
STATUTORY INSTRUMENTS

2021 No. 745

The Ecodesign for Energy-Related Products
and Energy Information Regulations 2021

PART 2

Ecodesign for Energy-Related Products

CHAPTER 1

WELDING EQUIPMENT

Application and interpretation

3.—(1) Subject to paragraph (2), this Chapter applies to welding equipment using one or more of the following welding processes—

- (a) flux cored arc welding;
- (b) manual metal arc welding;
- (c) metal active gas and metal inert gas welding;
- (d) plasma arc cutting;
- (e) self-shielded flux-cored welding;
- (f) shielded metal arc welding;
- (g) tungsten inert gas welding.

(2) Nothing in this Chapter applies to welding equipment using the following welding processes—

- (a) limited-duty arc welding;
- (b) resistance welding;
- (c) stud welding;
- (d) submerged arc welding.

(3) In this Chapter and Schedules 1 and 2—

“flux cored arc welding” means a welding process that uses, with or without external shielding gases, composite tubular filler metal electrodes consisting of a metal sheath and a core of various powdered materials, producing an extensive slag cover on the face of a weld bead;

“limited-duty arc welding” means arc welding processes that are not for industrial and professional applications and that—

- (a) use single-phase public low-voltage input;
- (b) if engine driven, do not exceed an output power of 7.5 kilovolt-amperes (“kVA”); and
- (c) do not require arc-striking and stabilising devices, liquid cooling systems or gas consoles for operation;

“manual metal arc welding” means an arc welding process with a coated electrode where the operator’s hand controls the travel speed of the welding operation and the rate at which the electrode is fed into the electric arc;

“metal active gas welding” means a gas metal arc welding process in which—

- (a) coalescence is produced by heating with an arc between a continuous filler metal (consumable) electrode and the workpiece area; and
- (b) shielding is obtained entirely from an externally supplied gas, or gas mixture, that is active;

“metal inert gas welding” means a gas metal arc welding process in which—

- (a) coalescence is produced by heating with an arc between a continuous filler metal (consumable) electrode and the workpiece area; and
- (b) shielding is obtained entirely from an externally supplied gas, or gas mixture, that is inert;

“plasma arc cutting” means an arc cutting process that uses a constricted arc and removes the molten metal in a high velocity jet of ionised gas (plasma gas) issuing from the constricting orifice, and which is a direct-current electrode-negative process;

“plasma gas” (also referred to as “orifice gas” or “cutting gas”) means a gas directed into the torch to surround the electrode, which becomes ionised by the arc to form a plasma and issues from the torch nozzle as the plasma jet;

“resistance welding” means a thermo-electrical process in which—

- (a) heat is generated at the interface of the parts to be joined by passing an electrical current through the parts for a precisely controlled time and under a controlled pressure; and
- (b) no consumables such as welding rods or shielding gases are required;

“self-shielded flux-cored welding” means a wire welding process in which—

- (a) a continuous hollow-wire electrode is fed through the welding gun into the weld joint without the need to use an external shielding gas to protect the weld pool from contamination; and
- (b) instead of an external shielding gas, a flux compound within the hollow wire reacts with the welding arc to form a gas that protects the weld pool;

“shielding gas” (also referred to as “secondary gas”) means a gas that does not pass through the orifice of the nozzle, but instead passes around the nozzle and forms a shield around the electric arc;

“shielded metal arc welding” means an arc welding process in which—

- (a) coalescence is produced by heating with an electric arc between a covered metal electrode and the workpiece and work area;
- (b) shielding is obtained from decomposition of the electrode covering; and
- (c) pressure is not used and filler metal is obtained from the electrode;

“stud welding” means a welding process in which a metal stud or a similar part is joined (manually, in automated or in semi-automated way) to a workpiece using an arc of electricity to heat both parts;

“submerged arc welding” means an arc welding process—

- (a) which uses an arc or arcs exceeding 600 amperes between a bare metal electrode or electrodes and the weld pool;
- (b) in which the arc and molten metal are shielded by a blanket of granular flux on the workpieces; and

- (c) in which no pressure is applied and the process uses filler metal from the electrode and sometimes from a supplementary source such as a welding rod, flux or metal granules; “tungsten inert gas welding” means an arc welding process in which—
 - (a) coalescence is produced by heating with an arc between a single tungsten (non-consumable) electrode and the workpiece area;
 - (b) shielding is obtained from a gas or gas mixture;
 - (c) pressure may or may not be used and filler metal may or may not be used;“welding equipment” means products that—
 - (a) are used for manual, automated or semi-automated welding, brazing, soldering or cutting (or all of the above);
 - (b) are stationary or transportable; and
 - (c) consist of linked parts or components, at least one of which moves and which are joined together to produce coalescence of metals by heating them to the welding temperature (with or without the application of pressure) or by the application of pressure alone, with or without the use of filler metal, and with or without the use of shielding gases, using appropriate tools and techniques, resulting in a product of defined geometry.

Ecodesign requirements

4.—(1) Welding equipment must conform to the ecodesign requirements set out in Schedule 1 when it is placed on the market or put into service.

(2) Manufacturers, authorised representatives and importers of welding equipment must comply with paragraphs 3 and 4 of Schedule 1 (resource efficiency and information requirements).

Conformity assessment

5.—(1) For the purposes of the conformity assessment procedure referred to in Schedule 1A to the 2010 Regulations(1), a manufacturer assessing whether a product conforms with these Regulations must use either—

- (a) the internal design control procedure set out in Part 1 of that Schedule; or
- (b) the management system procedure set out in Part 2 of that Schedule.

(2) The technical documentation file required for the conformity assessment of the product must contain—

- (a) a copy of the product information provided in accordance with paragraph 4 of Schedule 1;
- (b) the information specified in paragraph 5 of Schedule 1; and
- (c) the details and results of any measurements or calculations carried out in accordance with regulation 7.

Verification procedure for market surveillance purposes

6. The market surveillance authority(2) must use the verification procedure set out in Schedule 2 when verifying the compliance of a product with the requirements of these Regulations.

(1) Schedule 1A was inserted by [S.I. 2019/539](#), as amended by [S.I. 2020/1528](#).

(2) The meanings of “market surveillance” and “market surveillance authority” are set out in Article 2(17) and (18) respectively of EU Regulation 765/2008 (RAMS), and are amended by paragraph 3 of Schedule 33 to [S.I. 2019/696](#). Definitions in RAMS are applied to the 2010 regulations by regulation 2(2) of those regulations (as amended by [S.I. 2019/539](#)).

Measurements and calculations

7.—(1) The measurements and calculations required by this Chapter, or necessary for demonstrating or measuring conformity with this Chapter, must be made in accordance with designated standards⁽³⁾, where available.

(2) Where designated standards are not available, the measurements and calculations referred to in paragraph (1) must be made in accordance with methods which —

- (a) can be demonstrated to be reliable, accurate, and reproducible by the person deploying them; and
- (b) take into account the generally recognised state of the art.

Circumvention and software updates

8.—(1) The manufacturer, authorised representative or importer must not place on the market products designed to be able to detect they are being tested (for example by recognising the test conditions or test cycle), and to react specifically by automatically altering their performance during the test with the aim of reaching a more favourable level for any of the parameters in the technical documentation⁽⁴⁾ or included in any documentation provided.

(2) The energy consumption of the product and any of the other declared parameters must not deteriorate after a software or firmware update when measured with the same test standard originally used for the declaration of conformity, except with explicit consent of the end-user prior to the update.

(3) The performance of a product must not change as a result of rejecting a software update.

(4) A software update must not have the effect of changing the product's performance in a way that makes it non-compliant with the ecodesign requirements applicable for the declaration of conformity.

CHAPTER 2

REFRIGERATING APPLIANCES WITH A DIRECT SALES FUNCTION

Application and interpretation

9.—(1) Subject to paragraph (2), this Chapter applies to electric mains-operated refrigerating appliances with a direct sales function, including appliances sold for refrigeration of items other than foodstuffs.

(2) Nothing in this Chapter applies to—

- (a) food processing refrigerating appliances with a direct sales function;
- (b) professional refrigerated storage cabinets, blast cabinets, condensing units and process chillers as defined in Article 2 of Regulation (EU) 2015/1095⁽⁵⁾;
- (c) refrigerating appliances with a direct sales function powered only by energy sources other than electricity;
- (d) refrigerating appliances with a direct sales function specifically tested and approved for the storage of medicines or scientific samples;

(3) See regulation 2A of the 2010 regulations for the meaning of “designated standard”. Regulation 2A was inserted by [S.I. 2019/539](#), and amended by paragraph 4 of Schedule 4 to the European Union (Future Relationship) Act 2020 (c.29).

(4) See paragraph 1(2) of Schedule 1A to the 2010 Regulations for the meaning of “technical documentation”. Schedule 1A was inserted by [S.I. 2019/539](#).

(5) EUR 2015/1095; relevant amending instruments are [S.I. 2019/539](#) and [2020/1528](#).

- (e) refrigerating appliances with a direct sales function with no integrated system for producing cooling, which function by ducting chilled air that is produced by an external air chiller unit, except—
 - (i) remote cabinets;
 - (ii) category 6 refrigerated vending machines, as specified in Part 2 of Table 7 in Schedule 4.
- (f) the remote components, such as the condensing unit or compressors to which a remote cabinet needs to be connected in order to function;
- (g) wine storage appliances and minibars.

(3) In this Chapter and Schedules 3 to 5—

“compartment”—

- (a) means an enclosed space within a refrigerating appliance with a direct sales function, separated from other compartments by a partition, container, or similar construction, which is directly accessible through one or more external doors and may itself be divided into sub-compartments; and
- (b) unless otherwise specified, includes sub-compartments;

“condensing unit” means a product integrating at least one electrically driven compressor and one condenser, capable of cooling down and continuously maintaining low or medium temperature inside a refrigerated appliance or system, using a vapour compression cycle when the unit is connected to an evaporator and an expansion device;

“external door” is the part of a refrigerating appliance with a direct sales function that can be moved or removed to allow the load to be moved from the exterior to the interior or from the interior to the exterior of the appliance;

“food processing refrigerating appliance with a direct sales function”—

- (a) means a refrigerating appliance with a direct sales function specifically tested and approved for carrying out food processing such as ice-cream makers, microwave-equipped refrigerated vending machines or ice makers; and
- (b) does not include refrigerating appliances with a direct sales function equipped with one compartment specifically designed for carrying out food processing which is equivalent to less than 20 per cent of the appliance total net volume;

“foodstuffs” means food, ingredients, beverages, including wine, and other items primarily used for human consumption which require refrigeration at specified temperatures;

“gross volume” means the volume within the inside liners of the compartment, without internal fittings and with door or lid closed, in cubic decimetres (dm³) or litres (L);

“minibar” means a refrigerating appliance with a total volume of maximum 60 litres, which is primarily intended for the storage and sales of foodstuffs in hotel rooms and similar premises;

“net volume” means the part of the gross volume of any compartment which is left after deduction of the volume of components and spaces unusable for the storage or display of foodstuffs and other items, in dm³ or L;

“operating temperature” means the reference temperature inside a compartment during testing;

“refrigerated vending machine” means a refrigerating appliance with a direct sales function designed to accept consumer payments or tokens to dispense chilled foodstuffs or other items without on-site labour intervention;

“refrigerating appliance with a direct sales function” means an insulated cabinet—

- (a) with one or more compartments that are controlled at specific temperatures, cooled by natural or forced convection through one or more energy consuming means;
- (b) that is intended for displaying and selling, with or without assisted serving, foodstuffs and other items at specified temperatures below the ambient temperature to customers;
- (c) is accessible directly through open sides or through one or more doors, or drawers or both, including refrigerating appliances with a direct sales function with areas used for storage of foodstuffs and other items not accessible by customers;

“remote cabinet” means a refrigerating appliance with a direct sales function which consists of a factory-made assembly of components that in order to function as a refrigerating appliance with a direct sales function, needs to be connected additionally to remote components (such as a condensing unit or compressor) which are not an integral part of the cabinet;

“specifically tested and approved” means that, in relation to an operating condition or application, the product complies with all the following requirements—

- (a) it has been specifically designed and tested for that operating condition or application, in accordance with standards produced by an international standardising body⁽⁶⁾;
- (b) it is accompanied by evidence, to be included in the technical documentation in the form of a certificate, a type approval mark or a test report, that the product has been specifically approved for that operating condition or application;
- (c) it is placed on the market specifically for that operating condition or application, as evidenced by the technical documentation, information provided for the product and any advertising, information or marketing materials;

“sub-compartment” means an enclosed space in a compartment having a different operating temperature range from the compartment in which it is located;

“wine storage appliance” means refrigerating appliance with only one type of compartment for the storage of wine, with precision temperature control for the storage conditions and target temperature, and equipped with anti-vibration measures.

Ecodesign requirements

10.—(1) A refrigerating appliance with a direct sales function must conform to the ecodesign requirements set out in Schedule 3 when it is placed on the market or put into service.

(2) Manufacturers, authorised representatives and importers of refrigerating appliances with a direct sales function must comply with paragraphs 3 and 4 of Schedule 3 (resource efficiency and information requirements).

Conformity assessment

11.—(1) For the purposes of the conformity assessment procedure referred to in Schedule 1A to the 2010 Regulations, a manufacturer assessing whether a product conforms with these Regulations must use either—

- (a) the internal design control procedure set out in Part 1 of that Schedule; or
- (b) the management system procedure set out in Part 2 of that Schedule.

(2) The technical documentation file required for the conformity assessment of a product must contain—

- (a) a copy of the product information provided in accordance with paragraph 4 of Schedule 3;

⁽⁶⁾ See regulation 2A of the 2010 regulations, as amended by paragraph 4 of Schedule 4 to the European Union (Future Relationship) Act 2020, for the meaning of “international standardising body”.

- (b) the information specified in paragraph 5 of Schedule 3; and
- (c) the details and results of any measurements or calculations carried out in accordance with regulation 13 or Schedule 4.

Verification procedure for market surveillance purposes

12. The market surveillance authority must use the verification procedure set out in Schedule 5 when verifying the compliance of a product with the requirements of these Regulations.

Measurements and calculations

13.—(1) The measurements and calculations required by this Chapter, or necessary for demonstrating or measuring conformity with this Chapter, must be made in accordance with designated standards, where available.

(2) Where designated standards are not available, the measurements and calculations referred to in paragraph (1) must be made in accordance with methods which—

- (a) can be demonstrated to be reliable, accurate, and reproducible by the person deploying them; and
- (b) take into account the generally recognised state of the art.

Circumvention and software updates

14.—(1) The manufacturer, importer or authorised representative must not place on the market products designed to be able to detect they are being tested (for example recognising the test conditions or test cycle), and to react specifically by automatically altering their performance during the test with the aim of reaching a more favourable level for any of the parameters in the technical documentation or included in any of the documentation provided.

(2) The energy consumption of the product and any of the other declared parameters must not deteriorate after a software or firmware update when measured with the same test standard originally used for the declaration of conformity, except with the explicit consent of the end-user prior to the update.

(3) The performance of a product must not change as a result of rejecting a software update.

(4) A software update must not have the effect of changing the product's performance in a way that makes it non-compliant with the ecodesign requirements applicable for the declaration of conformity.

CHAPTER 3

HOUSEHOLD DISHWASHERS

Application and interpretation

15.—(1) Subject to paragraph (2), this Chapter applies to electric mains-operated household dishwashers, including—

- (a) built-in dishwashers; and
- (b) dishwashers that can also be powered by batteries.

(2) Nothing in this Chapter applies to—

- (a) dishwashers in the scope of the Supply of Machinery (Safety) Regulations 2008(7);

- (b) battery-operated household dishwashers that can be connected to the mains through an AC/DC converter purchased separately.
- (3) In this Chapter and Schedules 6 to 8—
 - “built-in dishwasher” means a household dishwasher that is designed, tested and marketed exclusively—
 - (a) to be installed in cabinetry or encased (top, bottom and sides) by panels;
 - (b) to be securely fastened to the sides, top or floor of the cabinetry or panels; and
 - (c) to be equipped with an integral factory-finished face or to be fitted with a custom front panel;
 - “household dishwasher” means a machine which cleans and rinses tableware, and which is declared by the manufacturer in the declaration of conformity to comply with the Electrical Equipment (Safety) Regulations 2016⁽⁸⁾ or the Radio Equipment Regulations 2017⁽⁹⁾;
 - “mains” or “electric mains” means the electricity supply from the electricity grid of 230 (± 10 per cent) volts of alternating current at 50 hertz (Hz).

Ecodesign requirements

16.—(1) A household dishwasher must conform to the ecodesign requirements set out in Schedule 6 when it is placed on the market or put into service.

(2) Manufacturers, authorised representatives and importers of household dishwashers must comply with paragraphs 13 and 14 of Schedule 6 (resource efficiency and information requirements).

Conformity assessment

17.—(1) For the purposes of the conformity assessment procedure referred to in Schedule 1A to the 2010 Regulations, a manufacturer assessing whether a product conforms with these Regulations must use either—

- (a) the internal design control procedure set out in Part 1 of that Schedule; or
- (b) the management system procedure set out in Part 2 of that Schedule.

(2) The technical documentation file required for the conformity assessment of a product must contain—

- (a) a copy of the declared values of the parameters referred to in paragraphs 6 to 12 of Schedule 6;
- (b) the information specified in paragraph 15 of Schedule 6; and
- (c) the details and results of any measurements or calculations carried out in accordance with regulation 19 or Schedule 7.

Verification procedure for market surveillance purposes

18. The market surveillance authority must use the verification procedure set out in Schedule 8 when verifying the compliance of a product with the requirements of these Regulations.

⁽⁸⁾ S.I. 2016/1101.

⁽⁹⁾ S.I. 2017/1206.

Measurements and calculations

19.—(1) The measurements and calculations required by this Chapter, or necessary for demonstrating or measuring conformity with this Chapter, must be made in accordance with designated standards, where available.

(2) Where designated standards are not available, the measurements and calculations referred to in paragraph (1) must be made in accordance with methods which —

- (a) can be demonstrated to be reliable, accurate, and reproducible by the person deploying them; and
- (b) take into account the generally recognised state of the art.

Circumvention and software updates

20.—(1) The manufacturer, importer or authorised representative must not place on the market products designed to be able to detect they are being tested (for example by recognising the test conditions or test cycle) and to react specifically by automatically altering their performance during the test with the aim of reaching a more favourable level for any of the parameters in the technical documentation or included in any documentation provided.

(2) The energy consumption of the product and any of the other declared parameters must not deteriorate after a software or firmware update when measured with the same test standard originally used for the declaration of conformity, except with explicit consent of the end-user prior to the update.

(3) The performance of a product must not change as a result of rejecting a software update.

(4) A software update must not have the effect of changing the product's performance in a way that makes it non-compliant with the ecodesign requirements applicable for the declaration of conformity.

CHAPTER 4

HOUSEHOLD WASHING MACHINES AND WASHER-DRYERS

Application and interpretation

21.—(1) Subject to paragraph (2), this Chapter applies to electric mains-operated household washing machines and household washer-dryers, including—

- (a) built-in washing machines and washer-dryers; and
- (b) machines that can also be powered by batteries.

(2) Nothing in this Chapter applies to—

- (a) washing machines and washer-dryers in the scope of Supply of Machinery (Safety) Regulations 2008;
- (b) battery-operated washing machines and washer-dryers that can be connected to the mains through an AC/DC converter purchased separately.

(3) In this Chapter and Schedules 9 to 12—

“mains” or “electric mains” means the electricity supply from the electricity grid of 230 (\pm 10 per cent) volts of alternating current at 50 Hz;

“automatic washing machine” means a washing machine where the load is fully treated by the washing machine without the need for user intervention at any point during the programme;

“household washing machine” means an automatic washing machine which—

- (a) cleans and rinses household laundry by using water, chemical, mechanical and thermal means;
- (b) has a spin extraction function; and
- (c) is declared by the manufacturer in the declaration of conformity to comply with the Electrical Equipment (Safety) Regulations 2016 or the Radio Equipment Regulations 2017;

“household washer-dryer” means a household washing machine which, in addition to the functions of an automatic washing machine, in the same drum includes a means for drying textiles by heating and tumbling, and which is declared by the manufacturer in the declaration of conformity to comply with the Electrical Equipment (Safety) Regulations 2016 or the Radio Equipment Regulations 2017;

“built-in washing machine” means a household washing machine that is designed, tested and marketed exclusively—

- (a) to be installed in cabinetry or encased (top, bottom, and sides) by panels;
- (b) to be securely fastened to the sides, top or floor of the cabinetry or panels; and
- (c) to be equipped with an integral factory-finished face or to be fitted with a custom front panel;

“built-in washer-dryer” means a household washer-dryer that is designed, tested and marketed exclusively—

- (a) to be installed in cabinetry or encased (top, bottom, and sides) by panels;
- (b) to be securely fastened to the sides, top or floor of the cabinetry or panels; and
- (c) to be equipped with an integral factory-finished face or to be fitted with a custom front panel.

Ecodesign requirements

22.—(1) A household washing machine or household washer-dryer must conform to the ecodesign requirements set out in Schedules 9 and 12 when it is placed on the market or put into service.

(2) Manufacturers, authorised representatives and importers of household washing machines and household washer-dryers must comply with paragraphs 18 and 19 of Schedule 9 (resource efficiency and information requirements).

Conformity assessment

23.—(1) For the purposes of the conformity assessment procedure referred to in Schedule 1A to the 2010 Regulations, a manufacturer assessing whether a product conforms with these Regulations must use either—

- (a) the internal design control procedure set out in Part 1 of that Schedule; or
- (b) the management system procedure set out in Part 2 of that Schedule.

(2) The technical documentation file required for the conformity assessment of a product must contain—

- (a) a copy of the declared values of the parameters referred to in paragraphs 13 to 17 of Schedule 9;
- (b) the information specified in paragraph 20 of Schedule 9; and
- (c) the details and results of any measurements or calculations carried out in accordance with regulation 25 or Schedule 10.

Verification procedure for market surveillance purposes

24. The market surveillance authority must use the verification procedure set out in Schedule 11 when verifying the compliance of a product with the requirements of these Regulations.

Measurements and calculations

25.—(1) The measurements and calculations required by this Chapter, or necessary for demonstrating or measuring conformity with this Chapter, must be made in accordance with designated standards, where available.

(2) Where designated standards are not available, the measurements and calculations referred to in paragraph (1) must be made in accordance with methods which—

- (a) can be demonstrated to be reliable, accurate, and reproducible by the person deploying them; and
- (b) take into account the generally recognised state of the art.

Circumvention and software updates

26.—(1) The manufacturer, importer or authorised representative must not place on the market products designed to be able to detect they are being tested (for example by recognising the test conditions or test cycle) and to react specifically by automatically altering their performance during the test with the aim of reaching a more favourable level for any of the parameters in the technical documentation or included in any documentation provided.

(2) The energy consumption of the product and any of the other declared parameters must not deteriorate after a software or firmware update when measured with the same test standard originally used for the declaration of conformity, except with explicit consent of the end-user prior to the update.

(3) The performance of a product must not change as a result of rejecting a software update.

(4) A software update must not have the effect of changing the product's performance in a way that makes it non-compliant with the ecodesign requirements applicable for the declaration of conformity.

CHAPTER 5

REFRIGERATING APPLIANCES

Application and interpretation

27.—(1) Subject to paragraph (2), this Chapter applies to electric mains-operated refrigerating appliances with a total volume of—

- (a) more than 10 litres; and
- (b) less than or equal to 1,500 litres.

(2) This Chapter does not apply to—

- (a) professional refrigerated storage cabinets and blast cabinets, other than professional chest freezers;
- (b) any appliance to which Chapter 2 of this Part applies (refrigerating appliances with a direct sales function);
- (c) mobile refrigerating appliances;
- (d) refrigerating appliances whose primary function is not the storage of foodstuffs.

(3) In this Chapter and Schedules 13 to 15—

“0-star compartment” and “ice-making compartment” means a frozen compartment with a target temperature and storage conditions of 0 °C, as set out in Table 17 in Schedule 14;

“1-star compartment” means a frozen compartment with a target temperature and storage conditions of -6 °C, as set out in Table 17 in Schedule 14;

“2-star compartment” means a frozen compartment with a target temperature and storage conditions of -12 °C, as set out in Table 17 in Schedule 14;

“3-star compartment” means a frozen compartment with a target temperature and storage conditions of -18 °C, as set out in Table 17 in Schedule 14;

“blast cabinet” means a refrigerating appliance primarily intended to rapidly cool hot foodstuffs to below—

- (a) 10 °C in the case of chilling, and
- (b) -18 °C in the case of freezing;

“compartment”—

- (a) means an enclosed space within a refrigerating appliance, separated from other compartments by a partition, container, or similar construction, which is directly accessible through one or more external doors and which may be divided into sub-compartments, and
- (b) unless otherwise specified, includes sub-compartments;

“compartment type” means the declared compartment type in accordance with the refrigerating performance parameters T_{min} , T_{max} , T_c and others set out in Table 17 in Schedule 14;

“compartment volume” or “ V_c ” means the volume of the space within the inside liner of the compartment, expressed in cubic decimetres (dm^3) or litres (L);

“external door” is the part of a cabinet that can be moved or removed to allow the load to be moved from the exterior to the interior or from the interior to the exterior of the cabinet;

“foodstuffs” means food, ingredients, beverages, including wine, and other items primarily used for human consumption which require refrigeration at specified temperatures;

“freezer” means a refrigerating appliance with only 4-star compartments;

“freezer compartment” or “4-star compartment” means a frozen compartment with a target temperature and storage conditions of -18 °C and which fulfils the requirements for freezing capacity in paragraph 3(7) of Schedule 13;

“freezing capacity” means the amount of fresh foodstuffs that can be frozen in a freezer compartment in 24 hours;

“frozen compartment” means a compartment type with a target temperature equal to or below 0 °C (being a 0-star, 1-star, 2-star, 3-star or 4-star compartment), as set out in Table 17 in Schedule 14;

“mains” or “electric mains” means the electricity supply from the electricity grid of 230 (\pm 10 per cent) volt of alternating current at 50 Hz;

“mobile refrigerating appliance”—

- (a) means a refrigerating appliance—
 - (i) which can be used where there is no access to the mains electricity grid; and
 - (ii) which uses extra low-voltage electricity (< 120 VDC) or fuel, or both, as the energy source for the refrigeration;
- (b) includes a refrigerating appliance which can be electric mains operated via a separately purchased external AC/DC converter in addition to extra low voltage electricity or fuel;

(c) does not include an appliance placed on the market with an AC/DC converter;
“professional chest freezer” means a freezer used for the storage of foodstuffs in non-household environments—

- (a) in which the compartment is accessible from the top of the appliance; or
- (b) which has both top-opening type and upright type compartments but where the gross volume of the top-opening type compartment exceeds 75 per cent of the total gross volume of the appliance;

“professional refrigerated storage cabinet” means a refrigerating appliance—

- (a) integrating one or more compartments accessible via one or more doors or drawers;
- (b) capable of continuously maintaining the temperature of foodstuffs within prescribed limits at chilled or frozen operating temperatures, using a vapour compression cycle; and
- (c) used for the storage of foodstuffs in non-household environments but not for display to or access by customers;

“refrigerating appliance” means an insulated cabinet with one or more compartments that are controlled at specific temperatures, and cooled by natural or forced convection whereby the cooling is obtained by one or more energy consuming means;

“sub-compartment” means an enclosed space in a compartment having a different operating temperature range from the compartment in which it is located;

“target temperature” or “ T_c ” means the reference temperature inside a compartment during testing, as set out in Table 17 in Schedule 14, over a set of sensors;

“total volume” (“V”) means the volume of the space within the inside liner of the refrigerating appliance, equal to the sum of the compartment volumes, expressed in dm^3 or L.

Ecodesign requirements

28.—(1) A refrigerating appliance must conform to the ecodesign requirements set out in Schedule 13 when it is placed on the market or put into service.

(2) Manufacturers, authorised representatives and importers of refrigerating appliances must comply with paragraphs 4 and 5 of Schedule 13 (resource efficiency and information requirements).

Conformity assessment

29.—(1) For the purposes of the conformity assessment procedure referred to in Schedule 1A to the 2010 Regulations, a manufacturer assessing whether a product conforms with these Regulations must use either—

- (a) the internal design control procedure set out in Part 1 of that Schedule; or
- (b) the management system procedure set out in Part 2 of that Schedule.

(2) The technical documentation file required for the conformity assessment of a product must contain—

- (a) a copy of the product information provided in accordance with paragraph 5 of Schedule 13;
- (b) the information specified in paragraph 6 of Schedule 13; and
- (c) the details and results of any measurements or calculations carried out in accordance with regulation 31 or Schedule 14.

Verification procedure for market surveillance purposes

30. The market surveillance authority must use the verification procedure set out in Schedule 15 when verifying the compliance of a product with the requirements of these Regulations.

Measurements and calculations

31.—(1) The measurements and calculations required by this Chapter, or necessary for demonstrating or measuring conformity with this Chapter, must be made in accordance with designated standards, where available.

(2) Where designated standards are not available, the measurements and calculations referred to in paragraph (1) must be made in accordance with methods which—

- (a) can be demonstrated to be reliable, accurate, and reproducible by the person deploying them; and
- (b) take into account the generally recognised state of the art.

Circumvention and software updates

32.—(1) The manufacturer, importer or authorised representative must not place on the market products designed to be able to detect they are being tested (for example by recognising the test conditions or test cycle) and to react specifically by automatically altering their performance during the test with the aim of reaching a more favourable level for any of the parameters in the technical documentation or included in any documentation provided.

(2) The energy consumption of the product and any of the other declared parameters must not deteriorate after a software or firmware update when measured with the same test standard originally used for the declaration of conformity, except with the explicit consent of the end-user prior to the update.

(3) The performance of a product must not change as a result of rejecting a software update.

(4) A software update must not have the effect of changing the product's performance in a way that makes it non-compliant with the ecodesign requirements applicable for the declaration of conformity.

CHAPTER 6

ELECTRIC MOTORS AND VARIABLE SPEED DRIVES

Application and interpretation

33.—(1) This Chapter applies to—

- (a) induction electric motors without brushes, commutators, slip rings or electrical connections to the rotor, which are rated for operation on a 50 Hz, 60 Hz or 50/60 Hz sinusoidal voltage and—
 - (i) have two, four, six or eight poles;
 - (ii) have a rated voltage (“ U_N ”) above 50 V and up to and including 1,000 V;
 - (iii) have a rated power output (“ P_N ”) from 0.12 kilowatts (kW) up to and including 1,000 kW;
 - (iv) are rated on the basis of continuous duty operation; and
 - (v) are rated for direct on-line operation;
- (b) variable speed drives with 3 phase input which—

- (i) are rated for operating with a motor falling within sub-paragraph (a), within the 0.12 kW-1,000 kW motor rated output range;
 - (ii) have a rated voltage above 100 V and up to and including 1,000 V AC; and
 - (iii) have only one AC voltage output.
- (2) In this Chapter and Schedules 16 to 18—

“brake motor” means a motor equipped with an electromechanical brake unit operating directly on the motor shaft without couplings;

“continuous duty operation” means capable of continuous operation at a rated power with a temperature rise within the specified insulation temperature class, specified as specific duty types S1, S3 ≥ 80 per cent or S6 ≥ 80 per cent;

“cordless or battery operated equipment” means an appliance deriving its energy from batteries;

“declared values” means the values provided by the manufacturer, importer or authorised representative for the stated, calculated or measured technical parameters in the technical documentation, in accordance with the conformity assessment procedure referred to in regulation 35;

“drive with sinusoidal input current” means a VSD with a sinusoidal waveform of the input current, characterised by a Total Harmonic Content below 10 per cent;

“electric motor” or “motor” means a device that converts electrical input power into mechanical output power in the form of a rotation with a rotational speed and torque that depends on factors including the frequency of the supply voltage and number of poles of the motor;

“Ex eb increased safety motor” means a motor intended for use in explosive atmospheres and certified “Ex eb”, as specified in British Standard BS EN 60079, and

“other explosion-protected motor” means a motor intended for use in explosive atmospheres and certified “Ex ec”, “Ex tb”, “Ex tc”, “Ex db”, or “Ex dc” as specified in British Standard BS EN 60079;

“energy efficiency” of a motor means the ratio of its mechanical output power to the electrical active input power;

“equivalent model” means a model which has the same technical characteristics relevant for the technical information to be provided, but which is placed on the market or put into service by the same manufacturer, importer or authorised representative as another model with a different model identifier;

“factory acceptance test” means a test on an ordered product where the customer uses witnessed testing to verify the product’s full accordance with contractual requirements, before the product is accepted or put into service;

“hand-held equipment” means a portable appliance intended to be held in the hand during normal use;

“hand-guided equipment” means a non-road mobile appliance that is moved and guided by the user during normal use;

“mains” or “electric mains” means the electricity supply from the electricity grid;

“model identifier” means the code, usually alphanumeric, which distinguishes a specific product model from other models with the same trade mark or the same manufacturer’s, importer’s or authorised representative’s name;

“motor with mechanical commutators” means a motor in which a mechanical device reverses the direction of the current;

“phase” means the type of configuration of the mains;

“pole” means a north or a south pole produced by the rotating magnetic field of the motor, whose total number of poles determines its base speed;

“regenerative drive” means a VSD that is able to regenerate energy from the load to the mains, and which induces a 180° +/- 20° phase shift of the input current to the input voltage when the load motor is braking;

“test load” of a VSD means the electrical device used for testing purposes that determines the output current and the output displacement factor cos phi;

“totally enclosed non-ventilated motor” means a motor designed and specified to operate without a fan, and which dissipates heat predominantly through natural ventilation or radiation on the totally enclosed motor surface;

“variable speed drive” or “VSD” means an electronic power converter that continuously adapts the electrical power supplied to a single motor to control the motor’s mechanical power output, according to the torque-speed characteristic of the load driven by the motor, by adjusting the power supply to a variable frequency and voltage supplied to the motor, and includes all integrated protection devices and auxiliaries;

“witnessed testing” means actively observing the physical testing of the product under investigation by another party, to draw conclusions on the validity of the test and the test results. This may include conclusions on the compliance of testing and calculations methods used.

Ecodesign requirements

34. An electrical motor or variable speed drive must conform to the ecodesign requirements set out in Schedule 16 when it is placed on the market or put into service.

Conformity assessment

35.—(1) For the purposes of the conformity assessment procedure referred to in Schedule 1A to the 2010 Regulations, a manufacturer assessing whether a product conforms with these Regulations must use either—

- (a) the internal design control procedure set out in Part 1 of that Schedule; or
- (b) the management system procedure set out in Part 2 of that Schedule.

(2) The technical documentation file required for the conformity assessment of a product must contain—

- (a) a copy of the product information provided in accordance with paragraphs 6 or 8 of Schedule 16;
- (b) the information specified in paragraph 9 of Schedule 16; and
- (c) the details and results of any measurements or calculations carried out in accordance with regulation 37, Schedule 16 or Schedule 17.

Verification procedure for market surveillance purposes

36. The market surveillance authority must use the verification procedure set out in Schedule 18 when verifying conformity with the requirements of these Regulations.

Measurements and calculations

37.—(1) The measurements and calculations required by this Chapter, or necessary for demonstrating or measuring conformity with this Chapter, must be made in accordance with designated standards, where available.

(2) Where designated standards are not available, the measurements and calculations referred to in paragraph (1) must be made in accordance with methods which—

- (a) can be demonstrated to be reliable, accurate, and reproducible by the person deploying them; and
- (b) take into account the generally recognised state of the art.

Software updates

38.—(1) The energy consumption of the product and any of the other declared parameters must not deteriorate after a software or firmware update when measured with the same test standard originally used for the declaration of conformity, except with explicit consent of the end-user prior to update.

(2) The performance of a product must not change as a result of rejecting a software update.

(3) A software update must not have the effect of changing the product's performance in a way that makes it non-compliant with the ecodesign requirements applicable for the declaration of conformity.

CHAPTER 7

ELECTRONIC DISPLAYS

Application and interpretation

39.—(1) Subject to paragraph (2), this Chapter applies to electronic displays, including—

- (a) televisions;
- (b) monitors; and
- (c) digital signage displays.

(2) Nothing in these Regulations applies to the following—

- (a) any electronic display with a screen area smaller than or equal to 100 square centimetres;
- (b) projectors;
- (c) all-in-one video conference systems;
- (d) medical displays;
- (e) virtual reality headsets;
- (f) displays integrated or to be integrated into products referred to in regulations 7(a) or 8 of the WEEE Regulations;
- (g) electronic displays that are components or sub-assemblies;
- (h) industrial displays.

(3) In this Chapter and Schedules 19 to 21—

“all-in-one video conference system” means a dedicated system which—

- (a) is designed for video conferencing and collaboration, integrated within a single enclosure; and
- (b) includes all of the following features—

- (i) support for specific videoconference protocol ITU-T H.323 or IETF SIP as delivered by the manufacturer;
- (ii) cameras, display and processing capabilities for two-way real-time video including packet loss resilience;
- (iii) loudspeaker and audio processing capabilities for two-way real-time hands-free audio including echo cancellation;
- (iv) an encryption function;
- (v) HiNA;

“digital signage display” means an electronic display that—

- (a) is designed primarily to be viewed by multiple people in non-desktop based and non domestic environments; and
- (b) includes all of the following features—
 - (i) a unique identifier to enable addressing a specific display screen;
 - (ii) a function disabling unauthorised access to the display settings and displayed image;
 - (iii) a network connection (encompassing a hard-wired or wireless interface) for controlling, monitoring or receiving the information to display from remote unicast or multicast but not broadcast sources;
 - (iv) is designed to be installed hanging, mounted or fixed to a physical structure for viewing by multiple people and not placed on the market with a ground stand;
 - (v) does not integrate a tuner to display broadcast signals;

“electronic display” means a display screen and associated electronics which displays visual information from wired or wireless sources as its primary function;

“HiNA” means High Network Availability and is to be construed in accordance with the definitions of “networked equipment with high network availability” and “networked equipment with high network availability functionality” in Article 2 of Regulation (EC) No 1275/2008⁽¹⁰⁾;

“industrial display” means an electronic display which—

- (a) is exclusively designed, tested and marketed for use in industrial environments for measuring, testing, monitoring or control; and
- (b) includes all the following features—
 - (i) operating temperatures between 0°C and +50°C;
 - (ii) operating humidity conditions between 20 per cent and 90 per cent non-condensing;
 - (iii) minimum level of ingress protection (IP65) ensuring no ingress of dust and complete protection against contact (dust-tight) with no effect for water projected by a nozzle (6.3 mm) against the enclosure;
 - (iv) electromagnetic compatibility immunity suitable for industrial environments;

“integrated”, in relation to a display which is part of another product as a functional component, means an electronic display which is—

- (a) not able to be operated independently from the product; and
- (b) depends on the product for providing its functions, including power;

⁽¹⁰⁾ EUR 1275/2008; relevant amending instruments are S.I. 2019/539 and 2020/1528.

“medical display” means an electronic display which is, or forms part of, a medical device within the meaning of regulation 2(1) of the Medical Devices Regulations 2002(11);

“monitor” means an electronic display intended for one person for close viewing such as in a desk-based environment;

“projector” means an optical device for processing analogue or digital video image information, in any format, to modulate a light source and project the resulting image onto an external surface;

“screen area” means the viewable area of the electronic display calculated by multiplying the maximum viewable image width by the maximum viewable image height along the surface of the panel;

“television” means an electronic display designed primarily for the display and reception of audio-visual signals, and which consists of—

- (a) an electronic display; and
- (b) one or more tuners;

“tuner” means an electronic circuit which detects television broadcast signals and facilitates the selection of a television channel from a group of broadcast channels, and for this purpose “broadcast signals”—

- (a) includes terrestrial digital and satellite signals;
- (b) does not include internet unicast;

“virtual reality headset” means a head-wearable device which provides immersive virtual reality for the wearer by displaying stereoscopic images for each eye with head motion tracking functions.

Ecodesign requirements

40.—(1) Any electronic display to which these Regulations apply must conform to the ecodesign requirements set out in Schedule 19 when it is placed on the market or put into service.

(2) Manufacturers, authorised representatives and importers of electronic displays must comply with paragraphs 15 to 18 of Schedule 19 (availability of spare parts, access to repair and maintenance information, software updates etc.).

Conformity assessment

41.—(1) For the purposes of the conformity assessment procedure referred to in Schedule 1A to the 2010 Regulations, a manufacturer assessing whether a product conforms with these Regulations must use either—

- (a) the internal design control procedure set out in Part 1 of that Schedule; or
- (b) the management system procedure set out in Part 2 of that Schedule.

(2) The technical documentation file required for the conformity assessment of a product must contain—

- (a) if any plastic part is not marked in accordance with paragraph 12 of Schedule 19, the specific reason why the exemption applies;
- (b) the information specified in paragraph 19 of Schedule 19; and
- (c) the details and results of any measurements or calculations carried out in accordance with regulation 43 or Schedules 19 and 20.

Verification procedure for market surveillance purposes

42. The market surveillance authority must use the verification procedure set out in Schedule 21 when verifying the compliance of a product with the requirements of these Regulations.

Measurements and calculations

43.—(1) The measurements and calculations required by this Chapter, or necessary for demonstrating or measuring conformity with this Chapter, must be made in accordance with designated standards, where available.

(2) Where designated standards are not available, the measurements and calculations referred to in paragraph (1) must be made in accordance with methods which—

- (a) can be demonstrated to be reliable, accurate, and reproducible by the person deploying them; and
- (b) take into account the generally recognised state of the art.

Circumvention and software updates

44.—(1) The manufacturer or importer or authorised representative must not place on the market products designed to be able to detect they are being tested (for example by recognising the test conditions or test cycle) and to react specifically by automatically altering their performance during the test with the aim of reaching a more favourable level, for any of the parameters in the technical documentation or included in any of the documentation provided.

(2) The energy consumption of the product and any of the other declared parameters must not deteriorate after a software or firmware update when measured with the same test standard originally used for the declaration of conformity, except with explicit consent of the end-user prior to the update.

(3) The performance of a product must not change as a result of rejecting a software update.

(4) A software update must not have the effect of changing the product's performance in a way that makes it non-compliant with the ecodesign requirements applicable for the declaration of conformity.