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**Minimum allowable values of energy efficiency and
energy efficiency grades for range hoods**

吸油烟机能效限定值及能效等级

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Minimum allowable values of energy efficiency and energy efficiency grades for range hoods

1 Scope

This Standard specifies the energy efficiency grades, minimum allowable values, evaluating values of energy conservation, test methods and inspection rules for range hoods.

This Standard applies to the air-extraction range hood, whose rated voltage does not exceed 250 V, which is installed on the upper part of household cooking stove, range or similar appliances.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only the dated version applies to this document. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 2828.1, Sampling procedures for inspection by attributes - Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection

GB/T 2829, Sampling procedures and tables for periodic inspection by attributes (apply to inspection of process stability)

GB/T 17713-2011, Range hood

3 Terms and definitions

Terms and definitions determined by GB/T 17713-2011 and the following ones are applicable to this document.

3.1

Minimum allowable values of energy efficiency for range hoods

The minimum allowable value energy efficiency of the range hood under the specified test conditions.

3.2

Evaluating values of energy conservation for range hoods

The minimum allowable value of energy efficiency of an energy-saving range hood under the specified test conditions.

3.3

Standby mode

The status in which the range hood is connected to the power supply, and only provides restart, information or status display (including clock) functions, but does not provide any main functions.

Note: The restart function refers to a function that enables the appliance to switch to the main function mode by means of remote control, internal sensor or timing clock.

3.4

Off mode

The status in which the range hood is connected to the power supply, but does not provide any standby mode function or main function.

Note: It is also regarded as the off mode when only the off-status indication (such as light-emitting diode) is provided.

3.5

Standby power

The active power of the range hood in standby mode, in watts (W).

3.6

Off power

The active power of the range hood in off mode, in watts (W).

4 Energy efficiency grades

The energy efficiency of range hoods is graded according to total pressure efficiency, standby power, off power, normal odour reduction factor, and grease emission limits. Its energy efficiency is divided into 5 grades (see Table 1), of which grade 1 has the highest energy efficiency. The energy efficiency value of products of each grade shall meet the requirements of Table 1.

Table 1 – Energy efficiency grades for range hoods

Appendix A

(Normative)

Standby and off power test methods of range hoods

A.1 Short-term power measurement method

This test only applies to the selected mode and the situation where the power is stable. If the measured power change within 5 min is less than 5%, the power is considered stable. In this case, the power value displayed by the instrument can be directly read.

Connect the to-be-tested range hood to the measuring instrument and select the measured mode. After the range hood has stabilized the power after at least 5 minutes, use the measuring instrument to measure the power consumption; the time shall not be less than 5 minutes. During the measurement, if the power value changes less than 5% (obtained from the maximum power value observed), consider the power stable, and directly record the power value at the end of 5 min from the measuring instrument.

A.2 Average power method

This test method applies to the selected mode or the situation where the measured power is unstable. However, this method also applies to all situations where the model is stable. This method uses the average power reading or cumulative energy within the time period selected by the user.

Connect the to-be-tested range hood to the measuring instrument; select the measured mode, and monitor the power consumption. The average power is determined by the following "average power method" or "cumulative energy method":

Average power method: The measuring instrument records a true average power in the time period selected by the user; the selected time period shall not be less than 5 minutes.

Cumulative energy method: The measuring instrument can accumulate the energy consumption in the time period selected by the user; the selected time period shall not be less than 5 minutes. The cumulative time period shall be such that the total recorded value of energy and time is greater than 200 times the resolution of the measuring instrument (including the power measuring instrument and the time measuring instrument). Divide the accumulated energy value by the measurement time to get the average power.

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