

2019,2623-ER-01



Expertise Report

Hario Europe BV

March 2020

REPORT SPECIFICATION

INVESTIGATION REQUESTED BY

Company	Hario Europe BV
Address	Beemsterweg 12A, 1311 XC Almere
Country	The Netherlands
Phone number	+31 20 240 5330
Company representative	Jasper Bulk


INVESTIGATION CONDUCTED BY

Company	Certification Experts B.V.
Address	Amerlandseweg 7, 3621 ZC Breukelen
Country	The Netherlands
Phone number	+31 (0)85 007 3210
Report	Expertise Report
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Reference number	2019,2623
Compiled by	Mr. R.F.M. Zaat, <i>LL.B.</i>
Verified by	Ms. R. Brust, BEc.

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1. INTRODUCTION

Hario Europe BV (Hario) commissioned Certification Experts to carry out an investigation, verification and CE-certification on the electric handy coffee grinder, hereafter to be called coffee grinder.

This Expertise Report will outline the results of the said investigation. The results are subdivided into seven chapters. The first chapter outlines the scope of the investigation and the second chapter the investigated equipment including the limits of the product. The third chapter provides the applicable classification of the coffee grinder. In the fourth chapter the Risk Assessment has been stipulated. In the fifth chapter the verification of the Technical Documentation has been specified and the sixth chapter includes the assessment of the coffee grinder. The seventh chapter concludes the investigation on the coffee grinder.

1.1 Scope of the investigation


Hario requires to CE mark the coffee grinder, in order to place the equipment on the Union market. In order to ensure the conformity, the appropriate procedures for the assessment must have been carried out. The scope of the investigation includes:

- ▼ Classification.
 - *Determine which Directive(s) and/or Regulation(s).*
 - *Select the related harmonised standard(s).*
 - *Determine the responsibilities and obligations of your company.*
 - *Indicate the WEEE-procedure.*
- ▼ Checklists.
 - *Technical Documentation.*
 - *Manual*
 - *Labelling/Packaging*
- ▼ Risk Assessment.
- ▼ Assessment.
 - *Testing EMC of the product functioning as an integral whole.*
 - *Evaluate the components to be in compliance with the European Legislation; Battery and Charger.*
 - *Verification of the information for the end-user.*
 - *Verification of the conformity to the RoHS Directive (based on documentation of the components).*
- ▼ Presumption of Conformity.
 - *EU Declaration of Conformity*
 - *Providing information on affixing the CE marking in a correct manner.*

2. INVESTIGATED PRODUCT

The coffee grinder has been taken into account during the investigation, please see table 1 for a specification.

Table 1. Investigated product

Generic name	electric handy coffee grinder	
Model	Smart G	
Photo		

The certification is based on the assumption that the components used in the equipment are in compliance with the European requirements.

2.1 Limits of Coffee Grinder

In this paragraph the limits of the coffee grinder is stipulated. In order to classify the coffee grinder, the limit of use, limit of space and the limit of time should be taken into account.

2.1.1 Limit of use

Limit of use	Description
Intended use	
<i>Correct use of the equipment</i>	The coffee grinder is intended to be used to grind coffee beans in combination with the coffee mill.
<i>Foreseeable misuse</i>	Using the coffee grinder without the coffee mill.
Operation of the equipment	The coffee grinder is operated by means of the push button on the electrical part.

Training of the operator	
<i>User instructions</i>	User instructions are given.
<i>Dangers</i>	The dangers are stipulated in the user instructions.
<i>Interaction with other operators</i>	Not applicable
<i>Maintenance instructions</i>	Maintenance instructions are provided
<i>Safety instructions</i>	Warnings are provided in the manual.
Operation	
<i>Number of people who are working on the equipment</i>	Due to the size of the coffee grinder there is only one person capable of operating the coffee grinder.
<i>Number of workstation(s) at the equipment</i>	Not applicable
Maintenance	Maintenance instructions are given.
Cleaning and frequency of cleaning	A dampened cloth has to be used to wipe away dirt.
<i>Cleaning products</i>	A neutral detergent can be used. Do not clean with thinner, benzine, kerosene, alcohol.
History of accidents	No history known.

2.1.2 Limit of space

Limit of space	Description
Equipment construction	
<i>Energy supply</i>	The coffee grinder is powered by a Lithium ion dry cell 3.7 V 2200 mAh
Space around the equipment	Not applicable
Other	Not applicable

2.1.3 Limit of time

Limit of time	Description
Maintenance	
<i>Maintenance</i>	Maintenance instructions are provided in the user manual. Dirt should be whipped away when it occurs.
<i>Expected life span</i>	25 uses per fully charged battery.

3. CLASSIFICATION

In this chapter, Certification Experts has classified the product to determine the applicable Directive(s) and/or Regulation(s) and their related harmonised standards. Furthermore, Certification Experts indicated the responsibilities and obligations your company has in order to put the coffee grinder onto the European market.

3.1 European Directives and Regulations

Certification Experts has determined the applicable European Directive(s) and/or Regulation(s) based on the information, characteristics, intended use and limits of the coffee grinder concerned.

3.1.1 Low Voltage Directive 2014/35/EU

The Low Voltage Directive 2014/35/EU shall apply to electrical equipment designed for use with a voltage rating of between 50 and 1 000 V for alternating current and between 75 and 1 500 V for direct current. According to the information provided by the economic operator, the voltage rating of the coffee grinder is 230 VAC when charging. Therefore the Low Voltage Directive is applicable to the charger of the coffee grinder. Please note that the coffee grinder is not delivered with a charger.

3.1.2 EMC Directive 2014/30/EU

The EMC Directive 2014/30/EU regulates electromagnetic compatibility of equipment and applies to apparatus and fixed installations as defined in Article 3 of the Directive. In accordance with Article 3 of the EMC Directive, apparatus means:

“any finished appliance or combination thereof made available on the market as a single functional unit, intended for the end-user and liable to generate electromagnetic disturbance, or the performance of which is liable to be affected by such disturbance.”

The coffee grinder is considered to be apparatus as the coffee grinder is a finished appliance, which is liable to generate electromagnetic disturbance or the performance of which is liable to be affected by such electromagnetic disturbance. Therefore the coffee grinder falls within the meaning of the EMC Directive.

3.1.3 RoHS Directive 2011/65/EU

The RoHS Directive 2011/65/EU lays down rules on the restriction of the use of hazardous substances in electrical and electronic equipment (EEE) with a view to contributing to the protection of human health and the environment, including the environmentally sound recovery and disposal of waste EEE.

In accordance with Article 3 of the RoHS Directive, electrical and electronic equipment means:

"Equipment which is dependent on electric currents or electromagnetic fields in order to work properly and equipment for the generation, transfer and measurement of such currents and fields and designed for use with a voltage rating not exceeding 1 000 volts for alternating current and 1 500 volts for direct current."

The coffee grinder is dependent on electric or electromagnetic fields to work properly and does not exceed the 1000 volt for alternating current and 1500 volt for direct current. The coffee grinder therefore is qualified as electrical and electronic equipment and falls within the meaning of the RoHS Directive.

3.1.4 WEEE Directive 2012/19/EU

The Waste of Electrical and Electronic Equipment Directive 2012/19/EU (hereafter: WEEE Directive) enforces a regulatory framework in order to facilitate the collection and disposal of electrical and electronic waste.

In order to determine the correct procedure, the applicability of the WEEE Directive should be determined for the coffee grinder. In accordance with Article 3 of the WEEE Directive, electrical and electronic equipment or EEE means:

"Equipment which is dependent on electric currents or electromagnetic fields in order to work properly and equipment for the generation, transfer and measurement of such currents and fields and designed for use with a voltage rating not exceeding 1 000 volts for alternating current and 1 500 volts for direct current."

As the coffee grinder is considered to be electrical and electronic equipment not exceeding 1000V AC or 1500V DC, the manufacturer is bounded to the obligations and responsibilities of the WEEE Directive.

3.1.4.1 WEEE Directive Procedure

The manufacturer needs to be registered on the National Register. Based on the quantities and weights placed on the national market, manufacturers shall declare the materials used for their product to the national authority. The information accompanying the product should include information for the end users on disposal of appliances: municipal collection points, grid reference of drop off points, take-back solutions, etc. Appliances shall display a specific symbol for the marking of Electrical and Electronic Equipment: the crossed-out wheelie bin.

3.2 European Harmonised Standards

Directives and Regulations are legal obligations which must be followed. Standards, contrary to the Directives and Regulations, are voluntary consensus-based and as such do not impose any regulations. The European Commission establishes essential safety and health requirements in a Directive/Regulation. European standards (EN) provide the test specifications and test methods.

European Harmonised Standards (official abbreviation: hEN) are used to provide presumption of conformity with the essential requirements of the Directives and Regulations. Based on the applicable Directive(s) and or Regulation(s), the selected standards in table 2 have been used during the investigation.

Table 2:

Reference	Title of the standard
EN 55014-1:2017	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission
EN 61000-3-2:2018	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)
EN 61000-4-2:2009	Electromagnetic compatibility (EMC) - Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test
EN 61000-4-3:2006/A2:2010	Electromagnetic compatibility (EMC) - Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test
EN 61000-4-4:2012	Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test
EN 61000-4-5:2014/A1:2018	Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test
EN 61000-4-6:2014	Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields

EN 61000-4-11:2004/A1:2011	Electromagnetic compatibility (EMC) - Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests
EN 60335-1:2012	Household and similar electrical appliances - Safety - Part 1: General requirements

3.3 Responsibilities and obligations economic operator

Certification Experts has determined the responsibilities and obligations of the economic operator based on the applicable Directives.

In accordance with the Union harmonisation legislation a 'manufacturer' means:

"any natural or legal person who manufactures a product or has a product designed or manufactured, and places it on the market under his own name or trademark."

Due to the fact that Hario designed and manufactured the coffee grinder and will place the equipment on the Union market, under his own name/trademark, Hario shall be considered as the manufacturer.

In accordance with the applicable Directives, the manufacturer shall, before placing the product on the market, ensure the following:

- ▼ Ensure that it satisfies the relevant safety objectives.
- ▼ Ensure that the Technical Documentation is available.
- ▼ Provide, in particular, the necessary information, such as instructions.
- ▼ Carry out the appropriate procedures for assessing conformity.
- ▼ Ensure that the product bears a type, batch or serial number.
- ▼ Indicate their name, registered trade name or registered trade mark and postal address on the electrical equipment.
- ▼ Draw up the EU Declaration of Conformity and ensure that it accompanies the electrical equipment.
- ▼ Ensure the CE marking is affixed.

4. RISK ASSESSMENT

In this chapter the Risk Assessment will be stipulated. In order to perform a Risk Assessment, the intended use and the limits of the equipment will have to be taken into account in order to determine the applicable hazards.

4.1 Risk Assessment Methodology

In order to conduct a Risk Assessment, the following steps should be taken:

1. Determine the intended use of the equipment;
2. Determine the limits of the equipment;
 - *The limits of the equipment include the demarcation within the risk assessment is carried out.*
3. The following step in the Risk Assessment is to identify the hazards. The potential hazards of equipment are divided in groups of hazards:
 - ▼ Mechanical hazards
 - ▼ Electrical hazards
 - ▼ Thermal hazards
 - ▼ Noise hazards
 - ▼ Vibration hazards
 - ▼ Radiation hazards
 - ▼ Material/ substance hazards
 - ▼ Ergonomic hazards
 - ▼ Hazards associated with the environment in which the equipment is used
 - ▼ Combination of hazards
4. Determine the life phases of the equipment concerned.

5. Perform the risk estimation.

By combining the hazardous situations, a worst-case scenario, which could occur, is outlined. This risk is to be estimated and based on the estimation a quantification of the risk shall rise.

The determined hazards should be converted into risks. The risk estimation is necessary in order to prioritise the risk and to compare the risks. For the estimation of the risks, the following parameters should be taken into account:

- i. *Severity*
 - *The degree of injury*
- ii. *Exposure duration and frequency*
 - *The length of time that a person is exposed and the frequency of occurrence*
- iii. *Probability*
 - *How often is it possible that the 'hazard' occurs*
- iv. *Danger diversion*
 - *Is it possible to avoid the danger as soon as it manifests itself.*

4.2 Risk Assessment

Based on the indicated steps, the Risk Assessment has been carried out by Certification Experts during the assessment procedure. Based on the Risk Assessment, can be concluded that the coffee grinder is in compliance as all risks have been reduced adequately.

5. CHECKLISTS COFFEE GRINDER

In this chapter the multiple checklists regarding the coffee grinder have been stipulated. In order to ensure that the Technical Documentation complies with the applicable requirements, a Technical Documentation Checklist has been established. Furthermore, a checklist concerning the contents of the Instructions Manual and a checklist concerning the packaging have been stipulated.

5.1 Technical Documentation Checklist

Union harmonisation legislation obliges the manufacturer to draw up Technical Documentation containing information to demonstrate the conformity of the equipment to the applicable requirements. The Technical Documentation has to include a description of the equipment and of its intended use and cover the design, manufacture and operation of the equipment.

Certification Experts assembled the Technical Documentation based on the provided documentation of the coffee grinder. Furthermore, Certification Experts evaluated the documentation within the Technical Documentation and concluded that the Technical Documentation contains all required documentation to determine the compliance with the applicable Directives. The results of the evaluation can be found in the Technical Documentation Checklist, see table 4. The terminology and abbreviations in table 3 are being used in the checklist.

Table 3

CONFORMITY	
Indication	Explanation
Y	The documentation is available.
N	Documentation has not been supplied.
N/A	Not applicable.
ACTION / REMARK	
Indication	Explanation
<i>Bold and italic</i>	These documentation must be supplied to determine compliance with the applicable Directives.
Normal	General information or remark, this does not affect the compliance with the applicable Directives.

Table 4

TECHNICAL DOCUMENTATION CHECKLIST			
#	Requirements	Available	Remark
CONSTRUCTION FILE			
1	A general description of the electrical equipment, e.g. a brochure.	Y	
2	Design and manufacturing drawings.	Y	
3	Schematics of components, sub-assemblies and circuits.	Y	
4	Descriptions and explanations necessary for understanding the drawings and schematics.	Y	
5	Descriptions and explanations necessary for understanding the operation of the equipment.	Y	
6	Results of design calculations made.	N/A	
7	Test reports.	Y	
8	Bill of Material, indicating all sub-assemblies and components.	Y	
RISK ASSESSMENT			
9	The documented Risk Assessment, including the identified hazards.	Y	
DECLARATIONS AND CERTIFICATES			
10	The EU Declaration of Conformity of the equipment.	Y	
SERIES MANUFACTURE			
11	Internal measures to ensure the equipment remains in conformity with the provisions of applicable Directives, e.g. a certificate of the ISO 9001 quality management system or other proof of quality insurance.	Y	
NOTES			
<i>Note 1: The Technical Documentation must be compiled in one or more official European Community languages.</i>			
<i>Note 2: The Technical Documentation must be kept for at least 10 years following the date of the last unit produced.</i>			

5.2 Instructions Manual Checklist

The instructions manual checklist is established in accordance with the applicable Directives, in order to ensure the instructions of the coffee grinder are in compliance. In the checklist, the terminology and abbreviations as indicated in table 5 are being used in the checklist. The instructions manual checklist is stipulated in table 6.

Table 5

CONFORMITY	
Indication	Explanation
Y	Item is in compliance. No action is required.
N	Item is not in compliance. A modification needs to be done in order to ensure conformity.
N/A	This item is not applicable.
ACTION / REMARKS	
Indication	Explanation
<i>Bold and italic</i>	A mandatory adjustment is necessary in order to guarantee the presumption of conformity. The adjustment needs to be checked by Certification Experts to determine compliance.
Normal	Information is a general remark or recommendation. This item does not have direct influence on the determination of compliance.

Table 6

INSTRUCTIONS MANUAL CHECKLIST			
#	REQUIREMENTS	CONFORMITY	REMARK
1	The instructions must be drafted in one or more official Community languages.	Y	The instructions are drafted in multiple languages.
2	The words 'Original instructions' must appear on the language version(s) verified by the manufacturer or his Authorised Representative.	N	The words 'Original Instructions' should be mentioned on the instructions of the coffee grinder.




INSTRUCTIONS MANUAL CHECKLIST			
#	REQUIREMENTS	CONFORMITY	REMARK
3	Where no 'Original instructions' exist in the official language(s) of the country where the equipment is to be used, a translation into that/those language(s) must be provided by the manufacturer or his Authorised Representative or by the person bringing the equipment into the language area in question. The translations must bear the words 'Translation of the original instructions'.	-	The instructions are drafted in multiple languages.
4	The contents of the instructions must cover not only the intended use of the equipment but also take into account any reasonably foreseeable misuse thereof.	Y	
5	In the case of equipment intended for use by non-professional operators, the wording and layout of the instructions for use must take into account the level of general education and acumen that can reasonably be expected from such operators.	Y	
6	The business name and full address of the manufacturer and of his Authorised Representative.	Y	
7	The designation of the equipment as marked on the equipment itself, except for the serial number.	Y	
8	A description of the intended use of the equipment.	Y	
9	Warnings concerning ways in which the equipment must not be used that experience has shown might occur.	Y	
10	Instructions concerning the cleaning of the equipment.	Y	

INSTRUCTIONS MANUAL CHECKLIST			
#	REQUIREMENTS	CONFORMITY	REMARK
11	Appropriate details concerning precautions taken during use and maintenance.	Y	
12	Information about the residual risks that remain despite the inherent safe design measures, safeguarding and complementary protective measures adopted.	Y	

5.3 Packaging Checklist

In accordance with the applicable legislation, the following requirements, see table 7, need to be applied on the packaging of the product.

Table 7

PACKAGING CHECKLIST			
#	Requirement	Conformity	Remarks
1.	The type, batch or serial number of the product.	Y	
2.	Name, registered trade name or registered trade mark and the postal address of the manufacturer and importer.	Y	
3.	CE marking.	Y	
4.	When applicable, restrictions on areas of use.	N/A	
5.	Country or origin of production.	Y	
6.	Article identification number of the product.	Y	
7.	Type, batch or serial number of the product.	Y	
8.	Symbol for the EEE collection for the EU. 	Y	

6. ASSESSMENT

During an inspection by Certification Experts, one of our experts assessed and tested the coffee grinder to determine compliance with the applicable Directives. The results of this assessment have been outlined in this chapter.

6.1 Low Voltage Directive

In order to establish the conformity of the coffee grinder with the Low Voltage Directive, the electrical safety has been evaluated. As the coffee grinder is not provided with a charger, the remarks in the manual should be followed when charging. Therefore, there is no need to test the electrical safety of the coffee grinder.

6.2 EMC Directive

In order to establish the conformity with the EMC Directive, the emission and immunity has been determined.

6.2.1 Immunity

Immunity testing is carried out on devices, equipment, or systems to test performance degradation in the presence of an electromagnetic disturbance. The immunity test results are outlined in table 8.

Table 8

IMMUNITY		
Test specification		Result
1.	ESD (direct contact discharge) ± 4 kV	PASS
2.	ESD (indirect air contact) ± 8 kV	PASS
3.	EFT ± 2 kV on AC supply line	N/A
4.	EFT ± 0.5 kV I/O lines	N/A
5.	Surge (± 2 kV on the AC mains supply line) (asymmetric)	N/A
6.	Surge (± 1 kV on the AC mains supply lines) (diff)	N/A
7.	Conducted/ radiated RF immunity (10 VEMF, V/m, 0,15 – 3.000 MHz)	PASS
8.	Mains interrupts 100% 10 ms	N/A

6.2.2 Emission

Radiated and conducted emissions are measured to verify that a product cannot cause harmful interference with other electrical or electronic equipment and communication networks. The results of the emission tests are displayed in the figures below.

IMMUNITY		
Test specification		Result
1.	DC Supply interference - 150 kHz - 30 MHz	PASS
2.	I/O line interference - 150 kHz - 30 MHz	N/A
3.	Radiated EM Fields - 30 MHz - 6 GHz	PASS
4.	Mains harmonic emission - 50 Hz - 2 kHz	N/A

6.3 RoHS Directive

Certification Experts has assessed the RoHS by means of a documentation investigation, to determine if the components used in the coffee grinder are in compliance with the requirements stated in the RoHS Directive 2011/65/EU. Table 8 indicates the restricted substances and maximum concentration values tolerated by weight in homogenous materials.

The economic operator has provided Certification Experts with a certificate of RoHS Compliance of the RoHS component of the battery of the coffee grinder. In this statement the manufacturer of the components declares that the coffee grinder is in compliance with the requirements of the RoHS Directive 2011/65/EU.

Table 10: RoHS Homogeneous Materials

Substance	Maximum concentration percentage
Lead	0,1 %
Mercury	0,1 %
Cadmium	0,01 %
Hexavalent chromium	0,1 %
Polybrominated biphenyls (PBB)	0,1 %
Polybrominated diphenyl ethers (PBDE)	0,1 %
Bis(2-Ethylhexyl) phthalate (DEHP)	0,1 %
Benzyl butyl phthalate (BBP)	0,1 %
Dibutyl phthalate (DBP)	0,1 %
Diisobutyl phthalate (DIBP)	0,1 %

6.4 Users Information

Since the safe use of equipment depends on a combination of design and construction measures taken by the economic operator and protective measures taken by the user, providing the necessary information and instructions to users is an essential and integral part of the design of the equipment.

6.4.1 Information and warnings

The information and warnings on the coffee grinder should be provided in the form of understandable symbols or pictograms. Any written or verbal information and warnings must be expressed in an official Community language or languages by the Member State in which the equipment is placed on the market and/or put into service and may be accompanied, on request, by versions in any other official Community language or languages understood by the operators. Certification Experts has determined that the information and warnings are provided in a correct manner.

6.4.2 Warning of residual risks

Where unforeseeable risks remain despite the inherent safe design measures, safeguarding and complementary protective measures adopted, the necessary warnings, including warning devices, are provided.

6.4.3 Instructions

All equipment must be accompanied by instructions in the official Community language or languages of the Member State in which it is placed on the market and/or put into service. The instructions are drafted in accordance with the principles set out in the applicable Directives, please see Annex I.

6.4.4 Marking of the equipment

The equipment must be marked visibly, legibly and indelibly in accordance with the requirements as set out in the applicable Directives. In accordance with the applicable legislation, the following particulars are required for the coffee grinder.

- the business name and full address of the manufacturer,
- designation of the equipment,
- the CE Marking (see Annex II),
- type, batch or serial number,
- voltage of the equipment,
- phases of the equipment
- the year of construction, that is the year in which the manufacturing process is completed.

The marking of the coffee grinder is in compliance with the requirements out of the Low Voltage Directive and EMC Directive, as well as the applicable harmonized standards.

7. CONCLUSION

Hario commissioned Certification Experts to carry out an investigation, verification and CE-certification on the coffee grinder.

Based on the classification, Certification Experts determined that the coffee grinder falls within the scope of the following Directives:

- ▼ Low Voltage Directive 2014/35/EU
- ▼ EMC Directive 2014/30/EU
- ▼ RoHS Directive 2011/65/EU
- ▼ WEEE Directive 2012/19/EU

The Technical Documentation, including Instructions for use, is compiled by the economic operator. Certification Experts has determined that the Technical Documentation includes all the information needed to clearly demonstrate that adequate measures have been taken to deal with the relevant essential health and safety requirements out of the applicable Directives.

The assessment is carried out based on testing of the coffee grinder. During the testing it has been determined that the coffee grinder complies with the applicable legislation, based on which the equipment satisfies the selected essential health and safety requirements out of the applicable Directives and their related harmonised standards.

Based on the presumption of conformity of the coffee grinder, Certification Experts has compiled and issued the format of the EU Declaration of Conformity, which shall be included in the Technical Documentation.

A copy of the EU Declaration of Conformity shall accompany the coffee grinder. Finally the economic operator shall affix the CE marking to prove conformity with the provisions of the applicable Directives, see Annex II.

Breukelen, March 2020
CERTIFICATION EXPERTS B.V.

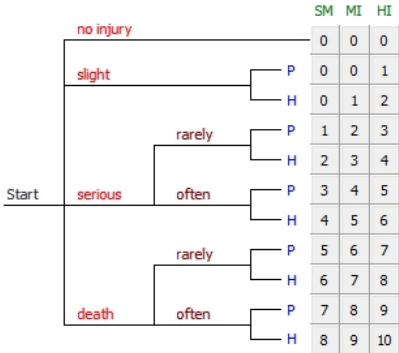
ANNEX I RISK ASSESSMENT

Risk assessment

Hario - Coffee Grinder

Project data			
Project name	Hario - Coffee Grinder	Created by	Zaat
Project number	2019,2623	Created on	3/13/2020
Product / Article	Smart G Handy Grinder	Last change	3/13/2020 11:47 AM
Function	Automatically grinding of coffee beans	Printed	3/13/2020
Type			
Order			
Commercial name	Smart G Handy Grinder		
Model	EMS-1B / EMSG-2		
Machine number			
Serial number			

Print options			
View	Hazard zones - Hazards - Phases of the machinery life	Display	All hazards

Legend			
 <p>Safexpert risk graph</p> <p>V = Value (0 - 10): 0 = Lowest Risk 10 = Highest Risk</p> <p>SH = Severity of harm: N = no injury SL = slight injury SE = serious injury D = death</p> <p>DS = Duration of stay in hazard zone: R = rarely to more often O = often to continuously</p> <p>RA = Possibility of recognition and avoidance: P = Possible under certain circumstances H = Hardly possible</p> <p>PO = Probability of occurrence: SM = Small (improbable) MI = Middle (will probably occur a number of times during the life) HI = High (will happen often)</p>		<p>Control engineering</p> <p>Cat. = Category PLr = Performance level required (before) PL = Performance level (after) SILr = SIL required (before) SIL = SIL (after)</p>	
		<p>Types of measure</p> <p>ISD = Inherently safe design measure SCP = Safeguarding / complementary protective measure PPE = Personal protection equipment PIC = Note on the machinery (Pictogram, ...) OI = Note in the Operating instruction</p>	

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Limit of the product: Use-, space-, time- and other limits

Hazard zone						Hazard		Phase of the machinery life											
Hazard description																			
Risk IN (before measure)						No.	Measures for risk reduction						Type	Risk OUT (after measure)					
SH	DS	RA	PO	V	PLr / SILr		Applied documents, attached images and files							SH	DS	RA	PO	V	PL / SIL
Risk adequately reduced No / Yes						Name			Date										
Coffee grinder						2.8 - shock			Normal operation										
During operation the operator could get a shock of the coffee grinder as the coffee grinder is operated by an battery.																			
SE	O	P	MI	4		1	The battery and all electronic components are guarded and live parts cannot be accessed by the operator.						ISD	SL		H	MI	1	
						Document number		Title				Section							
						2014/35/EU		Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits				Annex I, 2 a)							
						EN 60204-1:2006/A1:2009		Safety of machinery - Electrical equipment of machines - Part 1: General requirements				6.2							
						EN 60204-1:2006/A1:2009		Safety of machinery - Electrical equipment of machines - Part 1: General requirements				6.3							
Risk adequately reduced						<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes	Zaat			3/13/2020								

Coffee grinder					2.8 - shock					Cleaning								
During cleaning the coffee grinder the operator could get a shock of the coffee grinder as the coffee grinder is operated by an battery.																		
SE	O	P	MI	4		1	During the cleaning of the coffee grinder, will the coffee grinder not be operational. Further it is not allowed to flood the product with water, only a damped cloth can be used.					SCP	SL		H	MI	1	
							Document number		Title			Section						
							2014/35/EU		Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits			Annex I, 2 a)						
Risk adequately reduced <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Zaat 3/13/2020																		

Risk assessment	2019,2623 - Hario - Coffee Grinder	Printed: 3/13/2020
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Limit of the product: Use-, space-, time- and other limits

Hazard zone						Hazard						Phase of the machinery life											
Hazard description																							
Risk IN (before measure)						No.	Measures for risk reduction						Type	Risk OUT (after measure)									
SH	DS	RA	PO	V	PLr / SILr		Applied documents, attached images and files							SH	DS	RA	PO	V	PL / SIL				
Risk adequately reduced No / Yes						Name	Date																
Coffee grinder						2.8 - shock						Charging											
When charging the battery of the coffee grinder the operator could get a shock of the coffee grinder.																							
SE	O	P	MI	4		1	When the coffee grinder is charging, it cannot be operated, based on which no shock could occur.						ISD	SL		H	MI	1					
						<table> <tr> <th>Document number</th><th>Title</th><th>Section</th></tr> <tr> <td>2014/35/EU</td><td>Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits</td><td>Annex I, 2 a)</td></tr> </table>						Document number	Title	Section	2014/35/EU	Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits	Annex I, 2 a)						
Document number	Title	Section																					
2014/35/EU	Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits	Annex I, 2 a)																					
SL		H	MI	1		2	A charger is not provided with the coffee grinder. The operator must ensure to use a charger which complies with the indicated characteristics in the manual.						OI	SL		H	MI	1					
						<table> <tr> <th>Document number</th><th>Title</th><th>Section</th></tr> <tr> <td>EN ISO 12100:2010-11</td><td>Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100:2010)</td><td>6.4</td></tr> </table>						Document number	Title	Section	EN ISO 12100:2010-11	Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100:2010)	6.4						
Document number	Title	Section																					
EN ISO 12100:2010-11	Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100:2010)	6.4																					
Risk adequately reduced <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Zaat 3/13/2020																							

Coffee grinder						20.7 - Emission of radiation fields that can be hazardous						Normal operation														
As the coffee grinder is an electrical device, it could generate or be affected by EMC disturbance.																										
SE	O	P	MI	4		1	In order to determine the compliance of the coffee grinder, EMC testing has been performed. Based on the test results, can be concluded that the product complies with the EMC Directive.						SCP	SL		H	MI	1								
						<table> <tr> <th>Document number</th><th>Title</th><th>Section</th></tr> <tr> <td>EN 60204-1:2006/A1:2009</td><td>Safety of machinery - Electrical equipment of machines - Part 1: General requirements</td><td>4.4.2</td></tr> <tr> <td>EN 61000-3-2:2014</td><td>Electromagnetic compatibility (EMC) – Part 3-2: Limits – Limits for harmonic current emissions (equipment input current <= 16 A per phase) IEC 61000-3-2:2014</td><td></td></tr> </table>						Document number	Title	Section	EN 60204-1:2006/A1:2009	Safety of machinery - Electrical equipment of machines - Part 1: General requirements	4.4.2	EN 61000-3-2:2014	Electromagnetic compatibility (EMC) – Part 3-2: Limits – Limits for harmonic current emissions (equipment input current <= 16 A per phase) IEC 61000-3-2:2014							
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EN 60204-1:2006/A1:2009	Safety of machinery - Electrical equipment of machines - Part 1: General requirements	4.4.2																								
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Risk adequately reduced <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Zaat 3/13/2020																										

Printed: 3/13/2020

Hazard zone						Hazard	Phase of the machinery life														
Hazard description																					
Risk IN (before measure)						No.	Measures for risk reduction						Type	Risk OUT (after measure)							
SH	DS	RA	PO	V	PLr / SILr		Applied documents, attached images and files							SH	DS	RA	PO	V	PL / SIL		
Risk adequately reduced No / Yes						Name						Date									
Coffee grinder						20.7 - Emission of radiation fields that can be hazardous						Charging									
As the coffee grinder is an electrical device, it could generate or be affected by EMC disturbance.																					
SE	O	P	MI	4		1	In order to determine the compliance of the coffee grinder, EMC testing has been performed. Based on the test results when the coffee grinder was charging, can be concluded that the product complies with the EMC Directive.						SCP	SL			H	MI	1		
						Document number		Title				Section									
						EN 60204-1:2006/A1:2009		Safety of machinery - Electrical equipment of machines - Part 1: General requirements				4.4.2									
						EN 61000-3-2:2014		Electromagnetic compatibility (EMC) – Part 3-2: Limits – Limits for harmonic current emissions (equipment input current <= 16 A per phase) IEC 61000-3-2:2014													
Risk adequately reduced						<input type="checkbox"/> No		<input checked="" type="checkbox"/> Yes		Zaat				3/13/2020							

ANNEX II CE MARKING

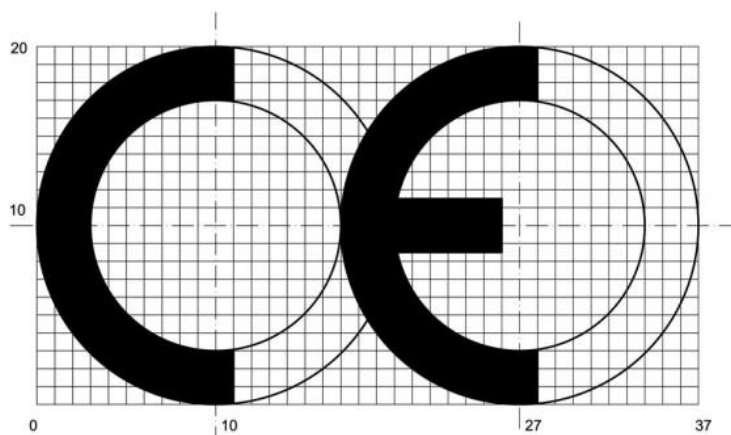
The CE marking must be affixed visibly, legibly and indelibly to the equipment or to its data plate. However, where this is not possible or not warranted on account of the nature of the equipment, it must be affixed to the packaging, if any, and/or to the accompanying documents.

The requirement for visibility means that the CE marking must be easily accessible for all parties. It could, for instance, be affixed on the back or underside of the equipment. A minimum height of 5 mm is required to ensure that it is legible. However, the minimum dimension of the CE marking may be waived for small devices or components. The CE marking must remain visible, legible and respects its proportions. It must also be indelible so that it cannot be removed under normal circumstances without leaving noticeable traces. Nevertheless, this does not mean that the CE marking must form an integral part of the equipment. However, in certain cases affixing of the CE marking to the equipment is impossible or not possible under reasonable technical or economic conditions.

Furthermore, there can be cases where the minimum dimensions for the affixing cannot be respected or cannot be ensured that the CE marking is visibly, legibly and indelibly affixed. In such cases, the CE marking can be affixed to the packaging, if it exists, and/or to the accompanying document, where the Union harmonisation legislation concerned provides for such documents. The CE marking on the equipment may neither be omitted nor be moved to the packaging or accompanying documents on purely aesthetic grounds.

Regulation (EC) 765/2008 and Decision 768/2008/EC lay down that the CE marking must have the dimensions, format and proportions defined in Annex II of Regulation (EC) No 765/2008 and be legible and clearly affixed. Regulation (EC) 765/2008 and Decision No 768/2008/EC do not forbid any kind of design (e.g. "hollow" design) as long as the above conditions are respected. Electronic labelling, however, is not allowed.

The CE marking shall consist of the initials 'CE' taking the following form:





CERTIFICATION
experts