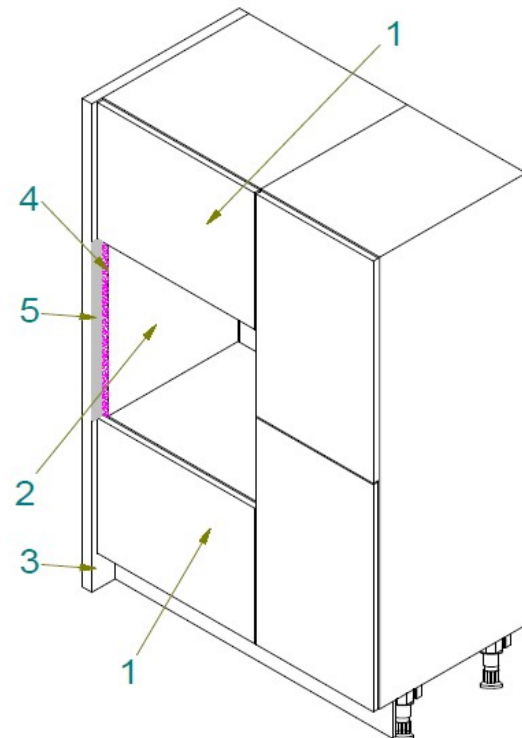
- 1 Worktop
- 2 Body
- 3 Furniture front
- 4 Side panel
- 5 Measuring area on the narrow surface of the body (both sides)
- 6 Measuring area on the side panel (both sides, if present)

Figure 4 – Measuring area (both sides) – Installation situation of appliance front – side panel

**Key**

- 1 Furniture front
- 2 Body
- 3 Measuring area on the narrow surface of the body (both sides)
- 4 Measuring area on the narrow surface of the furniture front (both sides, if present)

Figure 5 – Measuring area (both sides) – Installation situation of appliance front – furniture front (high installation)

**Key**

- 1 Furniture front
- 2 Body
- 3 Side panel
- 4 Measuring area on the narrow surface of the body (both sides)
- 5 Measuring area on the side panel (both sides, if present)

Figure 6 – Measuring area (both sides) – Installation situation of appliance front – side panel (high installation)

5. Requirements

5.1 Body of appliance cabinets for built-in electric ovens/cookers

On the narrow surfaces of the body of appliance cabinets for built-in electric ovens/cookers on the right and left, the temperature must not exceed 90 °C (see Figure 1 and Figure 2).

5.2 Furniture fronts and side panels (practical test)

On the narrow surfaces of furniture fronts on the right and left, the temperature emerging from the built-in electric oven/cooker must not exceed 65 °C (see Figure 1).

At the side panels, the temperature emerging from the built-in electric oven/cooker must not exceed 70 °C (see Figure 2).

5.3 Temperature resistance of furniture fronts and side panels in the heating cabinet

The temperature resistance of furniture fronts and side panels must be at least 75 °C.

Changes are not permitted.

Exception: On foil-laminated fronts, a maximum foil shrinkage of 0.2 mm is permitted, but no foil delamination.

6. Test report

The test report must contain at least the following information:

- a) a reference to this AMK Technical Bulletin;
- b) the furniture tested (key details);
- c) the appliance tested (key details);
- d) description of the delivery condition of furniture and appliance;
- e) in the event of a claim “on site” – description of the situation;
- f) test results;
- g) compliance with the requirements;
- h) details of all deviations;
- i) name and address of the testing body/tester;
- j) test date;
- k) room temperature (in °C).