CE LVD REPORT

Prepared For :	Liaoyang Bomigo Foreign Trade Service Co., Ltd Room 101, No 44, Binhe Road, Baita District, Liaoyang, Liaoning
Product Name:	HEATING MAT
Trade Mark:	/
Main Product model :	Bo-5010 Mig
Additional Product model:	Bo-580, Bo-147, Bo-0854, Bo-195, Bo-7585, Bo-7585, Bo-6015, Bo-8019, Bo-236, Bo-319, Bo-442, Bo-627, Bo-913, Bo-2749, Bo-169, Bo-358, Bo-4711, Bo-663, Bo-824, Bo-135, Bo-297, Bo-516, Bo-7325, Bo-849, Bo-361, Bo-428, Bo-173, Bo-694(All models share same electric circuits except color appearance and model name.)
Prepared By :	CTSL Testing (Dongguan) Co.,ltd. Room 112, Building 1, No. 15, Jiaoyuansongshan, Hetian Village, Houjie Town, Dongguan, Guangdong China
Test Date:	Jul. 02, 2026 To Jul. 09, 2026
Date of Report :	Jul. 09, 2026
Report No.:	CTSL2610730152S

LVD Report

EN 60335-1 & EN 60335-2-17

Household and similar electrical appliances - Safety - Part 2-17: Particular requirements for blankets, pads, clothing and similar flexible heating appliances

&EN 62233

Measurement methods for electromagnetic fields of household appliances and similar apparatus with regard to human exposure

Testing laboratory	
Testing Laboratory Name .....:	CTSL Testing (Dongguan) Co.,ltd.
Address .....:	Room 112, Building 1, No. 15, Jiaoyuansongshan, Hetian Village, Houjie Town, Dongguan, Guangdong China
Testing location .....:	CTSL Testing (Dongguan) Co.,ltd.
Applicant	
Name.....:	Liaoyang Bomigo Foreign Trade Service Co., Ltd
Address.....:	Room 101, No 44, Binhe Road, Baita District, Liaoyang, Liaoning
Test specification	
Standard.....:	EN IEC 60335-1:2023/A11:2023 EN 60335-2-17:2013/A2:2021 EN 62233:2008
Test procedure .....:	Compliance with EN IEC 60335-1:2023/A11:2023 EN 60335-2-17:2013/A2:2021 EN 62233:2008
Procedure deviation.....:	N.A.
Non-standard test method.....:	N.A.
Test item	
Description.....:	HEATING MAT
Trademark.....:	/
Model and/or type reference.....:	Bo-5010 Mig
Manufacturer.....:	Liaoyang Bomigo Foreign Trade Service Co., Ltd
Address.....:	Room 101, No 44, Binhe Road, Baita District, Liaoyang, Liaoning
Rating(s).....:	230VAC 50Hz 115W
Test case verdicts	
Test case does not apply to the test object.....:	N(.A.)
Test item does meet the requirement.....:	P(ass)
Test item does not meet the requirement.....:	F(ail)
Class of protection against electrical shock.....:	Class II appliance

General remarks
This test report shall not be reproduced except in full without the written approval of the testing laboratory.

The test results presented in this report relate only to the item tested.

"(see remark #)" refers to a remark appended to the report.

"(see appended table)" refers to a table appended to the report.

General product information:

Copy of marking plate

HEATING MAT
Model: Bo-5010 Mig
Rating: 230VAC 50Hz 115W



Instructions for Use: Suitable for household pets, indoor use only
Liaoyang Bomigo Foreign Trade Service Co., Ltd

Name and address of the testing laboratory: CTSL Testing (Dongguan) Co.,ltd.
Room 112, Building 1, No. 15, Jiaoyuansongshan, Hetian Village, Houjie Town, Dongguan, Guangdong China

Test by : Sandy Lun — Signature — Jul. 09, 2026 — Date

Technician — Title

Review by : Parker Wang — Signature — Jul. 09, 2026 — Date

Project Engineer — Title

Approved by : Felix Huang — Signature — Jul. 09, 2026 — Date

Authorized signatory

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
5	GENERAL CONDITIONS FOR THE TESTS		P
	Tests performed according to cl. 5, e.g. nature of supply, sequence of testing, etc.		P
6	CLASSIFICATION		P
6.1	Appliances of Class II or III (not exceeding 24 V) with respect to protection against electric shock(EN 60335-2-17)	Class II	P
6.2	Protection against harmful ingress of water	IP20	P
7	MARKING AND INSTRUCTIONS		P
7.1	Rated voltage or voltage range (V) .....:	230V~	P
	Nature of supply .....:	~	P
	Rated frequency (Hz).....:	50/60Hz	P
	Rated power input (W) .....:	115W	P
	Rated current (A) .....:		P
	Manufacturer's or responsible vendor's name, trademark or identification mark .....:		P
	Model or type reference .....:		P
	Symbol 5172 of IEC 60417, for Class II appliances	Class II	P
	IP number, other than IPX0 .....:	IP20	P
	Symbol IEC 60417-5036, for the enclosure of electrically-operated water valves in external hose-sets for connection of an appliance to the water mains		N/A
	Parts of class III do not marked with rated voltage of appliance (EN 60335-2-17)		N/A
	Flexible parts and detachable cover:		P
	Manufacturer's or responsible vendor's name, trademark or identification mar(EN 60335-2-17)		P
	Detachable cover marked with model or type reference of the appliance intended to be use(EN 60335-2- 17)		N/A
	Flexible part used with detachable control marked with the reference of the control unit(EN 60335-2-17)		P
	Flexible part used with detachable transformer marked with the reference of the transformer (EN 60335-2-17)		N/A
	Read the instruction (symbol 1641 of ISO 7000)(EN 60335-2-17)		P
	Do not use folded (see fig.101)(EN 60335-2-17)		P

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	Do not use rucked (see fig.101)(EN 60335-2-17)		P
	Do not insert pin (see fig.102)(EN 60335-2-17)		P
	Underblanket and overblanked, as appropriate(EN 60335-2-17)		N/A
	Do not use if wet (EN 60335-2-17)		P
	Do not use with a helpless or insensitive person or infant (EN 60335-2-17)		P
	Overlong application can result in skin burns(EN 60335-2-17)		P
	Flexible part and detachable cover marked with ISO 3758 (EN 60335-2-17)		P
7.2	Warning for stationary appliances for multiple supply		N/A
	Warning placed in vicinity of terminal cover		N/A
7.3	Range of rated values marked with the lower and upper limits separated by a hyphen		N/A
	Different rated values marked with the values separated by an oblique stroke		N/A
7.4	Appliances adjustable for different rated voltages, the voltage setting is clearly discernible		N/A
7.5	Appliances with more than one rated voltage or one or more rated voltage ranges, marked with rated input or rated current for each rated voltage or range, unless		N/A
	the power input is related to the arithmetic mean value of the rated voltage range		N/A
	Relation between marking for upper and lower limits of rated power input or rated current and voltage is clear		N/A
7.6	Correct symbols used		P
7.7	Connection diagram fixed to appliances to be connected to more than two supply conductors and appliances for multiple supply		N/A
7.8	Except for type Z attachment, terminals for connection to the supply mains indicated as follows:		N/A
	- marking of terminals exclusively for the neutral conductor (N)		N/A
	- marking of protective earthing terminals (symbol 5019 of IEC 60417)		P
	- marking not placed on removable parts		N/A
7.9	Marking or placing of switches which may cause a hazard		P

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
7.10	Indications of switches on stationary appliances and controls on all appliances by use of figures, letters or other visual means .....:		P
	The figure 0 indicates only OFF position, unless no confusion with the OFF position		N/A
7.11	Indication for direction of adjustment of controls		P
7.12	Instructions for safe use provided		P
	The instructions state that:		-
	- the appliance is not to be used by children or persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction		P
	- children being supervised not to play with the appliance		P
	The instruction have to contain :		
	Important instruction (EN 60335-2-17)		P
	Retain for future use (EN 60335-2-17)		P
	Explain of symbols used (EN 60335-2-17)		P
	How the blank is to be secured to the bed (EN 60335-2-17)		P
	Setting the control for all night use (EN 60335-2-17)		N/A
	For pads likely to be used for an extended period, controls adjusted to the setting recommended for continuous use (EN 60335-2-17)		P
	Used only with detachable devices marked on the appliance (EN 60335-2-17)		P
	Length and width of detachable cover of duvet		N/A
	Return to the manufacturer or his agent if link has ruptured (EN 60335-2-17)		P
	Instruction for correct store (EN 60335-2-17)		P
	When storing the appliance, allow it to cool down before folding (EN 60335-2-17)		P
	Do not crease the appliance by placing items on top of it during storage (EN 60335-2-17)		P
	Examine the appliance frequently(EN 60335-2-17)		P

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	Return to the supplier if has been misused (EN 60335-2-17)		P
	Not intended for medical use in hospital(EN 60335-2-17)		P
	For underblankets:		-
	Do not tuck in (EN 60335-2-17)		N/A
	Do not use on adjustable bed, or (EN 60335-2-17)		N/A
	Check that the blanket and cord do not become trapped or rucked (EN 60335-2-17)		N/A
	This blanked is not to be used by young children, unless the controls have been pre-set by a parent or guardian, or unless the child has been adequately instructed on how to operate the controls safely (EN 60335-2-17)		N/A
7.12.1	Sufficient details for installation supplied		P
7.12.2	Stationary appliances not fitted with means for disconnection from the supply mains having a contact separation in all poles that provide full disconnection under overvoltage category III, the instructions state that means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules		N/A
7.12.3	Insulation of the fixed wiring in contact with parts exceeding 50 K during clause 11; instructions stating that the fixed wiring must be protected		N/A
7.12.4	Instructions for built-in appliances:		-
	- dimensions of space		N/A
	- dimensions and position of supporting means		N/A
	- distances between parts and surrounding structure		N/A
	- dimensions of ventilation openings and arrangement		N/A
	- connection to supply mains and interconnection of separate components		N/A
	- allow disconnection of the appliance after installation, by accessible plug or a switch in the fixed wiring, unless		N/A
	a switch complying with 24.3		N/A
7.12.5	Replacement cord instructions, type X attachment with a specially prepared cord		N/A
	Replacement cord instructions, type Y attachment		P

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	Replacement cord instructions, type Z attachment		N/A
7.12.6	Caution in the instructions for heating appliances with a non-self-resetting thermal cut-out		N/A
7.12.7	Instructions for fixed appliances stating how the appliance is to be fixed		N/A
7.12.8	Instructions for appliances connected to the water mains:		-
	- max. inlet water pressure (Pa) .....:		N/A
	- min. inlet water pressure, if necessary (Pa).....:		N/A
	Instructions concerning new and old hose-sets for appliances connected to the water mains by detachable hose-sets		N/A
7.13	Instructions and other texts in an official language	English	P
7.14	Marking clearly legible and durable (liquid detergent is used) (EN 60335-2-17)		P
	Height lettering on flexible part at least2,5 mm(EN 60335-2-17)		P
	Height symbols shown in Fig. 101 and 102 at least 15mm (EN 60335-2-17)		P
	Height lettering of “important instruction-retain for future use” at least 6mm (EN 60335-2-17)		P
7.15	Marking on a main part		P
	Marking clearly discernible from the outside, if necessary after removal of a cover		P
	For portable appliances, cover can be removed or opened without a tool		P
	For stationary appliances, name, trademark or identification mark and model or type reference visible after installation		N/A
	For fixed appliances, name, trademark or identification mark and model or type reference visible after installation according to the instructions		N/A
	Indications for switches and controls placed on or near the components. Marking not on parts which can be positioned or repositioned in such a way that the marking is misleading		P
7.16	Marking of a possible replaceable thermal link or fuse link clearly visible with regard to replacing the link		N/A
7.101	Detachable control units marked with reference number (EN 60335-2-17)		P

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
8	PROTECTION AGAINST ACCESS TO LIVE PARTS		P
8.1	Adequate protection against accidental contact with live parts		P
8.1.1	Requirement applies for all positions, detachable parts removed		P
	Insertion or removal of lamps, protection against contact with live parts of the lamp cap		N/A
	Use of test probe B of IEC 61032: no contact with live parts		P
8.1.2	Use of test probe 13 of IEC 61032 through openings in class 0 appliances and class II appliances/ constructions: no contact with live parts		P
	Test probe 13 also applied through openings in earthed metal enclosures having a non-conductive coating: no contact with live parts	No such part	N/A
8.1.3	For appliances other than class II, use of test probe 41 of IEC 61032: no contact with live parts of visible glowing heating elements		N/A
8.1.4	Accessible part not considered live if:		-
	- safety extra-low a.c. voltage: peak value not exceeding 42.4 V	No such part	N/A
	- safety extra-low d.c. voltage: not exceeding 42.4 V		N/A
	- or separated from live parts by protective impedance		N/A
	If protective impedance: d.c. current not exceeding 2 mA, and		N/A
	a.c. peak value not exceeding 0.7 mA		N/A
	- for peak values over 42.4 V up to and including 450 V, capacitance not exceeding 0,1 F		N/A
	- for peak values over 450 V up to and including 15 kV, discharge not exceeding 45 C		N/A
	- for peak values over 15kV, the energy in the discharge not exceeding 350 mJ		N/A
8.1.5	Live parts protected at least by basic insulation before installation or assembly:		-
	- built-in appliances		N/A
	- fixed appliances		N/A
	- appliances delivered in separate units		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
8.2	Class II appliances and constructions constructed so that there is adequate protection against accidental contact with basic insulation and metal parts separated from live parts by basic insulation only		P
	Only possible to touch parts separated from live parts by double or reinforced insulation		P
9	STARTING OF MOTOR-OPERATED APPLIANCES		N/A
	Requirements and tests are specified in part 2 when necessary		N/A
10	POWER INPUT AND CURRENT		P
10.1	Power input at normal operating temperature, rated voltage and normal operation not deviating from rated power input by more than shown in table 1	(see appended table)	P
	Test for an appliance with one or more rated voltage ranges		N/A
10.2	Current at normal operating temperature, rated voltage and normal operation not deviating from rated current by more than shown in table 2		N/A
	Test for an appliance with one or more rated voltage ranges		N/A
10.101	For PTC heating elements the power input have to decrease if the temperature increase		N/A
11	HEATING		P
11.1	No excessive temperatures in normal use		P
11.2	Placing and mounting of appliance as described		P
	Placing of control unit/cord switch(EN 60335-2-17)		P
	Duvet folded (not PTC elements)(EN 60335-2-17)		N/A
	Wraps folded (EN 60335-2-17)		N/A
11.3	Temperature rises, other than of windings, determined by thermocouples		P
	Temperature rises of windings determined by resistance method, unless		N/A
	the windings makes it difficult to make the necessary connections		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	Thermocouples are attached to brass or copper plates coated with insulating lacquer (electro-conductive textile) (EN 60335-2-17)		P
	Thermocouples are soldered to plates of copper (pad) (EN 60335-2-17)		P
11.4	Heating appliances operated under normal operation at 1.15 times rated power input .....:		N/A
	Supply voltage (V) between 0,94 and 1,06 times rated voltage (controlled appliances and class III construction) (EN 60335-2-17)		P
11.5	Motor-operated appliances operated under normal operation at most unfavourable voltage between 0.94 and 1.06 times rated voltage .....:		N/A
11.6	Combined appliances operated under normal operation at most unfavourable voltage between 0.94 and 1.06 times rated voltage.....:		N/A
11.7	Appliances are operated until steady conditions are established (EN 60335-2-17)		P
11.8	Temperature rises not exceeding values in table 3	(see appended tables)	P
	Sealing compound does not flow out		P
	Protective devices do not operate, except		P
	components in protective electronic circuits tested for the number of cycles specified in 24.1.4		N/A
	Temperatures not exceeding values in table 101 or table 102 (EN 60335-2-17)		P
11.101	No risk of heatstroke to the user (blanket/mattress) (EN 60335-2-17)		N/A
	Blanket/mattress surface temperature controllable down to 60 °C or less, during the first hour of operation, and (EN 60335-2-17)		N/A
	37 °C thereafter (EN 60335-2-17)		N/A
11.102	No excessive surface temperature (pad) (EN 60335-2-17)		P
	Controlled pads, surface temperature controllable down to 85 °C or less (EN 60335-2-17)		P
	other pads, surface temperature not exceed 60 K (EN 60335-2-17)		N/A
13	LEAKAGE CURRENT AND ELECTRIC STRENGTH AT OPERATING TEMPERATURE		-

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
13.1	Leakage current not excessive and electric strength adequate		P
	Controlled appliances supplied at 1.06 times rated voltage (EN 60335-2-17) .....:		P
	Load of 35 kg/m^2 is placed on the top sheet(EN 60335-2-17)		P
	Class III appliances and Class III constructions, tests not applicable (EN 60335-2-17)		N
	Protective impedance and radio interference filters disconnected before carrying out the tests		P
13.2	Leakage current measured by means of the circuit described in figure 4 of IEC 60990		P
	Pads 0,5 mA (EN 60335-2-17)		P
	Blankets and mattresses 1 mA/m^2 with max 2,5 mA (EN 60335-2-17)		N/A
	Leakage current measurements	(see appended table)	P
13.3	The appliance is disconnected from the supply		P
	Electric strength tests according to table 4	(see appended table)	P
	No breakdown during the tests		P
14	TRANSIENT OVERVOLTAGES		N/A
	Appliances withstand the transient overvoltages to which they may be subjected		N/A
	Clearances having a value less than specified in table 16 subjected to an impulse voltage test, the test voltage specified in table 6	(see appended table)	N/A
	No flashover during the test, unless of functional insulation		N/A
	In case of flashover of functional insulation, the appliance complies with clause 19 with the clearance short circuited		N/A
15	MOISTURE RESISTANCE		P
15.1	Enclosure provides the degree of moisture protection according to classification of the appliance	IP20	P
	Compliance checked as specified in 15.1.1, taking into account 15.1.2, followed by the electric strength test of 16.3		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	No trace of water on insulation which can result in a reduction of clearances and creepage distances below values specified in clause 29		N/A
	Class III appliances and Class III constructions, tests not applicable (EN 60335-2-17)		N/A
15.1.1	Appliances, other than IPX0, subjected to tests as specified in IEC 60529..... :		N/A
	Water valves in external hoses for connection of an appliance to the water mains tested as specified for IPX7 appliances		N/A
15.1.2	Hand-held appliance turned continuously through the most unfavourable positions during the test		N/A
	Built-in appliances installed according to the instructions		N/A
	Appliances placed or used on the floor or table placed on a horizontal unperforated support		N/A
	Appliances normally fixed to a wall and appliances with pins for insertion into socket-outlets are mounted on a wooden board		N/A
	For IPX3 appliances, the base of wall mounted appliances is placed at the same level as the pivot axis of the oscillating tube		N/A
	For IPX4 appliances, the horizontal centre line of the appliance is aligned with the pivot axis of the oscillating tube		N/A
	However, for appliances normally used on the floor or table, the movement is limited to two times 90 for a period of 5 min, the support being placed at the level of the pivot axis of the oscillating tube		N/A
	Appliances normally fixed to a ceiling are mounted underneath a horizontal unperforated support, the pivot axis of the oscillating tube located at the level of the underside of the support		N/A
	For IPX4 appliances, the movement of the tube is limited to two times 90 from the vertical for a period of 5 min		N/A
	Wall-mounted appliances, take into account the distance to the floor stated in the instructions		N/A
	Appliances with type X attachment fitted with a flexible cord as described		N/A
	Detachable parts tested as specified		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
15.2	Spillage of liquid does not affect the electrical insulation		N/A
	Appliances with type X attachment fitted with a flexible cord as described		N/A
	Appliances incorporating an appliance inlet tested with or without an connector, whichever is most unfavourable		N/A
	Detachable parts removed		N/A
	Overfilling test with additional amount of water, over a period of 1 min (l)..... :		N/A
	The appliance withstands the electric strength test of 16.3		N/A
	No trace of water on insulation that can result in a reduction of clearances and creepage distances below values specified in clause 29		N/A
15.3	Appliances proof against humid conditions	25 °C, 93 % R.H.	P
	Humidity test for 48 h in a humidity cabinet		P
	The appliance withstands the tests of clause 16		P
15.101	Washable appliances are laundered according to instruction (EN 60335-2-17)		N/A
	Immersion test for 1 hour and then cl. 16 apply and no water on insulation specified in cl. 29 (EN 60335-2-17)		N/A
	Moisture-proof appliances, water not in contact with heating elements and other current-carrying parts (EN 60335-2-17)		N/A
15.102	Incision on permanent enclosure (EN 60335-2-17)		P
	Immersion test for 1 hour and then cl. 16 apply and no water on insulation specified in cl. 29 (EN 60335-2-17)		P
15.103	Mattress wetted with quantity (l) of saline (EN 60335-2-17) ..... :		N/A
	Withstand electric strength and inspection (flexible part) (EN 60335-2-17)		N/A
16	LEAKAGE CURRENT AND ELECTRIC STRENGTH		P
16.1	Leakage current not excessive and electric strength adequate		P

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	Protective impedance disconnected from live parts before carrying out the tests		N/A
	Class III appliances and Class III constructions, tests not applicable (EN 60335-2-17)		N/A
16.2	Single-phase appliances: test voltage 1.06 times rated voltage ..... :		N/A
	Three-phase appliances: test voltage 1.06 times rated voltage divided by 3 ..... :		N/A
	Flexible parts immersed in the saline solution (blankets and pads) (EN 60335-2-17)		P
	Flexible parts covered with metal foil (mattresses) (EN 60335-2-17)		P
	Pads (max 1 mA) (EN 60335-2-17)		P
	Blankets and mattresses (max 5 mA)(EN 60335-2-17)		N/A
	Leakage current measurements	(see appended table)	P
16.3	Electric strength tests according to table 7	(see appended table)	P
	No breakdown during the tests		P
	Flexing part of blankets and mattresses are rinsed in water (EN 60335-2-17)		N/A
17	OVERLOAD PROTECTION OF TRANSFORMERS AND ASSOCIATED CIRCUITS		N/A
	No excessive temperatures in transformer or associated circuits in event of short-circuits likely to occur in normal use	(see appended table)	N/A
	Appliance supplied with 1.06 or 0.94 times rated voltage and the most unfavourable short-circuit or overload likely to occur in normal use applied ..... :		N/A
	Temperature rise of insulation of the conductors of safety extra-low voltage circuits not exceeding the relevant value specified in table 3 by more than 15 K		N/A
	Temperature of the winding not exceeding the value specified in table 8,		N/A
	however limits do not apply to fail-safe transformers complying with sub-clause 15.5 of IEC 61558-1		N/A
19	ABNORMAL OPERATION		P
19.1	The risk of fire or mechanical damage under abnormal or careless operation obviated		P

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	Electronic circuits so designed and applied that a fault will not render the appliance unsafe		P
	Appliances incorporating contactors or relays subjected to the test of 19.14, being carried out before the tests of 19.11		N/A
19.2	Test of appliance with heating elements with restricted heat dissipation; test voltage (V): power input of 0.85 times rated power input ..... :		P
19.3	Test of 19.2 repeated; test voltage (V): power input of 1.24 times rated power input ..... :		P
19.4	Test conditions as in cl. 11, any control limiting the temperature during tests of cl. 11 short-circuited		N/A
19.5	Test of 19.4 repeated on Class 0I and I appliances with tubular sheathed or embedded heating elements. No short-circuiting, but one end of the element connected to the elements sheath		N/A
	The test repeated with reversed polarity and the other end of the heating element connected to the sheath		N/A
	The test is not carried out on appliances intended to be permanently connected to fixed wiring and on appliances where an all-pole disconnection occurs during the test of 19.4		N/A
19.6	Appliances with PTC heating elements tested at rated voltage, establishing steady conditions		N/A
	The working voltage of the PTC heating element is increased by 5% and the appliance is operated until steady conditions are re-established. The voltage is then increased in similar steps until 1.5 times working voltage or until the PTC heating element ruptures		N/A
19.7	Stalling test by locking the rotor if the locked rotor torque is smaller than the full load torque or locking moving parts of other appliances		N/A
	Locked rotor, motor capacitors open-circuited or short-circuited, if required		N/A
	Locked rotor, capacitors open-circuited one at a time		N/A
	Test repeated with capacitors short-circuited one at a time, if required		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	Appliances with timer or programmer supplied with rated voltage for each of the tests, for a period equal to the maximum period allowed		N/A
	Other appliances supplied with rated voltage for a period as specified		N/A
	Winding temperatures not exceeding values specified in table 8	(see appended table)	N/A
19.8	Three-phase motors operated at rated voltage with one phase disconnected		N/A
19.9	Running overload test on appliances incorporating motors intended to be remotely or automatically controlled or liable to be operated continuously		N/A
	Winding temperatures not exceeding values as specified	(see appended table)	N/A
19.10	Series motor operated at 1.3 times rated voltage for 1 min..... :		N/A
	During the test, parts not being ejected from the appliance		N/A
19.11	Electronic circuits, compliance checked by evaluation of the fault conditions specified in 19.11.2 for all circuits or parts of circuits, unless they comply with the conditions specified in 19.11.1		P
	Appliances incorporating a protective electronic circuit subjected to the tests of 19.11.3 and 19.11.4		N/A
	Appliances having a device with an off position obtained by electronic disconnection, or a device placing the appliance in a stand-by mode, subjected to the tests of 19.11.4		P
	Appliances incorporating an electronic circuit that relies upon a programmable component to function correctly, subjected to the test of 19.11.4.8		P
	unless restarting not result in a hazard		P
19.11.1	Before applying the fault conditions a) to f) in 19.11.2, it is checked if circuits or parts of circuit meet both of the following conditions:		-
	- the electronic circuit is a low-power circuit, that is, the maximum power at low-power points does not exceed 15 W according to the tests specified		N/A
	- the protection against electric shock, fire hazard, mechanical hazard or dangerous malfunction in other parts of the appliance does not rely on the correct functioning of the electronic circuit		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
19.11.2	Fault conditions applied one at a time, the appliance operated under conditions specified in cl. 11, but supplied at rated voltage, the duration of the tests as specified:		-
	a) short circuit of functional insulation if clearances or creepage distances are less than the values specified in 29		P
	b) open circuit at the terminals of any component		P
	c) short circuit of capacitors, unless they comply with IEC 60384-14		P
	d) short circuit of any two terminals of an electronic component, other than integrated circuits. This fault condition is not applied between the two circuits of an optocoupler		P
	e) failure of triacs in the diode mode		P
	f) failure of an integrated circuit		P
	g) failure of an electronic power switching device		P
	During failure of power switching device, winding temperatures not exceeding the values specified in 19.7		P
19.11.3	If the appliance incorporates a protective electronic circuit which operates to ensure compliance with clause 19, the relevant test is repeated with a single fault simulated, as indicated in a) to f) of 19.11.2		N/A
	During and after each test the following is checked:		-
	- the temperature rise of the windings do not exceed the values specified in table 8		N/A
	- the appliance complies with the conditions specified in 19.13		N/A
	- any current flowing through protective impedance not exceeding the limits specified in 8.1.4		N/A
	If a conductor of a printed board becomes open-circuited, the appliance is considered to have withstood the particular test, provided all three of the following conditions are met:		-
	- the material of the printed circuit board withstands the burning test of annex E		N/A
	- any loosened conductor does not reduce the clearances or creepage distances between live parts and accessible metal parts below the values specified in cl. 29		N/A
	- the appliance withstands the tests of 19.11.2 with open-circuited conductor bridged		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
19.11.4	Appliances having a device with an off position obtained by electronic disconnection, or		P
	a device that can be placed in the stand-by mode,		P
	subjected to the tests of 19.11.4.1 to 19.11.4.7		P
	Appliances incorporating a protective electronic circuit subjected to the tests of 19.11.4.1 to 19.11.4.7, except that		N/A
	appliances operated for 30 s or 5 min during the test of 19.7 are not subjected to the tests for electromagnetic phenomena.		N/A
19.11.4.1	The appliance is subjected to electrostatic discharges in accordance with IEC 61000-4-2, test level 4		P
19.11.4.2	The appliance is subjected to radiated fields in accordance with IEC 61000-4-3, test level 3		P
19.11.4.3	The appliance is subjected to fast transient bursts in accordance with IEC 61000-4-4, test level 3 or 4 as specified		P
19.11.4.4	The power supply terminals of the appliance subjected to voltage surges in accordance with IEC 61000-4-5, test level 3 or 4 as specified		P
	Earthed heating elements in class I appliances disconnected		N/A
19.11.4.5	The appliance is subjected to injected currents in accordance with IEC 61000-4-6, test level 3		P
19.11.4.6	The appliance is subjected to the Class 3 voltage dips and interruptions in accordance with IEC 61000- 4-11		P
19.11.4.7	The appliance is subjected to mains signals in accordance with IEC 61000-4-13, test level class 2		P
19.11.4.8	The appliance is supplied at rated voltage and operated under normal operation. After 60s the power supply is reduces to a level such that the appliance ceases to respond or a programmable component cease to operate.		P
	The appliance continues to operate normally or requires a manual operation to restart		P

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
19.12	If the safety of the appliance for any of the fault conditions specified in 19.11.2 depends on the operation of a miniature fuse-link complying with IEC 60127, the test is repeated, measuring the current flowing through the fuse-link; measured current (A); rated current of the fuse-link (A) ..... :		P
19.13	During the tests the appliance does not emit flames, molten metal, poisonous or ignitable gas in hazardous amounts		P
	Temperature rises not exceeding the values shown in table 9	(see appended table)	P
	Compliance with cl. 8 not impaired		P
	If the appliance can still be operated it complies with 20.2		N/A
	Insulation, other than of class III appliance, withstand the electric strength test of 16.3, the test voltage specified in table 4:		P
	- basic insulation ..... :		P
	- supplementary insulation..... :		P
	- reinforced insulation ..... :		P
	After operation or interruption of a control, clearances and creepage distances across the functional insulation withstanding the electric strength test of 16.3. the test voltage being twice the working voltage		N/A
	The appliance does not undergo a dangerous malfunction, and		P
	no failure of protective electronic circuits, if the appliance is still operable		N/A
	Appliances tested with an electronic switch in the off position, or in the stand-by mode:		-
	- do not become operational, or		P
	- if they become operational, do not result in a dangerous malfunction during or after the tests of 19.11.4		N
	Flexible part in contact thermal insulation (EN 60335-2-17)		-
	165 °C (160 C) controlled appliance		P
	150 K (145 K) other appliance	(see appended table)	N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
19.14	Appliances operated under the conditions of Clause 11. Contactors or relays contacts operating under the conditions of clause 11 short-circuited		N/A
19.101	Test of appliances except ruck-resistant appliances with 3-thickness fold and partial covering (EN 60335-2-17)		-
	Inherently controlled appliance at voltage (V) (0,9-1,1 times rated voltage) .....:		N/A
	Other appliances at input (W) (0,85-1,24 times rated input) .....:		N/A
	Test of underblankets except ruck-resistant, completely covered (EN 60335-2-17)		-
	Inherently controlled appliance at voltage (V) (0,9-1,1 times rated voltage) .....:		N/A
	Other appliances at input (W) (0,85-1,24 times rated input) .....:		N/A
19.102	Underblankets except ruck-resistant, 5-thickness fold (EN 60335-2-17)		-
	Inherently controlled appliances at voltage (V) (1,1times rated voltage) .....:		N/A
	Other appliances at input (W) (1,24 times rated input) .....:		N/A
19.103	Overblankets, 5-thickness fold (EN 60335-2-17)		-
	Inherently controlled appliance at voltage (V) (0,9-1,1 times rated voltage) .....:		N/A
	Other appliances at input (W) (0,85-1,24 times rated input) .....:		N/A
19.104	Controlled ruck-resistant blankets and controlled mattresses, test (EN 60335-2-17)		N/A
	Appliance at voltage (V) (0,9-1,1 times rated voltage) .....:		N/A
19.105	Ruck-resistant blankets, 3-thickness fold (EN 60335-2-17)		N/A
	Inherently controlled appliance at voltage (V) (0,9-1,1 times rated voltage) .....:		N/A
	Other appliances at input (W) (0,85-1,24 times rated input) .....:		N/A
19.106	Pads, 2-thickness fold (EN 60335-2-17)		P
	Inherently controlled appliance at voltage (V) (0,9-1,1 times rated voltage) .....:		P
	Other appliances at input (W) (0,85-1,24 times rated input) .....:		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
19.107	Tests with 19.101 to 19.106 repeated with the protection circuit included in the fold at (V) 0,9 times the rated voltage or 0,85 times the rated input (EN 60335-2-17)		P
19.108	Appliances with controls short circuit (EN 60335-2-17)		P
	Inherently controlled appliance at voltage (V) (0,9-1,1 times rated voltage) .....:		P
	Other appliances at input (W) (0,85-1,24 times rated input) .....:		N/A
19.109	Pads tested with two-thirds of flexible part positioned so that it overhangs the edge of the plywood support (EN 60335-2-17)		P
19.110	Pads, 3-thickness fold (EN 60335-2-17)		P
	Inherently controlled appliance at voltage (V) (0,9-1,1 times rated voltage) .....:		P
	Other appliances at input (W) (0,85-1,24 times rated input) .....:		N/A
19.111	Blankets and mattresses, test of 11.101 repeated with simulated single component failure. Max. surface temperature does not exceed 60 °C (EN 60335-2-17)		N/A
	Pads operated under normal condition with control adjusted for continuous use; simulated single component failure		P
	Inherently controlled pads at voltage (V) (0,94-1,06 times rated voltage)……:		P
	Other pads at input (W) (1,15 times rated input) …..:		N/A
	Inherently controlled pads, max. surface temperature does not exceed 85 °C		P
	Other pads, max. surface temperature rise does not exceed 60 K		N/A
19.112	Heating elements and internal wiring do not attain excessive temperature if a strand or strands are broken (tests 19.112.1-19.112.3) (EN 60335-2-17)		N/A
19.112.1	Test of internal wiring/heating elements without integral insulation, having individual strands not insulated from each other		N/A
	Number of strands left intact for the test; number of strands:		N/A
	No scorching of enclosure or material in contact		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
19.112.2	Test of internal wiring/heating elements without integral insulation, having individual strands not insulated from each other		N/A
	Number of strands left intact for the test; number of strands:		N/A
	No scorching of enclosure or material in contact		N/A
19.112.3	Test of internal wiring/heating elements having individual strands which are electrically insulated from each other		N/A
	Measured insulation resistance (M) at 500 V d.c. between any two strands:		N/A
	0,1 M min. (Class III appliances)		N/A
	1 M min. (for other appliances)		N/A
20	STABILITY AND MECHANICAL HAZARDS		N/A
20.1	Adequate stability		N/A
	Tilting test through an angle of 10 (appliance placed on an inclined plane/horizontal plane); appliance does not overturn		N/A
	Tilting test repeated on appliances with heating elements, angle of inclination increased to 15		N/A
	Possible heating test in overturned position; temperature rise does not exceed values shown in table 9		N/A
20.2	Moving parts adequately arranged or enclosed as to provide protection against personal injury		N/A
	Protective enclosures, guards and similar parts are non-detachable		N/A
	Adequate mechanical strength and fixing of protective enclosures		N/A
	Self-resetting thermal cut-outs and overcurrent protective devices not causing a hazard, by unexpected reclosure		N/A
	Not possible to touch dangerous moving parts with test probe		N/A
21	MECHANICAL STRENGTH		P
21.1	Appliance has adequate mechanical strength and is constructed as to withstand rough handling		P

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	Checked by applying blows to the appliance in accordance with test Ehb of IEC 60068-2-75, spring hammer test, impact energy 0,5 J	Applying blows to control unit	P
	If necessary, supplementary or reinforced insulation subjected to the electric strength test of 16.3		N/A
	If necessary, repetition of groups of three blows on a new sample		N/A
	Flexible parts do not show: (EN 60335-2-17)		P
	No damage to enclosure or displacement of heating elements		P
	No breakage of conductors of heating element		P
	No breakage more than 10% of strands of internal wiring		P
	No failure of constructional stitching or breakage of glued or welded joints		P
	No loosening of non-detachable flexible cord		P
	No loosening or breakage of electrical connections		P
	No open circuiting in controls in flexible part		P
	No damage between busbars and electro-conductive material or between busbars and their connections		N/A
21.2	Accessible parts of solid insulation having strength to prevent penetration by sharp implements		P
	The insulation is tested as specified, unless		P
	the thickness of supplementary insulation is at least 1 mm and reinforced insulation is at least 2 mm	>2.0mm	P
	Not applicable to flexible parts (EN 60335-2-17)		P
21.101	Control units subjected to prescribed drop tests (EN 60335-2-17)		-
	No damage after test		P
	Repeat of test Cl. 11. (if applicable)		P
21.102	Blanket rotated 2000 times on machine described in Annex BB (EN 60335-2-17)		N/A
21.103	Pads subjected to 4000 cycles of specified flexing test (force N) applied to attached end (EN 60335-2-17) ..... :		P
21.104	Mattress subjected to 1000 cycles with prescribed roller (EN 60335-2-17)		P

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
21.105	Measured surface temperature of flexible part (inherently controlled appliance) (EN 60335-2-17)		P
	Temperature (°C) at beginning of test.....:	49.8 °C	P
	Temperature (°C) at end of test.....:	49.7 °C	P
	Temperature difference (K) (limit 5 K max.).....:		P
	PTC heating elements 1000 h covered with 90 mm thick of thermal insulation		N/A
	Temperature after 1000 h and at the end of the test not increased more than 5 K		N/A
21.106	For blankets test of 21.102 repeated with other face in contact (EN 60335-2-17)		N/A
	For pads, test of 21.103 repeated with other face adjacent to roller		P
	For mattresses test of 21.104 repeated in direction of minor axis		N/A
21.107	Pad rotated 500 revs. in tumbling barrel shown in fig.109 (EN 60335-2-17)		P
21.108	Tests on enclosures of bonded construction (EN 60335-2-17)		-
	Specimens cut from sample A:		N/A
	- in direction of element runs, at 20 °C		N/A
	- in direction of element runs, at 80 °C		N/A
	- perpendicular to element runs, at 20 °C		N/A
	- perpendicular to element runs, at 80 °C		N/A
	Specimens cut from new sample:		-
	- in direction of element runs, at 20 °C		N/A
	- in direction of element runs, at 80 °C		N/A
	- perpendicular to element runs, at 20 °C		N/A
	- perpendicular to element runs, at 80 °C		N/A
	None of the layers separated		
21.109	Tests on enclosure of moisture-proof pads consisting of unsupported flexible plastic sheeting at -20 °C (EN 60335-2-17)		N/A
	Number of samples breaking into separate pieces (2 max.) out of the 10 samples		N/A
21.110	The enclosure has adequate resistance to tearing (moisture-proof pads only) (EN 60335-2-17)	Not a kind of moisture proof	N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	Enclosures of unsupported vinyl plastic sheeting test of 21.110.1		N/A
	Enclosures of rubberised and similar treated fabrics tests of 21.110.2 to 21.110.4		N/A
	Enclosure of sewn fabric conformity tested also with 21.110.5		N/A
21.110.1	Test of unsupported flexible plastic sheeting, 5 samples shaped as shown in fig. 111: (EN 60335-2-17)		-
	- breaking load in N (N).....:	1 - 2 - 3 - 4 - 5 -	N/A
	- average (N) (limit not less than 12,5 N) .....:		N/A
21.110.2	Test on 3 samples of rubberised or similar treated fabric (limit not less than 410kPa): (EN 60335-2-17)		-
	- pressure in kPa (kPa) .....:	1 - 2 - 3 -	N/A
	- average (kPa) (limit not less than 490kPa).....:		N/A
21.110.3	3 sets of samples conditioned and tested as specified in 21.110.2 (EN 60335-2-17)		-
	Set 1, 1h immersion in boiling water, plus 1000 h at 100 °C:		-
	- pressure in kPa (kPa) .....:	1 - 2 - 3 -	N/A
	- average in kPa (kPa) .....:		N/A
	- average (kPa) (limit 70% of result for 21.110.2 min) .....:		N/A
	Second set of samples after 168 h in oxygen bomb:		-
	- pressure in kPa (kPa) .....:	1 - 2 - 3 -	N/A
	- average in kPa (kPa) .....:		N/A
	- average (kPa) (limit 70% of result for 21.110.2 min) .....:		N/A
	Third set of samples after 20 h in air bomb:		-
	- pressure in kPa (kPa) .....:	1 - 2 - 3 -	N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	- average in kPa (kPa) .....:		N/A
	- average (kPa) (limit 70% of result for 21.110.2 min) .....:		N/A
21.110.4	Specified conditioning and folding test carried out (EN 60335-2-17)		N/A
	Samples show no cracks, hard spots or other evidence of deterioration		N/A
21.110.5	20 samples of seamed fabric conditioned and tested as specified (EN 60335-2-17)		-
	Set 1 (100 °C immersion and heating):		N/A
	- force in N per metre length (N/m).....:	1 - 2 - 3 - 4 - 5 -	N/A
	- average (N/m) .....:		N/A
	Set 2 (oxygen bomb):		-
	- force in N per metre length (N/m).....:	1 - 2 - 3 - 4 - 5 -	N/A
	- average (N/m) .....:		N/A
	Set 3 (air bomb):		-
	- force in N per metre length (N/m).....:	1 - 2 - 3 - 4 - 5 -	N/A
	- average (N/m) .....:		N/A
	Set 4 (no conditioning):		-
	- force in N per metre length (N/m).....:	1 - 2 - 3 - 4 - 5 -	N/A
	- average (N/m) .....:		N/A
	Average force for each test not less than 875 N per metre length		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
21.111	Plastic coverings of heating element and internal wiring has adequate flexibility and insulating characteristics (test of 21.111.1 and, if applicable, 21.111.2 and 21.111.3) (EN 60335-2-17)		P
21.111.1	Sample of heating element/internal wiring completed 25000 cycles on apparatus shown in fig.112 without interruption of the current (EN 60335-2-17)		P
	No increase in input (PTC only)	Non PTC	N/A
	Insulation resistance (M) measured at 500 V d.c. in saline (limit not less than 1 M):		P
21.111.2	Test of elongation and tensile strength on plastic coverings exceeding 75 °C (50 K) during test of Cl. 11. or 135 °C (110 K) during test of Cl. 19. (EN 60335-2-17)	(see appended table)	P
	Elongation (%), unconditioned .....:	155 %	P
	Elongation (%), conditioned.....:	140 %	P
	Tensile strength (MPa), unconditioned .....:	8.9 MPa	P
	Tensile strength (MPa), conditioned .....:	8.6 MPa	P
21.111.3	Test for flexibility of plastic coverings subjected to the test of 21.111.2 (EN 60335-2-17)		P
	Electric strength test (1000 V)		P
	No cracks visible to the naked eye		P
21.112	PTC heating elements resistant to crushing increase temperature less than 10 K (EN 60335-2-17)		N/A
22	CONSTRUCTION		P
22.1	Appliance marked with the first numeral of the IP system, relevant requirements of IEC 60529 are fulfilled	IPX0	N/A
22.2	Stationary appliance: means to provide all-pole disconnection from the supply provided, the following means being available:		N/A
	- a supply cord fitted with a plug		N/A
	- a switch complying with 24.3		N/A
	- a statement in the instruction sheet that a disconnection incorporated in the fixed wiring is to be provided		N/A
	- an appliance inlet		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	Singe-pole switches and single-pole protective devices for the disconnection of heating elements in single-phase, permanently connected class 01 and class I appliances, connected to the phase conductor		N/A
22.3	Appliance provided with pins: no undue strain on socket-outlets		N/A
	Applied torque not exceeding 0.25 Nm		N/A
	Pull force of 50N to each pin after the appliance has being placed in the heating cabinet; when cooled to room temperature the pins are not displaced by more than 1mm		N/A
	Each pin subjected to a torque of 0.4Nm; the pins are not rotating unless rotating does not impair compliance with the standard		N/A
22.4	Appliance for heating liquids and appliance causing undue vibration not provided with pins for insertion into socket-outlets		N/A
22.5	No risk of electric shock when touching the pins of the plug, for appliances having a capacitor with rated capacitance exceeding 0,1 F, the appliance being disconnected from the supply at the instant of voltage peak	0.1 uF used	N/A
22.6	Electrical insulation not affected by condensing water or leaking liquid		N/A
	Electrical insulation of Class II appliances not affected in case of a hose rupture or seal leak		N/A
22.7	Adequate safeguards against the risk of excessive pressure in appliances provided with steam-producing devices		N/A
22.8	Electrical connections not subject to pulling during cleaning of compartments to which access can be gained without the aid of a tool, and that are likely to be cleaned in normal use		N/A
22.9	Insulation, internal wiring, windings, commutators and slip rings not exposed to oil, grease or similar substances		N/A
	Adequate insulating properties of oil or grease to which insulation is exposed		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
22.10	Not possible to reset voltage-maintained non-self-resetting thermal cut-outs by the operation of an automatic switching device incorporated within the appliance		N/A
	Non-self resetting thermal motor protectors have a trip-free action, unless		N/A
	they are voltage maintained		N/A
	Location or protection of reset buttons of non-self-resetting controls is so that accidental resetting is unlikely		N/A
22.11	Reliable fixing of non-detachable parts that provide the necessary degree of protection against electric shock, moisture or contact with moving parts	Enclosure of control, connector	P
	Obvious locked position of snap-in devices used for fixing such parts		N/A
	No deterioration of the fixing properties of snap-in devices used in parts that are likely to be removed during installation or servicing		P
	Tests as described		P
22.12	Handles, knobs etc. fixed in a reliable manner		P
	Fixing in wrong position of handles, knobs etc. indicating position of switches or similar components not possible		P
	Axial force 15 N applied to parts, the shape being so that an axial pull is unlikely to be applied		P
	Axial force 30 N applied to parts, the shape being so that an axial pull is likely to be applied		N/A
22.13	Unlikely that handles, when gripped as in normal use, make the operators hand touch parts having a temperature rise exceeding the value specified for handles which are held for short periods only		N/A
22.14	No ragged or sharp edges creating a hazard for the user in normal use, or during user maintenance		P
	No exposed pointed ends of self tapping screws etc., liable to be touched by the user in normal use or during user maintenance		N/A
22.15	Storage hooks and the like for flexible cords smooth and well rounded		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
22.16	Automatic cord reels cause no undue abrasion or damage to the sheath of the flexible cord, no breakage of conductors strands, no undue wear of contacts	Non automatic cord reels	N/A
	Cord reel tested with 6000 operations, as specified		N/A
	Electric strength test of 16.3, voltage of 1000 V applied		N/A
22.17	Spacers not removable from the outside by hand or by means of a screwdriver or a spanner	No such parts	N/A
22.18	Current-carrying parts and other metal parts resistant to corrosion under normal conditions of use		P
22.19	Driving belts not used as electrical insulation	No such parts	N/A
22.20	Direct contact between live parts and thermal insulation effectively prevented, unless material used is non-corrosive, non-hygroscopic and non- combustible	No such parts	N/A
	Compliance is checked by inspection and, if necessary, by appropriate test		N/A
22.21	Wood, cotton, silk, ordinary paper and fibrous or hygroscopic material not used as insulation, unless impregnated	No such materials	P
	This requirement does not apply to magnesium oxide and mineral ceramic fibres used for the electrical insulation of heating elements		N/A
22.22	Appliances not containing asbestos	No asbestos	P
22.23	Oils containing polychlorinated biphenyl (PCB) not used	No such materials	N/A
22.24	Bare heating elements adequately supported	No such parts	N/A
	In case of rupture, the heating conductor is unlikely to come in contact with accessible metal parts		N/A
22.25	Sagging heating conductors cannot come into contact with accessible metal parts		N/A
22.26	The insulation between parts operating at safety extra-low voltage and other live parts complies with the requirements for double or reinforced insulation	No SELV parts	N/A
22.27	Parts connected by protective impedance separated by double or reinforced insulation	No such parts	N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
22.28	Metal parts of Class II appliances conductively connected to gas pipes or in contact with water: separated from live parts by double or reinforced insulation	No such parts	N/A
22.29	Class II appliances permanently connected to fixed wiring so constructed that the required degree of access to live parts is maintained after installation		N/A
22.30	Parts serving as supplementary or reinforced insulation fixed so that they cannot be removed without being seriously damaged, or		P
	so constructed that they cannot be replaced in an incorrect position, and so that if they are omitted, the appliance is rendered inoperable or manifestly incomplete		N/A
22.31	Clearances and creepage distances over supplementary and reinforced insulation not reduced below values specified in clause 29 as a result of wear		P
	Clearances and creepage distances between live parts and accessible parts not reduced below values for supplementary insulation, if wires, screws etc. become loose		P
22.32	Supplementary and reinforced insulation designed or protected against deposition of dirt or dust		P
	Supplementary insulation of natural or synthetic rubber resistant to ageing, or arranged and dimensioned so that creepage distances are not reduced below values specified in 29.2		N/A
	Ceramic material not tightly sintered, similar material or beads alone not used as supplementary or reinforced insulation		N/A
	Oxygen bomb test at 70 C for 96 h and 16 h at room temperature		N/A
	Insulating material in which heating conductors are embedded is considered to be basic insulation and not reinforced insulation		N/A
22.33	Conductive liquids that are or may become accessible in normal use are not in direct contact with live parts		N/A
	Electrodes not used for heating liquids		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	For class II constructions, conductive liquids that are or may become accessible in normal use, not in direct contact with basic or reinforced insulation		N/A
	For class II constructions, conductive liquids which are in contact with live parts, not in direct contact with reinforced insulation		N/A
22.34	Shafts of operating knobs, handles, levers etc. not live, unless the shaft is not accessible when the part is removed		P
22.35	Handles, levers and knobs, held or actuated in normal use, not becoming live in the event of a failure of basic insulation		P
	Such parts being of metal, and their shafts or fixings are likely to become live in the event of a failure of basic insulation, are either adequately covered by insulation material or their accessible parts are separated from their shafts or fixings by supplementary insulation		N/A
	This requirement does not apply to handles, levers and knobs on stationary appliances other than those of electrical components, provided they are either reliably connected to an earthing terminal or earthing contact, or separated from live parts by earthed metal		N/A
22.36	Handles continuously held in the hand in normal use are so constructed that when gripped as in normal use, the operators hand is not likely to touch metal parts, unless they are separated from live parts by double or reinforced insulation		N/A
22.37	Capacitors in Class II appliances not connected to accessible metal parts, unless complying with 22.42		N/A
	Metal casings of capacitors in Class II appliances separated from accessible metal parts by supplementary insulation, unless complying with 22.42		N/A
22.38	Capacitors not connected between the contacts of a thermal cut-out		P
22.39	Lamp holders used only for the connection of lamps		N/A
22.40	Motor-operated appliances and combined appliances intended to be moved while in operation, or having accessible moving parts, fitted with a switch to control the motor. The actuating member of the switch being easily visible and accessible		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	Appliances for remote operation fitted with switch for stopping the operation of the appliance, unless		N/A
	operating continuously, automatically or remotely without giving rise to a hazard		N/A
	The actuating member of the switch easily visible and accessible		N/A
22.41	No components, other than lamps, containing mercury		N/A
22.42	Protective impedance consisting of at least two separate components	No protective impedance	N/A
	Values specified in 8.1.4 not exceeded if any one of the components are short-circuited or open-circuited		N/A
22.43	Appliances adjustable for different voltages, accidental changing of the setting of the voltage unlikely to occur	No such parts	N/A
22.44	Appliances shall not have an enclosure that is shaped or decorated like a toy		P
22.45	When air is used as reinforced insulation, clearances not reduced below the values specified in 29.1.4 due to deformation as a result of an external force applied to the enclosure		P
22.46	Software used in protective electronic circuits is software class B or C ..... :		N/A
22.47	Appliances connected to the water mains withstand the water pressure expected in normal use		N/A
	No leakage from any part, including any inlet water hose		N/A
22.48	Appliances connected to the water mains constructed to prevent backsiphonage of non- potable water		N/A
22.49	For remote operation, the duration of operation shall be set before the appliance can be started, unless	No remote operation	N/A
	the appliance switches off automatically or can operate continuously without hazard		N/A
22.50	Controls incorporated in the appliance take priority over controls actuated by remote operation		N/A
22.51	A control on the appliance being manually adjusted to the setting for remote operation before the appliance can be operated in this mode		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	There is a visual indication showing that the appliance is adjusted for remote operation		N/A
	Manual setting and visual indication not necessary on appliances that can operate as follows, without giving rise to a hazard:		-
	- operate continuously,		N/A
	- operate automatically, or		N/A
	- be operated remotely		N/A
22.52	Socket-outlets on appliances accessible to the user in accordance with the socket-outlet system used in the country in which the appliance is sold		N/A
22.101	Insulation of heating element and internal wiring have to integral with the conductor (EN 60335-2-17)		P
22.102	No connections in heating elements other than to thermostats, cut-outs and the like in the flexible part (EN 60335-2-17)		P
22.103	Heating elements, electro-conductive textiles and internal wiring retained in their intended position (EN 60335-2-17)		P
	No part of heating element or electro-conductive textile crosses over another part of the heating element or electro-conductive textile		P
	Separate layer of enclosure supporting heating element or electro-conductive textile firmly secured to prevent rucking		P
	No crossing of internal wires or where such unavoidable, additional anchorage to prevent relative movement		P
22.104	Breaking of stitching does not result in significant change in position of heating element or busbar (EN 60335-2-17)		N/A
22.105	Thermostats and thermal cut-outs are enclosed in insulating material (EN 60335-2-17)		P
22.106	Test for ruck resistance (EN 60335-2-17)	Not ruck resistance type	N/A
	After 3 hours operation under conditions of adequate heat discharge ruck resistance g = restoring force F in Newtons, divided by deflection X in metres:		N/A
	- corner 1; F/X=g:		N/A
	- corner 2; F/X=g:		N/A
	- corner 3; F/X=g:		N/A
	- corner 4; F/X=g:		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	Minimum calculated ruck-resistance g (limit 2,5 min.) ..... :		N/A
22.107	Under-blankets, other than ruck-resistant blankets having a factor greater than 1,2 measured as specified in 22.106 provided with means to prevent rucking (EN 60335-2-17)		N/A
22.108	Detachable cover of adequate size (EN 60335-2-17)	No detachable cover	N/A
22.109	Control units prevented from dangerous penetration of objects on floor or table (EN 60335-2-17)	No such parts	N/A
	Distance at least 6mm:		P
22.110	Automatically switch have not to switch back to the high heat output setting (EN 60335-2-17)		P
22.111	Do not possible the replacement of thermal and fuse link (EN 60335-2-17)		P
22.112	Duvet have to adequate thermal proprieties: temperature rise exceed 40K (EN 60335-2-17)		N/A
22.113	Manual switch: (EN 60335-2-17)		P
	No continuously rotation in the same direction		P
	Off position marked at both end		N/A
	On position indicated with lamp		P
22.114	Flexible parts comprised of electro-conductive textile, Class III construction (EN 60335-2-17)		N/A
23	INTERNAL WIRING		P
23.1	Wire ways smooth and free from sharp edges		P
	Wires protected against contact with burrs, cooling fins etc.		P
	Wire holes in metal well rounded or provided with bushings		N/A
	Wiring effectively prevented from coming into contact with moving parts		N/A
23.2	Beads etc. on live wires cannot change their position, and are not resting on sharp edges or corners		N/A
	Beads inside flexible metal conduits contained within an insulating sleeve		N/A
23.3	Electrical connections and internal conductors movable relatively to each other not exposed to undue stress		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	Flexible metallic tubes not causing damage to insulation of conductors		N/A
	Open-coil springs not used		N/A
	Adequate insulating lining provided inside a coiled spring, the turns of which touch one another		N/A
	No damage after 10 000 flexings for conductors flexed during normal use or 100 flexings for conductors flexed during user maintenance		N/A
	Electric strength test, 1000 V between live parts and accessible metal parts		N/A
23.4	Bare internal wiring sufficiently rigid and fixed		N/A
23.5	The insulation of internal wiring withstanding the electrical stress likely to occur in normal use		P
	No breakdown when a voltage of 2000 V is applied for 15 min between the conductor and metal foil wrapped around the insulation		P
23.6	Sleeving used as supplementary insulation on internal wiring retained in position by positive means		N/A
23.7	The colour combination green/yellow used only for earthing conductors		N/A
23.8	Aluminium wires not used for internal wiring		P
23.9	No lead-tin soldering of stranded conductors where they are subject to contact pressure, unless		P
	clamping means so constructed that there is no risk of bad contact due to cold flow of the solder		P
23.10	The insulation and sheath of internal wiring, incorporated in external hoses for the connection of an appliance to the water mains, at least equivalent to that of light polyvinyl chloride sheathed flexible cord (60227 IEC 52)		N/A
24	COMPONENTS		P
24.1	Components comply with safety requirements in relevant IEC standards		P
	List of components	(see appended table)	P
	Components not tested and found to comply with relevant IEC standard for the number of cycles specified are tested in accordance with 24.1.1 to 24.1.9		P

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	Components not tested and found to comply with relevant IEC standard, components not marked or not used in accordance with its marking, tested under the conditions occurring in the appliance		P
	Lampholders and starterholders not being tested and found to comply with the relevant IEC standard, tested as a part of the appliance and additionally according to the gauging and interchangeability requirements of the relevant IEC standard		N/A
24.1.1	Capacitors likely to be permanently subjected to the supply voltage and used for radio interference suppression or for voltage dividing, complying with IEC 60384-14, or	Complying with IEC60384-14	P
	tested according to annex F		N/A
24.1.2	Safety isolating transformers complying with IEC 61558-2-6, or	No transformer	N/A
	tested according to annex G		N/A
24.1.3	Switches complying with IEC 61058-1, the number of cycles of operation being at least 10 000, or	10 000 cycles	P
	tested according to annex H		P
	If the switch operates a relay or contactor, the complete switching system is subjected to the test		N/A
24.1.4	Automatic controls complying with IEC 60730-1 with relevant part 2. The number of cycles of operation being:		-
	- thermostats: 10 000		N/A
	- temperature limiters: 1 000		N/A
	- self-resetting thermal cut-outs: 300		N/A
	- voltage maintained non-self-resetting thermal cut-outs: 1000		N/A
	- other non-self-resetting thermal cut-outs: 30		N/A
	- timers: 3 000		N/A
	- energy regulators: 10 000		N/A
	Thermal motor protectors are tested in combination with their motor under the conditions specified in Annex D		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	For water valves containing live parts and that are incorporated in external hoses for connection of an appliance to the water mains, the degree of protection declared for subclause 6.5.2 of IEC 60730-2-8 is IPX7		N/A
24.1.5	Appliance couplers complying with IEC 60320-1		N/A
	However, appliances classified higher than IPX0, the appliance couplers complying with IEC 60320-2-3		N/A
	Interconnection couplers complying with IEC 60320-2-2		P
24.1.6	Small lamp holders similar to E10 lampholders complying with IEC 60238, the requirements for E10 lampholders being applicable		N/A
24.1.7	If the remote operation of the appliance is via a telecommunication network, the relevant standard for the telecommunication interface circuitry in the appliance is IEC 62151		N/A
24.1.8	Thermal links complying with IEC 60691, or		N/A
	considered to be an intentionally weak partfor the purposes of cl. 19		N/A
24.1.9	Relays, other than motor starting relays, tested as part of the appliance		N/A
	They are also tested in accordance with Clause 17 of IEC 60730-1, the number of operations in 24.1.4 selected according to the relay function in the appliance ....:		N/A
24.2	No switches or automatic controls in flexible cords		N/A
	No devices causing the protective device in the fixed wiring to operate in the event of a fault in the appliance		N/A
	No thermal cut-outs that can be reset by soldering		N/A
	Appliances provided with switch and control unit in flexible cord (EN 60335-2-17)	Flexible cord to the control unit	P
24.3	Switches intended for all-pole disconnection of stationary appliances are directly connected to the supply terminals and having a contact separation in all poles, providing full disconnection under overvoltage category III conditions		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
24.4	Plugs and socket-outlets for extra-low voltage circuits and heating elements, not interchangeable with plugs and socket-outlets listed in IEC 60083 or IEC 60906-1 or with connectors and appliance inlets complying with the standard sheets of IEC 60320-1		N/A
24.5	Capacitors in auxiliary windings of motors marked with their rated voltage and capacitance and used accordingly	No motor	N/A
	Capacitors in appliances for which 30.2.3 is applicable and that are permanently connected in series with a motor winding, are of class P1 or P2 of IEC 60252		N/A
	Voltage across capacitors in series with a motor winding does not exceed 1,1 times rated voltage, when the appliance is supplied at 1,1 times rated voltage under minimum load		N/A
24.6	Working voltage of motors connected to the supply mains and having basic insulation that is inadequate for the rated voltage of the appliance, not exceeding 42V		N/A
	In addition, the motors are complying with the requirements of Annex I		N/A
24.7	Hose-sets for connection of appliances to the water mains, complying with IEC 61770 and supplied with the appliance		N/A
25	SUPPLY CONNECTION AND EXTERNAL FLEXIBLE CORDS		P
25.1	Appliance not intended for permanent connection to fixed wiring, means for connection to the supply:		P
	- supply cord fitted with a plug		P
	- an appliance inlet having at least the same degree of protection against moisture as required for the appliance		N/A
	- pins for insertion into socket-outlets		N/A
25.2	Appliance not provided with more than one means of connection to the supply mains		P
	Stationary appliance for multiple supply may be provided with more than one means of connection, provided electric strength test of 1250 V for 1 min between each means of connection causes no breakdown		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	Blanket for double bed provided with two means of connection (EN 60335-2-17)		N/A
25.3	Connection of supply conductors for appliance intended to be permanently connected to fixed wiring possible after the appliance has been fixed to its support		N/A
	Appliance provided with a set of terminals for the connection of cables or fixed wiring, cross-sectional areas specified in 26.6		N/A
	Appliance provided with a set of terminals allowing the connection of a flexible cord		N/A
	Appliance provided with a set of supply leads accommodated in a suitable compartment		N/A
	Appliance provided with a set of terminals and cable entries, conduit entries, knock-outs or glands, allowing connection of appropriate type of cable or conduit		N/A
25.4	Cable and conduit entries, rated current of appliance not exceeding 16 A, dimension according to table 10		N/A
	Introduction of conduit or cable does not reduce clearances or creepage distances below values specified in 29		N/A
25.5	Method for assemble supply cord with the appliance:		-
	- type X attachment		P
	- type Y attachment		N/A
	- type Z attachment, if allowed in part 2 (EN 60335-2-17)		N/A
	Type X attachment, other than those with a specially prepared cord, not used for flat twin tinsel cords		N/A
25.6	Plugs fitted with only one flexible cord		P
25.7	Supply cords being one of the following types:		-
	- rubber sheathed (at least 60245 IEC 53)		N/A
	- polychloroprene sheathed (at least 60245 IEC 57)		N/A
	- cross-linked polyvinyl chloride sheathed (at least 60245 IEC 87)		N/A
	- light polyvinyl chloride sheathed cord (at least 60227 IEC 52), appliances not exceeding 3 kg		P
	- ordinary polyvinyl chloride sheathed cord (at least 60227 IEC 53), other appliances		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	Light polyvinyl chloride sheated cords may be used, irrespective of the mass of the appliance (EN 60335-2-17)		P
	Natural rubber sheated cords not used (EN 60335-2-17)		N/A
	Temperature rise of external metal parts exceeding 75 K, PVC cord not used, unless		N/A
	appliance so constructed that the supply cord is not likely to touch external metal parts in normal use, or		N/A
	the supply cord is appropriate for higher temperatures, type Y or type Z attachment used		N/A
	Heat resistant polyvinyl chloride sheathed: Not used for type X attachment other than specially prepared cords.		-
	- Heat-resistant light polyvinyl chloride sheathed cord (at least 60227 IEC 56), appliances not exceeding 3 kg		N/A
	- heat-resistant polyvinyl chloride sheathed cord (60227 IEC 57), other appliances		N/A
25.8	Nominal cross-sectional area of supply cords according to table 11; rated current (A); cross- sectional area (mm^2) .....:		P
25.9	Supply cord not in contact with sharp points or edges		P
25.10	Green/yellow core for earthing purposes in Class I appliance	Functional earthing used	N/A
25.11	Conductors of supply cords not consolidated by lead-tin soldering where they are subject to contact pressure, unless		P
	clamping means so constructed that there is no risk of bad contacts due to cold flow of the solder		P
25.12	Moulding the cord to part of the enclosure does not damage the insulation of the supply cord		P
25.13	Inlet opening so shaped as to prevent damage to the supply cord		P
	Unless the enclosure at the inlet opening is of insulation material, a non-detachable lining or bushing complying with 29.3 for supplementary insulation provided	Insulation enclosure	N/A
	If unsheathed supply cord, a similar additional bushing or lining is required, unless		N/A
	the appliance is class 0		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
25.14	Supply cords adequately protected against excessive flexing		N/A
	Flexing test:		-
	- applied force (N) .....:		N/A
	- number of flexings .....:		N/A
	The test does not result in:		-
	- short circuit between the conductors		N/A
	- breakage of more than 10% of the strands of any conductor		N/A
	- separation of the conductor from its terminal		N/A
	- loosening of any cord guard		N/A
	- damage, within the meaning of the standard, to the cord or the cord guard		N/A
	- broken strands piercing the insulation and becoming accessible		N/A
25.15	Conductors of the supply cord relieved from strain, twisting and abrasion by use of cord anchorage		N/A
	The cord cannot be pushed into the appliance to such an extent that the cord or internal parts of the appliance can be damaged		N/A
	Pull and torque test of supply cord, values shown in table 10: pull (N); torque (not on automatic cord reel) (Nm)..... .....:		N/A
	Max. 2 mm displacement of the cord, and conductors not moved more than 1 mm in the terminals		N/A
	Creepage distances and clearances not reduced below values specified in 29.1		N/A
	Pull force of 100 N for cord connected to flexible part (EN 60335-2-17)		N/A
	Pull force of 100 N and torque of 0,1 Nm for cord connected to switch and control unit (EN 60335-2-17)		N/A
25.16	Cord anchorages for type X attachments constructed and located so that:		P
	- replacement of the cord is easily possible		P
	- it is clear how the relief from strain and the prevention of twisting are obtained		P
	- they are suitable for different types of cord		P

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	- cord cannot touch the clamping screws of cord anchorage if these screws are accessible, unless separated from accessible metal parts by supplementary insulation		P
	- the cord is not clamped by a metal screw which bears directly on the cord		P
	- at least one part of the cord anchorage securely fixed to the appliance, unless part of a specially prepared cord		P
	- screws which have to be operated when replacing the cord do not fix any other component, if applicable		N/A
	- if labyrinths can be bypassed the test of 25.15 is nevertheless withstood		N/A
	- for Class 0, 0I and I appliances: they are of insulating material or are provided with an insulating lining, unless a failure of the insulation of the cord does not make accessible metal parts live		N/A
	- for Class II appliances: they are of insulating material, or if of metal, they are insulated from accessible metal parts by supplementary insulation		N/A
25.17	Adequate cord anchorages for type Y and Z attachment		N/A
25.18	Cord anchorages only accessible with the aid of a tool, or		N/A
	so constructed that the cord can only be fitted with the aid of a tool		N/A
25.19	Type X attachment, glands not used as cord anchorage in portable appliances		P
	Tying the cord into a knot or tying the cord with string not used		N/A
25.20	Conductors of the supply cord for type Y and Z attachment adequately additionally insulated		N/A
25.21	Space for supply cord for type X attachment or for connection of fixed wiring constructed to permit checking of conductors with respect to correct positioning and connection before fitting any cover, no risk of damage to the conductors when fitting the cover, no contact with accessible metal parts if a conductor becomes loose, etc.		P

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	For portable appliances, the uninsulated end of a conductor prevented from any contact with accessible metal parts, unless the end of the cord is such that the conductors are unlikely to slip free		N/A
25.22	Appliance inlet:		P
	- live parts not accessible during insertion or removal	For connector of flexible part	P
	- connector can be inserted without difficulty		N/A
	- the appliance is not supported by the connector		N/A
	- is not for cold conditions if temp. rise of external metal parts exceeds 75 K, unless the supply cord is not likely to touch such metal parts		N/A
25.23	Interconnection cords comply with the requirements for the supply cord, except as specified		P
	If necessary, electric strength test of 16.3		P
	Interconnection cord without sheathed (EN 60335-2-17)		N/A
	For more than two conductor, current density not exceed 12 A/mm^2 and the sum of the cross sectional area 1 mm^2 (EN 60335-2-17)		N/A
	Electrical and mechanical proprieties equal to IEC 60227 (EN 60335-2-17)		P
25.24	Interconnection cords not detachable without the aid of a tool if compliance with the standard is impaired when they are disconnected		P
25.25	Dimensions of pins compatible with the dimensions of the relevant socket-outlet. Dimensions of pins and engagement face in accordance with the relevant plug in IEC 60083		N/A
26	TERMINALS FOR EXTERNAL CONDUCTORS		-
26.1	Appliances provided with terminals or equally effective devices for connection of external conductors		N/A
	Terminals only accessible after removal of a non-detachable cover		N/A
	However, earthing terminals may be accessible if a tool is required to make the connections and means are provided to clamp the wire independently from its connection		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
26.2	Appliances with type X attachment and appliances for connection to fixed wiring provided with terminals in which connections are made by means of screws, nuts or similar devices, unless the connections are soldered		N/A
	Screws and nuts serve only to clamp supply conductors, except		N/A
	internal conductors, if so arranged that they are unlikely to be displaced when fitting the supply conductors		N/A
	If soldered connections used, the conductor so positioned or fixed that reliance is not placed on soldering alone		N/A
	Soldering alone used, barriers provided, clearances and creepage distances satisfactory if the conductor becomes free at the soldered joint		N/A
26.3	Terminals for type X attachment and for connection to fixed wiring so constructed that the conductor is clamped between metal surfaces with sufficient contact pressure and without damaging the conductor		N/A
	Terminals for type X attachment and those for connection to fixed wiring so fixed that when tightening or loosening the clamping means:		-
	- the terminal does not loosen		N/A
	- internal wiring is not subjected to stress		N/A
	- clearances and creepage distances are not reduced below the values in 29		N/A
	Compliance checked by inspection and by the test of subclause 9.6 of IEC 60999-1, the torque applied being equal to two-thirds of the torque specified. Nominal diameter of thread (mm); screw category; torque (Nm)……..:		N/A
26.4	Terminals for type X attachment, except those with a specially prepared cord, and those for connection to fixed wiring, no special preparation of conductors required, and so constructed or placed that conductors prevented from slipping out		N/A
26.5	Terminals for type X attachment so located or shielded that if a wire of a stranded conductor escapes, no risk of accidental connection to other parts that result in a hazard		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	Stranded conductor test, 8 mm insulation removed		N/A
	No contact between live parts and accessible metal parts and, for class II constructions, between live parts and metal parts separated from accessible metal parts by supplementary insulation only		N/A
26.6	Terminals for type X attachment and for connection to fixed wiring suitable for connection of conductors with required cross-sectional area according to table 13; rated current (A); nominal cross-sectional area (mm^2) .....:		N/A
	Terminals only suitable for a specially prepared cord		N/A
26.7	Terminals for type X attachment accessible after removal of a cover or part of the enclosure		N/A
26.8	Terminals for the connection to fixed wiring, including the earthing terminal, located close to each other		N/A
26.9	Terminals of the pillar type constructed and located as specified		N/A
26.10	Terminals with screw clamping and screwless terminals not used for flat twin tinsel cords, unless conductors ends fitted with a device suitable for screw terminals		N/A
	Pull test of 5 N to the connection		N/A
26.11	For type Y and Z attachment: soldered, welded, crimped and similar connections may be used		P
	For Class II appliances: the conductor so positioned or fixed that reliance is not placed on soldering, welding or crimping alone		P
	For Class II appliances: soldering, welding or crimping alone used, barriers provided, clearances and creepage distances satisfactory if the conductor becomes free		N/A
27	PROVISION FOR EARTHING		-
27.1	Accessible metal parts of Class 0I and I appliances, permanently and reliably connected to an earthing terminal or contact of the appliance inlet		N/A
	Earthing terminals not connected to neutral terminal		N/A
	Class 0, II and III appliance have no provision for earthing		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	Safety extra-low voltage circuits not earthed, unless protective extra-low voltage circuits		N/A
27.2	Clamping means adequately secured against accidental loosening		N/A
	Terminals used for the connection of external equipotential bonding conductors allow connection of conductors of 2.5 to 6 mm², and		N/A
	do not provide earthing continuity between different parts of the appliance		N/A
	Conductors cannot be loosened without the aid of a tool		N/A
27.3	For detachable parts that are plugged into another part of the appliance, and having an earth connection, the earth connection made before and separated after current-carrying connections when removing the part		N/A
	For appliances with supply cord, current-carrying conductors become taut before earthing conductor, if the cord slips out of the cord anchorage		N/A
27.4	No risk of corrosion resulting from contact between metal of earthing terminal and other metal		N/A
	Adequate resistance to corrosion of coated or uncoated parts providing earthing continuity, other than parts of a metal frame or enclosure		N/A
	Parts of steel providing earthing continuity provided at the essential areas with an electroplated coating, thickness at least 5 µm		N/A
	Adequate protection against rusting of parts of coated or uncoated steel, only intended to provide or transmit contact pressure		N/A
	In case of aluminium alloys precautions taken to avoid risk of corrosion		N/A
27.5	Low resistance of connection between earthing terminal and earthed metal parts		N/A
	This requirement does not apply to connections providing earthing continuity in the protective extra-low voltage circuit, provided that clearances of basic insulation are based on the rated voltage of the appliance		N/A
	Resistance not exceeding 0,1 Ω at the specified low-resistance test		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
27.6	The printed conductors of printed circuit boards shall not be used to provide earthing continuity in hand-held appliances.		N/A
	They may be used to provide earthing continuity in other appliances if at least two tracks are used with independent soldering points and the appliance complies with 27.5 for each circuit		N/A
28	SCREWS AND CONNECTIONS		P
28.1	Fixings, electrical connections and connections providing earthing continuity withstand mechanical stresses		P
	Screws not of soft metal liable to creep, such as zinc or aluminium		N/A
	Diameter of screws of insulating material min. 3 mm		N/A
	Screws of insulating material not used for any electrical connection or connections providing earthing continuity		N/A
	Screws used for electrical connections or connections providing earthing continuity screw into metal		N/A
	Screws not of insulating material if their replacement by a metal screw can impair supplementary or reinforced insulation		N/A
	Type X attachment, screws to be removed for replacement of supply cord or for user maintenance, not of insulating material if their replacement by a metal screw can impair basic insulation		N/A
	For screws and nuts; test as specified		P
28.2	Electrical connections and connections providing earthing continuity constructed so that contact pressure not transmitted through insulating material liable to shrink or distort, unless shrinkage or distortion compensated		N/A
	This requirement does not apply to electrical connections in circuits carrying a current not exceeding 0.5A		N/A
	The requirement does not apply to the connections to heating element and electro-conductive textiles (EN 60335-2-17)		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
28.3	Space-threaded (sheet metal) screws only used for electrical connections if they clamp the parts together		N/A
	Thread-cutting (self-tapping) screws and thread rolling screws only used for electrical connections if they generate a full form standard machine screw thread		N/A
	Thread-cutting (self-tapping) screws not used if they are likely to be operated by the user or installer		N/A
	Thread-cutting, thread rolling and space threaded screws may be used in connections providing earthing continuity provided it is not necessary to disturb the connection:		-
	- in normal use,		N/A
	- during user maintenance,		N/A
	- when replacing a supply cord having a type X attachment, or		N/A
	- during installation		N/A
	At least two screws being used for each connection providing earthing continuity, unless		N/A
	the screw forms a thread having a length of at least half the diameter of the screw		N/A
	Thread-cutting and space-threaded screws may be used in connections providing earthing continuity, provided unnecessary to disturb the connection and at least two screws are used for each connection		N/A
28.4	Screws and nuts that make mechanical connection secured against loosening if they also make electrical connections or connections providing earthing continuity		P
	Rivets for electrical connections or connections providing earthing continuity secured against loosening if subjected to torsion		P
29	CLEARANCES, CREEPAGE DISTANCES AND SOLID INSULATION		P
	Clearances, creepage distances and solid insulation withstand electrical stress		P
	For coatings used on printed circuits boards to protect the microenvironment (Type 1) or to provide basic insulation (Type 2), annex J applies .....:		N/A
	The microenvironment is pollution degree 1 under Type 1 coating	Pollution 2	N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	No clearance or creepage distance requirements under Type 2 coating		N/A
29.1	Clearances not less than the values specified in table 16, taking into account the rated impulse voltage for the overvoltage categories of table 15, unless	See appended table	P
	for basic insulation and functional insulation they comply with the implulse voltage test of clause 14		P
	However, if the construction is affected by wear, distortion, movement of the parts or during assembly, the clearances for rated impulse voltages of 1500V and above are increased by 0,5 mm and the impulse voltage test is not applicable		N/A
	Impulse voltage test not applicable:		-
	- when the microenvironment is pollution degree 3		N/A
	- for basic insulation of class 0 and class 01 appliances		N/A
	Appliances are in overvoltage category II		P
	Clearances less than specified in table 16 not allowed for basic insulation of class 0 and class 0I appliances,		N/A
	or if pollution degree 3 is applicable		N/A
	Compliance is checked by inspection and measurements as specified		P
29.1.1	Clearances of basic insulation withstand the overvoltages, taking into account the rated impulse voltage		P
	Clearance at the terminals of tubular sheathed heating elements may be reduced to 1mm if the microenvironment is pollution degree 1		P
	Lacquered conductors of windings considered to be bare conductors		N/A
29.1.2	Clearances of supplementary insulation not less than those specified for basic insulation in table 16	(See appended table)	P
29.1.3	Clearances of reinforced insulation not less than those specified for basic insulation in table 16, but using the next higher step for rated impulse voltage		P
29.1.4	For functional insulation, the values of table 16 are applicable, unless		P

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	the appliance complies with clause 19 with the functional insulation short-circuited		P
	Lacquered conductors of windings considered to be bare conductors		N/A
	However, clearances at crossover points are not measured		N/A
	Clearance between surfaces of PTC heating elements may be reduced to 1mm		N/A
29.1.5	Appliances having higher working voltage than rated voltage, the voltage used for determining clearances from table 16 is the sum of the rated impulse voltage and the difference between the peak value of the working voltage and the peak value of the rated voltage		N/A
	If the secondary winding of a step-down transformer is earthed, or if there is an earthed screen between the primary and secondary windings, clearances of basic insulation on the secondary side not less than those specified in table 16, but using the next lower step for rated impulse voltage		N/A
	Circuits supplied with a voltage lower than rated voltage, clearances of functional insulation based on the working voltage used as the rated voltage in table 15		N/A
29.2	Creepage distances not less than those appropriate for the working voltage, taking into account the material group and the pollution degree		P
	Pollution degree 2 applies, unless		P
	precautions taken to protect the insulation; pollution degree 1		N/A
	insulation subjected to conductive pollution; pollution degree 3		N/A
	Microenvironment of the flexible part: pollution degree 3 applies, unless (EN 60335-2-17)		N/A
	enclose or located so that it is unlikely to be exposed to pollution during normal use (EN 60335-2-17)		P
	Compliance is checked by inspection and measurements as specified		P
29.2.1	Creepage distances of basic insulation not less than specified in table 17	(See appended table)	P

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	For pollution degree 1, creepage distance not less than the minimum specified for the clearance in table 16, if the clearance has been checked according to the test of clause 14		N/A
29.2.2	Creepage distances of supplementary insulation at least as specified for basic insulation in table 17	(See appended table)	P
29.2.3	Creepage distances of reinforced insulation at least double as specified for basic insulation in table 17	(See appended table)	P
29.2.4	Creepage distances of functional insulation not less than specified in table 18	(See appended table)	P
	Creepage distances may be reduced if the appliance complies with clause 19 with the functional insulation short-circuited		P
29.3	Supplementary and reinforced insulation having adequate thickness, or a sufficient number of layers, to withstand the electrical stresses		P
	Compliance checked by:		P
	- measurement, in accordance with 29.3.1, or		P
	- an electric strength test in accordance with 29.3.2, or		N/A
	- an assessment of the thermal quality of the material combined with an electric strength test, in accordance with 29.3.3		N/A
29.3.1	Supplementary insulation having a thickness of at least 1 mm	>2 mm	P
	Reinforced insulation having a thickness of at least 2 mm		P
29.3.2	Each layer of material withstand the electric strength test of 16.3 for supplementary insulation		N/A
	Supplementary insulation consisting of at least 2 layers		N/A
	Reinforced insulation consisting of at least 3 layers		N/A
29.3.3	The insulation is subjected to the dry heat test Bb of IEC 60068-2-2, followed by		N/A
	the electric strength test of 16.3		N/A
	If the temperature rise during the tests of Clause 19 does not exceed the value specified in Table 3, the test of IEC 60068-2-2 is not carried out		N/A
30	RESISTANCE TO HEAT AND FIRE		P

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
30.1	External parts of non-metallic material,		P
	parts supporting live parts, and		P
	thermoplastic material providing supplementary or reinforced insulation,		P
	sufficiently resistant to heat		P
	Ball-pressure test according to IEC 60695-10-2		P
	External parts: at 40 C plus the maximum temperature rise determined during the test of clause 11, or at 75 C, whichever is the higher; temperature (C) .....:		P
	Parts supporting live parts: at 40 C plus the maximum temperature rise determined during the test of clause 11, or at 125 C, whichever is the higher; temperature (C) .....:		P
	Parts of thermoplastic material providing supplementary or reinforced insulation, 25 C plus the maximum temperature rise determined during clause 19, if higher; temperature (C) .....:		N/A
	Parts of resilient plastic material fitted to the flexible part, pressure test according to sub-clause 24.1.3 of IEC 60320-1 (EN 60335-2-17)		P
30.2	Parts of non-metallic material adequately resistant to ignition and spread of fire		P
	This requirement does not apply to decorative trims, knobs and other parts unlikely to be ignited or to propagate flames that originate inside the appliance		P
	Compliance checked by the test of 30.2.1. In addition:		P
	- attended appliances, 30.2.2 applies		N/A
	- unattended appliances, 30.2.3 applies		P
	Appliances for remote operation, 30.2.3 applies		N/A
	Base material of printed circuit board, 30.2.4 applies		N/A
	Appliances for remote operation considered to be appliances that are operated while unattended		N/A
	The enclosure of the flexible part is not tested (EN 60335-2-17)		P
30.2.1	Glow-wire test of IEC 60695-2-11 at 550 C, unless		P

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	the material is classified at least HB40 according to IEC 60695-11-10		N/A
	Parts for which the glow-wire test cannot be carried out meet the requirements in ISO9772 for category HBF material		N/A
	Electro-conductive textiles according to the requirements specified in ISO 9772 for category HBF material (EN 60335-2-17)		N/A
30.2.2	Appliances operated while attended, parts of non-metallic material supporting current-carrying connections, and parts of non-metallic material within a distance of 3mm of such connections, are subjected to the glow-wire test of IEC 60695-2-11.		N/A
	The glow-wire test is not carried out on parts of material classified as having a glow- wire flammability index according to IEC 60695-2-12 of at least:		N/A
	-750 C, for connections carrying a current exceeding 0,5A during normal operation		N/A
	-650 C, for other connections		N/A
	Test as specified for an interposed shielding material		N/A
	When the glow-wire test of IEC 60695-2-11 is carried out, the temperatures are:		-
	-750 C, for connections carrying a current exceeding 0,5A during normal operation		N/A
	-650 C, for other connections		N/A
	Test not applicable to conditions as specified		N/A
30.2.3	Appliances operated while unattended, tested as specified in 30.2.3.1 and 30.2.3.2		P
	Tests not applicable to conditions as specified		N/A
30.2.3.1	Parts of insulating material supporting connections carrying a current exceeding 0.2A during normal operation, and		P
	parts of non-metallic material within a distance of 3mm,		P
	subjected to the glow-wire test of IEC 60695-2-11 with a test severity of 850°C		P
	Glow-wire test not carried out on parts of material classified as having a glow-wire flammability index of at least 850°C according to IEC 60695-2-12		N

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	Glow-wire test not carried out on small parts that comply with the needle-flame test of Annex E or on small parts of material classified as V-0 or V-1 according to IEC 60695-11-10		N/A
	Test as specified for an interposed shielding material		N/A
30.2.3.2	Parts of non-metallic material supporting current-carrying connections, and		P
	parts of non-metallic material within a distance of 3mm,		P
	subjected to glow-wire test of IEC 60695-2-11		N/A
	Test not carried out on material having a glow-wire ignition temperature according to IEC 60695-2-13 of at least:		N/A
	-775 C, for connections carrying a current exceeding 0,2A during normal operation		P
	-675 C, for other connections		N/A
	When the glow-wire test of IEC 60695-2-11 is carried out, the temperatures are:		N/A
	-750 C, for connections carrying a current exceeding 0,2A during normal operation		N/A
	-650 C, for other connections		N/A
	Parts that during the test produce a flame persisting longer than 2 s, tested as specified		N/A
	If a flame persists longer than 2 s during the test, parts above the connection, as specified, subjected to the needle-flame test of annex E, unless		N/A
	the material is classified as V-0 or V-1 according to IEC 60695-11-10		N/A
	Needle-flame test not carried out on the enclosure of the flexible part (EN 60335-2-17)		P
30.2.4	Base material of printed circuit boards subjected to needle-flame test of annex E		P
	Test not applicable to conditions as specified		P
30.101	The enclosure of the flexible part adequately resistant to ignition (EN 60335-2-17)		P
30.101.1	Spark ignition test results (s) (limit not less than 80 s average) (EN 60335-2-17)		P
30.101.2	Protection system operate within 30 s, the power input does not exceed 1 W (EN 60335-2-17)		P

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
30.102	Insulation of heating elements and internal wiring in flexible part, and other insulating parts retaining live parts in position, sufficient resistance to abnormal heat and fire (EN 60335-2-17)		P
	Heating element and internal wiring in flexible part, max. length (mm) damaged by fire (65 mm max.) (EN 60335-2-17)		P
31	RESISTANCE TO RUSTING		P
	Relevant ferrous parts adequately protected against rusting		P
32	RADIATION, TOXICITY AND SIMILAR HAZARDS		P
	Appliance shall not emit harmful radiation, present a toxic or similar hazard due to their operation in normal use		P
	Relevant tests specified in part 2, if necessary		P
A	ANNEX A (INFORMATIVE) ROUTINE TESTS		N/A
	Description of routine tests to be carried out by the manufacturer		N/A
B	ANNEX B (NORMATIVE) APPLIANCES POWERED BY RECHARGEABLE BATTERIES		N/A
	The following modifications to this standard are applicable for appliances powered by batteries that are recharged in the appliance		N/A
	This annex does not apply to battery chargers		N/A
3.1.9	Appliance operated under the following conditions:		N/A
	-the appliance, supplied by its fully charged battery, operated as specified in relevant part 2		N/A
	-the battery is charged, the battery being initially discharged to such an extent that the appliance cannot operate		N/A
	-if possible, the appliance is supplied from the supply mains through its battery charger, the battery being initially discharged to such an extent that the appliance cannot operate. The appliance is operated as specified in relevant part 2		N/A
	If the appliance incorporates inductive coupling between two parts that are detachable from each other, the appliance is supplied from the supply mains with the detachable part removed		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
3.6.2	Part to be removed in order to discard the battery is not considered to be detachable		N/A
5.101	Appliances supplied from the supply mains tested as specified for motor-operated appliances		N/A
7.1	Battery compartment for batteries intended to be replaced by the user, marked with battery voltage and polarity of the terminals		N/A
7.12	The instructions for appliances incorporating batteries intended to be replaced by the user includes required information		N/A
	Details about how to remove batteries containing materials hazardous to the environment given		N/A
7.15	Markings placed on the part of the appliance connected to the supply mains		N/A
8.2	Appliances having batteries that according to the instruction may be replaced by the user need only have basic insulation between live parts and the inner surface of the battery compartment		N/A
	If the appliance can be operated without batteries, double or reinforced insulation required		N/A
11.7	The battery is charged for the period described		N/A
19.1	Appliances subjected to tests of 19.101, 19.102 and 19.103		N/A
19.101	Appliances supplied at rated voltage for 168 h, the battery being continually charged		N/A
19.102	Short-circuiting of the terminals of the battery, being fully charged, for appliances having batteries that can be removed without the aid of a tool		N/A
19.103	Appliances having batteries replaceable by the user supplied at rated voltage under normal operation with the battery removed or in any position allowed by the construction		N/A
21.101	Appliances having pins for insertion into socket- outlets have adequate mechanical strength, checked according to procedure 2 of IEC 68-2-32		N/A
	Part of the appliance incorporating the pins subjected to the free fall test, procedure 2, of IEC 60068-2-32, the number of falls being:		-
	- 100, the mass of part does not exceed 250 g		N/A
	- 50, the mass of part exceeds 250 g		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	After the test, the requirements of 8.1, 15.1.1, 16.3 and clause 29 are met		N/A
22.3	Appliances having pins for insertion into socket-outlets tested as fully assembled as possible		N/A
25.13	An additional lining or bushing not required for interconnection cords operating at safety extra-low voltage		N/A
30.2	For parts of the appliance connected to the supply mains during the charging period, 30.2.3 applies		N/A
	For other parts, 30.2.2 applies		N/A
C	ANNEX C (NORMATIVE) AGEING TEST ON MOTORS		-
	Tests, as described, carried out when doubt with regard to the temperature classification of the insulation of a motor winding		N/A
D	ANNEX D (NORMATIVE) THERMAL MOTOR PROTECTORS		-
	Applicable to appliances having motors that incorporate thermal motor protectors		N/A
E	ANNEX E (NORMATIVE) NEEDLE-FLAME TEST		-
	Needle-flame test carried out in accordance with IEC 60695-11-5, with the following modifications:		N/A
7	Severities		-
	The duration of application of the test flame is 30 s ± 1 s		N/A
9	Test procedure		-
9.1	The specimen so arranged that the flame can be applied to a vertical or horizontal edge as shown in the examples of figure 1		N/A
9.2	The first paragraph does not apply		N/A
	If possible, the flame is applied at least 10 mm from a corner		N/A
9.3	The test is carried out on one specimen		N/A
	If the specimen does not withstand the test, the test may be repeated on two additional specimens, both withstanding the test		N/A
11	Evaluation of test results		-

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	The duration of burning not exceeding 30 s		N/A
	However, for printed circuit boards, the duration of burning not exceeding 15 s		N/A
F	ANNEX F (NORMATIVE) CAPACITORS		-
	Capacitors likely to be permanently subjected to the supply voltage, and used for radio interference suppression or voltage dividing, comply with the following clauses of IEC 60384-14, with the following modifications:		N/A
1.5	Terminology		-
1.5.3	Class X capacitors tested according to subclass X2		N/A
1.5.4	This subclause is applicable		N/A
1.6	Marking		-
	Items a) and b) are applicable		N/A
3.4	Approval testing		-
3.4.3.2	Table II is applicable as described		N/A
4.1	Visual examination and check of dimensions		-
	This subclause is applicable		N/A
4.2	Electrical tests		-
4.2.1	This subclause is applicable		N/A
4.2.5	This subclause is applicable		N/A
4.2.5.2	Only table IX is applicable		N/A
	Values for test A apply		N/A
	However, for capacitors in heating appliances the values for test B or C apply		N/A
4.12	Damp heat, steady state		-
	This subclause is applicable		N/A
	Only insulation resistance and voltage proof are checked		N/A
4.13	Impulse voltage		-
	This subclause is applicable		N/A
4.14	Endurance		-
	Subclauses 4.14.1, 4.14.3, 4.14.4 and 4.14.7 applicable		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
4.14.7	Only insulation resistance and voltage proof are checked		N/A
	Visual examination, no visible damage		N/A
4.17	Passive flammability test		-
	This subclause is applicable		N/A
4.18	Active flammability test		-
	This subclause is applicable		N/A
G	ANNEX G (NORMATIVE) SAFETY ISOLATING TRANSFORMERS		-
	The following modifications to this standard are applicable for safety isolating transformers:		N/A
7	Marking and instructions		-
7.1	Transformers for specific use marked with:		-
	-name, trademark or identification mark of the manufacturer or responsible vendor		N/A
	-model or type reference		N/A
17	Overload protection of transformers and associated circuits		
	Fail-safe transformers comply with subclause 15.5 of IEC 61558-1		N/A
22	Construction		-
	Subclauses 19.1 and 19.1.2 of IEC 61558-2-6 are applicable		N/A
29	Clearances, creepage distances and solid insulation		
29.1, 29.2 and 29.3	The distances specified in items 2a, 2c and 3 in table 13 of IEC 61558-1 apply		N/A
H	ANNEX H (NORMATIVE) SWITCHES		-
	Switches comply with the following clauses of IEC 61058-1, as modified:		N/A
	-The tests of IEC 61058-1 carried out under the conditions occurring in the appliance		N/A
	-Before being tested, switches are operated 20 times without load		N/A
8	Marking and documentation		-
	Switches are not required to be marked		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	However, switches that can be tested separately from the appliance marked with the manufacturer's name or trade mark and the type reference		N/A
13	Mechanism		-
	The tests may be carried out on a separate sample		N/A
15	Insulation resistance and dielectric strength		-
15.1	Not applicable		N/A
15.2	Not applicable		N/A
15.3	Applicable for full disconnection and micro- disconnection		N/A
17	Endurance		-
	Compliance is checked on three separate appliances or switches		N/A
	For 17.2.4.4, the number of cycles is 10 000, unless otherwise specified in 24.1.3 of the relevant part 2 of IEC 60335		N/A
	Switches for operation under no load and which can be operated only by a tool and switches operated by hand that are interlocked so that they cannot be operated under load, are not subjected to the tests		N/A
	Subclauses 17.2.2 and 17.2.5.2 not applicable		N/A
	The ambient temperature during the test is that occurring in the appliance during the test of Clause 11 in IEC 60335-1		N/A
	Temperature rise of the terminals not more than 30 K above the temperature rise measured in clause 11 of IEC 60335-1		N/A
20	Clearances, creepage distances, solid insulation and coatings of rigid printed board assemblies		-
	This clause is applicable to clearances and creepage distances for functional insulation, across full disconnection and micro-disconnection, as stated in table 24		N/A
I	ANNEX I (NORMATIVE) MOTORS HAVING BASIC INSULATION VOLTAGE OF THE APPLIANCE THAT IS INADEQUATE FOR THE RATED		-
	The following modifications to this standard are applicable for motors having basic insulation that is inadequate for the rated voltage of the appliance:		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
8	Protection against access to live parts		N/A
8.1	Metal parts of the motor are considered to be bare live parts		N/A
11	Heating		-
11.3	Temperature rise of the body of the motor is determined instead of the temperature rise of the windings		N/A
11.8	Temperature rise of the body of the motor, where in contact with insulating material, not exceeding values in table 3 for the relevant insulating material		N/A
16	Leakage current and electric strength		-
16.3	Insulation between live parts of the motor and its other metal parts not subjected to the test		N/A
19	Abnormal operation		-
19.1	The tests of 19.7 to 19.9 not carried out		N/A
19.101	Appliance operated at rated voltage with each of the following fault conditions:		-
	- short circuit of the terminals of the motor, including any capacitor incorporated in the motor circuit		N/A
	- short circuit of each diode of the rectifier		N/A
	- open circuit of the supply to the motor		N/A
	- open circuit of any parallel resistor, the motor being in operation		N/A
	Only one fault simulated at a time, the tests carried out consecutively		N/A
22	Construction		-
22.101	For class I appliances incorporating a motor supplied by a rectifier circuit, the d.c. circuit being insulated from accessible parts of the appliance by double or reinforced insulation		N/A
	Compliance checked by the tests specified for double and reinforced insulation		N/A
J	ANNEX J (NORMATIVE) COATED PRINTED CIRCUIT BOARDS		-
	Testing of protective coatings of printed circuit boards carried out in accordance with IEC 60664-3 with the following modifications:		N/A
5.7	Conditioning of the test specimens		-

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	When production samples are used, three samples of the printed circuit board are tested		N/A
5.7.1	Cold		-
	The test is carried out at -25 C		N/A
5.7.3	Rapid change of temperature		-
	Severity 1 is specified		N/A
5.9	Additional tests		-
	This subclause is not applicable		N/A
K	ANNEX K (NORMATIVE) OVERVOLTAGE CATEGORIES		-
	The information on overvoltage categories is extracted from IEC 60664-1		N/A
	Overvoltage category is a numeral defining a transient overvoltage condition		N/A
	Equipment of overvoltage category IV is for use at the origin of the installation		N/A
	Equipment of overvoltage category III is equipment in fixed installations and for cases where the reliability and the availability of the equipment is subject to special requirements		N/A
	Equipment of overvoltage category II is energy consuming equipment to be supplied from the fixed installation		N/A
	If such equipment is subjected to special requirements with regard to reliability and availability, overvoltage category III applies		N/A
	Equipment of overvoltage category I is equipment for connection to circuits in which measures are taken to limit transient overvoltages to an appropriate low level		N/A
L	ANNEX L (INFORMATIVE) GUIDANCE FOR THE MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES		-
	Sequences for the determination of clearances and creepage distances		N/A
M	ANNEX M (NORMATIVE) POLLUTION DEGREE		-
	The information on pollution degrees is extracted from IEC 60664-1		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	Pollution		-
	The microenvironment determines the effect of pollution on the insulation, taking into account the microenvironment		N/A
	Means may be provided to reduce pollution at the insulation by effective enclosures or similar		N/A
	Minimum clearances specified where pollution may be present in the microenvironment		N/A
	Degrees of pollution in the microenvironment		-
	For evaluating creepage distances, the following degrees of pollution in the microenvironment are established:		-
	- pollution degree 1: no pollution or only dry, non-conductive pollution occurs. The pollution has no influence		N/A
	- pollution degree 2: only non-conductive pollution occurs, except that occasionally a temporary conductivity caused by condensation is to be expected		N/A
	- pollution degree 3: conductive pollution occurs or dry non-conductive pollution occurs that becomes conductive due to condensation that is to be expected		N/A
	- pollution degree 4: the pollution generates persistent conductivity caused by conductive dust or by rain or snow		N/A
N	ANNEX N (NORMATIVE) PROOF TRACKING TEST		-
	The proof tracking test is carried out in accordance with IEC 60112 with the following modifications:		N/A
7	Test apparatus		-
7.3	Test solutions		-
	Test solution A is used		N/A
10	Determination of proof tracking index (PTI)		-
10.1	Procedure		-
	The proof voltage is 100V, 175V, 400V or 600V .... :		N/A
	The last paragraph of Clause 3 applies		N/A
	The test is carried out on five specimens		N/A

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
	In case of doubt, additional test with proof voltage reduced by 25V, the number of drops increased to 100		N/A
10.2	Report		-
	The report stating if the PTI value was based on a test using 100 drops with a test voltage of (PTI-25) V		N/A
O	ANNEX O (INFORMATIVE) SELECTION AND SEQUENCE OF THE TESTS OF CLAUSE 30		-
	Description of tests for determination of resistance to heat and fire		N/A
P	ANNEX P (INFORMATIVE) GUIDANCE FOR THE APPLICATION OF THIS STANDARD TO APPLIANCES USED IN WARM DAMP EQUABLE CLIMATES		-
	Modifications applicable for class 0 and 01 appliances having a rated voltage exceeding 150V, intended to be used in countries having a warm damp equable climate and that are marked WDaE		-
	Modifications may also be applied to class 1 appliances having a rated voltage exceeding 150V, intended to be used in countries having a warm damp equable climate and that are marked WdaE, if liable to be connected to a supply mains that excludes the protective earthing conductor		-
5	General conditions for the tests		-
5.7	The ambient temperature for the tests of Clauses 11 and 13 is 40 $^{+3}/_{0}$		N/A
7	Marking and instructions		-
7.1	The appliance marked with the letters WDaE		N/A
7.12	The instructions state that the appliance is to be supplied through a RCD having a rated residual operating current not exceeding 30 mA		N/A
	The instructions state that the appliance is considered to be suitable for use in countries having a warm damp equable climate, but may also be used in other countries		N/A
11	Heating		-
11.8	The values of Table 3 are reduced by 15 K		N/A
13	Leakage current and electric strength at operating temperature		-
13.2	The leakage current for class I appliances not exceeding 0,5 mA		N/A
15	Moisture resistance		-

EN 60335-1 & EN 60335-2-17			
Cl.	**Requirement – Test**	**Result**	**Verdict**
15.3	The value of t is 37 C		N/A
16	Leakage current and electric strength		-
16.2	The leakage current for class I appliances not exceeding 0,5 mA		N/A
19	Abnormal operation		-
19.13	The leakage current test of 16.2 is applied in addition to the electric strength test of 16.3		N/A
Q	ANNEX Q (INFORMATIVE) SEQUENCE OF TESTS FOR THE EVALUATION OF ELECTRONIC CIRCUITS		-
	Description of tests for appliances incorporating electronic circuits		-
R	ANNEX R (NORMATIVE) SOFTWARE EVALUATION		-
	Software evaluated in accordance with the following clauses of Annex H of IEC 60730-1, as modified		-
H.2	Definitions		-
	Only definitions H.2.16 to H.2.20 applicable		N/A
H.7	Information		-
	Only footnotes 12) to 18) of Table 7.2, as modified, applicable		N/A
H.11.12	Controls using software		-
	All the subclauses of H.11.12, as modified, except H.11.12.6 and H.11.12.6.1, applicable		N/A
H.11.12.7	Delete text		N/A
H.11.12.7.1	For appliances using software class C having a single channel with self-test and monitoring structure, the manufacturer provides the measures necessary to address the fault/errors in safety related segments and data		N/A
H.11.12.8	Software fault/error detection occurs before compliance with 19.13 of IEC 60335-1 is impaired		N/A
H.11.12.8.1	Replace text		N/A
H.11.12.13	Software and safety related hardware under its control initializes and terminates before compliance with 19.13 of IEC 60335-1 is impaired		N/A

10	TABLE: power input and current			P
Rated Voltage and Frequency (V/Hz)	Rated Input Power or Current (W/A)	Tested Voltage and Frequency (V/Hz)	Measured Input Power or Current (W/A)	Measured Power deviation
230V/50Hz	115W	230V/50Hz	113.3W	-1.48%
Limited deviation: power input deviation: +10%,-10%				

11	TABLE: temperature rise measurements	P
	1.15 times rated Power	
	132.2W	
	Ambient (t1) (°C)	Ambient (t2) (°C)
	27.6	28.3

No.	Temperature rise dT of part/at:	dT (K)	Limited dT (K)
1	Power cord	11.3	85
2	Plastic enclosure	45.6	60
3	Ambient	28.3 °C	--

13.2	TABLE: leakage current measurements at operating temperature	P
	At 1.15 times rated Power (W): 132.3W	---

Leakage current between:	I (mA)	Limited I (mA)
Between live parts and enclosure	0.032	0.35

13.3	TABLE: electric strength measurements at operating temperature:	P

Test voltage applied between:	Test voltage (V)	Breakdown
Between live parts and enclosure	3000	No

15.3	TABLE: Moisture resistance, humidity treatment	P

Temperature (°C)	Humidity (%)	Duration (hours)
25	93	48
Remark: After humidity test, electric strength test specified in clause 16.3 should be applied.		

16.2	TABLE: leakage current measurements	P
	At 1.15 times rated Power (W): 132.3W	---

Leakage current I between:	I (mA)	Limited I (mA)
Between live parts and enclosure	0.043	0.25

16.3	TABLE: electric strength measurements:	Pass
Test voltage applied between:	Test voltage (V)	Breakdown
Between live parts and enclosure	3000	No

19	TABLE: abnormal operation tests					P
	ambient temperature (°C)			27.8		---
No.	component No.	fault	test voltage (V)	test time	result	
1	Heater	0,85 times rated power input	212V	30min	No hazard.	

23.5	TABLE: electric strength measurements for basic insulation of internal wiring	P
Test voltage applied between:	Test voltage (V)	Breakdown
Conductor and insulation	2000	No

24.1	TABLE: components				P
object/part No.	manufacturer/trademark	type/model	technical data	standard	mark(s) of conformity
Power cord	Various	Various	2*0.75mm^2	--	VDE
PCB	Various	Various	V-0 130°C	--	VDE
Heater	Various	Various	115W	--	VDE
[1]) an asterisk indicates a mark which assures the agreed level of surveillance					

29.1	TABLE: CREEPAGE DISTANCE AND CLEARANCE THROUGH INSULATION MEASUREMENTS					P
clearance cl and creepage distance dcr at/of:	Up (V)	U r.m.s. (V)	required cl (mm)	cl (mm)	required dcr (mm)	dcr (mm)
L to N	<420	<250	2.0	3.0	2.5	3.0

30.1	TABLE: ball-pressure tests for thermoplastics		P
	Limited impression diameter (mm)	≦2 mm	---
Part	Test temperature (°C)	Impression diameter (mm)	Allowed impression diameter (mm)
Plastic part	75	0.8	≤2

30.2	TABLE: glow wire test		P
Part	Test temperature (°C)	Result	
Plastic part	650	Not burning	

ANNEX A:

Photo-document

Photo 1 General appearance of the EUT (Bo-5010 Mig)



Photo 2 General appearance of the EUT (Bo-5010 Mig)

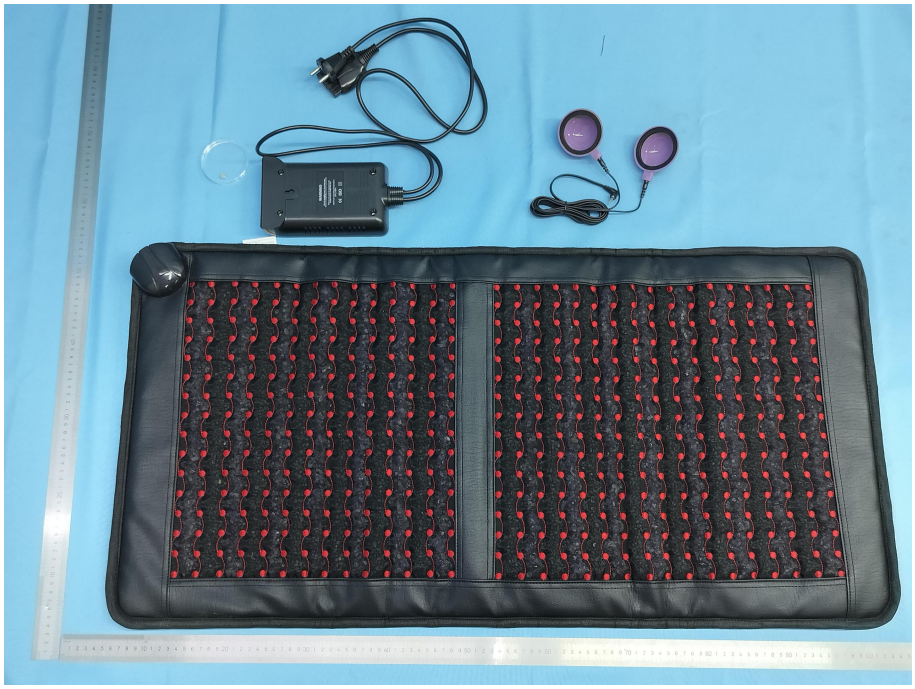


Photo 3 General appearance of the EUT (Bo-5010 Mig)



Photo 4 General appearance of the EUT (Bo-5010 Mig)



Photo 5 General appearance of the EUT (Bo-5010 Mig)



Photo 6 General appearance of the EUT (Bo-5010 Mig)

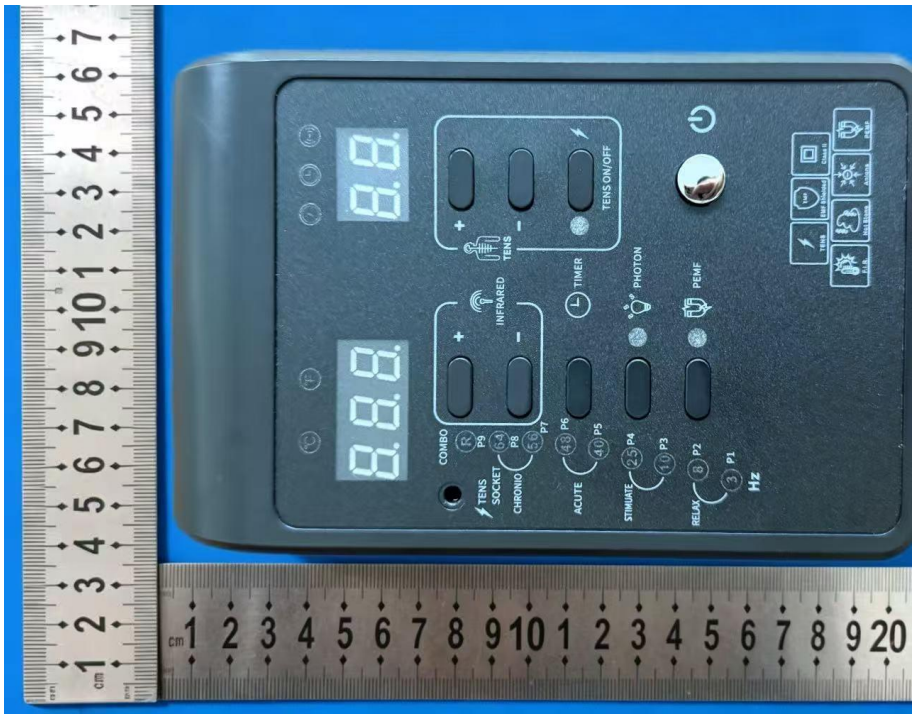


Photo 7 General appearance of the EUT (Bo-5010 Mig)

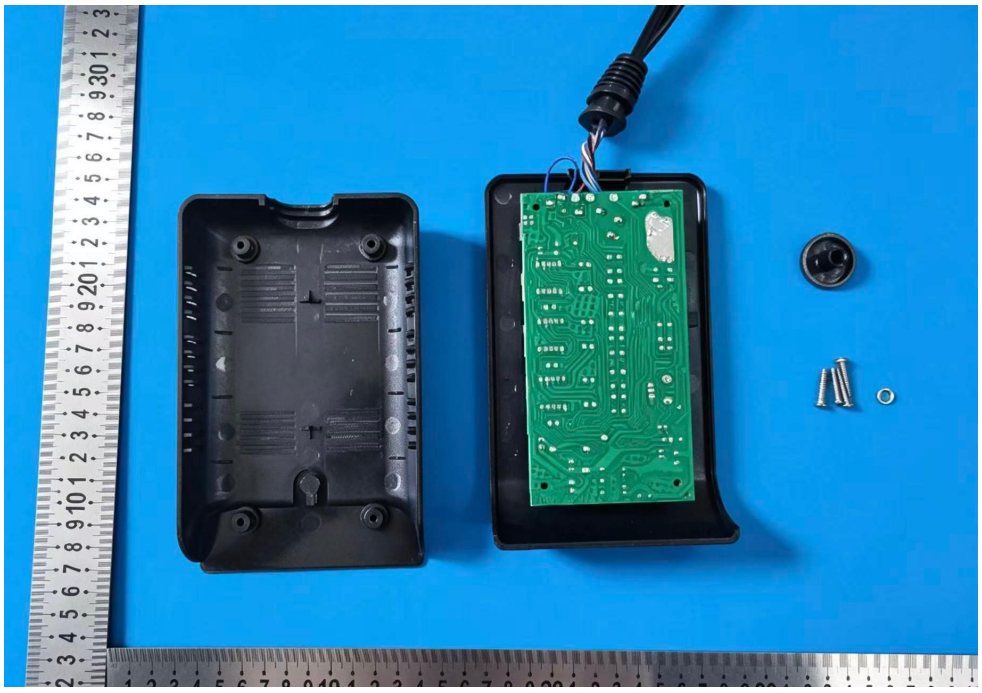


Photo 8 General appearance of the EUT (Bo-5010 Mig)

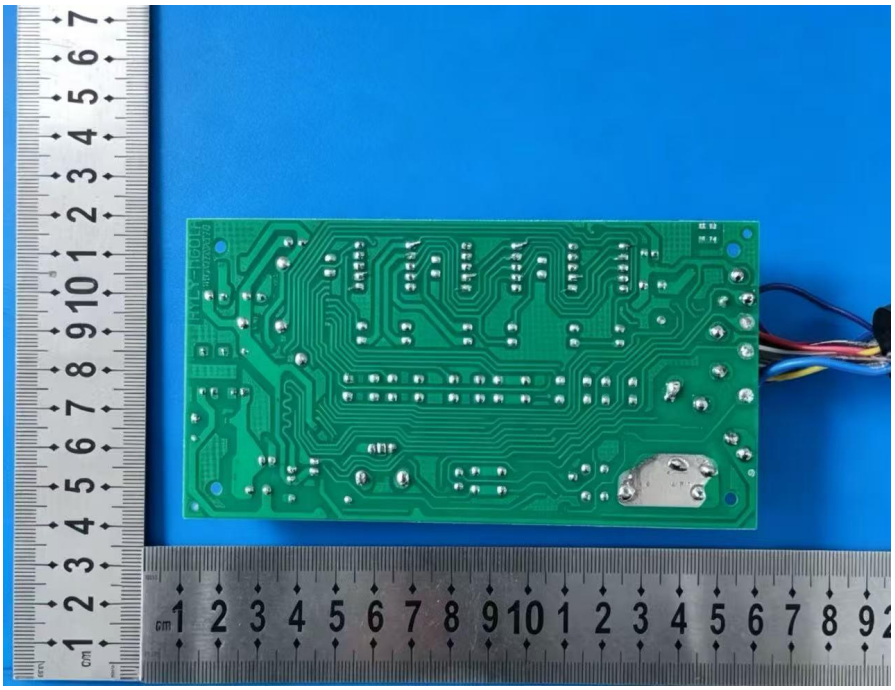


Photo 9 General appearance of the EUT (The stone inside the heating pad)







***** End of report *****