

☒ **CTL Provisional DECISION SHEET (PDSH)**
☐ **CTL DECISION SHEET (DSH)**

Standard(s) (incl. year)	Subclause(s)	Tracking No.
IEC 60335-2-9:2019	Clause 3.1.9.102 Clause 5.101 Clause 7.1 Clause 10.1	2311
Category		
HOUS		
Subject	Keywords	Developed by
Marking of Rated power input for breadmakers	Rated power input Breadmakers	ETF 1
Question		
1. Background For breadmakers that mark a single value of the rated power input, some testing laboratories require two separate power-input values of heating element and motor to be marked. (For example, Heating power: 340 W. Mixing power: 45 W) Their reason is that if only the heating element's power input is marked as the rated power input, then in the test of clause 10.1, the measured value during a mixing cycle (with only the motor operated) falls out of the lower limit of the allowable deviation for heating appliances in Table 1, so it is necessary to mark the two power-input values of the heating element and motor separately. (They seem to interpret that in clause 10.1, the deviation for heating appliances only applies for breadmakers when the motor is operated, as one of modes of normal operation.) 2. Question For breadmakers, which of the following is required to be marked as the rated power input or rated current? (1) A single value (2) Two values indicating the heating element and motor power/current rating		
Decision		
(For the question, Answer (1) is correct.) For breadmakers, only a single value is required to be marked with the rated power input or rated current. During the test of clause 10, the breadmakers need to be operated with the most unfavourable cycle with only the heating element operating as a heating appliance or with the heating element and motor operating simultaneously as applicable, they do not need to be operated at lower power input or current with only the motor operating.		
Explanatory notes		
<u>Enquiry:</u>		
Date:	2026	
<u>PDSH:</u>		
Year of publication:	2026	
To be approved at CTL plenary:	2027	
<u>DSH</u>		

Publication date: N/A

Rationale 1:

The relevant clause 3.1.9.102 (normal operation) of IEC 60335-2-9:2019 and clause 10.1 of IEC 60335-1:2020 read,

Clause 3.1.9.102

Breadmakers are operated using the most unfavourable cycle and ingredients specified in the instructions.

Clause 10.1

...

The deviation for motor-operated appliances applies for combined appliances if the power input of the motors is more than 50 % of the rated power input.

...

Compliance is checked by measurement when the power input has stabilized with:

- all circuits which can operate simultaneously being in operation;
- the appliance being supplied at rated voltage;
- the appliance being operated under normal operation.

Explanation notes,

- During the test of clause 10.1, breadmakers are operated under normal operation, which is defined as operation only using the most unfavourable cycle.
- Breadmakers are combined appliances but only have the motor power input of 10 % - 20 % of the total power input so in clause 10.1 they are considered to be heating appliances.
- According to the above, during the test of clause 10, breadmakers need to be operated using the most unfavourable cycle as a heating appliance with only the heating element operating or with the heating element and motor operating simultaneously as applicable. However, they do not need to be operated at lower power input with only the motor operating because it is meaningless according to Rationale 2.

Rationale 2:

The purposes of marking the rated power input or rated current are generally understood as follows.

- The marking serves as an indicator of the load applied to the socket outlet to users.
- By providing information of the rated power input or rated current of the appliance, it can be confirmed that components subject to the supply main such as the supply cord or supply plug are not being used beyond their ratings.

By only marking a single maximum rated power-input value based on the most unfavorable cycle, these purposes can be fulfilled, and marking two separate values of the heating element and the motor is not meaningful.

Rationale 3:

The relevant clauses of IEC 60335-2-9:2019 read,

Clause 5.101 Induction hotplates are operated as specified for motor-operated appliances. Other appliances are tested as specified for heating appliances, even if they incorporate motors.

In appliances that incorporate induction hotplates in addition to other heating units, the induction hotplates are operated simultaneously and supplied separately.

Clause 7.1 Addition:

The rated power input or rated current of induction hotplates shall also be marked.

Clause 10.1 Addition:

The power input of induction hotplates is measured separately and the tolerances for motor-operated appliances apply.

Explanation notes,

- Clause 5.101 specifies that other appliances including breadmakers are only tested as heating appliances.

- Only for appliances that incorporate both an induction hotplate and radiant heater, the induction hotplate is operated as for motor-operated appliances, and the rated power input of the induction hotplate is required to be separately marked and separately measured as per clause 10.1.

However, this means that for other appliances including breadmakers, the rated power input of the motor is not required to be separately marked or measured in clause 10.1.