

Stok Air Automação Ltda.

850, Tamoios St. - ZIP 80.320-290 CURITIBA, PR, BRAZIL

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**CONFORMITY DECLARATION
IN ACCORDANCE WITH**

73/23EEC

Stok Air Automação Ltda.
850, Tamoios St.
ZIP 80.320-290 Curitiba, PR, Brazil

Declares that the following tyre calibrator model :

Electronic Tyre Calibrator Premium

which this declaration refers to respect the following regulations:

Standards : EN 61010-1:1993+A2:1995

Curitiba, July 16, 2003



Director João Paulo Carcavallo



ISTITUTO ITALIANO
DEL MARCHIO DI QUALITÀ
per il controllo di rispondenza
a norme tecniche di prodotti e sistemi
D.P.R. n. 134 del 20-1-1971

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Trib. Milano Pers. Giur. n° 159 / vol. 5 / fasc. 162
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MR ENNES
AIRTEC ELECTRONICS

FAX 0055 41 3457776

Your ref. : ../..
Our ref. : ../..
Date : October 18, 1999

Dear Mr ANNES

**IMQ Approval on Electronic tyre calibrator, mod. FUTURA-ART-04
Test Report No 09A9900094**

With reference to your application of December 10, 1998, covering the above mentioned product, we wish to inform you of the following.

- said product has been tested according to the applicable EN 61010-1:1993+A2:1995 standard and has been found to be:

In conformity. Relevant Approval Certificate will follow soon.
The product is therefore in compliance with the requirements of 73/23/CEE Directive.

- IMQ contact person for this application: Mr Matteo Giuffrida.

Yours sincerely

Matteo Giuffrida
Certification Manager
Electronic Division

IEC SYSTEM FOR CONFORMITY TESTING
AND CERTIFICATION OF ELECTRICAL
EQUIPMENT (IECEE)
CB SCHEME

SYSTÈME CEI D'ESSAIS DE CONFORMITÉ
ET DE CERTIFICATION DES EQUIPEMENTS
ELECTRIQUES (IECEE)
METHODE OC

IMQ

CB TEST CERTIFICATE
CERTIFICAT D'ESSAI OC

Product
Produit

Electronic tyre calibrator

Name and address of the applicant
Nom et adresse du demandeur

Airtech Equipamentos De Automação Industrial Ltda.
364, Professor Doracy Cesarino St.
80320-00 Curitiba PR, Brazil

Name and address of the manufacturer
Nom et adresse du fabricant

Airtech Equipamentos De Automação Industrial Ltda.
364, Professor Doracy Cesarino St.
80320-00 Curitiba PR, Brazil

Name and address of the factory
Nom et adresse de l'usine

Airtech Equipamentos De Automação Industrial Ltda.
364, Professor Doracy Cesarino St.
80320-00 Curitiba PR, Brazil

Rating and principal characteristics
Valeurs nominales et caractéristiques principales

220/230 V 50/60 Hz 8 W

Trade mark (if any)
Marque de fabrique (si elle existe)

airtech

Model/type Ref.
Ref. de type

ART04

Additional information (if necessary)
Information complémentaire (si nécessaire)

PUBLICATION

EDITION

A sample of the product was tested and found
to be in conformity with
*Un échantillon de ce produit a été essayé et a été
considéré conforme à la*

IEC 1010-1:1990 + A1:1992 + A2:1995

as shown in the Test Report Ref. No.
which forms part of this Certificate
*comme indiqué dans le Rapport d'essais numéro
de référence
qui constitue une partie de ce certificat*

09A9900094

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme National de Certification

IMQ - Istituto Italiano del Marchio di Qualità - Milan - Italy

IMQ

Date 1999-12-30

Signature

Umberto Scda

TEST REPORT

IEC 1010-1

Safety requirements for electrical equipment for measurement, control, and laboratory use

Part 1: General requirements

Report reference No.....: 09A9900094

Compiled by (+ signature).....: S. Ferrioli *Ferrioli Sgo*

Approved by (+ signature).....: F. Brivio *F. Brivio*

Date of issue: 14/12/1999

Testing laboratory.....: IMQ – Istituto Italiano del Marchio di Qualita`.

Address: Via Quintiliano 43, I-20138 Milano

Testing location.....: as above

Applicant.....: AIRTECH EQUIPAMENTOS DE AUTOMACAO INDUSTRIAL Ltda.

Address: 364, Professor Doracy Cesarino St. , 80320-00 CURITIBA PR BRAZIL

Standard.....: IEC 1010-1:90 + A1:92 + A2:95

Test Report Form No.: I10101_A

TRF originator.: VDE

Master TRF: dated 1995

Copyright blank test report: the bodies participating in the Committee of Certification Bodies (CCB) and/or the CENELEC Certification Agreement (CCA). This report is based on a blank test report that was prepared by KEMA using information obtained from the TRF originator.

Test procedure: CB-scheme

Procedure deviation.....: N.A.

Non-standard test method.....: N.A.

Type of test object.....: ELECTRONIC TYRE CALIBRATOR

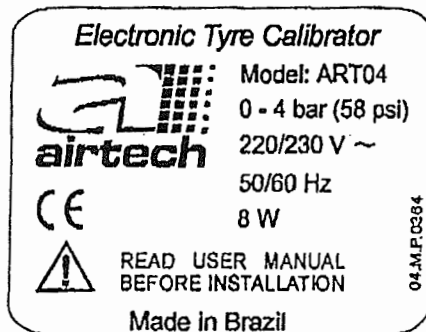
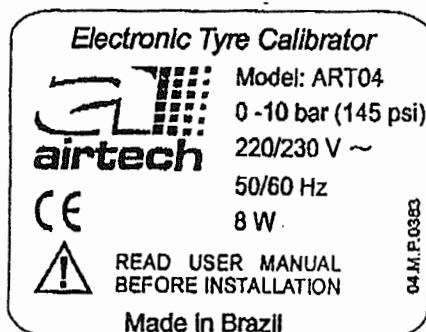
Trademark.....: AIRTECH

Model/type reference.....: ART04

Manufacturer: AIRTECH EQUIPAMENTOS DE AUTOMACAO INDUSTRIAL Ltda.
364, Professor Doracy Cesarino St. , 80320-00 CURITIBA PR BRAZIL

Rating.....: 220/230 V a.c. ; 50/60 Hz ; 8 W

Copy of marking plate



<p>Test item particulars:</p> <p>Environmental conditions: standard</p> <p>Operating conditions: continuous</p> <p>Connection to supply mains: permanent</p> <p>Degree of mobility: fixed</p> <p>Overall size of the equipment: width; depth; height.....: 380 x 280 x 200 mm</p> <p>Mass of the equipment.....: 4 kg</p> <p>Special protection to IEC 529.....: IP 54</p> <p>Accessories and detachable parts included in the evaluation.....: Panel instruction.</p> <p>Options included: -</p>
<p>Possible test case verdicts:</p> <p>- test case does not apply to the test object.....: N(.A.)</p> <p>- test object does meet the requirement: P(ass)</p> <p>- test object does not meet the requirement: F(ail)</p>
<p>General remarks:</p> <p>*(see remark #)* refers to a remark appended to the report.</p> <p>*(see appended table)* refers to a table appended to the report.</p> <p>Throughout this report a comma is used as the decimal separator.</p> <p>The test results presented in this report relate only to the object tested.</p> <p>This report shall not be reproduced except in full without the written approval of the testing laboratory.</p>
<p>Date of receipt of test item : 10/12/1998</p> <p>Date(s) of performance of test : 01/09/1999 to 27/09/1999</p>
<p>This Test Report consists of 44 pages and 1 annex.</p> <p>Description of the device :</p> <p>This appliance is intended for pressure calibration of airplane tyres.</p> <p>It is intended for indor or outdoor use and is available in two versions :</p> <ul style="list-style-type: none"> - low pressure version 0 – 4 bar (58 psi). - high pressure version 0 – 10 bar (145 psi). <p>There are no hardware differences between the two versions ; setting of the low or high pressure range is obtained by a jumper.</p> <p>Complete technical information are given in the User's manual.</p> <p>Annex 1 : Insulation block diagram.</p>

4.4	Testing in SINGLE FAULT CONDITION (SFC)		
4.4.1	General		Pass
4.4.2.1	PROTECTIVE IMPEDANCE		N.A.
4.4.2.2	PROTECTIVE CONDUCTOR		Pass
4.4.2.3	Equipment or parts for short-term or intermittent operations		N.A.
4.4.2.4	Motors	Not present (see appended table)	N.A.
4.4.2.5	Capacitors		N.A.
4.4.2.6	Mains transformers	(see appended table)	Pass
4.4.2.7	Outputs		N.A.
4.4.2.8	Equipment for more than one supply	220/230 V.	N.A.
4.4.2.9	Cooling		N.A.
4.4.2.10	Heating devices		N.A.
4.4.2.11	Insulation between circuits and parts		N.A.
4.4.2.12	Interlocks		N.A.

5	MARKING AND DOCUMENTATION		
5.1.1	Required markings are visible from the exterior, or		Pass
	... after removing a cover or opening a door, or		N.A.
	... after removal from a rack or panel		N.A.
	Required markings are not put on parts which can be removed by an OPERATOR		N.A.
	Letter symbols (IEC 27) used		Pass
	Graphic symbols (table 1) used		Pass
5.1.2	Identification; equipment is identified by:		
	- manufacturer's name or registered trademark	AIRTECH	Pass
	- model number, name or other means	PNEUAIR FUTURA - ART04	Pass
5.1.3	Mains supply		
5.1.3 a)	Nature of supply:		
	- a.c. RATED mains frequency or range of frequencies	50/60 Hz	Pass
	- d.c. with symbol 1		N.A.
5.1.3 b)	RATED supply voltage(s) or range	220/230 V	Pass

IEC 1010-1			
Clause	Requirement – Test	Result - Remark	Verdict
5.1.3 c)	Maximum RATED power in W or VA, or	8 W	Pass
	... maximum RATED input current		N.A.
	The measured value is not more than 110%	(see appended table)	Pass
	More than one voltage range: separate values marked, or		N.A.
	... values differ by less than 20%		N.A.
5.1.3 d)	Equipment which the OPERATOR can set for different RATED supply voltages:		
	- indicates the equipment set voltage		N.A.
	- PORTABLE EQUIPMENT indication is visible from the exterior		N.A.
	- changing the voltage setting changes the indication		N.A.
5.1.3 e)	Accessory mains socket-outlets accepting standard mains plugs are marked:		
	- with the voltage if it is different from the mains supply voltage		N.A.
	- for use with specific equipment		N.A.
	If not marked for specific equipment it is marked with the maximum RATED current or power, and the maximum permitted leakage current, or		N.A.
	... symbol 14 with full details in the documentation		N.A.
5.1.4	Fuses		
	Operator replaceable fuse marking	Fuse not intended to be replaced by an operator.	N.A.
	Documentation gives details for fuses not replaceable by the OPERATOR		Pass
5.1.5	Measuring circuit TERMINALS		
	RATED maximum working voltage or current is marked	Not present.	N.A.
	Maximum RATED voltage to earth is marked		N.A.
	Means for identifying these TERMINALS is provided		N.A.
	Marking is adjacent to TERMINALS, or (if there is insufficient space)		N.A.

IEC 1010-1			
Clause	Requirement — Test	Result - Remark	Verdict

	... the marking is on the RATING plate or scale plate, or		N.A.
	... the TERMINAL is marked with symbol 14		N.A.
	INSTALLATION CATEGORY marked		N.A.
5.1.6	TERMINALS and operating devices		
	Necessary identification for TERMINALS, connectors, controls and indicators	The air inflow hose and the air outflow hose are identified.	Pass
	Power supply switch ON or OFF position marked	No manual mechanical mains switch provided.	N.A.
	Mains supply TERMINAL identified		N.A.
5.1.6 a)	FUNCTIONAL EARTH TERMINALS		N.A.
5.1.6 b)	PROTECTIVE CONDUCTOR TERMINALS		Pass
	Symbol is placed adjacent to or on the TERMINAL		N.A.
5.1.6 c)	TERMINALS of measuring and control circuits		N.A.
5.1.6 d)	TERMINALS supplied from the interior		N.A.
5.1.6 e)	ACCESSIBLE FUNCTIONAL EARTH TERMINALS		N.A.
5.1.6 f)	Requirements replaced by paragraph 2 above - Power supply switch		N.A.
5.1.7	Equipment protected by DOUBLE INSULATION or REINFORCED INSULATION		
	Protected throughout (symbol 11)	Class I	N.A.
	Only partially protected (symbol 11 not used)		N.A.
5.1.8	Battery charging; equipment with means to charge rechargeable batteries is marked:		
	- to warn against the charging of non-rechargeable batteries		N.A.
	- to indicate the type of rechargeable batteries used		N.A.
5.2	Warning markings:		
	- visible when ready for NORMAL USE		Pass
	- if necessary marked with symbol 14	Symbol stuck on the air hoses.	Pass
	- are near or on applicable parts		Pass

IEC 1010-1			
Clause	Requirement – Test	Result - Remark	Verdict
	- advise how to avoid contact with HAZARDOUS live parts		N.A.
	- TERMINAL voltage exceeding 1 kV (symbol 12)		N.A.
	- easily touched high temperature parts (symbol 13)		N.A.
5.3	Durability of markings; the required markings remain clear and legible (NORMAL USE)	(see appended table)	Pass
5.4	Documentation		
5.4.1	General; equipment is accompanied by documentation which includes:		
	- technical specification		Pass
	- instructions for use		Pass
	- name and address of manufacturer or supplier		Pass
	- the information supplied in 5.4.2 to 5.4.5		Pass
	Definition of INSTALLATION CATEGORY		N.A.
	A clear explanation of warning symbols is in the documentation, or		N.A.
	... information is durable and legibly marked on the equipment (see also NOTE on instructions for handling hazardous substances)		N.A.
5.4.2	Equipment RATINGS; documentation includes:		
	- supply voltage or voltage range	220/230 V	Pass
	- the frequency or frequency range	50/60 Hz	Pass
	- the power or current RATING	8 W	Pass
	- a description of all input and output connections		Pass
	- the RATING of insulation of external circuits, when such circuits are nowhere ACCESSIBLE		N.A.
	- statement of the range of environmental conditions	-10 C° to 70 C°	Pass

IEC 1010-1			
Clause	Requirement – Test	Result - Remark	Verdict

5.4.3	Equipment installation; documentation includes instruction for:		
	- assembly, location and mounting		Pass
	- protective earthing		Pass
	- connections to the supply		Pass
	- ventilation requirements	Not present.	N.A.
	- special services		Pass
	- maximal sound power level		N.A.
	- instructions about sound pressure		N.A.
	Additional information for PERMANENTLY CONNECTED EQUIPMENT:		
	- supply wiring		N.A.
	- external switch or circuit-breaker and external overcurrent protection		N.A.
	- recommendation on switch or circuit-breaker location		Pass
5.4.4	Equipment operation; instructions for use include:		
	- identification of operating controls		Pass
	- equipment positioning		Pass
	- interconnection requirements		Pass
	- specification of intermittent operation limits		N.A.
	- explanation of required symbols		N.A.
	- replacement of consumables		Pass
	- cleaning and decontamination	Included in the maintenance provisions.	Pass
	- a statement against use in a manner not specified by the manufacturer		Pass
5.4.5	Equipment maintenance; instructions include:		
	- sufficient preventive maintenance and inspection information	Provided.	Pass
	- specific battery	Not present.	N.A.
	- any manufacturer specified parts		N.A.
	- RATING and characteristics of fuses		Pass

IEC 1010-1			
Clause	Requirement – Test	Result - Remark	Verdict

6	PROTECTION AGAINST ELECTRIC SHOCK		
6.1.1	Exceptions; capacitance test	No hazardous live parts indicated as exceptions are present in the appliance.	N.A.
6.2	Determination of ACCESSIBLE parts	No hazardous live parts are permitted to be accessible to the test finger and pins.	Pass
6.3	Permissible limits for ACCESSIBLE parts:		
6.3.1	- values in NORMAL CONDITION	No accessible conductive parts.	Pass
6.3.2	- values in SINGLE FAULT CONDITION	(see appended table)	N.A.
6.4	Protection in NORMAL CONDITION (see 6.8 and 8.1)		Pass
6.5	Protection in SINGLE FAULT CONDITION; additional protection is provided as specified in 6.5.1 to 6.5.4, or	Obtained by : - fuses on mains path - protective earthing - basic insulation - double or reinforced insulation	Pass
	... by automatic disconnection of the supply	Not provided in the appliance.	N.A.
6.5.1	Protective earthing; ACCESSIBLE conductive parts are bonded to the PROTECTIVE CONDUCTOR TERMINAL, or		Pass
	... are separated from parts which are HAZARDOUS LIVE (for indirect bonding of measurement and test equipment see 6.5.1.4)		N.A.
6.5.1.1	PROTECTIVE BONDING consists of directly connected structural parts or discrete conductors or both		N.A.

IEC 1010-1			
Clause	Requirement – Test	Result - Remark	Verdict
6.5.1.2	Bonding impedance of plug-connected equipment	(see appended table)	N.A.
6.5.1.3	Bonding impedance of PERMANENTLY CONNECTED EQUIPMENT	(see appended table)	N.A.
6.5.1.4	Indirect bonding for measurement and test equipment	(see appended table)	N.A.
6.5.2	DOUBLE INSULATION and REINFORCED INSULATION (see 6.7, 6.8 and 6.9.2)		Pass
6.5.3	A PROTECTIVE IMPEDANCE is one or more of the following:		
	- an appropriate HIGH INTEGRITY single component (see 14.6)		N.A.
	- a combination of components		N.A.
	- a combination of BASIC INSULATION and a current or voltage limiting device		N.A.
	Components, wires and connections are RATED as required		N.A.
6.5.4	Built-in panel meters; where the requirements of 6.5.1 to 6.5.3 are not met:		
	- no ACCESSIBLE conductive parts		N.A.
	- ACCESSIBLE surfaces are separated		N.A.
	- ACCESSIBLE surface of parts intended to be grasped are separated		N.A.
6.6	External circuits		
6.6.1	Separation of internal circuits; if the other internal circuit exceeds the values of 6.3.2 in NORMAL CONDITION, the following is included in the manufacturer's instructions:		
	- a statement that the TERMINAL is for use only with equipment which has no ACCESSIBLE live parts		N.A.
	- the RATING of the insulation required for external circuits		N.A.
	- the connection to be used at the remote end of existing circuits		N.A.
	- the type of equipment which may be connected to the TERMINAL		N.A.
	- any of the above were waived		N.A.

IEC 1010-1			
Clause	Requirement – Test	Result - Remark	Verdict

6.6.2	TERMINALS for external circuits		
	ACCESSIBLE TERMINALS are not HAZARDOUS LIVE except as permitted by 6.6.1	No accessible terminals.	N.A.
	The following TERMINALS are not HAZARDOUS LIVE:		
	- PROTECTIVE CONDUCTOR TERMINALS		N.A.
	- FUNCTIONAL EARTH TERMINALS		N.A.
	- headphone TERMINALS		N.A.
	TERMINALS which receive a charge from an internal capacitor; measured voltage (V); charge ...:		N.A.
	High voltage TERMINALS energised from the interior are:		
	- not ACCESSIBLE		N.A.
	- marked		N.A.
6.6.3	Circuits with TERMINALS which are HAZARDOUS LIVE		
	No mains circuits are connected to ACCESSIBLE conductive parts		N.A.
	For other HAZARDOUS LIVE circuits with one TERMINAL contact at earth potential		N.A.
	Circuits designed to be operated with one ACCESSIBLE TERMINAL contact floating		N.A.
6.7	CLEARANCES and CREEPAGE DISTANCES between circuits and parts (see Annex D)	(See appended table)	Pass
6.8	Dielectric strength test		
	Tests show that the requirements of 6.4 and 6.6 are met		Pass
	Protection against the spread of fire (see 9.1 and Annex G)	(see appended table)	N.A.
6.9	Constructional requirements for protection against electric shock		
6.9.1	General; in circuits exceeding the values of 6.3.2:		
	- security of wiring connections		N.A.
	- screws securing removable covers		N.A.
	- accidental loosening		Pass

IEC 1010-1			
Clause	Requirement – Test	Result - Remark	Verdict

6.9.2	ENCLOSURES of equipment with DOUBLE INSULATION or REINFORCED INSULATION		
	ENCLOSURE surrounds all metal parts		N.A.
	Small parts are separated		N.A.
	ENCLOSURES or parts of insulating material		Pass
	Protection for metal ENCLOSURES or parts is provided by provision of an insulating coating or BARRIER on the inside, or		N.A.
	... CLEARANCES and CREEPAGE DISTANCES cannot be reduced by loosening of parts or wires		Pass
6.9.3	Equipment using PROTECTIVE BONDING		Pass
6.9.3 a)	OPERATOR removable parts		N.A.
6.9.3 b)	Movable conductive connections		N.A.
6.9.3 c)	Exterior metal braids of cable		N.A.
6.9.3 d)	Mains supply is passed through the equipment		N.A.
6.9.3 e)	Protective earthing conductors		Pass
	Exceptions:		
	- earthing braids		N.A.
	- internal protective conductors		N.A.
6.9.3 f)	Equipment using PROTECTIVE BONDING		Pass
6.9.4	Over-range indication unambiguous		Pass

IEC 1010-1			
Clause	Requirement – Test	Result - Remark	Verdict

6.10	Connection to mains supply source and connections between parts of equipment		
6.10.1	Mains supply cords are RATED for maximum equipment current (see 5.1.3 c)	Supply cord not provided with the appliance ; only connector provided. Mains supply cord suitable for the max. input current. Instruction manual gives all the information for the correct supply cord to be used : 3 x 0,75 mm ² .	Pass
	The cable used complies with IEC 227 or IEC 245 or is a certified cord		Pass
	Cord is heat resistant	No hot external parts.	N.A.
	Required temperature RATING		N.A.
	Green/yellow covered conductors are used only for connection to PROTECTIVE CONDUCTOR TERMINALS	Supply cord not provided	N.A.
	Detachable cords with IEC 320 mains connectors comply with IEC 799, or	Provided with industrial power connector type DIN43650 / ISO-44006952	N.A.
	... the current RATING of the mains connector		Pass
6.10.2	Fitting of non-detachable mains supply cords		
6.10.2.1	Cord entry; non-detachable cord protection:		
	- inlet smoothly rounded with radius 1,5 D		N.A.
	- insulated cord guard with specified projection 5 D		N.A.
6.10.2.2	The cord anchorage:		
	- relieves the conductors from strains and twisting	Industrial power connector provided.	N.A.
	- protects the conductor from abrasion		N.A.
	The protective earth conductor is the last to take the strain		N.A.
	Cord anchorages:		
	- the cord is not clamped		N.A.
	- knots are not used		N.A.

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Clause	Requirement – Test	Result - Remark	Verdict

	- cannot push the cord into the equipment, to the extent to cause a hazard		N.A.
	- failure of the cord insulation in a cord anchorage which has metal parts		N.A.
	- compression bushing		N.A.
	Compression bushing clamps all types and sizes of mains cords, and		N.A.
	... is suitable for connection to TERMINALS provided, or		N.A.
	... it is designed for screened mains cord		N.A.
	Cord replacement:		
	- does not cause a hazard		N.A.
	- the method of strain relief is clear		N.A.

IEC 1010-1			
Clause	Requirement – Test	Result - Remark	Verdict
6.10.3	Plugs and connectors		
6.10.3 a)	Plugs, connectors and appliance couplers, comply with the relevant specifications	See appended table.	Pass
6.10.3 b)	In equipment designed to be supplied at voltages below 6.3.2.1, mains type plugs and sockets are not used incorrectly		N.A.
6.10.3 c)	Plug pins of cord-connected equipment which receive a charge from an internal capacitor; measured voltage (V); charge		N.A.
6.10.3 d)	Equipment with accessory mains socket-outlets:		
	- if it accepts a standard mains plug there is a marking according to 5.1.3 e)		N.A.
	- outlets with a PROTECTIVE EARTH TERMINAL contact		N.A.
6.11.1	ACCESSIBLE TERMINALS		
6.11.1 a)	No risk of accidental contact (see 5.1.6. c)		Pass
6.11.1 b)	Are anchored		N.A.
6.11.2	PROTECTIVE CONDUCTOR TERMINALS		
6.11.2 a)	Appliance inlet		N.A.
6.11.2 b)	If cord is rewirable PROTECTIVE CONDUCTOR TERMINAL is close to the mains supply TERMINAL		Pass
6.11.2 c)	If no mains supply is required, any PROTECTIVE CONDUCTOR TERMINAL is near TERMINALS of circuit for which protective earthing is necessary		N.A.
	External TERMINALS		N.A.
6.11.2 d)	Equivalent current capacity		Pass

IEC 1010-1			
Clause	Requirement – Test	Result - Remark	Verdict
6.11.2 e)	Soldered connections independently secured		N.A.
	Such connections are not used for other purposes		N.A.
	Screw connections are secured		N.A.
6.11.2 f)	Contact surfaces are metal		Pass
6.11.2 g)	If plug-in makes first and breaks last : •		N.A.
6.11.2 h)	Protective conductor of measuring circuit:		
	- current RATING		N.A.
	- protective bonding not interrupted, or		N.A.
	... indirect bonding		N.A.
6.11.3	FUNCTIONAL EARTH TERMINALS; independent connection		N.A.
6.12	Disconnection from supply source		
6.12.1	Disconnection device provided, or		N.A.
	... exempted by 6.12.1.1		N.A.
6.12.1.1	Exceptions		N.A.
6.12.2	Requirements according to type of equipment		
6.12.2.1	PERMANENTLY CONNECTED EQUIPMENT: switch or circuit-breaker, or		Pass
	... specified for building installation	Circuit-breaker	Pass
6.12.2.2	Single-phase cord-connected equipment: switch or circuit-breakers, or		N.A.
	... appliance coupler - no TOOL, or		N.A.
	... separable plug - no lock		N.A.
6.12.2.3	An emergency switch is provided		N.A.
	The emergency switch is located at less than 1 m' from the moving part		N.A.
6.12.3	Disconnecting devices electrically close to supply		N.A.

IEC 1010-1			
Clause	Requirement – Test	Result - Remark	Verdict

6.12.3.1	Switches and circuit-breakers, when used as disconnection device:		
	- meet IEC 937-1 and IEC 937-3	Not provided on the appliance.	N.A.
	- contact separation		N.A.
	- contact position evident in OFF position		N.A.
	- marked to indication function		N.A.
	- not incorporated in mains cord		N.A.
	- do not interrupt protective earth conductor		N.A.
	- if have other contacts, meet separation requirements of 6.6 and 6.7		N.A.
6.12.3.2	Appliance couplers and plugs; where an appliance coupler or separate plug is used as the disconnecting device (6.12.2.2):		
	- it is readily identifiable and easily reached by the OPERATOR		N.A.
	- single-phase PORTABLE EQUIPMENT cord length \leq 3 m		N.A.
	- the protective earth conductor connected before and disconnected after		N.A.

7	PROTECTION AGAINST MECHANICAL HAZARDS		
7.2	Moving parts not able to crush, etc. (see also 6.12.32.3)		N.A.
	If OPERATOR access permitted:		
	- access requires TOOL		N.A.
	- instructions about training		N.A.
	- warning markings		N.A.
7.3	Stability, compliance tests:		N.A.
	- 10 tilt test		N.A.
	- multi-directional force test		N.A.
	- downward force test		N.A.
	- marking of non-automatic means		N.A.

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Clause	Requirement — Test	Result - Remark	Verdict

9	EQUIPMENT TEMPERATURE LIMITS AND PROTECTION AGAINST THE SPREAD OF FIRE		
9.1	General; conformity is checked by 9.2 and fault tests of 4.4, or	No hazardous temperature in normal and abnormal operating conditions.	Pass
	... measurement of CREEPAGE DISTANCE and CLEARANCE and the voltage tests of Annex G, or	(see appended table)	N.A.
	... method of Annex F		N.A.
	Method of Annex F: limited circuit, or	(see appended table)	N.A.
	... unlimited circuit energized by OPERATOR held switch, or		N.A.
	... motors, transformers have overcurrent protection, or		N.A.
	... motors, transformers have temperature protection		N.A.
	And in addition unlimited circuit meets:		N.A.
	- F.4.2.1 (connectors etc.)		N.A.
	- F.4.2.2 (printed boards)		N.A.
	- F.4.2.4 (wiring - not applicable to switch-controlled circuits)		N.A.
	- F.4.3.1 (high-current devices)		N.A.
	- F.4.3.2 (bottom of ENCLOSURE)		N.A.
	- F.4.3.3 (ENCLOSURE material)	(see appended table)	N.A.
9.2	Temperature tests; temperature limits	(see appended table)	Pass
9.3	Guards		
	Surfaces liable to exceed 100 °C:		
	- protected by guards	No hot external surface.	N.A.
	- marked, or		N.A.
	... intended to be hot (see 9.1)		N.A.
	Guards not removable without TOOL		N.A.

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Clause	Requirement – Test	Result - Remark	Verdict
9.4	Field-wiring TERMINAL boxes		
	Marking of temperature RATING of the cable adjacent to the field-wiring TERMINALS, or	(see appended table)	N.A.
	... visible during and after installation		N.A.
9.5	Overtemperature protection devices		
	No shock or spread of fire from loss of cooling (see 4.4.2.9) with:		
	- air holes closed		N.A.
	- fans stopped		N.A.
	- coolant stopped		N.A.
	No shock or spread of fire from heating control system failure (see 4.4.2.10) with:		
	- timer overridden		N.A.
	- temperature controller overridden		N.A.
	- loss of cooling liquid		N.A.
	Overtemperature protection device:		
	- fitted and operates in SINGLE FAULT CONDITION		N.A.
	- meets requirements of 14.3		N.A.
	- does not operate in NORMAL USE (see 3.5.6)		N.A.
	- if self-resetting, can only be set to operate in SINGLE FAULT CONDITION		N.A.
9.6	Overcurrent protection		
	Mains operated equipment protected	Fuse provided.	Pass
9.6.1	PERMANENTLY CONNECTED EQUIPMENT		
	Overcurrent protection device fitted with the equipment, or		Pass
	... specified in manufacturer's instructions		N.A.
9.6.2	Other equipment		
	Protection provided within the equipment		N.A.
	Overcurrent protection devices not in the protective conductor		N.A.
	Fuses or single pole circuit-breakers not fitted in neutral (multi-phase)		N.A.

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Clause	Requirement – Test	Result - Remark	Verdict

10	RESISTANCE TO HEAT		
10.1	Integrity of CLEARANCES and CREEPAGE DISTANCES		Pass
10.2	Resistance to heat of non-metallic ENCLOSURES	(see appended table)	N.A.
10.3	Resistance to heat of insulating material; supporting parts connected to:		
	- mains supply		N.A.
	- supporting TERMINALS *		N.A.

11	PROTECTION AGAINST HAZARDS FROM FLUIDS		
11.2	Cleaning	(see appended table)	Pass
11.3	Spillage	(see appended table)	N.A.
11.4	Overflow	(see appended table)	N.A.
11.5	Battery electrolyte leakage presents no hazard		N.A.
11.6	Specially protected equipment; test to IEC 529	IP54 ; with the device installed according to the Manufacturer's instruction no dust and no water entered through the enclosure.	Pass
11.7	Fluid pressure and leakage		
11.7.1	Maximum pressure not exceeded	Maximum air pressure input : 200 psi. Maximum air pressure for the following parts : hoses 300 psi ; solenoid valve 220 psi ; detector 290 psi ; internal tube connecting the detector 203 psi .	Pass
11.7.2	Leakage and rupture at high pressure	(see appended table)	Pass
	Test to IEC 335 (refrigeration only)		N.A.
11.7.3	Leakage from low-pressure parts	(see appended table)	N.A.

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Clause	Requirement – Test	Result - Remark	Verdict

11.7.4	Overpressure safety device:		
	- no operation in NORMAL USE	Not present	N.A.
	- position		N.A.
	- access		N.A.
	- adjustment		N.A.
	- no discharge towards person		N.A.
	- no hazard from discharge		N.A.
	- discharge capacity		N.A.
	- no shut-off valve		N.A.

12	PROTECTION AGAINST RADIATION, INCLUDING LASER SOURCES, AND AGAINST SONIC AND ULTRASONIC PRESSURE		
12.2	Equipment producing ionizing radiation		
12.2.1	Ionizing radiation		N.A.
12.2.2	Accelerated electrons		N.A.
12.3	Ultra-violet radiation (under consideration)		N.A.
12.4	Micro-wave radiation (under consideration)		N.A.
12.5	Sonic and ultrasonic pressure		
12.5.1	Sound level	(see appended table)	N.A.
12.5.2	Ultrasonic pressure	(see appended table)	N.A.
12.6	Laser sources (IEC 825)		N.A.

13	PROTECTION AGAINST LIBERATED GASES, EXPLOSION AND IMPLOSION		
13.1	Poisonous and injurious gases		N.A.
13.2	Explosion and implosion		
13.2.1	Components liable to explode have pressure release devices, or		N.A.
	... the apparatus incorporates OPERATOR protection (see also 7.5)		N.A.

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Clause	Requirement – Test	Result - Remark	Verdict

13.2.2	Batteries		
	Explosion/fire hazard		N.A.
	Protection is incorporated in the equipment, or		N.A.
	... instructions specify the batteries to be used		N.A.
	Warning marking or symbol 14		N.A.
	Battery compartment design		N.A.
13.3	Implosion of high-vacuum devices		
	High-vacuum devices are intrinsically protected, or		N.A.
	... ENCLOSURE provides protection		N.A.
	Non-intrinsically protected tube		N.A.
	Separate glass screen		N.A.
	Cathode-ray tube or high-vacuum device mounting		N.A.

14	COMPONENTS		
14.1	Safety components comply with applicable safety requirements in relevant IEC standards	(see appended table)	Pass
14.2	Motors		
14.2.1	Motor temperatures	(see appended table)	N.A.
14.2.2	Series excitation motors		N.A.
14.3	Overtemperature protection devices; devices operating in a SINGLE FAULT CONDITION:		
	- are constructed and tested		N.A.
	- are RATED for voltage and current interrupt		N.A.
	- are RATED for the maximum surface temperature		N.A.
	- parts in contact with flammable liquid		N.A.
	- do not operate in NORMAL USE (see 9.5)		N.A.
	- no self-resetting unless protected part cannot function		N.A.
14.4	Fuse holders	No external fuse holders.	N.A.
14.5	Mains voltage selecting devices	Not present.	N.A.

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14.6	HIGH INTEGRITY components used in applicable positions		N.A.
	Tested to IEC publications		N.A.
	Not a single electronic device		N.A.
14.7	Mains transformers		
14.7.1	Short-circuit tests; transformer meet 4.4.4.1 to 4.4.4.3	(see appended table) See 4.4.2.6	N.A.
14.7.2	Overload test; overtemperature protection meets 14.3, or		N.A.
	... transformer meets 4.4.4.1 to 4.4.4.3	(see appended table)	N.A.
14.8	Overpressure safety devices meet ISO 4126	Non present.	N.A.

15	PROTECTION BY INTERLOCKS		
15.1	General; interlocks are designed to remove a hazard before OPERATOR exposed		N.A.
15.2	Prevention of reactivation		N.A.
15.3	Reliability		N.A.

16	MEASURING CIRCUITS		
16.1	Current measuring circuits	(see appended table)	N.A.

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Clause	Requirement – Test	Result - Remark	Verdict

4.4		TABLE: testing in SINGLE FAULT CONDITION					
		Results: 1 - clause; 2 - fault No.; 3 - fault description; 4 - test duration; 5 – test termination; 6 – compliance with 4.4.4; 7 – comments					
1	2	3	4	5	6	7	
4.4.1	1-4	U8 pins open : “-; G; +; S”	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display “02”.	
4.4.1	5-10	U8 pins s-c : “S; -”, “G; -”, “G; +”, “S; +”, “+; -”, “S;G”	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display “02”.	
4.4.1	11-13	U7B pins s-c : “5; 6”, “6; 7”, “5; 4”	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display “02”.	
4.4.1	14-16	U7A pins s-c : “2; 3”, “1; 2”, “3; 4”	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display “02”.	
4.4.1	17-19	U7C pins s-c : “10; 9”, “9; 8”, “10; 11”	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display “02”.	
4.4.1	20-22	U7D pins s-c : “12; 13”, “13; 14”, “12; 11”	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display “02”.	
4.4.1	23-24	R51 open and s-c	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display “02”.	
4.4.1	25-26	R52 open and s-c	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display “02”.	
4.4.1	27-28	R49 open and s-c	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display “02”.	
4.4.1	29-30	R50 open and s-c	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display “02”.	
4.4.1	31-32	P1 open and s-c	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display “02”.	
4.4.1	33-34	P3 open and s-c	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display “02”.	

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Clause	Requirement – Test		Result - Remark	Verdict

1	2	3	4	5	6	7
4.4.1	35-37	P2 pins open : C, D, E	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display "02".
4.4.1	38-39	P2 pins s-c : "C; D" , "D; E"	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display "02".
4.4.1	40-42	P4 pins open : C, D, E	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display "02".
4.4.1	43-44	P4 pins s-c : "C; D" , "D; E"	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display "02".
4.4.1	45-46	R5 open and S-c	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display "02".
4.4.1	47-48	R6 open and S-c	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display "02".
4.4.1	49-50	R7 open and S-c	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display "02".
4.4.1	51-52	R8 open and S-c	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display "02".
4.4.1	53-54	R45 open and S-c	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display "02".
4.4.1	55-56	R46 open and S-c	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display "02".
4.4.1	57-58	R47 open and S-c	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display "02".
4.4.1	59-60	R48 open and S-c	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display "02".
4.4.1	61-62	U1 pins open : "16" ; "18"	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display "02".

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Clause	Requirement — Test	Result - Remark	Verdict

1	2	3	4	5	6	7
4.4.1	63	Q6 C-E pins s-c	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display "03".
4.4.1	64	Q6 C or E pins open	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display "03".
4.4.1	65	Q4 C-E pins s-c	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display "03".
4.4.1	66	Q4 C or E pins open	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display "03".
4.4.1	67	Q11 C-E pins s-c	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display "03".
4.4.1	68	Q11 C or E pins open	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display "03".
4.4.1	69	Q10 C-E pins s-c	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display "03".
4.4.1	70	Q10 C or E pins open	-	-	Pass	Appliance not working and air inlet valve closed. Error message on the display "03".
4.2.6	71	Secondary windings of mains transformer s-c.	-	6 min	Pass	Windings temperature : 200 °C
4.4.1	72	D10 s-c.	-	6 min	Pass	Windings temperature : 200 °C
4.4.1	73	C11 s-c	-	6 min	Pass	Windings temperature : 200 °C
4.4.1	74	C12 s-c.	-	10 min	Pass	Temperature near Q12 : 70 °C Secondary windings temperature : 55 °C
4.4.1	75	C10 s-c	-	10 min	Pass	Temperature near Q3 : 55 °C Temperature near Q12 : 35 °C
4.4.1	76	C9 s-c	-	10 min	Pass	Temperature near Q2 : 45 °C
4.4.1	77	Q10 C ; E pins s-c	-	5 min	Pass	Solenoid valve temperature : 83 °C

s-c : short-circuit

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Clause	Requirement – Test	Result - Remark	Verdict

5.1.3 c)		TABLE: mains supply					
		Marked RATING (V)	220/230 V			-	
		Number of phases	1			-	
		Frequency (Hz)	50/60 Hz			-	
		Current (A)	-			-	
		Power (W)	8 W			-	
		Power (VA)	-			-	
		Measurements: 1 - test No.; 2 – voltage (V); 3 – frequency (Hz); 4 – current (A); 5 - power (W); 6 - power (VA); 7 – comments and/or operating conditions					
1	2	3	4	5	6	7	
1.	207	50	0.075	11	-	Normal operating conditions.	
2.	230	50	0.08	13	-	Normal operating conditions.	
3.	242	50	0.084	15	-	Normal operating conditions.	

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Clause	Requirement – Test	Result - Remark	Verdict

5.3	TABLE: durability of markings					
	Marking method of:					
	- identification (5.1.2)	Adhesive label				-
	- mains supply (5.1.3)	220/230 V				-
	- fuses (5.1.4)	-				-
	- measuring circuit terminals (5.1.4)	-				-
	- terminals and operating devices (5.1.6)	-				-
	- double/reinforced equipment (5.1.7)	Class I				-
	- battery charging (5.1.8)	-				-
	- warning marking (5.2)	-				-
	Durability test: 1 - method; 2 - test agent; 3 - remains legible; 4 - label loose; 5 - curled edges; 6 – comments					
	1	2	3	4	5	6
Rubbing	water	Yes	No	No	No	Pass
Rubbing	Alcohol	Yes	No	No	No	Pass

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6	TABLE: protection against electric shock									
	Block diagram of the system	annex 1								
	Pollution degree	2								
	Overvoltage installation category	II								
	Measurements: 1 - location or description; 2 – insulation type; 3 - maximum working voltage (V); 4 - CREEPAGE DISTANCE, PWB (mm); 5 - CREEPAGE DISTANCE, CTI; 6 - CREEPAGE DISTANCE, other (mm); 7 – CREEPAGE DISTANCE, CTI; 8 – CLEARANCE (mm); 9 - test voltage (V); 10 – comments									
	1	2	3	4	5	6	7	8	9	10
Between primary and secondary tracks.		R	300 230	- 4.5	- > 100	- -	- -	3.3 -	2300 2300	- -
Between tracks directly connected to the supply mains.		B	300 230	- 3.1	- >100	- -	- -	1.5 -	1350 1350	- -
Between primary and earth tracks.		B	300 230	- 3.1	- >100	- -	- -	1.5 -	1350 1350	- -
Between case of V1 (primary) and core of mains transformer connected to earth.		B	300 230	- -	- -	- 2.2	- > 100	- 1.5	1350 1350	- -
Between case of C16 (primary) and core of mains transformer connected to earth.		B	300 230	- -	- -	- 2.2	- > 100	- 1.5	1350 1350	- -
Between primary windings and secondary windings of mains transformer.		R	300 230	- -	- -	- 4.5	- > 100	3.3 -	2300 2300	- -
Between primary windings and core of mains transformer.		B	300 230	- -	- -	- 4.5	- > 100	3.3 -	2300 2300	- -
Between secondary windings and core of mains transformer.		R	300 230	- -	- -	- 4.5	- > 100	3.3 -	2300 2300	- -
Between primary tracks and metal case connected to earth.		B	300 230	- -	- -	- 2.2	- > 100	1.5 -	1350 1350	- -
Between mains poles. (male connector)		B	300 230	- -	- -	- 2.2	- > 100	1.5 -	1350 1350	- -
Between mains poles and earth. (male connector)		B	300 230	- -	- -	- 2.2	- > 100	1.5 -	1350 1350	- -

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Clause	Requirement – Test	Result - Remark	Verdict

1	2	3	4	5	6	7	8	9	10
Between mains poles and metal panel connected to earth. (male connector)	B	300	-	-	-	-	1.5	1350	-
		230	-	-	2.2	> 100	-	1350	-
Between mains poles. (female connector)	B	300	-	-	-	-	1.5	1350	-
		230	-	-	2.2	> 100	-	1350	-
Between mains poles and earth. (female connector)	B	300	-	-	-	-	1.5	1350	-
		230	-	-	2.2	> 100	-	1350	-

(B) = Basic insulation; (S) = Supplementary insulation; (R) = Reinforced insulation;
Where applicable linear interpolation applied.

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Clause	Requirement – Test	Result - Remark	Verdict

6.2	TABLE: determination of ACCESSIBLE parts		
	List of ACCESSIBLE PARTS: 1 – item; 2 – description; 3 – determination method; 4 – exception under 6.1.1		
	1	2	3
1.	Whole enclosure	Rigid test finger	-

6.3.1	TABLE: values in NORMAL CONDITION								
	Measurements: 1 - item; 2 – voltage (V); 3 - test circuit; 4 - current (A); 5 – capacitance; 6 - 10 s test, voltage (V); 7 - 10 s test, capacitance; 8 - result; 9 – comments								
	1	2	3	4	5	6	7	8	9
	-	-	-	-	-	-	-	-	-

6.3.2	TABLE: values in SINGLE FAULT CONDITION							
	Measurements: 1 - item; 2 - fault condition; 3 - voltage (V); 4 - test circuit; 5 - current (A); 6 - capacitance (μF); 7 – result; 8 – comments							
	1	2	3	4	5	6	7	8
	-	-	-	-	-	-	-	-

6.5.1.2	TABLE: bonding impedance of plug-connected equipment			
	Measurements: 1 – ACCESSIBLE part under test; 2 - test current (A); 3 - voltage attained after 1 min (V); 4 – calculated resistance (Ω); 5 – result			
	1	2	3	4
	-	-	-	-

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Clause	Requirement – Test	Result - Remark	Verdict

6.5.1.3	TABLE: bonding impedance of PERMANENTLY CONNECTED EQUIPMENT			
	Measurements: 1 - ACCESSIBLE part under test; 2 - test current (A); 3 – voltage attained after 1 min (A); 4 – result			
1	2	3	4	
Front panel.	25	0,3	Pass	
Internal appliance.	25	0,3	Pass	

6.5.1.4	TABLE: indirect bonding for measuring and test equipment			
	Measurements: 1 - ACCESSIBLE part under test; 2 - voltage attained (V); 3 - time for voltage to drop below allowable levels(s); 4 – result			
1	2	3	4	
-	-	-	-	

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Clause	Requirement – Test	Result - Remark	Verdict

6.7	TABLE: CLEARANCES and CREEPAGE DISTANCES						
	Measurements (1): 1 - location; 2 – initial CREEPAGE DISTANCE (mm); 3 - initial CLEARANCE (mm); 4 - result; 5 – mechanical tests, force (N); 6 - rigidity test; 7 – impact test						
	1	2	3	4	5	6	7
Between primary and secondary tracks.		7,5	7,5	Pass	30 N	30 N	-
Between tracks directly connected to the supply mains.		3,1	1,7	Pass	30 N	30 N	-
Between primary and earth tracks.		3,1	1,6	Pass	30 N	30 N	-
Between case of V1 (primary) and core of mains transformer connected to earth.		6	6	Pass	30 N	30 N	-
Between case of C16 (primary) and core of mains transformer connected to earth.		11,5	11,5	Pass	30 N	30 N	-
Between primary windings and secondary windings of mains transformer.		9,5	9,5	Pass	30 N	30 N	-
Between primary windings and core of mains transformer.		8,8	8,8	Pass	30 N	30 N	-
Between secondary windings and core of mains transformer.		7,3	7,3	Pass	30 N	30 N	-
Between primary tracks and metal case connected to earth.		14	14	Pass	30 N	30 N	-
Between mains poles. (male connector)		15,5	15,5	Pass	30 N	30 N	-
Between mains poles and earth. (male connector)		8,3	8,3	Pass	30 N	30 N	-
Between mains poles and metal panel connected to earth. (male connector)		6	6	Pass	30 N	30 N	-
Between mains poles. (female connector)		12	12	Pass	30 N	30 N	-
Between mains poles and earth. (female connector)		6	6	Pass	30 N	30 N	-

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Clause	Requirement – Test	Result - Remark	Verdict

Measurements (2): 1 - drop test, normal; 2 – drop test, hand-held; 3 - post test CREEPAGE DISTANCE (mm); 4 - post test CLEARANCE (mm); 5 – result				
1	2	3	4	5
√	-	7,5	7,5	Pass
√	-	3,1	1,7	Pass
√	-	3,1	1,6	Pass
√	-	6	6	Pass
√	-	11,5	11,5	Pass
√	-	9,5	9,5	Pass
-	-	8,8	8,8	Pass
√	-	7,3	7,3	Pass
√	-	14	14	Pass
√	-	15,5	15,5	Pass
√	-	8,3	8,3	Pass
√	-	6	6	Pass
√	-	12	12	Pass
√	-	6	6	Pass

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1	2	3	4	5
6.8				
TABLE: dielectric strength tests for protection against the spread of fire				
Measurements: 1 - location; 2 – working voltage (V); 3 - test voltage (V); 4 – result; 5 – comments				
Between mains poles and external enclosure connected to earth.	230	2300	Pass	-
Between primary and secondary windings of mains transformer.	230	2300	Pass	-
Insulation material (thickness 0,6 mm) between case V1 (primary) and core of mains transformer connected to earth.	230	1350	Pass	-
Insulation material (thickness 1 mm) between male connector and external enclosure connected to earth.	230	1350	Pass	-

IEC 1010-1			
Clause	Requirement – Test	Result - Remark	Verdict

6.10.2.2	TABLE: cord anchorage tests					
	Measurements: 1 - location; 2 – mass (kg); 3 - pull (N); 4 - result; 5 - torque (Nm); 6 – result					
1	2	3	4	5	6	
-	-	-	-	-	-	

8	TABLE: mechanical resistance to shock and impact								
	Measurements; 1 - location; 2 – rigidity; 3 - impact hammer; 4 - drop test, normal; 5 - drop test, hand-held; 6 – working voltage (V); 7 - test voltage (V); 8 - result; 9 – comments								
1	2	3	4	5	6	7	8	9	
Front panel.	✓	✓	-	-	300	2300	Pass	-	

9.1	TABLE: test details						
	Measurements; 1 - between parts or circuits; 2 - CREEPAGE DISTANCE (mm); 3 - CLEARANCE (mm); 4 – working voltage (V); 5 - test voltage (V); 6 - result; 7 – comments						
1	2	3	4	5	6	7	
-	-	-	-	-	-	-	

9.1	TABLE: Annex F.2.1 - limited circuits						
	Test details: 1 - circuit/location; 2 – open circuit voltage (V); 3 - maximum current (A); 4 - maximum available power (VA); 5 - overload protection (VA); 6 - limited current (Yes/No); 7 – comments						
1	2	3	4	5	6	7	
-	-	-	-	-	-	-	

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Clause	Requirement – Test	Result - Remark	Verdict

9.2	TABLE: temperature tests					
	Frequency (Hz)	50/60				-
	Duration (h, min)	4				-
	Voltage (V)	242				-
	Ambient temperature Ta (°C)	24				-
	Measurements: 1 - part; 2 – measured temperature Tm (°C); 3 - corrected maximum temperature Tm + 70 – Ta (°C); 4 – maximum allowed temperature (°C); 5 - result; 6 – comments					
	1	2	3	4	5	6
	1) Solenoid valve (TO TYRE).	29	75	105	Pass	-
	2) Solenoid valve (AIR INLET).	38	84	105	Pass	-
	3) PCB near Q3,Q6,Q7,Q4,Q10.	36	82	105	Pass	-
	4) PCB near Q12,D9,L10.	55	101	105	Pass	-
	5) Windings of mains transformer.	45	91	105	Pass	-

10.2	TABLE: resistance to heat of non-metallic enclosures					
	Test method	non-operative treatment /				-
	Test temperature (°C)					-
	Enclosure samples tested:					-
	(1) description; material					-
	(2) description; material					-
	(3) description; material					-
	(4) description; material					-
	(5) description; material					-
	(6) description; material					-
	Dielectric strength (V)					-

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Clause	Requirement -- Test	Result - Remark	Verdict

11	TABLE: protection against hazards from fluids							
Measurements: 1 - location; 2 - cleaning; 3 - spillage; 4 - overflow; 5 - equipment plus liquid; 6 - working voltage (V); 7 - test voltage (V); 8 - result; 9 - comments								
1	2	3	4	5	6	7	8	9
-	-	-	-	-	-	-	-	-

11.7.2	TABLE: leakage and rupture at high pressure					
Measurements: 1 - part; 2 - maximum permissible working pressure (Pa); 3 - factor; 4 - test pressure (Pa); 5 - leakage test; 6 - burst test; 7 - comments						
1	2	3	4	5	6	7
Air inflow hose.	1.380.000	2.9	4.002.000	-	-	(1)
Air outflow hose.	830.000	3	2.490.000 (24.9 bar)	Pass	Pass	-

(1) Test not performed because the product of pressure and volume is less than 200 kPa.l

11.7.3	TABLE: leakage from low-pressure parts		
Measurements: 1 - part; 2 - test pressure (Pa); 3 - result; 4 - comments			
1	2	3	4
-	-	-	-

12.2.1	TABLE: ionizing radiation		
Measurements: 1 - location; 2 - radiation ($\mu\text{Sv/h}$); 3 - result; 4 - comments			
1	2	3	4
-	-	-	-

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Clause	Requirement – Test	Result - Remark	Verdict

12.5.1	TABLE: sound level measurements		
	Measurements: 1 - location; 2 – value (dBA); 3 - calculated maximum sound pressure level		
	1	2	3
	-	-	-

12.5.2	TABLE: ultrasonic pressure measurements			
	Measurements: 1 - location; 2 – value (dB); 3 - frequency (kHz); 4 - result			
	1	2	3	4
	-	-	-	-

13.2.2	TABLE: batteries tests		
	Battery load and charging circuit diagram	-	-
	Battery type	-	-
	Battery manufacturer	-	-
	Battery model	-	-
	Battery catalogue No.	-	-
	Battery ratings	-	-
	Reverse polarity installment test	-	
	Measurements: 1 - component; 2 – result, open circuit; 3 - result, short circuit		
	1	2	3
	-	-	-

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Clause	Requirement – Test	Result - Remark	Verdict

14.1	TABLE: components				
object/part No.	manufac-turer/trademark	type/model	technical data	standard	mark(s) of conformity
Power supply connector	mPm	180	10 A ; 250 V IP65	DIN 43650 ISO-44006952	VDE, UL, CSA
Connector socket	mPm	200	10 A ; 250 V IP65	DIN 43650 ISO-44006952	VDE, UL, CSA
Mains fuse	Littelfuse	2183	F 0,315 A ; 250 V	IEC 127-2	S
X capacitor (C16)	Siemens	B81130	100 nF ; 250 V (X2)	IEC 384-14 II ed.	S
Y capacitor (C14,C15)	Siemens	B81122	4700 pF ; 250 V (Y2)	IEC 384-14 II ed.	S
Mains transformer (T1)	Ralp Industrial	TR 20706	220 V / 18 V	-	-
Solenoid valve	Emicoil Eitro Electronica Ltda	EVA 03.3	220 psi (15,2 bar)	-	-
Hose	Pneuir	PT	300 psi (20,7 bar) ; ¼"	-	-
Internal tube	S.G. Industria e Comércio de Plásticos e Elastomeros Ltda	PU-3	203 psi (14 bar)	-	-
Pressure detector	Lucas Nova Sensor	NPC-102	300 psi (20,7 bar)	-	-

Remarks :

- a) Components having approval marks have been checked for the correct application in the appliance.
- b) Components without approval marks have been tested according to the applicable clauses of the standard.

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Clause	Requirement – Test	Result - Remark	Verdict

14.2.1	TABLE: motor temperatures measurements					
	Frequency (Hz)	-				
	Duration (h, min)	-				
	Voltage (V)	-				
	Ambient temperature Ta (°C)	-				
	Measurements: 1 - motor No. and location; 2 - insulation class; 3 - measured temperature Tm (°C); 4 - corrected maximum temperature Tm + 40 - Ta (°C); 5 - maximum allowed temperature (°C); 6 - result					
	1	2	3	4	5	6
	-	-	-	-	-	-

14.3	TABLE: overtemperature protection devices			
	Measurements: 1 - component; 2 - type (self-resetting SR, non-self-resetting NSR, non-resetting NR); 3 - result; 4 – comments			
	1	2	3	4
	-	-	-	-

14.7.1	TABLE: short-circuit tests (for mains transformers)		
	Type	-	-
	Manufacturer	-	-
	Tested	In the appliance.	-
	Temperature protection class of the lowest RATED winding (class or maximum RATED temperature) .:	-	-
	Winding identification	-	-
	Type of protector for winding	-	-
	Elapsed time	-	-
	Current, primary (A)	-	-
	Current, secondary (A)	-	-

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Clause	Requirement — Test	Result - Remark	Verdict

	Winding temperature, primary (°C)	-	-
	Winding temperature, secondary (°C)	-	-
	Tissue paper/cheesecloth test	-	
	Voltage test, primary to secondary (V)	-	
	Voltage test, primary to core (V)	-	
	Voltage test, secondary to secondary (V)	-	
	Voltage test, secondary to core (V)	-	

14.7.2	TABLE: overload tests (for mains transformers)		
	Type	-	-
	Manufacturer	-	-
	Tested	-	-
	Temperature protection class of the lowest RATED winding (class or maximum RATED temperature) :	-	-
	Winding identification	-	-
	Type of protector for winding	-	-
	Elapsed time	-	-
	Current, primary (A)	-	-
	Current, secondary (A)	-	-
	Winding temperature, primary (°C)	-	-
	Winding temperature, secondary (°C)	-	-
	Tissue paper/cheesecloth test	-	
	Voltage test, primary to secondary (V)	-	
	Voltage test, primary to core (V)	-	
	Voltage test, secondary to secondary (V)	-	
	Voltage test, secondary to core (V)	-	

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Clause	Requirement – Test	Result - Remark	Verdict

16.1	TABLE: current measuring circuits (current transformers)			
	Measurements: 1 - type/model; 2 - test; 3 - result; 4 – comments			
1	2	3	4	
-	-	-	-	

16.1	TABLE: current measuring circuits (current changing switches)			
	Measurements: 1 - type/model; 2 - maximum RATED current of switch (A); 3 - result; 4 – comments			
1	2	3	4	
-	-	-	-	

BLOCK DIAGRAM

