LONGTIME®

Certification PSR

Auxiliary gas heating

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I. INTRODUCTION

Based on the standards of the EN 45550 series and consistent with the EN 45552 and EN 45554 standards, the specific LONGTIME® standards specify elements relating to the study of the robustness, reliability and reparability of the associated product family.
All qualitative, semi-quantitative or quantitative data comes from a research and consultation process, as required by current standards, and takes into account bibliographic references (scientific studies, regulations, standards, etc.). .) and all stakeholders; namely: marketers (manufacturers, importers, distributors), their suppliers and/or subcontractors, product experts (repairers, installers, professional testers), spare parts professionals, reconditioners, consumers, consumer associations, environmental associations and all stakeholders able to provide assistance subject to added value and the availability of networks and information.
The definition of prerequisites in terms of quality, energy thresholds, pollutant emission thresholds, classification of parts as well as the definition of the thresholds present in the accessibility scales come from the analysis of the consultations carried out and taking into account the best eco-design practices available on the market.
The specific LONGTIME® standards are revised every 3 years at the latest.

Vision of LONGTIME®

This project is part of a dynamic of societal movement with the desire to move ahead of regulations. This label is made by citizens, for citizens. It provides certainty that the product carrying the label is manufactured for long-term use, as desired by 80% of consumers, and that it is economically repairable.

LONGTIME® is a simple, strong and effective tool, created to inform the consumer actor concerned about the overall impact of their purchases, but also the consumer wishing to acquire a product with a fair longevity/price ratio. It also tends to bring to the forefront manufacturers keen to offer products with an optimized lifespan.

Label objectives

This approach involves encouraging different consumption, therefore aiming to produce differently. Almost all citizens want a transformation of the consumer society with a real change in the technical-economic paradigm in order to consume better and more sustainably.

The ecological interest is of course major, on a global scale we have increased our consumption of raw materials in just a few decades to now exceed 60 billion tonnes per year. The label influences the preservation of planetary resources, through better use of them and the reduction of waste.

Intuitively, therefore, obtaining a good with an optimized lifespan promotes reasoned use of our planet's resources, reduces overconsumption and allows us to move away from disposable items and waste. It is not a question of looking for “immortal” products but of fighting against the too short lifespan of products.

Extending the service life of a gas-fired auxiliary heater can reduce the results of indicators in those life cycle impact categories that depend on the production phases upstream of use.

In the other impact categories, the benefit of extending the service life will depend largely on the energy efficiency of the replacement product, bearing in mind that the average service life of gas-fired auxiliary heaters is estimated at 8 years.

Fields of application

The label is applicable to different product families as long as there is an assembly of parts. LONGTIME® tends to cover domestic, electronic, portable power appliances, furniture, leisure equipment, professional equipment, etc. The range of products is therefore very vast but excludes automobiles, textile products (excluding leather goods), food, cosmetics and chemicals.

Organization of the certification PSR

The criteria are broken down into several categories and the presentation of the criteria follows the following diagram:

Criteria category

The criteria are grouped into 11 main categories

Criterion number and name

Each criterion has an identification number in I.X.X format and a name allowing its theme to be defined.

Requirement level (KO/Major/Minor)

See table below

TRANSVERSE CRITERION

Criterion applicable to all product categories

- Spécification ou Product Specific Requirement (PSR)

Specific criterion whose scope is adapted to the product category of the framework.

Means of proof

Details of the means of proof required and/or relevant for the evaluation of the criterion and its PSRs

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A level of requirement is assigned to each label criterion according to the classification indicated in the table below:

KO	These criteria must be respected to qualify for labeling after the initial audit (year N).
Major	These criteria must be respected at least 80% during the audit. They will lead to the implementation of corrective actions to reach 100% by year N+1.

Minor	These criteria must be respected at least 50% during the audit. They will lead to the implementation of corrective actions to reach 80% by year N+1 and 100% by year N+2.

Control system

The assessment of compliance with the benchmark criteria is carried out by an approved and independent inspection body.
Each criterion is assessed using a compliant/non-compliant approach
More details on the control system in the labeling process available on the LONGTIME® labeling conditions online.

Standards and regulations

The standards or regulations cited in the reference system use the most recent versions and/or equivalences published in the official journal of the European Union.

II. DEFINITION OF THE PRODUCT SCOPE

The "Gas-fired auxiliary heating" standard applies to decentralised, free-standing domestic heating appliances (portable or mobile) fuelled solely by 3rd family liquefied petroleum gas cylinders. These appliances include a section for installing a removable gas bottle and are not connected to a system for extracting residual products that may be generated by combustion. All the heat produced by the appliance is diffused into the space to be heated using an infrared, infrared or catalytic diffusion system.

Product scope

- Portable gas-fired auxiliary heater (catalytic, infrared, infrared)
- Portable auxiliary gas heater (catalytic, infrared, infrared)

Outside the product scope

- Auxiliary heating appliance with a nominal heat output of more than 4.2 kw
- Mobile or portable liquid petroleum auxiliary heating appliance
- Fixed gas-fired boiler
- Commercial decentralised heaters

In the remainder of the standard, "**Mobile or portable gas-fired auxiliary heating appliance**" is replaced by "**Auxiliary gas heating**".

III. NOMENCLATURE OF PARTS

List of parts representative of the target product group but not-exhaustive.

- **Machine body assembly**
  - Frame, structure

- Plinth, bottle support, base
- Front panel(s) (grille, fire door, glass, etc.)
- Control panel
- Cover, covers, panels, protection (front/rear, sides, top/inf)
- Castors and castor supports
- Feet and foot pads
- Carrying handle(s)
- Bottle cover
- Thermal protection plate
- Bottle belt
- Protective grid
- Protection, bumper
- Door (frame)
- Door hinge(s)
- Door handle
- Door glass(es)
- Seal(s) (glass, door)

- **Control assembly (start-up, settings, programs, etc.):**
  - Control knob (tactile, mechanical)
  - Tap handle
  - Thermostat
  - Gas tap and lever

- **Burner assembly**
  - Gas hose
  - Gas hose connection (corrugated, screwed)
  - Gas valve
  - Gas circuit
  - Fitting(s)
  - Burner support
  - Calibrated injector
  - Burner(s)
  - Solenoid valve
  - Piezo (mechanical, electronic)
  - Atmospheric control device (ODS)
  - Thermocouple (probe, cable, hose, earth)
  - Anti-spill system
  - Door opening safety device

- **Heating system assembly**
  - Reflector
  - Deflector
  - Catalytic panel
  - Ceramic(s)
  - Heat shield(s)

- **Sealing and stabilisation of mechanical links** assembly

- Sealing mechanism (O-ring, flat seal, conical seal, lips, silicone, etc.)
- Holding mechanism (screws, bolts, circlips, washers, etc.)
- Stabilising mechanism (spring, spacer, bucket, bearing, etc.)
- Translation mechanism (slides)

IV. ACCESSIBILITY SCALE

The accessibility scale has 3 levels and aggregates data related to repairability; notably :

- The dismantling depth of the part in number of steps
- Dismantling time in minutes
- The level of skill required to complete the task
- The tools needed for the process

A	≤ 3 steps | ≤ 5 mins | any user | consumer tools
B	≤ 5 steps | ≤ 10 mins | experienced user or repairer | general public tools, experienced public tools
C	≤ 7 steps | ≤ 12 mins | experienced user or repairer | general public tools, experienced public tools, professional tools

The scales indicated in the table above are orders of magnitude not to be exceeded but these thresholds can be limited more precisely in the criteria calling for accessibility scales.

If all the relevant safety instructions are followed, the dismantling process starts when the product is connected to the gas cylinder.

V. EXPOSURE OF PRODUCT TO EXOGENOUS FAILURES

Definition

An exogenous failure of a manufactured product refers to a defect or problem that arises due to external factors or conditions beyond the control of the manufacturer or producer. Unlike endogenous failure, which is related to internal design, manufacturing or quality problems, exogenous failure is usually the result of unforeseen or unexpected external circumstances. (Example of causes of exogenous failure: extreme environmental conditions, poor compliance with transport conditions, inappropriate handling by the end user)

Managing exogenous failures in product manufacturing may involve implementing quality control measures, rigorous testing, supply chain management, warranties and return policies to deal with problems that may arise due to these external factors.

Exogenous failure criteria

User risk :

Reflects the ability to respect the conditions of use in the face of the weight of the constraints of use. Related levels:

- Low : the user scrupulously respects the rules for using the product, particularly for reasons of quality and safety
- Medium : the user generally respects the rules for using the product
- High : the user may not respect the rules for using the product due to a difficult context of use

System mobility :

Translates the hazards linked to the movement possibilities of the system (fixed environment, moving environment: movement in a vehicle for example). Related levels:

- Low : Few hazards (fixed or stable environment)
- Medium : Moderate hazards
- High : Strong hazards, great variability (transport by car, etc.)

Product handling :

Reflects the possibility of false handling, shocks, falls. Associated levels:

- Low : Not manipulated
- Medium : Handling without moving or dismantling
- High : Handling with movement or disassembly

Exposure to bad weather :

Reflects exposure to rain, hail, frost, wind, sand, lightning, dust, salt fog, etc. Associated levels:

- Low : Zero exposure (inside home)
- Medium : Indirect exposure (hold, station hall)
- High : Direct exposure (outdoor)

Phase	User risk	System mobility	Product handling	Exposure to bad weather	Overall risk
Allumage	Low	Medium	Low	Low	Low
Chauffage	Low	Low	Low	Low	Low
Insertion bouteille	Medium	Low	Medium	Low	Medium
Nettoyage	Medium	Low	High	Low	Medium
Inactivité	Low	Low	Medium	Low	Low
Stockage prolongé	High	Low	Low	Low	Medium

Assessment of the overall risk of exogenous failures - Medium

The main risks of exogenous failures for this product category mainly result in:

- Failure to follow the instructions for use (storage or use in damp conditions, use as the main heating source)
- Failure to maintain the stove
- Blower bottle

This product category is subject to a medium risk of exogenous failures.

VI. ELIGIBILITY

Candidate commitment

The candidate's eligibility in a quality certification process must be consistent with their existing values and strategies.
The company has not been accused or found responsible (information/material evidence, subpoena), of ethical violation, of commercial practices clearly contrary to quality and ethics (practice of planned obsolescence, industrial espionage, fraud -tax) or major environmental impact over the last 10 years where considerable and appropriate efforts have been put in place to: repair the damage caused, prevent it from happening again, reduce their impacts.
The manufacturer has all the necessary rights over the products and is the sole holder of property rights of any kind over the products, including in particular the designs, patents and trademarks relating thereto.
The products are not subject to any dispute of any nature whatsoever from any third party.
The products are not likely to harm public order or good morals, to provoke protests from third parties, or to contravene the legal provisions in force.
For the marketing of the products, the manufacturer agrees to its obligations and strictly complies with all legal provisions (directives, regulations, standards, laws) relating to the protection of human health, safety and the protection of the environment prevailing in the geographic areas of product distribution and in relation to its product categories. For the European Economic Area, products must therefore obey European legislation and be in compliance with the “CE” marking for the products concerned.

VII. LABEL CRITERIA

Environmental performance and/or energy mandate

PR.1. Protection of health, safety and environment

Criterion Prerequisites

Within the framework of respect for human health, the safety of people, installations and protection of the environment, the producer proves that he deploys actions according to a level of requirements compliant at least with the prerogatives of the European directives 2011/65/EU and (EC) No 1907/2006 relating to the limitation of the use of certain dangerous substances in electrical and electronic equipment where necessary.

Method of proof: For products distributed in geographical areas potentially covered by regulatory prerogatives establishing requirements similar to the European market in terms of limiting the use of certain dangerous substances in the EEA, proof of compliance with these regulatory requirements will be used. method of proof in compliance with the PSR of this criterion if necessary.

- For large companies (workforce > 5,000 people), the main site(s) involved in the production of the product have(s) a certification linked to an international environmental management standard.

Method of proof: ISO 14001 certification delivered by an accredited third-party inspection body.

- The manufacturer reduces the proportion of non-recoverable plastic waste in its packaging thanks to:
  - 95% minimum by weight of all recycled and/or recyclable and/or reusable packaging waste
  - Manual separability of non-recyclable packaging components weighing more than 25 grams into single components for non-reusable packaging

Method of proof: Composition and characterization of packaging

PR.2. Energy and/or environmental performance

Criterion Prerequisites

As part of reducing the impacts linked to energy consumption or pollution emissions, the producer demonstrates the environmental and/or energy performance of its products.
It proves that it deploys actions according to a level of requirements consistent, at a minimum, with the prerogatives of the European (EU) directives and/or regulations 2009/125/EC (including its implementing measures) on the ecodesign of energy-related products and (EU) 2017/1369 (including delegated regulations) on energy labeling of products if the product claiming the LONGTIME® label is concerned.

Method of proof: For products distributed in geographical areas potentially covered by regulatory prerogatives establishing requirements in terms of energy efficiency, eco-design and energy display similar to the European market, proof of compliance with these requirements regulatory requirements will serve as a method of proof in compliance with the PSR of this criterion if necessary.

- The energy performance of gas-fired auxiliary heating appliances eligible for the label complies with energy class A

Method of proof: The energy class must be determined in accordance with Annex III to REGULATION (EU) 2015/1188.

- Gas-fired auxiliary heaters must have either a progressive power control mechanism with at least 2 levels or a room temperature control mechanism using an on-board or remote thermostat.

Method of proof: Eco-design measures assessed by the Control Body appointed during the audit.

- The manufacturer clearly informs the user about the usage scenario(s) to minimize the energy consumption of the machine and explains the differences in consumption between the different operating modes (ready to operate, deep sleep, complete shutdown, etc.). .).

Method of proof: Eco-design measures assessed by the Control Body appointed during the audit.

PR.3. End of life management of equipment

Criterion Prerequisites

As part of the management of end-of-life equipment, the producer proves that it deploys actions for the recovery, recovery and effective treatment of used products according to a level of requirements that complies at least with the prerogatives of the European directives 2012/ 19/EU of July 4, 2012 relating to the prevention and treatment of waste depending on the target product group.

Method of proof: In geographic distribution areas covered by regulatory prerogatives establishing product collection and recycling requirements, proof of compliance with these regulatory requirements will serve as a mode of proof in compliance with the PSRs of this criterion if necessary.

Conception

I.1.1. State of the art and technical solutions

Criterion KO

The manufacturer identifies and records in a technical sheet the constraints on the use of the product and its different parts. It justifies reliable and qualitative design choices and technical solutions with regard to these constraints.

- *CE marking database*
- *Type file*
- *Supplier quality data (technical specification sheet, iso 9001:2015, certification, etc.)*
- *Test data (external/internal) for qualification, performance, ageing, wear, endurance, resistance to limit conditions.*
- *Any documentation/software to support compliance, such as :*
  - *Internal product data sheet*
  - *Functional analysis tool*
  - *Design study (operation, materials, usage constraints)*
  - *Performance and endurance tests*
  - *Phase and qualification testing*
  - *Study of failure rates*
  - *Quality commitment (commercial guarantee)*
- *Application of product-related test standards:*
  - *EN 60068-2-38:2009 (resistance of components to temperature and humidity)*

❖ General resistance to operating and environmental conditions :

- Regardless of the country of distribution, compliance with all NF EN 449+A1 standards compatible with the product, with third-party certification.

- Protection of internal components against damage (dust, hair, water spray)
  - Protection of electrical or electronic components
  - Product design and/or selection of components that are watertight or resistant to attack (watertight compartment, optimised location of sensitive components, components that are insensitive to corrosion, etc.).

- Conclusive durability of ferrous and non-ferrous materials under operating conditions, particularly for parts, burner assembly(s) and chassis:
  - Hot water
  - Ambient humidity
  - Heat
  - Dust

❖ Durability of the heating element assembly

- Corrosion resistance
  - Finishing coatings must not be applied to ferrous materials on bare metal. Prior surface treatment required.
  - Mechanical resistance of materials and surface treatments to thermal stress (thermal shock and thermal cycling)

Method of proof: Characterisation of parts and processes using technical data, wear and ageing tests. Failing this, a minimum 5-year quality commitment from the manufacturer.

- Durability of the burner and heating system assembly
  - Optimum resistance of burners and heat distribution system to thermal stress (thermal shock and thermal cycling)
    - Robustness and reliability of the surface covering of the heating system plates in place
    - Thickness of burner and heating system plate materials, demonstrating their robustness
    - Stainless steel burner(s) only
  - Robust burner fixing points
    - Reliability and strength of welds, with soft solder excluded
    - Heat treatment to increase resistance to heat and wear

Method of proof: Specifications, characteristics and technical data relating to the material and thickness of the burners. Conclusive wear, ageing or accelerated life tests. Failing this, a minimum 10-year quality commitment from the manufacturer for the burners.

- Management of exogenous failures :
  - Measures to combat gas-blowing cylinders
  - Preventive measure against the introduction of insects
  - Ready-to-use product with connectors adapted to the countries of destination and requiring no modification by the user (apart from connecting the gas bottle)

- Specific measures to promote repairs :
  - Prohibited serialisation practices

I.1.2. Production

Major criterion

The manufacturer has processes enabling it to control and maintain constant quality of manufacturing and assembly in production.

- The main site(s) involved in the production of the product own(have)) standard quality assurance, via so-called serial certification, linked to international quality management and management standards from a system and product point of view.
  - Site involved in the manufacture of parts linked to the ISO 9001 type gas circuit
  - Site involved in the manufacture of the ISO 9001 thermocouple
  - Site involved in the manufacture of ISO 9001 type plates
  - Site involved in the manufacture of ODS sensors

Method of proof: ISO 9001 or equivalent certification (Certigaz, issued by an accredited third-party inspection body. Demonstration of compliance with ISO 9001 principles by verification of quality procedures or equivalence in other certifications. For companies with more than 250 employees, ISO 9001 certification issued by an accredited third-party inspection body.

I.1.3. Consumable parts and accessories

Major criterion

Consumable parts, accessories and parts requiring regular maintenance comply with accessibility scale A.

❖ Accessibility scale limited to 3 steps and 5 minutes

Consumable parts : parts intended to be replaced, subject to wear during use of the device.

- **Burner assembly :**
  - Piezo (mechanical, electronic)
- **Machine body assembly :**
  - Castors
  - Foot pads
  - Seal(s) (glass, door)

Method of proof: Visual inspection and real-time demonstration to the inspection body mandated during the on-site audit.

I.1.4. Security elements

Criterion KO

The replacement and/or rearming of product and/or user safety elements is provided by the manufacturer. These elements respect accessibility scale B.
These are all the active and passive parts necessary to protect against risks associated with the use of the product.

❖ Accessibility scale limited to 5 steps and 10 minutes

- **Burner assembly**
  - Atmosphere control device (ODS)
  - Thermocouple (probe, cable, hose, earth)
  - Solenoid valve
  - Anti-spill system
  - Door opening safety device
  - Position or safety sensors or contactors (Hall effect sensor, microswitch, etc.)
- **Electrical and electronic assembly**
  - Electromechanical safety thermostat (Klixon type)
  - Thermal fuse(s)
  - Temperature sensor (NTC type)

Method of proof: Visual inspection and real-time demonstration to the inspection body mandated during the on-site audit.

I.1.5. Vulnerable parts

Criterion KO

Vulnerable parts include parts exposed to a high rate of accidental user breakage. The replacement of these parts complies with accessibility scale B.

- Accessibility scale limited to 5 steps and 10 minutes
  - **Machine body assembly :**
    - Door window(s)
  - **Heating system assembly**
    - Ceramic(s)

Method of proof: Visual inspection and real-time demonstration to the inspection body mandated during the on-site audit.

I.1.6. Non usage

Minor criterion

The manufacturer identifies the consequences of non-use of the product and must inform the consumer in the recommendations for use of the minimum use necessary for the proper functioning of the product.

- Applicable: Product family sensitive to non-use in the event of prolonged immobilization and more particularly to the risk of scaling
  - Solenoid valve sensitive to humidity
  - Gas circuit sensitive to insect intrusion
  - Metal parts or structures sensitive to corrosion

- Consistent duration from which non-use is defined: 30 days

I.1.7. Unproven technology

Criterion KO

The manufacturer provides information on the unproven technology in its product. It must provide the means implemented to guarantee its reliability or ensure that the normal use of the product does not depend on this technology.

- IOT function

Method of proof: Real-time demonstration to the inspection body mandated during the on-site audit.

I.1.8. External source parts

Minor criterion

The manufacturer records external source parts purchased and/or subprocessed. It must provide information relating to their origin and quality.

- Parts linked to the gas circuit (series or product quality assurance via certification by a notified third-party organisation mandatory)

Method of proof: Supplier certification and demonstration of quality management to the inspection body mandated during the on-site audit or 10-year manufacturer quality commitment.

I.1.9. Reliability plan

Minor criterion

The manufacturer provides its own FMEA, FMEA or internal audit and identifies the changes implemented to improve the reliability and/or repairability of the product. Corrections or improvements already made to the product are indicated.

I.1.10. sub-assembly

Major criterion

The product design must only use subassemblies on technical justification or proof of reliability.
Without technical justification, the subassemblies must be subject to a standard reconditioning and/or exchange route where the manufacturer demonstrates the economic interest for the user.

Scalability

I.2.1. Software

Major criterion

The manufacturer ensures that the original performance of its product is maintained during OS updates. without a time limit. The manufacturer identifies and records the means it uses to monitor the maintenance of these post-upgrade performances.

Traceability

I.3.1. Study and failure rate

Minor criterion

The manufacturer provides breakdown rates and/or indicators enabling the reliability of the product to be monitored at least until the last unit of the model concerned is placed on the market.

- Particular attention will be paid to the following failures:
  - Alteration of heat diffusion system materials (reflector, catalytic panel, ceramic(s))
  - Deterioration of burners (oxidation, corrosion, etc.)
  - Blocked gas system (burner venturi)
  - Solenoid valve failure
  - Thermocouple failure
  - Ignition failure (broken spark plug, piezo box)
  - Control failure (buttons, broken throttle lever, etc.)

I.3.2. Identification number

Minor criterion

The manufacturer uses an identification number or method on each product.

Method of proof: In geographic distribution areas covered by regulatory pre-rotations establishing identification requirements, proof of compliance with these regulatory requirements will serve as a mode of proof in compliance with the PSRs of this criterion if necessary.

Disassembly

II.1.1. Product packaging

Criterion KO

Brings together all the product's covering parts (cover type) to protect the internal components from the outside.
The body of the product is removable and allows access to internal elements while respecting accessibility scale B. Permanent assemblies are prohibited unless the nature or use of the product justifies it.

- Accessibility scale limited to 5 steps and 10 minutes

  - **Machine body assembly**
    - Frame, structure
    - Plinth, bottle support, base
    - Front panel(s) (grille, fire door, glass, etc.)
    - Control panel

- Bonnet, covers, protective panels (front/back, side, top/inf)
- Carrying handle(s)
- Protective grille

❖ Non-justifiable, unauthorized permanent assembly.

❖ In case of assembly by clips, verification of the quality of the clips and the availability of location information.

Method of proof: Visual inspection and real-time demonstration to the inspection body mandated during the on-site audit.

II.1.2. Access to functional parts

Major criterion

Parts related to the operation or use of the product.
Access to functional parts cannot exceed accessibility scale C.

❖ Accessibility scale limited to 7 steps and 12 minutes

- **Machine body assembly**
  - Thermal protection plate
  - Bottle belt
  - Hatch, bottle cover
  - Door (frame)
  - Door hinge(s)
  - Door handle
  - Castor support
  - Feet
- **Control unit (start-up, settings, programmes, etc.)**
  - Tap and gas lever
  - Control knob (tactile, mechanical)
- **Burner assembly**
  - Gas hose
  - Gas tap and lever
  - Gas pipe connection (corrugated, screwed)
  - Burner support
- **Heating system assembly**
  - Heat shield(s)
  - Deflector
- **Control unit (start-up, settings, programmes, etc.)**
  - Control knob (tactile, mechanical)
  - Programme selector, timer
  - Switch
- **Sealing and stabilising element for mechanical connections :**
  - Stabilising mechanism (spring, spacer, bucket, bearing, etc.)
  - Translation mechanism (slides)

Method of proof: Visual inspection and real-time demonstration to the inspection body mandated during the on-site audit.

II.1.3. Access to priority parts

Major criterion

Functional parts but characterized by proven criticality in the event of a malfunction or breakdown (sometimes called critical parts).
Access to priority rooms complies with accessibility scale B or has been the subject of a reliability plan.

- Accessibility scale limited to 5 steps and 10 minutes

  - **Control unit (start-up, settings, programmes, etc.)**
    - Thermostat

  - **Burner assembly**
    - Gas valve
    - Gas circuit
    - Fitting(s)
    - Calibrated injector
    - Burner(s)

  - **Heating system assembly**
    - Reflector
    - Catalytic panel
    - Ceramic(s)

- The fixings of the different priority parts of the product having both a function must be removable and reusable (Class A standard EN 45554)

  In the event that the fixing system cannot be reused, it must be supplied with the replacement part to allow resolution of the failure or maintenance scenario.

Method of proof: Visual inspection and real-time demonstration to the inspection body mandated during the on-site audit.

II.1.4. Sub-assembly connectors (internal parts)

Major criterion

The connectors of the replacement subassemblies must not interfere with the repair of the product.

- All connector fixing elements must be at least removable (class B standard EN 45554).

Method of proof: Visual inspection and real-time demonstration to the inspection body mandated during the on-site audit.

II.1.5. Batteries

Criterion KO

The manufacturer provides a solution for replacing the batteries of autonomously operating devices.

- Applicable in the case of electromechanical piezo ignition

II.1.6. Disassembly tools

Major criterion

Disassembly of the product does not require a proprietary tool, apart from regulatory justification.

- No regulatory justification identified
- List of tools in accordance with the list in table A2 of standard EN 45554 and supplemented with basic tools specific to the target product group
  - Extractor of bearings and/or bearings that may exist in electric motors or transmission systems
  - Joint extractor
- Tolerance allowed for proprietary tools provided on request at no cost additional with the spare part.

Method of proof: Visual inspection and real-time demonstration to the inspection body mandated during the on-site audit.

Documentation

II.2.1. Exploded diagram

Major criterion

The manufacturer makes available to users, directly or indirectly via its partners or its network, diagram(s) or exploded view(s) of the product as well as a nomenclature of the parts and subassemblies of the product.

II.2.2. Exploded diagram

Minor criterion

The manufacturer references and delivers more specific exploded views to help identify and name a part.

II.2.3. Fault code

Major criterion

User and repairer fault codes must be present in the respective documentation and/or accessible on the manufacturer's website.

II.2.4. Repair Manual

Minor criterion

The manufacturer makes the information necessary for repairing the product accessible to repairers OR must justify economically viable alternatives for the end user.

- All documents necessary for resolving failure scenarios must be exhaustive and accessible (Class A Table A.10 of standard EN 45554) for all professionals in the sector and as a priority:
  - A disassembly diagram or exploded view
  - A technical instruction manual for resolving failure scenarios
  - A list of necessary repair and testing equipment
  - Component and diagnostic information (such as theoretical minimum and maximum values for measurements)
  - Wiring and connection diagrams
  - Error and diagnostic codes (including manufacturer-specific codes, if applicable)
  - Instructions for installing relevant software and firmware, including reset software
  - Information on how to access data relating to failure incidents if they are recorded in the product

Method of proof: Visual inspection and real-time demonstration to the mandated inspection body during the documentary audit or on-site audit.

II.2.5. Troubleshooting software packages

Minor criterion

The fault diagnosis software packages must be free of rights after the full warranty period with regard to the end date of manufacture of the product.

Spare parts

II.3.1. Nomenclature

Major criterion

All spare parts or subassemblies are uniquely named and coded to facilitate identification and ordering of parts.

II.3.2. Availability time

Criterion KO

The manufacturer commits in its General Terms and Conditions or via commercial communication to the availability of spare parts or replacement parts for the product for a minimum of 5 to 10 years from the placing on the market of the last unit of the model concerned. The minimum availability time required is determined in the sectoral appendix.

- Availability of spare parts 10 years minimum (Class A - Long-term accessibility; Table A9 according to standard EN 45554)

Method of proof: Mode of proof: Demonstration to the mandated inspection body during the documentary audit or on-site audit (general conditions of sale).

II.3.3. Supply time

Minor criterion

For functional parts or sub-assembly, the manufacturer has a minimum reserve to meet the probability of demand for said part OR justification for a procurement process within identical deadlines.

II.3.4. Price of spare parts

Major criterion

The terms and conditions for purchasing spare parts are detailed (average price, distribution network, etc.). The manufacturer makes every effort to limit the total price of functional parts to the maximum recommended selling price excluding tax of the product.
The value of one of these functional parts cannot exceed the set percentage of the maximum recommended selling price excluding tax of the product.

- Percentage set at 20%. A tolerance is allowed for parts whose PRU would exceed 20%.

- All replacement parts must be accessible.

Method of proof: Visual inspection and real-time demonstration to the mandated inspection body during the documentary audit or on-site audit.

II.3.5. Price of delivery costs

Minor criterion

The manufacturer delivers the spare parts at actual shipping and preparation costs or offers alternative solutions reducing the cost of receiving the spare parts.

After-sales service under warranty

II.4.1. Contact du SAV

Minor criterion

The maximum time for opening an after-sales service file must not exceed 2 working days.

II.4.2. Support

Major criterion

The manufacturer provides the end user with an after-sales service network in line with its direct distribution network.

II.4.3. Repair policy

Major criterion

Repair must take precedence over replacement.

Out-of-warranty after-sales service

II.5.1. After-sales service network

Minor criterion

The user is provided with the means to facilitate the repair of his product outside of warranty. To support the product to be repaired, the manufacturer must provide the user with the benefit of its distribution and repair network.

Free long-term warranty

III.1.1. Warranty time

Criterion KO

The warranty period with presumption of prior history of the defect is determined in the sectoral annex. This time cannot be less than 24 months.

- 24 months minimum

Method of proof: Demonstration to the mandated inspection body during the documentary audit or on-site audit (general conditions of sale).

III.1.2. Warranty conditions (beyond the legal conformity period)

Major criterion

For product categories considered to be “highly useful”, the manufacturer provides for the provision of a replacement item to the user during the period of downtime of the product for repair.

- Product not considered of much use

III.1.3. Disclaimer of warranty

Major criterion

The warranty exclusions must not be excessive with regard to the normal conditions of use of the product. They will be defined in the sectoral annex.

- Warranty exclusions that may be identified as unfair:
  - Surface micro-scratch(es)
  - Slight trace of oxidation on chassis
  - Gas circuit blocked

Method of proof: Demonstration to the mandated inspection body during the documentary audit or on-site audit (general conditions of sale).

III.1.4. Assignment of Warranty

Major criterion

The manufacturer sets up a transferable guarantee system.

III.1.5. Original package

Minor criterion

Return of the original packaging cannot be required for warranty coverage.

Use and care instructions

III.2.1. Usage information provided

Major criterion

The manufacturer delivers with the product a notice with advice on use and maintenance of the product. This information must be exhaustive and relevant in order to reduce the exogenous failure rate.

- The manufacturer clearly makes the user aware, via the instructions and/or its website, of responsible use of the device.
  - Maintenance with particular emphasis on the concept and importance of descaling
  - Use
  - Valorization of consumables
  - Repair

Method of proof: Visual inspection and real-time demonstration to the mandated inspection body during the documentary audit or on-site audit (physical and/or digital instructions for use).

III.2.2. Usage information provided

Major criterion

The use and maintenance advice booklet is clear, simple and accessible (adapted font size, vocabulary, language and print quality), so as to be easily understandable by end users.

III.2.3. Access to information

Minor criterion

Information relating to the use and maintenance of the property must be available in digital version on simple request or freely accessible on the manufacturer's website.

VIII. TERMS AND DEFINITIONS

Depending on sectoral standards, definitions specific to different product categories (parts, functions, etc.) can be added to the recurring definitions below.

AMDEC / FMEA
Tools allowing the Analysis of Failure Modes, their Effects and their Criticality / Failure Mode and Effect Analysis.

Permanent assembly
It is a set of components forming a single piece or part of a product and cannot be dismantled without destruction or alteration of the use for which it is intended.
To remove the connection between two assemblies or parts, it is necessary to deform, degrade or destroy at least one of the parts forming the assembly. Examples: welding, crimping, clinching, stamping, bonding and adhesives.

Constraint of use
It corresponds to the forces which apply to the part.

Criticality
The criticality of a failure refers to the importance or impact of this failure on the proper functioning of a product. It is evaluated according to the severity of the consequences that the failure could cause, particularly in terms of safety/costs, and the frequency of occurrence.

Actual failure
Failure which is actually linked to a malfunction of the product and not to an exogenous problem. (e.g. power outlet not powered, power cable not properly connected, lid not properly locked, etc.)

Expected lifespan
Period during which the user expects their product to perform as intended.

Seasonal energy efficiency for space heating
The ratio (Ns), expressed as a %, between the space heating demand for a designated heating season, covered by a heating device, and the annual energy consumption required to meet this demand.

Household appliances
Product powered by electrical energy and intended for domestic use only.

Compostable packaging
Container designed with materials capable of decomposing naturally under the action of microorganisms present in the composter to become a natural or organic element of the substrate.

Reusable packaging
Container designed to be used multiple times, reducing the need for disposable packaging.

Non-recoverable packaging
Refers to a type of packaging that cannot be effectively recovered, recycled or reused after use.

Regular maintenance
Maintenance recommended by the manufacturer to keep the product in optimal operating condition.

Working environment
When resolving failure scenarios, several working environments may be listed.

EOS
Acronym for Electrical Overstress reflecting a state of undesirable electrical overload likely to lead to damage or failure of the product.

Step (disassembly)
Operation leading to the removal of a part or a tool change.

Reusable attachment
Corresponds to an original fixing system removed during disassembly without altering the product and which is reusable during reassembly (e.g. screws, clips).

Removable attachment
Corresponds to an original fixing system which can be removed during disassembly without altering the product, but which cannot be reused during reassembly (e.g. plastic clamp, rivet).

HS
Out of service ; corresponds to exiting the functional state.

Spare parts interface
Refers to how parts connect or integrate with existing components of a product. Depending on the type of part and the type of interface used to connect them, a classification is established: A standard part is a component, a part, manufactured according to recognized specifications and standards, commonly used and compatible with various products or systems.

IOT
Internet of Things or internet of objects; This function corresponds to the fact of being able to connect your product to the internet in order to obtain additional remote control and/or regulation functionalities.

Competence level
Resolving a failure scenario may require skills such as the ability to identify and locate the failure, access the affected area in the product, handle appropriate tools, and manage any risks related to the product, environment, and environment. the operator. Depending on the level of technical skill necessary to carry out the repair, several levels are defined:

Non usage
It corresponds to a non-operating state of the device.

O.S
Operating System, or operating system, is a set of programs that direct the use of a computer's resources by application software.

“General public” tools
Common tools, for general use, available to the general public in traditional distribution and as specified in the EN 45554 standard tools list: screwdriver (slotted head screw, cruciform, 6 internal lobes, wrench (hexagon socket screw, mixed), pliers (universal, half-round nose, diagonal cutting, power strip, vice, for stripping and crimping terminals), pry bar, tweezers, hammer with steel head, utility knife (cutting pliers with retractable blade), multimeter, voltage tester , soldering iron, glue gun, magnifying glass.

“Experienced Audience” tools
Tools requiring skills to use and whose cost can represent a barrier (torque wrench, soldering iron, etc.).

“Professional” tools
Tools requiring specific knowledge or conditions of use and whose acquisition cost represents an investment.

Proprietary tool
Specific tool, not commercially available, belonging exclusively to a party or a company, and by virtue of which, its use by another party (end user, customer, repairer) implies copyright, a license and/or a cost.

External source parts
Parts external to the manufacturer's production body, coming from an identified supplier.

Unit cost price “PRU” of a product/part
Understood as the sum of the price of the parts making up a product/components of a part.

“Great utility” product
A very frequently used product which, in the event of a breakdown, causes a significant disruption in day-to-day management: refrigerator, washing machine, boiler/water heater, telephone, computer, hob, etc.

Disassembly depth
Corresponds to the sum of the steps allowing individual access to each part and detaching it from the equipment, with a view to its replacement.

Data management process
Refers to all the practices and procedures put in place by an organization to collect, store, process, protect, and manage the personal information of individuals using their products.

PSR
“Product Specific Requirement” corresponds to the criterion specifications applicable to the types of equipment specified within the scope of the framework.

Serialization
Practice by which the producer limits the use of spare parts to only original parts that he approves, in particular by software means.
Example: associate the serial numbers of the components of a product with the overall serial number of the product.

Subset
Set of connected components inseparable from each other which form a block and provide a function. The subassembly can be separated from the product.
Example: Motor and welded electronic card

Disruptive technology
Technology whose operation brings an innovation or a major technological advance compared to previous ones and whose reliability has not yet been fully proven over time.

IX. THANKS

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