

SCHEDULE 2

Regulation 3

Product requirements

PART 1

Introduction

1. This Schedule sets out in relation to a listed product the requirements that must be met by that product.

PART 2

Boilers and appliances

1. A boiler or an appliance must comply with the useful efficiency requirements—
 - (a) at rated output (that is operating at rated output P_n expressed in kW, at an average boiler-water temperature of 70 degrees C); and
 - (b) at part load (that is operating at 30 per cent part load, at an average boiler-water temperature which varies according to the type of boiler),

set out in the table in paragraph 2.

2. The table referred to in paragraph 1—

Useful efficiency requirements

| <i>Type of Boiler</i> | <i>Range of power output</i> | <i>Efficiency at rated output</i> | <i>Efficiency at part load</i> |
|--------------------------------|------------------------------|---|--|
| | kW | Average boiler-water temperature expressed in degrees C | Average boiler-water temperature expressed in degrees C |
| Standard | 4 to 400 | 70 | Greater than or equal to $84 + 2 \log P_n$ |
| Low temperature ⁽¹⁾ | 4 to 400 | 70 | Greater than or equal to $40 + 87.5 + 1.5 \log P_n$ |
| Gas condensing | 4 to 400 | 70 | Greater than or equal to $91 + 1 \log P_n$ 30 ⁽²⁾ |

(1) Including a condensing boiler using liquid fuels

(2) Temperature of boiler water supply

3. A boiler or an appliance with a dual function of—
 - (a) heating premises; and

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(b) providing sanitary hot water,
must comply with paragraph 1 to the extent of the heating function only.

4. A boiler which is—

- (a) a back-boiler; or
- (b) a boiler designed to be installed in the living space,

must be treated as a standard boiler but its efficiency at rated output and part load may be 4 per cent less than shown in the table in paragraph 2.

PART 3

Refrigerator appliances

1. If a refrigerator appliance is within categories 1 to 9 as described in table 1 in paragraph 2, the maximum allowable electricity consumption (E_{max}) of that appliance, expressed in kWh per 24 hours, is set out in column 3 of that table.

2. The table referred to in paragraph 1—

Table 1

Requirements for maximum allowable electricity consumption – appliances in categories 1 to 9

| <i>Category</i> | <i>Description</i> | <i>E_{max} (kWh/.24h)</i> |
|-----------------|--|--------------------------------------|
| 1 | Refrigerator without low temperature compartment (being any compartment with a temperature at or below -6 degrees C) | $(0.207 \times V_{adj} + 218) / 365$ |
| 2 | Refrigerator/chiller compartment at 5 degrees C and/or 12 degrees C | $(0.207 \times V_{adj} + 218) / 365$ |
| 3 | Refrigerator with no-star temperature compartment | $(0.207 \times V_{adj} + 218) / 365$ |
| 4 | Refrigerator with low temperature compartment (*) | $(0.557 \times V_{adj} + 166) / 365$ |
| 5 | Refrigerator with low temperature compartment (**) | $(0.402 \times V_{adj} + 206) / 365$ |
| 6 | Refrigerator with low temperature compartment (***) | $(0.573 \times V_{adj} + 206) / 365$ |
| 7 | Refrigerator/freezer, freezer compartment (****) | $(0.697 \times V_{adj} + 272) / 365$ |
| 8 | Food freezer, upright | $(0.434 \times V_{adj} + 262) / 365$ |
| 9 | Food freezer, chest | $(0.480 \times V_{adj} + 195) / 365$ |

3. If a refrigerator appliance—

- (a) has more than 2 doors; or

(b) is not described in table 1,
 the maximum allowable electricity consumption (E_{max}) of that appliance as described in columns 1 and 2 of table 2 in paragraph 4, expressed in kWh per 24 hours, is set out in column 3 of that table.

4. Table 2 referred to in paragraph 3—

Table 2

Requirements for maximum allowable electricity consumption – other appliances

| <i>Temperature of the coldest compartment</i> | <i>Category</i> | <i>E_{max} (kWh/24 hours)</i> |
|---|-----------------|--|
| > - 6 degrees C | 1/2/3 | $(0.207 \times V_{adj} + 218) / 365$ |
| - 6 degrees C(*) | 4 | $(0.557 \times V_{adj} + 166) / 365$ |
| - 12 degrees C(**) | 5 | $(0.402 \times V_{adj} + 219) / 365$ |
| - 18 degrees C (***) | 6 | $(0.573 \times V_{adj} + 206) / 365$ |
| - 18 degrees C(****) | 7 | $(0.697 \times V_{adj} + 272) / 365$ |

5. The categories 1 to 7 referred to in column 2 of table 2 are the same categories of refrigerator appliance numbered 1 to 7 referred to in column 1 of table 1.

6. The following have effect in respect of tables 1 and 2—

$$V_{adj} = \sum V_c \times F_c \times C_c$$

$$R_c = (23 - T_c) / 20$$

7. For the purposes of paragraph 6—

V_{adj} is the value of the adjusted volume (in litres);

V_c is the net volume (in litres) of a given type of compartment in the appliance;

T_c is the design temperature in each compartment (in degrees C);

F_c is a factor which equals—

- (a) 1.2 for no-frost compartments; or
- (b) 1 for other compartments;

C_c is—

- (a) 1 for refrigeration appliances belonging to the normal (N) and subnormal (SN) climate classes;
- (b) X_c for refrigeration appliances belonging to the sub-tropical (ST) climate class; or
- (c) Y_c for refrigeration appliances belonging to the tropical (T) climate class;

X_c and Y_c are weighting co-efficients defined in paragraph 8.

8. The following table defines the co-efficients X_c and Y_c referred to in paragraph 7—

Table 3

Table of weighting co-efficients X_c and Y_c , according to the temperature of the compartment

| | X_c | Y_c |
|------------------------|-------|-------|
| Cellar compartment | 1.25 | 1.35 |
| Fresh food compartment | 1.20 | 1.30 |

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| | <i>X_c</i> | <i>Y_c</i> |
|--|----------------------|----------------------|
| 0 degrees C compartment | 1.15 | 1.25 |
| 1-star (*) compartment | 1.12 | 1.20 |
| 2-star (**) compartment | 1.08 | 1.15 |
| 3 (***) and 4 (****) star compartments | 1.05 | 1.10 |

9. For the purposes of this Part, a manufacturer must establish the electricity consumption of a refrigerator appliance in accordance with European Standard EN 153.

PART 4

Ballasts for fluorescent lighting

1. A ballast for fluorescent lighting must be allocated to a category as described in table 1 in paragraph 3.

2. In respect of—

- (a) the category of ballast shown in column 1 of table 2 in paragraph 4; and
- (b) the lamp power shown for that category in column 2 of table 2,

the maximum input value of a ballast lamp circuit shall be the value shown in column 3 of table 2.

3. Table 1 referred to in paragraph 1—

Table 1

Categories of ballast

| <i>Category</i> | <i>Description</i> |
|-----------------|--|
| 1 | Ballast for linear lamp type |
| 2 | Ballast for compact 2 tubes lamp type |
| 3 | Ballast for compact 4 tubes flat lamp type |
| 4 | Ballast for compact 4 tubes lamp type |
| 5 | Ballast for compact 6 tubes lamp type |
| 6 | Ballast for compact 2 D lamp type |

4. Table 2 referred to in paragraph 2—

Table 2

Maximum input power of a ballast-lamp circuit

| <i>Ballast category</i> | <i>Lamp Power</i> | | <i>Maximum input power of Ballast-lamp circuits</i> |
|-------------------------|-------------------|-------|---|
| Column 1 | Column 2 | | Column 3 |
| | 50 Hz | HF | |
| 1 | 15W | 13.5W | 23W |

| <i>Ballast category</i> | <i>Lamp Power</i> | | <i>Maximum input power of Ballast-lamp circuits</i> |
|-------------------------|-------------------|-------|---|
| | 18W | 16W | 26W |
| | 30W | 24W | 38W |
| | 36W | 32W | 43W |
| | 38W | 32W | 45W |
| | 58W | 50W | 67W |
| | 70W | 60W | 80W |
| 2 | 18W | 16W | 26W |
| | 24W | 22W | 32W |
| | 36W | 32W | 43W |
| | 38W | 32W | 45W |
| 3 | 18W | 16W | 26W |
| | 24W | 22W | 32W |
| | 36W | 32W | 43W |
| | 38W | 32W | 45W |
| 4 | 10W | 9.5W | 16W |
| | 13W | 12.5W | 19W |
| | 18W | 16.5W | 26W |
| | 26W | 24W | 34W |
| | 38W | 32W | 45W |
| 5 | 18W | 16W | 26W |
| | 26W | 24W | 34W |
| | 38W | 32W | 45W |
| 6 | 10W | 9W | 16W |
| | 16W | 14W | 23W |
| | 21W | 19W | 29W |
| | 28W | 25W | 36W |
| | 38W | 34W | 45W |

5. For a ballast for fluorescent lighting designed for a lamp which falls between two values shown in table 2, the maximum input value of a ballast lamp circuit must be calculated by linear interpolation between the two values of maximum power for the two lamps which are closest in table 2 to the lamp in question.

6. For the purposes of this Part, a manufacturer must establish the electricity consumption for a ballast for fluorescent lighting in accordance with European Standard EN 50294.