



# IEC 60601-1 Medical electrical equipment

## Part 1: General requirements for basic safety and essential performance

Report Reference No...... \$190700.01

Date of issue ...... 14 October 2018

Total number of pages ...... 138

Testing Laboratory ...... ITL (Product Testing) Ltd.

Address ....... 1 Bat-Sheva St., POB 87, Lod 71100, Israel

Applicant's name...... MediTouch Ltd.

Test specification:

Standard ...... IEC 60601-1: 2005 + CORR. 1:2006 + CORR. 2:2007 + AM1:2012

Test procedure...... PM120

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

Test Report Form No.....: IEC60601\_1K

Test Report Form Originator ......: UL(US)

Master TRF ...... 2015-11

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**Test item description.....:** Platform for static and dynamic balance rehabilitation

Trade Mark..... MediTouch

Manufacturer .....: Same as applicant.

 Model/Type reference
 :
 BalanceTutor: Model BT100

 Ratings
 :
 200-240Vac, 50/60Hz, 10A





ACCREDITED

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Testing procedure and testing location	n:		
		ITL (Product Testing) Lt	d.
Testing location/ address	::	1 Bat-Sheva St., POB 8	7, Lod 71100, Israel
☐ Associated CB Testing Laborate	ory:		
Testing location/ address	:		
Tested by (name + signature)	:	Anthony Nikitin	Hn Thy
Approved by (name + signature)	:	Slava Pilyagin	they
Testing procedure: TMD/CTE Sta	1.		
Testing procedure: TMP/CTF Sta			
Testing location/ address	:		
Tested by (name + signature)	:		
Approved by (name + signature)	:		
Testing procedure: WMT/CTF St			
Testing location/ address	:		
Tested by (name + signature)	:		
Witnessed by (name + signature)	:		
Approved by (name + signature)	:		
Testing procedure: SMT/CTF Stage 3 or 4:			
Testing location/ address	:		
Tested by (name + signature)	:		
Witnessed by (name + signature)	:		
Approved by (name + signature)	:		
Supervised by (name + signature)	:		





#### List of Attachments:

Attachement #	Description
1	National Differences US ,Canada
2	Photos

\*IEC 60601-1-6 evaluated at ITL test report No: S190701.01

#### Summary of testing

#### Tests performed (name of test and test clause):

4.8; 4.9; 11.2; 15.4 Ratings on critical components

4.11 Power consumption (input) single phase and poly-phase

5.7 Humidity

5.9; 8.3 Determination of applied parts and accessible parts

7.1.2; 7.1.3 Durability and legibility of marking

8.4.3 Limitation of voltage, current or energy

8.7 Leakage current

8.8.3 Dielectric strength

9.4 Instability

11.1 Normal heating

11.6.6 Cleaning and disinfection

11.8 Interruption of power supply

13.2 Single fault conditions

15.3 Mechanical Strength

15.5 Mains supply transformers

#### **Testing location:**

1 Bat-Sheva St., POB 87, Lod 71100, Israel

#### Summary of compliance with National Differences

List of countries addressed: US and CA

 ☐ The product fulfils the requirements of US (US National standard AAMI / ANSI ES60601-1:2005/(R)2012 and A1:2012, c1:2009/(r)2012 and a2:2010/(r)2012) and CA (Canadian National standard: CAN/CSA-C22.2 No. 60601-1:08 + amendment 1CAN/CSA-C22.2 No. 60601-1:14 (IEC 60601-1:2005+A1:2012, MOD)







#### Copy of marking plate

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.



a dynamic and static postural control trainer

Serial: A183XXXXXX

Model: BT100

Ratings: 200V-240V AC 50/60Hz 10A

MediTouch Limited

45 Hamelacha st., Netanya

4250574, IL



IPX-0 RoHS compliant

ECREP Janette Waterman

177 Ashfield Avenue, Bushey

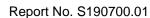
Herts, WD23 4TB, UK

LBL-23-01-01-D





GENERAL INFORMATION				
Test item particulars (see also Clause 6):				
Classification of installation and use:	Stationary			
Device type (component/sub-assembly/ equipment/ system):	equipment			
Intended use (Including type of patient, application location):	Platform for static and dynamic balance rehabilitation.			
Mode of operation:	Continuous			
Supply connection	Non detachable power supply cord			
Accessories and detachable parts included:	N/A			
Other options include:	N//A			
Testing				
Date of receipt of test item(s):	15/07/2018			
Dates tests performed:	16/07/2018 - 19/08/2018			
Possible test case verdicts:				
- test case does not apply to the test object:	N/A			
- test object does meet the requirement:	Pass (P)			
- test object was not evaluated for the requirement:	N/E (collateral standards only)			
- test object does not meet the requirement:	Fail (F)			
Abbreviations used in the report:				
- normal condition: N.C.	- single fault condition: S.F.C.			
- means of Operator protection: MOOP	- means of Patient protection: MOPP			
General remarks:  "(See Attachment #)" refers to additional information appended to the report.  "(See appended table)" refers to a table appended to the report.  The tests results presented in this report relate only to the object tested.  This report shall not be reproduced except in full without the written approval of the testing laboratory.  List of test equipment must be kept on file and available for review.  Additional test data and/or information provided in the attachments to this report.  Throughout this report a □ comma / ⋈ point is used as the decimal separator.				
Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02	2:2012			
sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided:	applicable			
When differences exist; they shall be identified in the Gener Name and address of factory (ies)	al product information section. as applicant			





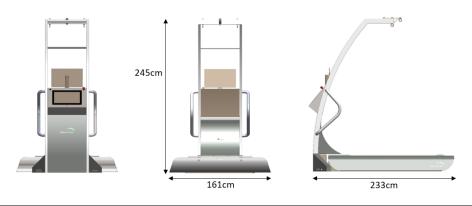


#### **General product information:**

The BalanceTutor Model BT100 is a platform for static and dynamic balance rehabilitation and fall prevention. The Unit is is a Class I equipment AC-supplied via Isolation Transformer and consists of a moving treadmill, computer and mechanical construction with patient harness. The Unit is programmed and controlled by an Operator Touch screen, and the patient can view the program status on patient monitor.



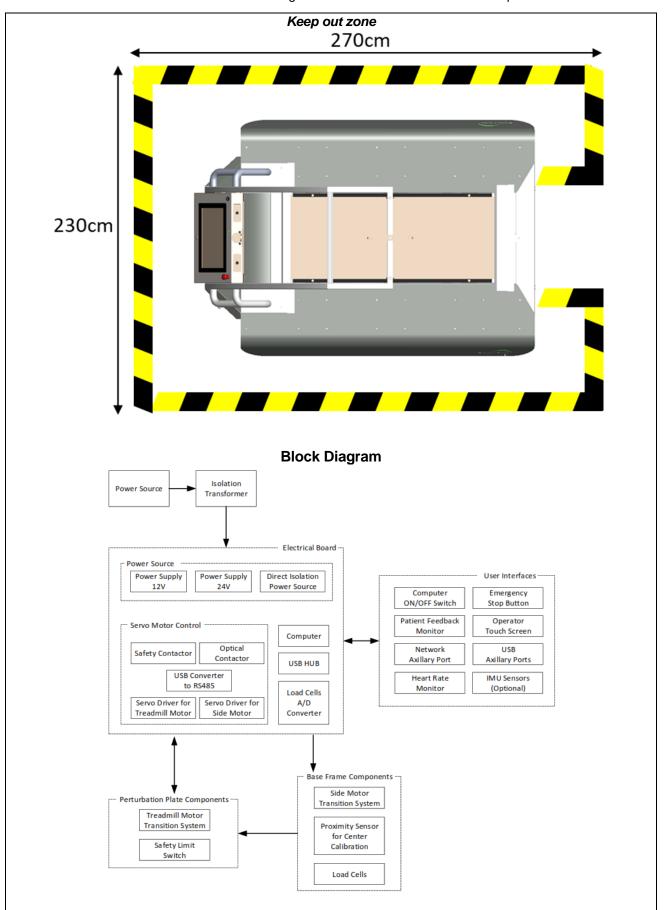
#### **Product dimensions**







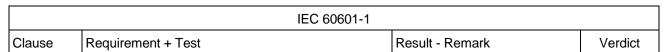
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## **INSULATION DIAGRAM** Applied Part Harness Belt PΕ A1,2,3 Treadmill Motor Side Motor 24V PSU (for control) L Isolation AC input Transformer Ν 12V PSU USB hub (for computer, usb hub, Operator monitor) Computer Operator Monitor Patient Monitor







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enclosure thickness

2mm

enclosure

	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict

TABL	.E: To insulatio	n diagram	1						Р
Pollut	tion degree			: 2					_
Overv	oltage categor	y		: II					_
Altitu	de			: Up to	2000m				_
	ional details or plied parts				one $\ \ \Box$ A	Areas for details	)		_
Area	Number and type of Means of Protection: MOOP, MOPP	CTI (IIIb, unless is known)	Working Vrms [VAC]	g voltage Vpk [VAC]	Required creepage (mm)	Required clearance (mm)	Measured creepage (mm)	Measured clearance (mm)	Remarks
<b>A</b> <sub>1</sub>	1 MOOP	IIIb	240	325	2.5	2	4.5	4.5	L/N to Transformer PE
A <sub>2</sub>	1 MOOP	IIIb	240	325	2.5	2	8.5	7	L/N to Transformer enclosure
A <sub>3</sub>	1 MOOP	IIIb	240	325	2.5	2	11.5	5.2	L/N to BT100 PE
В	2 MOPP	IIIb	240	325	8	5	_	n the EUT osure	L/N to Applied Part (Harness belt)
С	2 MOPP	IIIb	240	325	8	5	12	10	L/N to Transformer output
D	2 MOPP	IIIb	240	325	8	5	Transfor Monitor enclosure	by isolation mer and Plastic thickness	L/N to patient touch screen
E	2 MOOP	IIIb	240	325	5	4	Transfor	oy isolation mer and Plastic	L/N to Operator Monitor

#### **INSULATION DIAGRAM CONVENTIONS and GUIDANCE:**

A measured value must be provided in the value columns for the device under evaluation. The symbol > (greater than sign) must not be used. Switch-mode power supplies must be re-evaluated in the device under evaluation therefore N/A must not be used with a generic statement that the component is certified.

Insulation diagram is a graphical representation of equipment insulation barriers, protective impedance and protective earthing. If feasible, use the following conventions to generate the diagram:

- All isolation barriers are identified by letters between separate parts of diagram, for example separate transformer windings, optocouplers, wire insulation, creepage and clearance distances.
- Parts connected to earth with large dots are protectively earthed. Other connections to earth are functional
- Applied parts are extended beyond the equipment enclosure and terminated with an arrow.
- Parts accessible to the operator only are extended outside of the enclosure, but are not terminated with an arrow.







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	IEC 60601-1	T	I
Clause	Requirement + Test	Result - Remark	Verdict
4	GENERAL REQUIREMENTS		Р
4.1	Requirements of this standard applied in NORMAL USE and reasonably foreseeable misuse	Complied	Р
4.2	RISK MANAGEMENT PROCESS FOR ME EQUIPMENT OR ME	SYSTEMS	Р
4.2.2	General requirement for RISK MANAGEMENT - PROCESS complies with ISO14971 (2007):	See Appended RM Results Table 4.2.2.	Р
4.2.3	Evaluating RISK		Р
4.2.3.1	a) Compliance with the standard reduces residual risk to an acceptable level		Р
	b) Manufacturer has defined risk acceptability criteria in the RISK MANAGEMENT PLAN	See RMF	Р
	c) When no specific technical requirements provided manufacturer has determined HAZARDS or HAZARDOUS SITUATIONS exists.		N/A
	- HAZARDS or HAZARDOUS SITUATIONS have been evaluated using the RISK MANAGEMENT PROCESS.		Р
4.2.3.2	MANUFACTURER has addressed HAZARDS or HAZARDOUS SITUATIONS not specifically addressed in the IEC 60601-1 series.	No such addressed hazards or hazardous situations.	N/A
4.3	Performance of clinical functions necessary to achieve intended use or that could affect the safety of the ME EQUIPMENT or ME SYSTEM were identified during RISK ANALYSIS.		P
	- Performance limits were identified in both NORMAL CONDITION and SINGLE FAULT CONDITION.		Р
	- Loss or degradation of performance beyond the limits specified by the MANUFACTURER were evaluated		Р
	- Functions with unacceptable risks are identified as ESSENTIAL PERFORMANCE:	No essential performance	N/A
	- RISK CONTROL measures implemented		Р
	- Methods used to verify the effectiveness of RISK CONTROL measures implemented		Р
4.4	EXPECTED SERVICE LIFE stated in RISK MANAGEMENT FILE:	See RMF	Р
4.5	Alternative RISK CONTROL methods utilized:	No Alternative Risk Control	N/A
	RESIDUAL RISK resulting from the alternative RISK CONTROL measures or tests is acceptable and comparable to RESIDUAL RISK resulting from application of this standard:	No Alternative Risk Control.  RMF Reference to specific risks:	N/A
	(ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)	(ISO 14971 Cl)	
	Alternative means based scientific data or clinical opinion or comparative studies:	As above	N/A







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	IEC 60601-1	<u>,                                      </u>	
Clause	Requirement + Test	Result - Remark	Verdict
4.6	RISK MANAGEMENT PROCESS identifies parts that can come into contact with PATIENT but not defined as APPLIED PARTS, subjected to the requirements for APPLIED PARTS, except for Clause 7.2.10	See RMF	Р
	MANUFACTURER assesses the risk of accessible parts coming into contact with the patient: (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)	See RMF	Р
	Assessment identified the APPLIED PART TYPE requirements	Type BF	Р
4.7	ME EQUIPMENT remained SINGLE FAULT SAFE, or the RISK remained acceptable as determined by Clause 4.2	Complied	Р
	MANUFACTURER RISK ANALYSIS was used to determine failures to be tested:  (ISO 14971 Cl. 4.2-4.4)	See RMF	Р
	Failure of any one component at a time that could result in a HAZARDOUS SITUATION, including those in 13.1, simulated physically or theoretically	See appended Table 13.2 for simulated physical test	Р
4.8	All components and wiring whose failure could result in a HAZARDOUS SITUATION used according to their applicable ratings, unless specified:	See list of critical components 8.10	Р
	Components and wiring exception in the standard or by RISK MANAGEMENT PROCESS		Р
	RISK MANAGEMENT PROCESS assesses components to identify components where the failure results in a HAZARDOUS SITUATION for components used outside their ratings:	No components used outside their ratings	N/A
	(ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)  MANUFACTURER identified components where the failure results in a HAZARDOUS SITUATION:	See RMF	Р
	Components determined to be acceptable where used as a MEANS OF PROTECTION:	See list of critical components 8.10 and RMF	Р
	Reliability of components used as MEANS OF PROTECTION assessed for conditions of use in ME EQUIPMENT, and they complied with one of the following	As above	Р
	a) Applicable safety requirements of a relevant IEC or ISO standard	See list of critical components 8.10	Р
	b) Requirements of this standard applied in the absence of a relevant IEC or ISO standard	See list of critical components 8.10	Р
4.9	A COMPONENT WITH HIGH-INTEGRITY CHARACTERISTICS provided and selected appropriately:	No such components	N/A







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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
	RISK MANAGEMENT FILE includes an assessment to determine if the failure of components results in unacceptable RISK	See RMF	N/A
	Components identified and required to be COMPONENTS WITH HIGH INTEGRITY CHARACTERISTIC:		N/A
4.10	Power supply		Р
4.10.1	ME EQUIPMENT is suitable for connection to indicated power source (select applicable):	Mains is the only suitable power source	Р
4.10.2	Maximum rated voltage for ME EQUIPMENT intended to be connected to SUPPLY MAINS:	240Vac	Р
	- 250 V for HAND-HELD ME EQUIPMENT (V):	Not Hand-Held	Р
	- 250 V d.c. or single-phase a.c., or 500 V polyphase a.c. for ME EQUIPMENT and ME SYSTEMS with a RATED input ≤ 4 kVA (V):	Rated 240Vac max single- phase	Р
	- 500 V for all other ME EQUIPMENT and ME SYSTEMS	Rated 240Vac max single- phase	Р
4.11	Power input		Р
	Steady-state measured input of ME EQUIPMENT or ME SYSTEM at RATED voltage or voltage range and at operating settings indicated in instructions for use didn't exceed marked rating by more than 10%	See appended Table 4.11	Р

5	GENERAL REQUIREMENTS FOR TESTING ME E	QUIPMENT	Р
5.1	Test not performed when analysis indicated condition being tested was adequately evaluated by other tests or methods	Tests performed	N/A
	RISK MANAGEMENT FILE identifies combinations of simultaneous independent faults that could result in a HAZARDOUS SITUATION.	RMF Reference to specific RISKS:(ISO 14971 CI)	N/A
	(ISO 14971 Cl. 4.2-4.4)		
5.3	Tests conducted within the environmental conditions specified in technical description		Р
	Temperature (°C), Relative Humidity (%):	10-40°C, 10-80%	_
	Atmospheric Pressure (kPa)	700hPa to 1060hPa	_
5.5	a) Supply voltage during tests was the least favourable of the voltages specified in 4.10.2 or voltages marked on ME EQUIPMENT (V)	264Vac	Р
	b) ME EQUIPMENT marked with a RATED frequency range tested at the least favourable frequency within the range (Hz):	60 / 50Hz	Р







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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
	c) ME EQUIPMENT with more than one RATED voltage, both a.c./ d.c. or both external power and INTERNAL ELECTRICAL POWER SOURCE tested in conditions (see 5.4) related to the least favourable voltage, nature of supply, and type of current	No internal electrical power source	N/A
	d) ME EQUIPMENT intended for only d.c. supply connection tested with d.c. and influence of polarity considered:	Not intended for d.c. supply connection	Р
	e)ME EQUIPMENT tested with alternative ACCESSORIES and components specified in ACCOMPANYING DOCUMENTS to result in the least favourable conditions:	Not specified	N/A
	f) ME EQUIPMENT connected to a separate power supply as specified in instructions for use	Not connected to a separate power supply	N/A
5.7	ME EQUIPMENT or parts thereof affected by climatic conditions were set up completely, or partially, with covers detached and subjected to a humidity preconditioning prior to tests of Clauses 8.7.4 and 8.8.3:		P
	ME EQUIPMENT heated to a temperature between T and T + 4°C for at least 4 h and placed in a humidity chamber and ambient within 2 °C of T in range of +20°C to +32°C for indicated time	T = 22°C Time – 48h	_
5.9	Determination of APPLIED PARTS and ACCESSIBLE PARTS		Р
5.9.1	APPLIED PARTS identified by inspection and reference to ACCOMPANYING DOCUMENTS:	Complied	Р
5.9.2	ACCESSIBLE PARTS		Р
5.9.2.1	Accessibility determined using standard test finger of Fig. 6	See Appended Table 5.9.2	Р
5.9.2.2	Test hook of Fig. 7 inserted in all openings of ME EQUIPMENT and pulled with a force of 20 N for 10 s	See Appended Table 5.9.2	P
5.9.2.3	Conductive parts of actuating mechanisms of electrical controls accessible after removal of handles, knobs, levers and the like regarded as ACCESSIBLE PARTS:	No such parts	N/A
	Conductive parts of actuating mechanisms not considered ACCESSIBLE PARTS when removal of handles, knobs, required use of a TOOL:	No such parts	N/A

6	CLASSIFICATION OF ME EQUIPMENT AND ME SYSTEMS		Р
6.2	CLASS I ME EQUIPMENT, externally powered		Р
	CLASS II ME EQUIPMENT, externally powered	Not Class II equipment	N/A
	INTERNALLY POWERED ME EQUIPMENT	Not Internally powered	N/A







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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
	EQUIPMENT with means of connection to a SUPPLY MAINS complied with CLASS I or CLASS II ME EQUIPMENT requirements when so connected, and when not connected to SUPPLY MAINS with INTERNALLY POWERED ME EQUIPMENT requirements	Class I Equipment ,Not Internally powered	Р
	TYPE B APPLIED PART	No Type B Applied Part	N/A
	TYPE BF APPLIED PART		Р
	TYPE CF APPLIED PART	No Type CF Applied Part	N/A
	DEFIBRILLATION-PROOF APPLIED PARTS	No Defibrillation-proof applied parts	N/A
6.3	ENCLOSURES classified according to degree of protection against ingress of water and particulate matter as per IEC 60529::	IPX0	Р
6.4	ME EQUIPMENT or its parts intended to be sterilized classified according to method(s) of sterilization in instructions for use:	No such intention	Р
6.5	ME EQUIPMENT and ME SYSTEMS intended for use in an OXYGEN RICH ENVIRONMENT classified for such use and complied with 11.2.2	Equipment not intended for use in an oxygen rich environment	N/A
6.6	CONTINUOUS OF Non-CONTINUOUS OPERATION:	Continuous	Р

7	ME EQUIPMENT IDENTIFICATION, MARKING, AND DOCUMENTS		Р
7.1.2	Legibility of Markings Test for Markings specified in Clause 7.2-7.6:	See Appended Table 7.1.2	Р
7.1.3	Required markings can be removed only with a TOOL or by appreciable force, are durable and remain CLEARLY LEGIBLE during EXPECTED SERVICE LIFE OF ME EQUIPMENT IN NORMAL USE	See appended Tables 7.1.3 and 8.10	P
7.2	Marking on the outside of ME EQUIPMENT or ME EQ	UIPMENT parts	Р
7.2.1	At least markings in 7.2.2, 7.2.5, 7.2.6, 7.2.10, and 7.2.13 were applied when size of EQUIPMENT, its part, an ACCESSORY, or ENCLOSURE did not permit application of all required markings:		Р
	Remaining markings fully recorded in ACCOMPANYING DOCUMENTS:	See UM	Р
	Markings applied to individual packaging when impractical to apply to ME EQUIPMENT		N/A
	Single use item marked:	No such item	N/A
7.2.2	ME EQUIPMENT marked with:		Р
	- the name or trademark and contact information of the MANUFACTURER	See attached copy of Marking Plate	Р
	- a model or type reference	See attached copy of Marking Plate	Р







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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
	- a serial number or lot or batch identifier; and	See attached copy of Marking Plate	Р
	- the date of manufacture or use by date	See attached copy of Marking Plate	Р
	Detachable components of the ME EQUIPMENT not marked; misidentification does not present an unacceptable risk, or		N/A
	RISK MANAGEMENT FILE includes an assessment of the RISKS relating to misidentification of all detachable parts:	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
	(ISO 14971 Cl. 4.2-4.4, 5, 6.4)		
	Detachable components of the ME EQUIPMENT are marked with the name or trademark of the MANUFACTURER, and	No Detachable components	N/A
	– a MODEL OR TYPE REFERENCE	As above	N/A
	Software forming part of a PEMS identified with a unique identifier:		N/A
7.2.3	Symbol 11 on Table D.1 used, optionally, advice to OPERATOR to consult ACCOMPANYING DOCUMENTS	See attached copy of Marking Plate	Р
	Safety sign 10 on Table D.2) used, advising OPERATOR that ACCOMPANYING DOCUMENTS must be consulted	See attached copy of Marking Plate	Р
7.2.4	Accessories marked with name or trademark and contact information of their MANUFACTURER, and	See attached copy of marking plates	Р
	- with a MODEL or TYPE REFERENCE		Р
	- a serial number or lot or batch identifier		Р
	- the date of manufacture or use by date		Р
	Markings applied to individual packaging when not practical to apply to ACCESSORIES		Р
7.2.5	ME EQUIPMENT and ME SYSTEM intended to receive power from other equipment, provided with one of the following	No power from other equipment	N/A
	- the name or trademark of the manufacturer of the other electrical equipment and type reference marked adjacent to the relevant connection point; or	As above	N/A
	- Table D.2, safety sign No. 10 adjacent to the relevant connection point and listing of the required details in the instructions for use; or	As above	N/A
	- Special connector style used that is not commonly available on the market and listing of the required details in the instructions for use.	As above	N/A
7.2.6	Connection to the Supply Mains		Р







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IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Marking appearing on the outside of part containing SUPPLY MAINS connection and, adjacent to connection point	See attached copy of Marking Plate	Р
	For PERMANENTLY INSTALLED ME EQUIPMENT, NOMINAL supply voltage or range marked inside or outside of ME EQUIPMENT	Not permanently installed me equipment	N/A
	- RATED supply voltage(s) or RATED voltage range(s) with a hyphen (-) between minimum and maximum voltages (V, V-V):	200-240	Р
	Multiple RATED supply voltages or multiple RATED supply voltage ranges are separated by (V/V):	No Multiple rated supply voltages	N/A
	- Nature of supply and type of current:	AC	Р
	Symbols 1-5, Table D.1 (used for same parameters:	Symbols not used	N/A
	- RATED supply frequency or RATED frequency range in hertz:	50/60Hz	Р
	- Symbol 9 of Table D.1 used for CLASS II ME EQUIPMENT	No Class II equipment	N/A
7.2.7	RATED input in amps or volt-amps, (A, VA):	10A	Р
	RATED input in amps or volt-amps, or in watts when power factor exceeds 0.9 (A, VA, W):	power factor not exceeds 0.9	N/A
	RATED input for one or more RATED voltage ranges provided for upper and lower limits of the range or ranges when the range(s) is/are greater than ± 10 % of the mean value of specified range (A, VA,W)	ranges are not greater than ± 10 %	N/A
	Input at mean value of range marked when range limits do not differ by more than 10 % from mean value (A, VA, W):	10A	Р
	Marking includes long-time and most relevant momentary volt-ampere ratings when provided, each plainly identified and indicated in ACCOMPANYING DOCUMENTS (VA)	No such ratings	P
	Marked input of ME EQUIPMENT provided with means for connection of supply conductors of other electrical equipment includes RATED and marked output of such means (A, VA, W):	No such connection	N/A
7.2.8			N/A
7.2.8.2	Output connectors are marked, except for MULTIPLE SOCKET-OUTLETS or connectors intended for specified ACCESSORIES or equipment	No output connectors intended to deliver power	N/A
	Rated Voltage (V), Rated Current (A):	See above	_
	Rated Power (W), Output Frequency (Hz):	See above	_







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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
7.2.9	ME EQUIPMENT or its parts marked with the IP environmental Code per IEC 60529 according to classification in 6.3 (Table D.3, Code 2), marking optional for ME EQUIPMENT or parts rated IPX0:	See above	N/A
7.2.10	Degrees of protection against electric shock as c PARTS marked with relevant symbols:	lassified in 6.2 for all APPLIED	Р
	TYPE B APPLIED PARTS with symbol 19 of Table D.1	No B Applied parts	N/A
	TYPE BF APPLIED PARTS with symbol 20 of Table D.1:	BF Applied parts	Р
	TYPE CF APPLIED PARTS with symbol 21 of Table D.1:	No BF Applied parts	N/A
	DEFIBRILLATION-PROOF APPLIED PARTS marked with symbols 25-27 of Table D.1:	Not Defibrillation-proof applied parts	N/A
	Proper symbol marked adjacent to or on connector for APPLIED PART	provided on product label	N/A
	Safety sign 2 of Table D.2 placed near relevant outlet:	No Outlets	N/A
	An explanation indicating protection of ME EQUIPMENT against effects of discharge of a cardiac defibrillator depends on use of proper cables included in instructions for use	The device is not protected against defibrillation.	N/A
7.2.11	ME EQUIPMENT suitable for CONTINUOUS OPERATION		Р
	DUTY CYCLE for ME EQUIPMENT intended for non- CONTINUOUS OPERATION appropriately marked to provide maximum "on" and "off" time:	Continuous	Р
7.2.12	Type and full rating of a fuse marked adjacent to ACCESSIBLE fuse-holder	No fuses incorporated	N/A
	Fuse type:	See above	_
	Voltage (V) and Current (A) rating:	See above	_
	Operating speed (s) and Breaking capacity:	See above	_
7.2.13	Physiological effects – safety sign and warning statements	See UM	Р
	Nature of HAZARD and precautions for avoiding or minimizing the associated RISK described in instructions for use:	See UM	Р
	(ISO 14971 Cl. 4.2-4.4, 5, 6.3)		
7.2.14	HIGH VOLTAGE TERMINAL DEVICES on the outside of ME EQUIPMENT accessible without the use of a TOOL marked with symbol 24 of Table D.1	No such terminals	N/A
7.2.15	Requirements for cooling provisions marked:	No special cooling provisions	N/A
7.2.17	Packaging marked with special handling instructions for transport and/or storage:	See attached copy of Packaging Marking	Р
	Permissible environmental conditions marked	Standard transportation limits	N/A







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Clause	Requirement + Test	Result - Remark	Verdict
	Packaging marked with a suitable safety sign indicating premature unpacking of ME EQUIPMENT could result in an unacceptable RISK	Not required	N/A
	RISK MANAGEMENT FILE includes the assessment to determine premature unpacking of ME EQUIPMENT or its parts could result in an unacceptable RISK:	No such risk	P
	(ISO 14971 Cl. 4.2-4.4, 5, 6.3-6.4)		
	Packaging of sterile ME EQUIPMENT or ACCESSORIES marked sterile and indicates the methods of sterilization	Not sterile	N/A
7.2.18	RATED maximum supply pressure from an external source marked on ME EQUIPMENT adjacent to each input connector, and:	No supply pressure	N/A
	- the RATED flow rate also marked	As above	N/A
7.2.19	Symbol 7 of Table D.1 marked on FUNCTIONAL EARTH TERMINAL	No functional earth terminal	N/A
7.2.20	Removable protective means marked to indicate the necessity for replacement when the function is no longer needed:	No Removable protective means	N/A
7.2.21	MOBILE ME EQUIPMENT marked with its mass including its SAFE WORKING LOAD in kilograms:	Not mobile	N/A
7.3	Marking on the inside of ME EQUIPMENT or ME EQUIPMENT parts		N/A
7.3.1	Maximum power loading of heating elements or lamp-holders designed for use with heating lamps marked near or in the heater (W):	No such parts	N/A
	A marking referring to ACCOMPANYING DOCUMENTS provided for heating elements or lamp-holders designed for heating lamps that can be changed only by SERVICE PERSONNEL using a TOOL	As above	N/A
7.3.2	Symbol 24 of Table D.1, or safety sign No.3 of Table D.2 used to mark presence of HIGH VOLTAGE parts:	No such parts	N/A
7.3.3	Type of battery and mode of insertion marked:	No Batteries	N/A
	An identifying marking provided referring to instructions in ACCOMPANYING DOCUMENTS for batteries intended to be changed only by SERVICE PERSONNEL using a TOOL	As above	N/A
	A warning provided indicating replacement of lithium batteries or fuel cells when incorrect replacement would result in an unacceptable RISK	As above	N/A
	RISK MANAGEMENT FILE includes an assessment to determine the replacement of lithium batteries or fuel cells leads to an unacceptable RISK if replaced incorrectly:	As above	N/A
	(ISO 14971 Cl. 4.2-4.4, 5, 6.3)		







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	IEC 60601-1	,	
Clause	Requirement + Test	Result - Remark	Verdict
	ACCOMPANYING DOCUMENTS contain a warning indicating the replacement of lithium batteries or fuel cells by inadequately trained personnel could result in a HAZARD	No Batteries	N/A
7.3.4	Fuses, replaceable THERMAL CUT-OUTS and OVER-CURRENT RELEASES, accessible by use of a TOOL Identified	No such parts	N/A
	Voltage (V) and Current (A) rating:	See above	_
	Operating speed(s), size & breaking capacity.:	See above	_
7.3.5	PROTECTIVE EARTH TERMINAL marked with symbol 6 of Table D.1	Provided by PE pin of appliance coupler plug.	N/A
	Markings on or adjacent to PROTECTIVE EARTH TERMINALS not applied to parts requiring removal to make the connection, and remained visible after connection made		N/A
7.3.6	Symbol 7 of Table D.1 marked on FUNCTIONAL EARTH TERMINALS	No functional earth terminals	N/A
7.3.7	Terminals for supply conductors marked adjacent to terminals	The terminals are marked	Р
	Terminals for supply connections are not marked, the RISK MANAGEMENT FILE includes an assessment of the RISKS resulting from misconnections	RMF Reference to specific RISKS: (ISO14971 CI)	N/A
	Terminal markings included in ACCOMPANYING DOCUMENTS when ME EQUIPMENT too small to accommodate markings		N/A
	Terminals exclusively for neutral supply conductor in PERMANENTLY INSTALLED ME EQUIPMENT marked with Code 1 of Table D.3	Not permanently installed equipment	N/A
	Marking for connection to a 3-phase supply, complies with IEC 60445		N/A
	Markings on or adjacent to electrical connection points not applied to parts requiring removal to make connection, and remained visible after connection made		Р
7.3.8	"For supply connections, use wiring materials suitable for at least X °C" or equivalent, marked at the point of supply connections		N/A
	Statement not applied to parts requiring removal to make the connection, and CLEARLY LEGIBLE after connections made		N/A
7.4	Marking of controls and instruments		Р
7.4.1	The "on" & "off" positions of switch to control power to ME EQUIPMENT or its parts, including mains switch, marked with symbols 12 and 13 of Table D.1 or	No on/off switch	N/A







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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
	- indicated by an adjacent indicator light, or		N/A
	- indicated by other unambiguous means		N/A
	The "on/off" positions of push button switch with bi-stable positions marked with symbol 14 of Table D.1, and	No on/off switch	N/A
	- status indicated by adjacent indicator light		N/A
	status indicated by other unambiguous means		N/A
	The "on/off" positions of push button switch with momentary on position marked with symbol 15 of Table D.1 or	No on/off switch	N/A
	- status indicated by adjacent indicator light		N/A
	<ul> <li>status indicated by other unambiguous means</li> </ul>		N/A
7.4.2	Different positions of control devices/switches indicated by figures, letters, or other visual means	No such means	N/A
	RISK MANAGEMENT FILE identifies controls where a change in setting during NORMAL USE results in an unacceptable RISK:	RMF Reference to specific RISK & Marking: (ISO 14971 CI.)	N/A
	(ISO 14971 Cl. 4.2-4.4, 5, 6.2, 6.3)		
	Controls provided with an associated indicating device when change of setting of a control could result in an unacceptable RISK to PATIENT in NORMAL USE:	No such device	N/A
	or an indication of direction in which magnitude of the function changes	Monitor indication	Р
	Control device or switch that brings the ME EQUIPMENT into the "stand-by" condition marked with symbol IEC 60417-5009		Р
7.4.3	Numeric indications of parameters on ME EQUIPMENT expressed in SI units according to ISO 80000-1 except the base quantities listed in Table 1 expressed in the indicated units		P
	ISO 80000-1 applied for application of SI units, their multiples, and certain other units		Р
	All Markings in Sub-clause 7.4 complied with tests and criteria of 7.1.2 and 7.1.3:	See Appended Tables 7.1.2 and 7.1.3.	Р
7.5	Safety signs		Р
_	Safety sign with established meaning used		Р







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	IEC 60601-1	<u></u>	
Clause	Requirement + Test	Result - Remark	Verdict
	RISK MANAGEMENT PROCESS identifies markings used to convey a warning, prohibition or mandatory action that mitigate a RISK not obvious to the OPERATOR	See Risk Analysis for Mazor X  – Version 2, No.MCP0324-01 Rev: F.5. Risk Analysis Acceptability Table: Clause 4.3:-RISK-8756, RISK-8783, RISK-8781, RISK-8780, RISK-8774	P
	Affirmative statement together with safety sign placed in instructions for use if insufficient space on ME EQUIPMENT		Р
	Specified colours in ISO 3864-1 used for safety signs:	Complied	Р
	Safety notices include appropriate precautions or instructions on how to reduce RISK(S)		Р
	Safety signs including any supplementary text or symbols described in instructions for use		Р
	- and in a language acceptable to the intended OPERATOR	English	Р
7.6	Symbols		Р
7.6.1	Meanings of symbols used for marking described in instructions for use:	See UM	Р
7.6.3	Symbols used for controls and performance conform to the IEC or ISO publication where symbols are defined, as applicable		P
7.7	Colours of the insulation of conductors		Р
7.7.1	PROTECTIVE EARTH CONDUCTOR identified by green and yellow insulation		Р
7.7.2	Insulation on conductors inside ME EQUIPMENT forming PROTECTIVE EARTH CONNECTIONS identified by green and yellow at least at terminations		P
7.7.3	Green and yellow insulation identify only following conductors:		Р
	- PROTECTIVE EARTH CONDUCTORS		Р
	- conductors specified in 7.7.2		Р
	- POTENTIAL EQUALIZATION CONDUCTORS	No potential equalization conductors	N/A
	- FUNCTIONAL EARTH CONDUCTORS		N/A
7.7.4	Neutral conductors of POWER SUPPLY CORDS are "light blue"	provided	Р
7.7.5	Colours of conductors in POWER SUPPLY CORDS in accordance with IEC 60227-1 or IEC 60245-1		Р
7.8	Indicator lights and controls		Р
7.8.1	Red indicator lights used only for Warning		N/A







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	IEC 60601-1	T	
Clause	Requirement + Test	Result - Remark	Verdict
	Yellow indicator lights used only for Caution		N/A
	Green indicator lights used only for Ready for use	Power on	Р
	Other colours: Meaning other than red, yellow, or green (colour, meaning):	No such colours	N/A
7.8.2	Red used only for emergency control	Emergency Stop Button	Р
7.9	ACCOMPANYING DOCUMENTS		Р
7.9.1	ME EQUIPMENT accompanied by documents containing instructions for use, and a technical description	Provided	Р
	ACCOMPANYING DOCUMENTS identify ME EQUIPMENT by the following, as applicable:		
	- Name or trade-name of MANUFACTURER and contact information for the RESPONSIBLE ORGANIZATION can be referred to:	Meditouch Ltd.	Р
	- MODEL Or TYPE REFERENCE:	BalanceTutor	Р
	When ACCOMPANYING DOCUMENTS provided electronically, USABILITY ENGINEERING PROCESS includes instructions as to what is required in hard copy or as markings on ME EQUIPMENT	Hard copy provided	N/A
	ACCOMPANYING DOCUMENTS specify special skills, training, and knowledge required of OPERATOR or RESPONSIBLE ORGANIZATION and environmental restrictions on locations of use		Р
	ACCOMPANYING DOCUMENTS written at a level consistent with education, training, and other needs of individuals for whom they are intended	Considered	Р
7.9.2	Instructions for use include the required informa	ation	Р
7.9.2.1	– use of ME EQUIPMENT as intended by the MANUFACTURER:	Provided	Р
	- frequently used functions,	Provided	Р
	- known contraindication(s) to use of ME EQUIPMENT	Provided	Р
	- parts of the ME EQUIPMENT that are not serviced or maintained while in use with the patient	Provided	Р
	<ul> <li>name or trademark and address of the MANUFACTURER</li> </ul>	Provided	Р
	- MODEL OR TYPE REFERENCE	Provided	Р
	Instruction for use included the following when the PATIENT is an intended OPERATOR:	patient is not an intended operator	N/A
	- the PATIENT is an intended OPERATOR	As above	N/A
	- warning against servicing and maintenance while the ME EQUIPMENT is in use	patient is not an intended operator	N/A







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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
	- functions the PATIENT can safely use and, where applicable, which functions the PATIENT cannot safely use; and	As above	N/A
	-maintenance the PATIENT can perform	Patient is not an intended operator	N/A
	Classifications as in Clause 6, all markings per Clause 7.2, and explanation of safety signs and symbols marked on ME EQUIPMENT	Provided	Р
	Instructions for use are in a language acceptable to the intended operator	English	Р
7.9.2.2	Instructions for use include all warning and safety notices	Provided	P
	Warning statement for CLASS I ME EQUIPMENT included		P
	Warnings regarding significant RISKS of reciprocal interference posed by ME EQUIPMENT during specific investigations or treatments	Not specified	N/A
	Information on potential electromagnetic or other interference and advice on how to avoid or minimize such interference	See UM	Р
	Warning statement for ME EQUIPMENT supplied with an integral MULTIPLE SOCKET-OUTLET provided	No multiple socket-outlet	N/A
	The RESPONSIBLE ORGANIZATION is referred to this standard for the requirements applicable to ME SYSTEMS		Р
7.9.2.3	Statement on ME EQUIPMENT for connection to a separate power supply provided in instructions	Not connected to a separate power supply	N/A
7.9.2.4	Warning statement for mains- operated ME EQUIPMENT with additional power source not automatically maintained in a fully usable condition indicating the necessity for periodic checking or replacement of power source	No additional Power source	N/A
	RISK MANAGEMENT FILE assesses the RISK resulting from leakage of batteries:	No batteries	N/A
	(ISO 14971 Cl. 4.2-4.4, 5, 6.3)	(ISO 14971 CI)	
	Where the RISK is unacceptable, the IFU includes a warning to remove the battery if the ME EQUIPMENT is not likely to be used for some time:	No batteries	N/A
	Specifications of replaceable INTERNAL ELECTRICAL POWER SOURCE when provided:	No internal electrical power source	N/A
	Warning indicating ME EQUIPMENT must be connected to an appropriate power source when loss of power source would result in an unacceptable RISK	No such warning	N/A







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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
7.9.2.5	Instructions for use include a description of ME EQUIPMENT, its functions, significant physical and performance characteristics together with the expected positions of OPERATOR, PATIENT, or other persons near ME EQUIPMENT in NORMAL USE	Provided	Р
	Information provided on materials and ingredients PATIENT or OPERATOR is exposed to	Not specified	N/A
	Restrictions specified on other equipment or NETWORK/DATA COUPLINGS, other than those forming part of an ME SYSTEM, to which a SIGNAL INPUT/OUTPUT PART may be connected	Not specified	N/A
	APPLIED PARTS specified		Р
7.9.2.6	Information provided indicating where the installation instructions may be found or information on qualified personnel who can perform the installation	Provided	Р
7.9.2.7	Instructions provided indicating not to position ME EQUIPMENT to make it difficult to operate the disconnection device	Provided	P
7.9.2.8	Necessary information provided for OPERATOR to bring ME EQUIPMENT into operation	Provided	Р
7.9.2.9	Information provided to operate ME EQUIPMENT	Provided	Р
	Meanings of figures, symbols, warning statements, abbreviations and indicator lights described in instructions for use	Provided	P
7.9.2.10	A list of all system messages, error messages, and fault messages provided with an explanation of messages including important causes and possible action(s) to be taken to resolve the problem indicated by the message	Provided	Р
7.9.2.11	Information provided for the OPERATOR to safely terminate operation of ME EQUIPMENT	Provided	Р
7.9.2.12	Information provided on cleaning, disinfection, and sterilization methods, and applicable parameters that can be tolerated by ME EQUIPMENT parts or ACCESSORIES specified	Provided	Р
	Components, ACCESSORIES or ME EQUIPMENT marked for single use, except when required by MANUFACTURER to be cleaned, disinfected, or sterilized prior to use	Provided	Р
7.9.2.13	Instructions provided on preventive inspection, calibration, maintenance and its frequency	Provided	Р
	Information provided for safe performance of routine maintenance necessary to ensure continued safe use of ME EQUIPMENT		Р







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	IEC 60601-1	<u>,                                      </u>	
Clause	Requirement + Test	Result - Remark	Verdict
	Parts requiring preventive inspection and maintenance to be performed by SERVICE PERSONNEL identified including periods of application		Р
	Instructions provided to ensure adequate maintenance of ME EQUIPMENT containing rechargeable batteries to be maintained by anyone other than SERVICE PERSONNEL	No batteries	N/A
7.9.2.14	A list of ACCESSORIES, detachable parts, and materials for use with ME EQUIPMENT provided	Provided	Р
	Other equipment providing power to ME SYSTEM sufficiently described	No Other equipment providing power to the system	N/A
7.9.2.15	Disposal of waste products, residues, etc., and of ME EQUIPMENT and ACCESSORIES at the end of their EXPECTED SERVICE LIFE are identified in the instruction for use:	See User manual.	Р
7.9.2.16	Instructions for use include information specified in 7.9.3 or identify where it can be found (e.g. in a service manual)	Provided	Р
7.9.2.17	Instruction for use for ME EQUIPMENT emitting radiation for medical purposes, indicate the nature, type, intensity and distribution of this radiation	No radiation emitted.	N/A
7.9.2.18	The instructions for use for ME EQUIPMENT or ACCESSORIES supplied sterile indicate that they have been sterilized and the method of sterilization	No such parts	N/A
	The instructions for use indicate the necessary instructions in the event of damage to the sterile packaging, and where appropriate, details of the appropriate methods of resterilization		N/A
7.9.2.19	The instructions for use contain a unique version identifier:	Provided at the bottom of each page.	Р
7.9.3	Technical description		Р
7.9.3.1	All essential data provided for safe operation, transport, storage, and measures or conditions necessary for installing ME EQUIPMENT, and preparing it for use		Р
	Technical description separable from instructions for use contains required information, as follows:		Р
	- all applicable classifications in Clause 6, warning and safety notices, and explanation of safety signs marked on ME EQUIPMENT		Р
	- a brief description of the ME EQUIPMENT, how the ME EQUIPMENT functions and its significant physical and performance characteristics; and		Р







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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
	a unique version identifier:	Provided at the bottom of each page.	Р
	MANUFACTURER'S optional requirements for minimum qualifications of SERVICE PERSONNEL documented in technical description		Р
7.9.3.2	The technical description contains the following	required information	Р
	-type and full rating of fuses used in SUPPLY MAINS external to PERMANENTLY INSTALLED ME EQUIPMENT:	No such Fuses	N/A
	- a statement for ME EQUIPMENT with a non- DETACHABLE POWER SUPPLY CORD if POWER SUPPLY CORD is replaceable by SERVICE PERSONNEL, and		N/A
	- instructions for correct replacement of interchangeable or detachable parts specified by MANUFACTURER as replaceable by SERVICE PERSONNEL, and		Р
	RISK MANAGEMENT FILE includes an assessment to determine if replacement of components results in any unacceptable RISKS:	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
	(ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)		
	- warnings identifying nature of HAZARD when replacement of a component could result in an unacceptable RISK, and when replaceable by SERVICE PERSONNEL all information necessary to safely replace the component	No such hazard	N/A
7.9.3.3	Technical description indicates, MANUFACTURER will provide circuit diagrams, component part lists, descriptions, calibration instructions to assist to SERVICE PERSONNEL in parts repair		P
7.9.3.4	Means used to comply with requirements of 8.11.1 clearly identified in technical description		Р

8	PROTECTION AGAINST ELECTRICAL HAZARDS FROM ME EQUIPMENT		Р
8.1	Limits specified in Clause 8.4 not exceeded for ACCESSIBLE PARTS and APPLIED PARTS in NORMAL or SINGLE FAULT CONDITIONS		Р
	RISK MANAGEMENT FILE identifies conductors and connectors where breaking free results in a HAZARDOUS SITUATION:  (ISO 14971 Cl. 4.3)	See RMF	P
8.2	Requirements related to power sources		N/A
8.2.1	Connection to a separate power source		N/A







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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
	When ME EQUIPMENT specified for connection to a separate power source other than SUPPLY MAINS, separate power source considered as part of ME EQUIPMENT or combination considered as an ME SYSTEM	No separate power source	N/A
	Tests performed with ME EQUIPMENT connected to separate power supply when one specified	As above	N/A
	When a generic separate power supply specified, specification in ACCOMPANYING DOCUMENTS examined	As above	N/A
8.2.2	Connection to an external d.c. power source		N/A
	No HAZARDOUS SITUATION as described in 13.1 developed when a connection with wrong polarity made for ME EQUIPMENT from an external d.c. source	No external d.c. power source	N/A
	ME EQUIPMENT connected with correct polarity maintained BASIC SAFETY and ESSENTIAL PERFORMANCE	As above	N/A
	Protective devices that can be reset by anyone without a TOOL returns to NORMAL CONDITION on reset	As above	N/A
8.3	Classification of APPLIED PARTS		Р
	a) APPLIED PART specified in ACCOMPANYING DOCUMENTS as suitable for DIRECT CARDIAC APPLICATION is TYPE CF	Not suitable for direct cardiac application	N/A
	b) An APPLIED PART provided with a PATIENT CONNECTION intended to deliver electrical energy or an electrophysiological signal to or from PATIENT is TYPE BF OR CF APPLIED PART	Not intended to deliver electrical energy	N/A
	c) An APPLIED PART not covered by a) or b) is a TYPE B, BF, or CF	BF applied part	N/A
8.4	Limitation of voltage, current or energy		Р
8.4.2	ACCESSIBLE PARTS and APPLIED PARTS		Р
	a) Currents from, to, or between PATIENT CONNECTIONS did not exceed limits for PATIENT LEAKAGE CURRENT & PATIENT AUXILIARY CURRENT:	See appended Table 8.7	Р
	b) LEAKAGE CURRENTS from, to, or between ACCESSIBLE PARTS did not exceed limits for TOUCH CURRENT:	See appended Table 8.7	Р
	c) Limits specified in b) not applied to parts when probability of a connection to a PATIENT, directly or through body of OPERATOR, is negligible in NORMAL USE, and the OPERATOR is appropriately instructed		Р







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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
	Voltage to earth or to other ACCESSIBLE PARTS did not exceed 42.4 V peak a.c. or 60 V d.c. for above parts in NORMAL or single fault condition (V a.c. or d.c.)	No accessible parts other than enclosure, displays and applied part.	N/A
	Energy did not exceed 240 VA for longer than 60 s or stored energy available did not exceed 20 J at a potential of 2 V or more (VA or J):	See above	N/A
	d) Voltage and energy limits specified in c) abov following:	e also applied to the	Р
	- internal parts touchable by test pin in Fig 8 inserted through an opening in an ENCLOSURE; and	Not accessible	N/A
	- internal parts touchable by a metal test rod with a diameter of 4 mm and a length 100 mm, inserted through any opening on top of ENCLOSURE or through any opening provided for adjustment of pre-set controls by RESPONSIBLE ORGANIZATION in NORMAL USE using a TOOL	Complied	Р
	Test pin or the test rod inserted through relevant openings with minimal force of no more than 1 N	Complied	P
	Test rod inserted in every possible position through openings provided for adjustment of pre-set controls that can be adjusted in NORMAL USE, with a force of 10 N	Complied	Р
	Test repeated with a TOOL specified in instructions for use	None tool specified	N/A
	Test rod freely and vertically suspended through openings on top of ENCLOSURE	No openings on top	N/A
	e) Devices used to de-energize parts when an ACCESS COVER opened without a TOOL gives access to parts at voltages above levels permitted by this Clause comply with 8.11.1 for mains isolating switches and remain effective in SINGLE FAULT CONDITION	No access to Mains parts	Р
	A TOOL is required when it is possible to prevent the devices from operating		N/A
8.4.3	Worst case voltage between pins of plug and between either supply pin and ENCLOSURE did not exceed 60 V one sec after disconnecting the plug of ME EQUIPMENT or its parts (V)::	See appended Table 8.4.3	Р
	When voltage exceeded 60 V, calculated or measured stored charge didn't exceed 45 μC:	See appended Table 8.4.3	Р
8.4.4	Residual voltage of conductive parts of capacitive circuits, having become accessible after ME EQUIPMENT was de-energized after removal of ACCESS COVERS, didn't exceed 60V or calculated stored charge didn't exceed 45µC:	See appended Table 8.4.4 No such parts	N/A







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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
	A device manually discharging capacitors used when automatic discharging was not possible and ACCESS COVERS could be removed only with aid of a TOOL	As above	N/A
	Capacitor(s) and connected circuitry marked with symbol 24 of Table D.1, and manual discharging device specified in technical description:	As above	N/A
8.5	Separation of parts		Р
8.5.1	MEANS OF PROTECTION (MOP)		Р
8.5.1.1	Two MEANS of PROTECTION provided for ME EQUIPMENT to prevent APPLIED and other ACCESSIBLE PARTS from exceeding limits in 8.4		Р
	Varnishing, enamelling, oxidation, and similar protective finishes and coatings with sealing compounds re-plasticizing at temperatures expected during operation and sterilization disregarded as MEANS OF PROTECTION		Р
	Components and wiring forming a MEANS OF PROTECTION comply with 8.10	See appended Tables 8.10	Р
8.5.1.2	MEANS OF PATIENT PROTECTION (MOPP)		Р
	Solid insulation forming a MEANS OF PATIENT PROTECTION complied with dielectric strength test:	See appended Table 8.8.3	Р
	CREEPAGE and CLEARANCES forming a MEANS OF PATIENT PROTECTION complied with Table 12		Р
	PROTECTIVE EARTH CONNECTIONS forming a MEANS OF PATIENT PROTECTION complied with CI. 8.6		Р
	Y1 or Y2 capacitor complying with standard IEC 60384-14 considered one MEANS OF PATIENT PROTECTION:	Evaluated as part of approved power supplies	Р
	Single Y1 capacitor used for two MEANS OF PATIENT PROTECTION when the working voltage is less than 42,4 V peak a.c. or 60 V d.c:	Evaluated as part of approved power supplies	Р
	Two capacitors used in series, each RATED for total WORKING VOLTAGE across the pair and have the same NOMINAL capacitance	Evaluated as part of approved power supplies	P
	Voltage Total Working (V) and C Nominal (μF):	See above	_
8.5.1.3	MEANS OF OPERATOR PROTECTION (MOOP)		Р
	Solid insulation forming a MEANS OF OPERATOR PR	OTECTION complied with:	Р
	- dielectric strength test:	See appended Table 8.8.3	Р
	- requirements of IEC 60950-1 for INSULATION CO-ORDINATION	As part of approved power supplies	Р







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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
	CREEPAGE and CLEARANCES forming a MEANS OF OPERATOR PROTECTION complied with:		Р
	- limits of Tables 13 to 16 (inclusive); or		Р
	- requirements of IEC 60950-1 for INSULATION CO-ORDINATION	As part of approved power supplies	Р
	PROTECTIVE EARTH CONNECTIONS forming a MEANS OF OPERATOR PROTECTION complied with Cl. 8.6		Р
	- or with requirements and tests of IEC 60950-1 for protective earthing:	See Attachment No	N/A
	A Y2 (IEC 60384-14) capacitor is considered one MEANS OF OPERATOR PROTECTION:	As part of approved power supplies	Р
	A Y1 (IEC 60384-14 ) capacitor is considered two MEANS OF OPERATOR PROTECTION:	As part of approved power supplies	Р
	Two capacitors used in series each RATED for total WORKING VOLTAGE across the pair and have the same NOMINAL capacitance	As part of approved power supplies	P
	Voltage Total Working (V) and C Nominal (μF):	See above	_
	Points and applied parts at which impedances of components, CREEPAGE, CLEARANCES, PROTECTIVE EARTH CONNECTIONS or insulation, prevent ACCESSIBLE PARTS from exceeding limits in 8.4 were examined whether a failure at any of these points is to be regarded as a NORMAL or SINGLE FAULT CONDITION	No such parts	N/A
	A MEANS OF PROTECTION protecting APPLIED PARTS, or parts identified by 4.6 as parts subject to the same requirements, considered MEANS OF PATIENT PROTECTION:	Considered	Р
	A MEANS OF PROTECTION protecting other parts considered MEANS OF OPERATOR PROTECTION:	Considered	Р
3.5.2	Separation of PATIENT CONNECTIONS		Р
3.5.2.1	PATIENT CONNECTIONS of F-TYPE APPLIED PART separated from all other parts by equivalent to one MEANS OF PATIENT PROTECTION for a WORKING VOLTAGE equal to the MAX. MAINS VOLTAGE:	For additional RM information, see appended Tables 8.7 and 8.8.3	Р
	•	See also Table 11.6.1	
	Separation requirement not applied between multiple functions of a single F-TYPE APPLIED PART	No multiple functions of a single F-type applied part	N/A
	PATIENT CONNECTIONS treated as one APPLIED PART in the absence of electrical separation between PATIENT CONNECTIONS of same or another function		N/A
	MANUFACTURER has defined if multiple functions are to be considered as all within one APPLIED PART or as multiple APPLIED PARTS:	No multiple applied parts	N/A







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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
	Classification as TYPE BF, CF, or DEFIBRILLATION-PROOF applied to one entire APPLIED PART		Р
	LEAKAGE CURRENT tests conducted per 8.7.4:	See appended Table 8.7	Р
	Dielectric strength test conducted per 8.8.3:	See appended Table 8.8.3	Р
	CREEPAGE and CLEARANCES measured:	Refer to Insulation Diagram	Р
	A protective device connected between PATIENT CONNECTIONS of an F-TYPE APPLIED PART and ENCLOSURE to protect against excessive voltages did not operate below 500 V r.m.s	No such device	N/A
3.5.2.2	PATIENT CONNECTIONS OF A TYPE B APPLIED PART not PROTECTIVELY EARTHED are separated by one MEANS OF PATIENT PROTECTION from metal ACCESSIBLE PARTS not PROTECTIVELY EARTHED:	No B type applied part	N/A
	<ul> <li>except when metal ACCESSIBLE PART is physically close to APPLIED PART and can be regarded as a part of APPLIED PART; and</li> </ul>	As above	N/A
	- RISK that metal ACCESSIBLE PART will make contact with a source of voltage or LEAKAGE CURRENT above permitted limits is acceptably low		N/A
	LEAKAGE CURRENT tests conducted per 8.7.4:	See appended Table 8.7	N/A
	Dielectric strength test conducted per 8.8.3:	See appended Table 8.8.3	N/A
	Relevant CREEPAGE and CLEARANCES measured	Refer to Insulation Diagram	N/A
	RISK MANAGEMENT FILE includes an assessment of the RISK of metal ACCESSIBLE PARTS contacting a source of voltage or LEAKAGE CURRENT above the limits	RMF Reference to specific RISKS:(ISO 14971 Cl)	N/A
	(ISO 14971 Cl. 4.2-4.4, 5)		
3.5.2.3	A connector on a PATIENT lead or PATIENT cable to or cable remote from PATIENT, with conductive patient connections by one MEANS OF PATIENT PROVOLTAGE	art not separated from all	N/A
	- cannot be connected to earth or hazardous voltage while the PATIENT CONNECTIONS are in contact with PATIENT:	No such connector	N/A
	- conductive part of connector not separated from all PATIENT CONNECTIONS did not come into contact with a flat conductive plate of not less than 100 mm diameter	No such connector	N/A
_	– CLEARANCE between connector pins and a flat surface is at least 0.5 mm	No such connector	N/A
	- conductive part pluggable into a mains socket protected from making contact with parts at MAINS VOLTAGE by insulation with a CREEPAGE DISTANCE of at least 1.0 mm, a 1500 V dielectric strength and complying with 8.8.4.1	No such conductive part	N/A







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Clause	Requirement + Test	Result - Remark	Verdict
Oladoc	requirement i rest	Result Remark	VCIGIO
	<ul> <li>required test finger did not make electrical contact with conductive part when applied against access openings with a force of 10 N,</li> </ul>	As above	N/A
	Test finger test (10 N):	See appended Table 5.9.2	N/A
	Except when RISK MANAGEMENT PROCESS includes an assessment of RISKS resulting from contact with objects other than mains sockets or flat surfaces:	RMF Reference to specific RISKS:(ISO 14971 CI)	N/A
	(ISO 14971 Cl. 4.2-4.4, 5)		
8.5.4	WORKING VOLTAGE		Р
	- Input supply voltage to ME EQUIPMENT was RATED voltage or voltage within RATED range resulting in highest measured value (V)::	264Vac	Р
	- WORKING VOLTAGE for d.c. voltages with superimposed ripple was average value when peak-to-peak ripple less than 10% of average value or peak voltage when peak-to-peak ripple exceeding 10% of average value (V):	No d.c. voltages with superimposed ripple	N/A
	- WORKING VOLTAGE for each MEANS OF PROTECTION forming DOUBLE INSULATION was voltage DOUBLE INSULATION, as a whole, subjected to (V):	See Insulation Diagram and Insulation Table	Р
	- Intentional or accidental earthing of PATIENT regarded as a NORMAL CONDITION for WORKING VOLTAGE involving a PATIENT CONNECTION not connected to earth		N/A
	- WORKING VOLTAGE between PATIENT CONNECTIONS of an F-TYPE APPLIED PART and ENCLOSURE was highest voltage appearing across insulation in NORMAL USE including earthing of any part of APPLIED PART (V):	OV	Р
	WORKING VOLTAGE for DEFIBRILLATION-PROOF     APPLIED PARTS determined disregarding     possible presence of defibrillation voltages	No defibrillation-proof applied parts	N/A
	- WORKING VOLTAGE was equal to resonance voltage in case of motors provided with capacitors between the point where a winding and a capacitor are connected together and a terminal for external conductors (V)::	No motors with such capacitors	N/A
8.5.5	DEFIBRILLATION-PROOF APPLIED PARTS	No defibrillation-proof applied parts,	N/A
8.5.5.1	Classification "DEFIBRILLATION-PROOF APPLIED PART" applied to one APPLIED PART in its entirety	No defibrillation-proof applied parts,	N/A
· <del></del>	Isolation of PATIENT CONNECTIONS of a DEFIBRILLAT	ON-PROOF APPLIED PART from	N/A







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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
	a) No hazardous electrical energies appear during a discharge of cardiac defibrillator:	No defibrillation-proof applied parts,	N/A
		See appended Table 8.5.5.1a	
	b) ME EQUIPMENT complied with relevant requirements of this standard, providing BASIC SAFETY and ESSENTIAL PERFORMANCE following	No defibrillation-proof applied parts,	N/A
	exposure to defibrillation voltage, and recovery time stated in ACCOMPANYING DOCUMENTS:	See appended Table 8.5.5.1b	
8.5.5.2	Means provided to limit energy delivered to a 100 $\Omega$ load:	No defibrillation-proof applied parts,	N/A
		See appended Table 8.5.5.2	
3.6	Protective and functional earthing and potential	equalization of ME EQUIPMENT	Р
3.6.1	Requirements of 8.6.2 to 8.6.8 applied		Р
	Parts complying with IEC 60950-1 for protective earthing and serving as MEANS OF OPERATOR PROTECTION but not PATIENT PROTECTION exempted from requirements of 8.6.2 to 8.6.8		P
8.6.2	PROTECTIVE EARTH TERMINAL is suitable for connection to an external protective earthing system by a PROTECTIVE EARTH CONDUCTOR in a POWER SUPPLY CORD and a suitable plug or by a FIXED PROTECTIVE EARTH CONDUCTOR	Plug is to be assembled during installation.	Р
	Clamping means of PROTECTIVE EARTH TERMINAL of ME EQUIPMENT for FIXED supply conductors or POWER SUPPLY CORDS comply with 8.11.4.3, and cannot be loosened without TOOL		Р
	Screws for internal PROTECTIVE EARTH CONNECTIONS completely covered or protected against accidental loosening from outside:		Р
	Earth pin of APPLIANCE INLET forming supply connection to ME EQUIPMENT regarded as PROTECTIVE EARTH TERMINAL	Earth pin of the appliance inlet regarded as protective earth terminal	Р
	PROTECTIVE EARTH TERMINAL not used for mechanical connection between different parts of ME EQUIPMENT or securing components not related to protective or functional earthing		Р
8.6.3	PROTECTIVE EARTH CONNECTION not used for a moving part,	PE connection not used for a moving part,	Р
	except when MANUFACTURER demonstrated in RISK MANAGEMENT FILE connection will remain reliable during EXPECTED SERVICE LIFE:	See above	Р
	(ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)		
8.6.4	a) PROTECTIVE EARTH CONNECTIONS carried fault currents reliably and without excessive voltage drop	See appended Table 8.6.4	Р







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IEC 60601-1				
Clause	Requirement + Test	Result - Remark	Verdict	
	b) Allowable TOUCH CURRENT and PATIENT LEAKAGE CURRENT in SINGLE FAULT CONDITION were not exceeded, when impedance of PROTECTIVE EARTH CONNECTIONS exceeded values in 8.6.4 a) and Table 8.6.4, due to limited current capability of relevant circuits:	See appended Table 8.6.4 & Clause 8.7	N/A	
8.6.5	Surface coatings		Р	
	Poorly conducting surface coatings on conductive elements removed at the point of contact		Р	
	Coating not removed when requirements for impedance and current-carrying capacity met	As above	N/A	
8.6.6	Plugs and sockets			
	PROTECTIVE EARTH CONNECTION where connection between SUPPLY MAINS and ME EQUIPMENT or between separate parts of ME EQUIPMENT made via a plug and socket was made before and interrupted after supply connections	Mains plug is to be assembled during installation.	N/A	
	- applied also where interchangeable parts are PROTECTIVELY EARTHED	No interchangeable parts	N/A	
8.6.7	Terminal for connection of a POTENTIAL EQUALIZATION CONDUCTOR		N/A	
	- Terminal is accessible to OPERATOR with ME EQUIPMENT in any position of NORMAL USE	No potential equalization conductor	N/A	
	-accidental disconnection avoided in NORMAL USE	No potential equalization conductor	N/A	
	- Terminal allows conductor to be detached without a TOOL	No potential equalization conductor	N/A	
	- Terminal not used for a PROTECTIVE EARTH CONNECTION	As above	N/A	
	- Terminal marked with symbol 8 of Table D.1	As above	N/A	
	<ul> <li>Instructions for use contain information on function and use of POTENTIAL EQUALIZATION CONDUCTOR together with a reference to requirements of this standard</li> </ul>	As above	N/A	
	POWER SUPPLY CORD does not incorporate a POTENTIAL EQUALIZATION CONDUCTOR	As above	N/A	
3.6.8	FUNCTIONAL EARTH TERMINAL not used to provide a PROTECTIVE EARTH CONNECTION	No Functional earth terminal	N/A	
8.6.9	Class II ME EQUIPMENT		N/A	
	Third conductor of POWER SUPPLY CORD connected to protective earth contact of MAINS PLUG provided with CLASS II ME EQUIPMENT with isolated internal screens used as functional earth connection to the screen's FUNCTIONAL EARTH TERMINAL, coloured green and yellow	No Class II equipment	N/A	







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	IEC 60601-1				
Clause	Requirement + Test	Result - Remark	Verdict		
	ACCOMPANYING DOCUMENTS include a statement that the third conductor in the POWER SUPPLY CORD is only a functional earth.	As above	N/A		
	Two MEANS OF PROTECTION provided between insulation of internal screens and all internal wiring connected to them and ACCESSIBLE PARTS	As above	N/A		
8.7	LEAKAGE CURRENTS and PATIENT AUXILIARY CURRENT	тѕ	Р		
8.7.1	a) Electrical isolation providing protection against electric shock limits currents to values in 8.7.3:	See appended Tables 8.7	Р		
	b) Specified values of EARTH LEAKAGE, TOUCH, PATIENT LEAKAGE, and PATIENT AUXILIARY CURRENTS applied in combination of conditions in appended Table 8.7:	See appended Tables 8.7	Р		
8.7.2	Allowable values specified in 8.7.3 applied under SINGLE FAULT CONDITIONS of 8.1 b), except	See appended Tables 8.7	Р		
	<ul> <li>where insulation used in conjunction with a PROTECTIVE EARTH CONNECTION, insulation short circuited only under conditions in 8.6.4 b)</li> </ul>		Р		
	the only SINGLE FAULT CONDITION for EARTH LEAKAGE CURRENT was interruption of one supply conductor at a time		Р		
	- LEAKAGE CURRENTS and PATIENT AUXILIARY CURRENT not measured in SINGLE FAULT CONDITION of short circuiting of one constituent part of DOUBLE INSULATION		Р		
	SINGLE FAULT CONDITIONS not applied at same time as special test conditions of MAXIMUM MAINS VOLTAGE ON APPLIED PARTS and non-PROTECTIVELY EARTHED parts of ENCLOSURE		Р		
8.7.3	Allowable Values		Р		
	a) Allowable values in 8.7.3 b), c), and d) measured based on, and are relative to currents in Fig 12 a), or by a device measuring frequency contents of currents as in Fig 12 b.:	See appended Table 8.7	Р		
	b) Allowable values of PATIENT LEAKAGE and AUXILIARY CURRENTS are according to Tables 3 & 4, and values of a.c. are relative to currents having a frequency not less than 0.1Hz:	See appended Table 8.7	Р		
	c) Touch current did not exceed 100 µA in NORMAL CONDITION and 500 µA in SINGLE FAULT CONDITION (I <sub>TNC</sub> , I <sub>TSFC</sub> ):	See appended Table 8.7	Р		
	d) EARTH LEAKAGE CURRENT did not exceed 5 mA in NORMAL CONDITION and 10 mA in SINGLE FAULT CONDITION (I <sub>ENC</sub> , I <sub>ESFC</sub> ):	See appended Table 8.7	Р		







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	IEC 60601-1				
Clause	Requirement + Test	Result - Remark	Verdict		
	Higher values of EARTH LEAKAGE CURRENT permitted for PERMANENTLY INSTALLED ME EQUIPMENT connected to a supply circuit supplying only this ME EQUIPMENT according to local regulations or IEC 60364-7-710:	See appended Table 8.7	N/A		
	e) LEAKAGE CURRENTS, regardless of waveform and frequency, did not exceed 10 mA r.m.s. in NORMAL or in SINGLE FAULT CONDITION (measured with a non-frequency-weighted device:	See appended Table 8.7	Р		
	f) LEAKAGE CURRENTS flowing in a FUNCTIONAL EARTH CONDUCTOR in a non-PERMANENTLY INSTALLED ME EQUIPMENT are 5 mA in NORMAL CONDITION, 10 mA in SINGLE FAULT CONDITION:	See appended Table 8.7	N/A		
8.7.4	LEAKAGE and PATIENT AUXILIARY CURRENTS measurements:	See appended Table 8.7	Р		
8.8	Insulation		Р		
8.8.1	Insulation relied on as MEANS OF PROTECTION, including REINFORCED INSULATION subjected to testing	Provided	Р		
	Insulation exempted from test (complies with clause 4.8)	See appended Table 8.10	Р		
	Insulation forming MEANS OF OPERATOR PROTECTION and complying with IEC 60950-1 for INSULATION CO-ORDINATION not tested as in 8.8	No such insulation	N/A		
8.8.2	Distance through solid insulation or use of thin sheet material				
	Solid insulation forming SUPPLEMENTARY or REINFORCED INSULATION for a PEAK WORKING VOLTAGE greater than 71 V provided with:	Plastic enclosure	Р		
	a) 0.4 mm, min, distance through insulation, or	4mm min	Р		
	b) does not form part of an ENCLOSURE and not subject to handling or abrasion during NORMAL USE, and comprised of:		N/A		
	- at least two layers of material, each passed the appropriate dielectric strength test:	No such insulation	N/A		
	- or three layers of material, for which all combinations of two layers together passed the appropriate dielectric strength test:	No such insulation	N/A		
	Dielectric strength test for one or two layers was same as for one MEANS OF PROTECTION for SUPPLEMENTARY INSULATION		N/A		
	Dielectric strength test for one or two layers was same as for two MEANS OF PROTECTION for REINFORCED INSULATION		N/A		







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IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	BASIC, SUPPLEMENTARY, and REINFORCED INSULATION required between windings of wound components separated by interleaved insulation complying with a) or b), or both, except when	Evaluated as part of isolation transformer approved for construction.	P
	c) Wire with solid insulation, other than solvent based enamel, complying with a)		N/A
	d) Wire with multi-layer extruded or spirally wrapped insulation complying with b) and complying with Annex L		N/A
	e) Finished wire with spirally wrapped or multi- layer extruded insulation, complying with Annex L		N/A
	BASIC INSULATION: minimum two wrapped layers or one extruded layer		N/A
	- SUPPLEMENTARY INSULATION: minimum two layers, wrapped or extruded		N/A
	- REINFORCED INSULATION: minimum three layers, wrapped or extruded		N/A
	In d) and e), for spirally wrapped insulation with CREEPAGE DISTANCES between layers less than in Table 12 or 16 (Pollution Degree 1) depending on type of insulation, path between layers sealed as a cemented joint in 8.9.3.3 and test voltages of TYPE TESTS in L.3 equal 1.6 times of normal values		N/A
	Protection against mechanical stress provided where two insulated wires or one bare and one insulated wire are in contact inside wound component, crossing at an angle between 45° and 90° and subject to winding tension:	No such case	N/A
	Finished component complied with routine dielectric strength tests of 8.8.3:	See appended Table 8.8.3	N/A
	Tests of Annex L not repeated since material data sheets confirm compliance:	See Table 8.10 and Material Information Attachment	N/A
3.8.3	Dielectric Strength		Р
	Solid insulating materials with a safety function withstood dielectric strength test voltages:	See appended Table 8.8.3	Р
3.8.4	Insulation other than wire insulation		Р
3.8.4.1	Resistance to heat retained by all insulation and insulating partition walls during EXPECTED SERVICE LIFE of ME EQUIPMENT	No excessive temperatures, see appended table 11.1	Р
	ME EQUIPMENT and design documentation examined:	See table 8.10	Р







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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
	RISK MANAGEMENT FILE examined in conjunction with resistance to moisture, dielectric strength, and mechanical strength tests:	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
	(ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)		
	Satisfactory evidence of compliance provided by manufacturer for resistance to heat:	No excessive temperatures, see appended table 11.1	N/A
	Tests conducted in absence of satisfactory evidence for resistance to heat:	see appended tables 11.1 and 8.8.4.1	Р
	a) ENCLOSURE and other external parts of insulating material, except insulation of flexible cords and parts of ceramic material, subjected to ball-pressure test using Fig 21 apparatus:	See appended Table 8.8.4.1	P
	b) Parts of insulating material supporting	No Such Parts	N/A
	uninsulated parts of MAINS PART subjected to ball-pressure test in a), except at 125 °C $\pm$ 2 °C or ambient indicated in technical description $\pm$ 2°C plus temperature rise determined during test of 11.1 of relevant part, if higher (°C):	See appended Table 8.8.4.1	
	Test not performed on parts of ceramic material, insulating parts of commutators, brush-caps, and similar, and on coil formers not used as REINFORCED INSULATION	No such materials	Р
3.8.4.2	Resistance to environmental stress		N/A
	Insulating characteristics and mechanical strength of all MEANS OF PROTECTION not likely to be impaired by environmental stresses including deposition of dirt resulting from wear of parts within EQUIPMENT, potentially reducing CREEPAGE and CLEARANCES below 8.9	No dirt and dust within unit	N/A
	Ceramic and similar materials not tightly sintered, and beads alone not used as SUPPLEMENTARY OF REINFORCED INSULATION	No such materials	N/A
	Insulating material with embedded heating conductors considered as one MEANS OF PROTECTION	No such materials	N/A
	Parts of natural latex rubber aged by suspending samples freely in an oxygen cylinder containing commercial oxygen to a pressure of 2.1 MPa ± 70 kPa, with an effective capacity of at least 10 times volume of samples	No such parts	N/A
	There were no cracks visible to naked eyes after samples kept in cylinder at 70 °C ± 2 °C for 96h, and afterwards, left at room temperature for at least 16h	No such condition	N/A
3.9	CREEPAGE DISTANCES and AIR CLEARANCES		Р
8.9.1.1	CREEPAGE DISTANCES and AIR CLEARANCES are equal to or greater than values in Tables 12 to 16 (inclusive):	Refer to Insulation Diagram	Р







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IEC 60601-1				
Clause	Requirement + Test	Result - Remark	Verdict	
8.9.1.15	CREEPAGE DISTANCES and AIR CLEARANCES for DEFIBRILLATION-PROOF APPLIED PARTS are 4 mm or more to meet 8.5.5.1	No defibrillation-proof applied parts	N/A	
8.9.2	a) Short circuiting of each single one of CREEPAGE DISTANCES and CLEARANCES in turn did not result in a HAZARDOUS SITUATION, min CREEPAGE and CLEARANCES not applied:	See appended Table 8.9.2	N/A	
8.9.3	Spaces filled by insulating compound		N/A	
8.9.3.1	Only solid insulation requirements applied where distances between conductive parts filled with insulating compound	No insulation compound	N/A	
	Thermal cycling, humidity preconditioning, and dielectric strength tests	As above	N/A	
8.9.3.2	For insulating compound forming solid insulation between conductive parts, a single sample subjected to thermal cycling PROCEDURE of 8.9.3.4 followed by humidity preconditioning per 5.7 (for 48 hours), followed by dielectric strength test (cl. 8.8.3 at 1,6 x test voltage):	See appended Table 8.9.3.2	N/A	
	Cracks or voids in insulating compound affecting homogeneity of material didn't occur	No insulation compound	N/A	
8.9.3.3	Where insulating compound forms a cemented joint with other insulating parts, three samples tested for reliability of joint	No insulation compound	N/A	
	A winding of solvent-based enamelled wire replaced for the test by a metal foil or by a few turns of bare wire placed close to cemented joint, and three samples tested as follows:	As above	N/A	
	- One sample subjected to thermal cycling PROCEDURE of 8.9.3.4, and immediately after the last period at highest temperature during thermal cycling followed by dielectric strength test of cl. 8.8.3 at 1.6 x the test voltage:	No insulation compound See appended Table 8.9.3.3	N/A	
	- The other two samples subjected to humidity preconditioning of 5.7, except for 48 hours only followed by a dielectric strength test of cl. 8.8.3 at 1.6 times the test voltage	No insulation compound	N/A	
8.10	Components and wiring		Р	
8.10.1	Components of ME EQUIPMENT likely to result in an unacceptable RISK by their movements mounted securely:	All unit components are mounted securely	Р	
	RISK MANAGEMENT FILE includes an assessment of RISKS related to unwanted movement of components:  (ISO 14791 Cl. 4.2-4.4, 5, 6.2-6.5)	See RMF	P	
8.10.2	Conductors and connectors of ME EQUIPMENT adequately secured or insulated to prevent accidental detachment:	Conductors and connectors are adequately secured / insulated	Р	







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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
	Stranded conductors are not solder-coated when secured by clamping means to prevent HAZARDOUS SITUATIONS		Р
8.10.3	Interconnecting flexible cords detachable without a TOOL used provided with means for connection to comply with requirements for metal ACCESSIBLE PARTS when a connection is loosened or broken:	Approved appliance inlets and interconnection cords are used, see table 8.10	N/A
8.10.4	Cord-connected HAND-HELD parts and cord-connected devices	ected foot-operated control	N/A
8.10.4.1	Control devices of ME EQUIPMENT and their connection cords contain only conductors and components operating at 42.4 V peak a.c., max, or 60 V d.c. in circuits isolated from MAINS PART by two MEANS OF PROTECTION	No such control devices	N/A
8.10.4.2	Connection and anchorage of a flexible cord to a HAND-HELD or foot-operated control device of ME EQUIPMENT, at both ends of the cable to the control device, complies with the requirements for POWER SUPPLY CORDS in Cl. 8.11.3	No hand-held or foot-operated control device	N/A
	Other HAND-HELD parts, if disturbance or breaking of one or more of the connections could result in a HAZARDOUS SITUATION, also comply with tests of Cl. 8.11.3	No hand-held device	N/A
8.10.5	Mechanical protection of wiring		Р
	a) Internal cables and wiring adequately protected against contact with a moving part or from friction at sharp corners and edges:	Adequately protected	Р
	b) Wiring, cord forms, or components are not likely to be damaged during assembly or during opening or closing of ACCESS COVERS		Р
8.10.6	Guiding rollers prevent bending of movable insulated conductors around a radius of less than five times the outer diameter of the lead		N/A
8.10.7	a) Insulating sleeve adequately secured:	No sleaving used	N/A
	b) Sheath of a flexible cord not used as a MEANS OF PROTECTION inside ME EQUIPMENT when it is subject to mechanical or thermal stresses beyond its RATED characteristics	No such cord	N/A
	c) Insulated conductors of ME EQUIPMENT subject to temperatures exceeding 70 °C:	No subjected to temperatures greater than 70 °C in normal use	N/A
8.11	MAINS PARTS, components and layout		Р
8.11.1	a) ME EQUIPMENT provided with means of	By approved circuit breaker	Р







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IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	PERMANENTLY INSTALLED ME EQUIPMENT connected to a poly-phase SUPPLY MAINS equipped with a device not interrupting neutral conductor, provided local installation conditions prevent voltage on neutral conductor from exceeding limits in 8.4.2 c)	Not permanently installed equipment	N/A
	PERMANENTLY INSTALLED ME EQUIPMENT provided with means to isolate its circuits electrically from the SUPPLY MAINS are capable of being locked in the off position	Not permanently installed equipment	N/A
	- the isolation device specified in the ACCOMPANYING DOCUMENTS	As above	N/A
	b) Means of isolation incorporated in ME EQUIPMENT, or if external, described in technical description:	The means are incorporated	N/A
	c) A SUPPLY MAINS switch used to comply with 8.11.1 a) complies with CREEPAGE / CLEARANCES for a MAINS TRANSIENT VOLTAGE of 4 kV:	No such switch	N/A
	d) A SUPPLY MAINS switch not incorporated in a POWER SUPPLY CORD or external flexible lead	Mains switch not incorporated in a power supply cord	Р
	e) Actuator of a SUPPLY MAINS switch used to comply with 8.11.1 a) complies with IEC 60447	See appended Table 8.10	Р
	f) A suitable plug device used in non- PERMANENTLY INSTALLED ME EQUIPMENT with no SUPPLY MAINS SWITCH:	See appended Table 8.10	Р
	g) A fuse or a semiconductor device not used as an isolating means		Р
	h) ME EQUIPMENT not provided with a device causing disconnection of ME EQUIPMENT from SUPPLY MAINS by producing a short circuit resulting in operation of an overcurrent protection device	No such device	N/A
	i) Parts within ENCLOSURE of ME EQUIPMENT with a circuit > 42.4 V peak a.c. or 60 V d.c. that cannot be disconnected from its supply by an external switch or a plug device accessible at all times is protected against touch even after opening ENCLOSURE by an additional covering	No such parts	N/A
	A clear warning notice is marked on outside of ME EQUIPMENT to indicate it exceeds allowable touch voltage	Not exceeds allowable touch voltage	N/A
	For a part that could not be disconnected from supply by an external switch or a plug device accessible at all times, the required cover or warning notice complied with this clause	No such parts	N/A
	Standard test finger applied	As above	N/A







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Clause	Requirement + Test	Result - Remark	Verdict
8.11.2	MULTIPLE SOCKET-OUTLETS integral with ME EQUIPMENT complied with 16.2 d), second dash; and 16.9.2	No socket-outlets	N/A
8.11.3	POWER SUPPLY CORDS		Р
8.11.3.1	MAINS PLUG not fitted with more than one POWER SUPPLY CORD	Only one power supply cord.	N/A
8.11.3.2	Power Supply cords are no less robust than ordinary tough rubber sheathed flexible cord (IEC 60245-1:2003, Annex A, designation 53) or ordinary polyvinyl chloride sheathed flexible cord (IEC 60227-1:1993, Annex A, design 53):	See appended Table 8.10	Р
	Only polyvinyl chloride insulated POWER SUPPLY CORD with appropriate temperature rating used for ME EQUIPMENT having external metal parts with a temperature > 75 °C touchable by the cord in NORMAL USE:	See appended Table 8.10	Р
8.11.3.3	NOMINAL cross-sectional area of conductors of POWER SUPPLY CORDS of ME EQUIPMENT is not less than in Table 17:	See appended Table 8.10	Р
8.11.3.4	APPLIANCE COUPLERS complying with IEC 60320-1 are considered to comply with 8.11.3.5 and 8.11.3.6:	EUT is provided with non- detachable cord with no plug	N/A
8.11.3.5	Cord anchorage (for APPLIANCE COUPLERS not complying with IEC 60320-1)		
	a) Conductors of POWER SUPPLY CORD provided with strain relief and insulation protected from abrasion at point of entry to ME EQUIPMENT or a MAINS CONNECTOR by a cord anchorage	Approved cable entry is used See table 8.10	Р
	b) Cord anchorage of POWER SUPPLY CORD is an insulating material, or	Approved cable entry is used See table 8.10	Р
	- metal, insulated from conductive ACCESSIBLE PARTS non-PROTECTIVELY EARTHED by a MEANS OF PROTECTION, or		N/A
	metal provided with an insulating lining affixed to cord anchorage		N/A
	c) Cord anchorage prevents cord from being clamped by a screw bearing directly on cord insulation	Approved cable entry is used See table 8.10	Р
	d) Screws to be operated when replacing POWER SUPPLY CORD do not serve to secure any components	No such screws	N/A
	e) Conductors of POWER SUPPLY CORD arranged to prevent PROTECTIVE EARTH CONDUCTOR against strain as long as phase conductors are in contact with their terminals		Р
	f) Cord anchorage prevents POWER SUPPLY CORD from being pushed into ME EQUIPMENT OR MAINS CONNECTOR		Р







N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Conductors of POWER SUPPLY CORD supplied by MANUFACTURER disconnected from terminals or from MAINS CONNECTOR and cord subjected 25 times to a pull applied with no jerks, each time for 1 s, on sheath of the value in Table 18:	See appended Table 8.11.3.5	Р
	Cord subjected to a torque in Table 18 for one minute immediately after pull tests		P
	Cord anchorage did not allow cord sheath to be longitudinally displaced by more than 2 mm or conductor ends to move over a distance of more than 1 mm from their connected position		Р
	CREEPAGE and CLEARANCES not reduced below limits in 8.9		Р
	It was not possible to push the cord into ME EQUIPMENT or MAINS CONNECTOR to an extent the cord or internal parts would be damaged		Р
8.11.3.6	Power Supply cords protected against excessive bending at inlet opening of equipment		Р
	Cord guard complied with test of IEC 60335- 1:2001, Clause 25.14, or	Approved cable entry is used See table 8.10	N/A
	ME EQUIPMENT placed such that axis of cord guard projected at an angle of 45° with cord free from stress, and a mass equal 10 x D <sup>2</sup> gram attached to the free end of cord (g):	Approved cable entry is used See table 8.10	N/A
	Cord guard of temperature-sensitive material tested at 23 $^{\circ}$ C $\pm$ 2 $^{\circ}$ C, and flat cords bent in the plane of least resistance		N/A
	Curvature of the cord radius, immediately after mass attached, was not less than 1.5 x D:	See appended Table 8.11.3.6	Р
8.11.4	Mains terminal devices		N/A
8.11.4.1	PERMANENTLY INSTALLED and ME EQUIPMENT with non-DETACHABLE POWER SUPPLY CORD provided with MAINS TERMINAL DEVICES ensuring reliable connection	Not Permanently installed	N/A
	Terminals alone are not used to keep conductors in position		N/A
	Terminals of components other than terminal blocks complying with requirements of this Clause and marked accordingly used as terminals intended for external conductors		N/A
	Screws and nuts clamping external conductors do not serve to secure any other component		N/A
	<u> </u>		

Arrangement of MAINS TERMINAL DEVICES

8.11.4.2







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Clause	Requirement + Test	Result - Remark	Verdict
	a) Terminals provided for connection of external cords or POWER SUPPLY CORDS together with PROTECTIVE EARTH TERMINAL grouped to provide convenient means of connection		P
	d) Mains terminal devices not accessible without use of a TOOL		Р
	e) A MEANS OF PROTECTION are not short circuited when one end of a flexible conductor with NOMINAL cross-sectional area is stripped 8 mm and a single free wire is bent in each possible direction		P
3.11.4.3	Internal wiring not subjected to stress and CREEPAGE and CLEARANCES not reduced after fastening and loosening a conductor of largest cross-sectional area 10 times		N/A
3.11.4.4	Terminals with clamping means for a rewireable flexible cord did not require special preparation of conductors and conductors were not damaged and did not slip out when clamping means tightened	No such Terminals	N/A
8.11.4.5	Adequate space provided inside ME EQUIPMENT designed for FIXED wiring or a rewireable POWER SUPPLY CORD to allow for connection of conductors		P
	Correct connection and positioning of conductors before ACCESS COVER verified by an installation test		N/A
3.11.5	Mains fuses and OVER-CURRENT RELEASES		N/A
	A fuse or OVER-CURRENT RELEASE provided in each supply lead for CLASS I and CLASS II ME EQUIPMENT with a functional earth connection . :	See appended Table 8.10 No mains fuses, Circuit Breakers are used	N/A
	- in at least one supply lead for other single-phase CLASS II ME EQUIPMENT:	Not Class II equipment	N/A
	- neutral conductor not fused for PERMANENTLY INSTALLED ME EQUIPMENT	Not permanently installed equipment	N/A
	fuses or OVER-CURRENT RELEASES omitted due to provision of two MEANS OF PROTECTION between all parts within MAINS PART		N/A
	Protective devices have adequate breaking capacity to interrupt the max. fault current:	See appended Table 8.10	Р
	A fuse or OVER-CURRENT RELEASE not provided in a PROTECTIVE EARTH CONDUCTOR		Р
	Justification for omission of fuses or OVER- CURRENT RELEASES documented:	Circuit Breakers are used	N/A
3.11.6	Internal wiring of the MAINS PART		Р







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Clause	Requirement + Test	Result - Remark	Verdict
	a) Cross-sectional area of internal wiring in a MAINS PART between MAINS TERMINAL DEVICE or APPLIANCE INLET and protective devices suitable:	See Table 8.10	P
	b) Cross-sectional area of other wiring in MAINS PART and sizes of tracks on printed wiring circuits are sufficient:	See appended Table 8.10 for details	N/A
9	PROTECTION AGAINST MECHANICAL HAZARDS	S OF ME EQUIPMENT AND	Р
9.2	HAZARDS associated with moving parts		Р
9.2.1	When ME EQUIPMENT with moving parts PROPERLY INSTALLED, used per ACCOMPANYING DOCUMENTS or under foreseeable misuse, RISKS associated with moving parts reduced to an acceptable level	See RMF	Р
	RISK from contact with moving parts reduced to an acceptable level using protective measures, (access, function, shape of parts, energy, speed of motion, and benefits to PATIENT considered)		Р
	RESIDUAL RISK associated with moving parts considered acceptable when exposure was needed for ME EQUIPMENT to perform its intended function, and	See RMF	Р
	RISK CONTROLS implemented:	See RMF	Р
	RISK MANAGEMENT FILE includes an assessment of RISKS associated with moving parts	See RMF	P
	All RISKS associated with moving parts have been reduced to an acceptable level	See RMF	Р
9.2.2	TRAPPING ZONE		N/A
9.2.2.1	ME EQUIPMENT with a TRAPPING ZONE complied with one or more of the following as feasible:	No Trapping zone	N/A
	- Gaps in Clause 9.2.2.2, or		N/A
	- Safe distances in Clause 9.2.2.3, or		N/A
	- GUARDS and other RISK CONTROL measures in 9.2.2.4, or		N/A
	- Continuous activation in Clause 9.2.2.5		N/A
	Control of relevant motion complied with 9.2.2.6 when implementation of above protective measures were inconsistent with INTENDED USE of ME EQUIPMENT OR ME SYSTEM		N/A
9.2.2.2	A TRAPPING ZONE considered not to present a MECHANICAL HAZARD when gaps of TRAPPING ZONE complied with dimensions per Table 20:	No Trapping zone See appended Table 9.2.2.2	N/A







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Clause	Requirement + Test	Result - Remark	Verdict
9.2.2.3	A TRAPPING ZONE considered not to present a MECHANICAL HAZARD when distances separating OPERATOR, PATIENT, and others from TRAPPING ZONES exceeded values in ISO 13857:2008:	No Trapping zone See appended Table 9.2.2.2	N/A
9.2.2.4	GUARDS and other RISK CONTROL measures		N/A
9.2.2.4.1	A TRAPPING ZONE do not to present a MECHANICAL HAZARD when GUARDS or other RISK CONTROL measures are of robust construction, not easy to bypass or render non-operational, and did not introduce additional unacceptable RISK:	No Trapping zone See appended Table 15.3	N/A
9.2.2.4.2	FIXED GUARDS held in place by systems that can only be dismantled with a TOOL	No Fixed guards	N/A
9.2.2.4.3	Movable GUARDS that can be opened without a TOOL remained attached when GUARD was open	No Movable guards	N/A
	- they are associated with an interlock preventing relevant moving parts from starting to move while TRAPPING ZONE is accessible, and stops movement when the GUARD is opened,		N/A
	- absence or failure of one of their components prevents starting, and stops moving parts		N/A
	Movable GUARDS complied with any applicable tests		N/A
9.2.2.4.4	Other RISK CONTROL designed and incorporated into to the control system stops movement and	No Trapping zone	N/A
	- SINGLE FAULT CONDITIONS have a second RISK CONTROL, or		N/A
	ME EQUIPMENT IS SINGLE FAULT SAFE		N/A
9.2.2.5	Continuous activation		N/A
	Continuous activation used as a RISK CONTROL, complies with the following	No Trapping zone	N/A
	a) movement was in OPERATOR'S field of view		N/A
	b) movement of ME EQUIPMENT or its parts was possible only by continuous activation of control by OPERATOR		N/A
	c) a second RISK CONTROL provided for SINGLE FAULT CONDITION of continuous activation system, or		N/A
	- the continuous activation system is SINGLE FAULT SAFE		N/A
9.2.2.6	Speed of movement(s) positioning parts of ME EQUIPMENT OR PATIENT limited to allow OPERATOR control of the movement	No Trapping zone	N/A
	Over travel of such movement occurring after operation of a control to stop movement, did not result in an unacceptable RISK		N/A







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Clause	Requirement + Test	Result - Remark	Verdict
9.2.3	Other MECHANICAL HAZARDS associated with moving parts		
9.2.3.1	Controls positioned, recessed, or protected by other means so that they cannot be accidentally actuated	See below	Р
	- unless for the intended PATIENT, the USABILITY ENGINEERING PROCESS concludes otherwise (e.g. PATIENT with special needs), or		N/A
	- activation does not result in an unacceptable		Р
9.2.3.2	Over travel past range limits of the ME EQUIPMENT prevented:	By design	Р
	Over travel means provided with mechanical strength to withstand loading in NORMAL CONDITION & reasonably foreseeable misuse:	See appended Table 9.2.3.2	N/A
9.2.4	Emergency stopping devices		Р
	Where necessary to have one or more emergency stopping device(s), emergency stopping device complied with all the following, except for actuating switch capable of interrupting all power:	See appended Table 8.10	Р
	a) Emergency stopping device reduced RISK to an acceptable level	See RMF	Р
	RISK MANAGEMENT FILE indicates the use of an emergency stopping device reduces the RISK to an acceptable level:	See RMF	Р
	(ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.6)		
	b) Proximity and response of OPERATOR to actuate emergency stopping device could be relied upon to prevent HARM		Р
	c) Emergency stopping device actuator was readily accessible to OPERATOR		Р
	d) Emergency stopping device(s) are not part of normal operation of ME EQUIPMENT		Р
	e) Emergency switching operation or stopping means neither introduced further HAZARD nor interfered with operation necessary to remove original MECHANICAL HAZARD		P
	f) Emergency stopping device was able to break full load of relevant circuit, including possible stalled motor currents and the like		Р
	g) Means for stopping of movements operate as a result of one single action		Р
	h) Emergency stopping device provided with an actuator in red and easily distinguishable and identifiable from other controls		Р







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Clause	Requirement + Test	Result - Remark	Verdict
	i) An actuator interrupting/opening mechanical movements marked on or immediately adjacent to face of actuator with symbol 18 of Table D.1 or "STOP"		P
	j) Emergency stopping device, once actuated, maintained ME EQUIPMENT in disabled condition until a deliberate action, different from that used to actuate it, was performed		P
	k) Emergency stopping device is suitable for its application		Р
9.2.5	Means provided to permit quick and safe release of PATIENT in event of breakdown of ME EQUIPMENT or failure of power supply, activation of a RISK CONTROL measure, or emergency stopping	No such risk	N/A
	- and uncontrolled or unintended movement of ME EQUIPMENT that could result in an unacceptable RISK prevented	No such risk	N/A
	- Situations where PATIENT is subjected to unacceptable RISKS due to proximity of moving parts, removal of normal exit routes, or other HAZARDS prevented	No such risk	N/A
	- Measures provided to reduce RISK to an acceptable level when after removal of counterbalanced parts, other parts of ME EQUIPMENT can move in a hazardous way	No such parts	N/A
	RISK MANAGEMENT FILE includes an assessment of RISKS to the PATIENT related to breakdown of the ME EQUIPMENT	No such risk	Р
	(ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)		
9.3	Rough surfaces, sharp corners and edges of ME EQUIPMENT that could result in injury or damage avoided or covered:	Inspected	P
9.4	Instability HAZARDS		Р
9.4.1	ME EQUIPMENT and its parts, other than FIXED, for placement on a surface did not overbalance (tip over) or move unexpectedly in NORMAL USE	Not overbalanced	Р
9.4.2	Instability – overbalance		N/A
9.4.2.1	ME EQUIPMENT or its parts did not overbalance when prepared per ACCOMPANYING DOCUMENTS, or when tested:	No transport position	N/A
9.4.2.2	Instability excluding transport		N/A
	ME EQUIPMENT or its did not overbalance when placed in different positions of NORMAL USE,:	End user is instructed to position the device on a straight surface during installation	N/A
	A warning provided when overbalance occurred during 10° inclined plane test		N/A







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Clause	Requirement + Test	Result - Remark	Verdict
9.4.2.3	Instability from horizontal and vertical forces		Р
	a) ME EQUIPMENT or its parts with a mass of 25kg or more, intended to be used on the floor, didn't overbalance due to pushing, leaning against it		Р
	Surfaces of ME EQUIPMENT or its parts where a RISK of overbalancing exists from pushing, etc., permanently marked with a warning of the RISK		P
	ME EQUIPMENT did not overbalance when tested according to Cl. 9.4.2.3 a)	See appended Table 9.4.2.3	Р
	b) ME EQUIPMENT, for use on the floor or on a table, did not overbalance due to sitting or stepping		Р
	ME EQUIPMENT or its parts, for use on the floor or on a table, where RISK of overbalancing exists, permanently marked with the RISK warning:	No such risk	N/A
	ME EQUIPMENT did not overbalance when tested according to Cl. 9.4.2.3b)	See appended Table 9.4.2.3	Р
9.4.2.4	Castors and wheels		N/A
9.4.2.4.1	Means used for transportation of MOBILE ME EQUIPMENT did not result in an unacceptable RISK when MOBILE ME EQUIPMENT moved or parked in NORMAL USE	No castor or wheels	N/A
9.4.2.4.2	Force required to move MOBILE ME EQUIPMENT did not exceed 200 N	No castor or wheels	N/A
9.4.2.4.3	MOBILE ME EQUIPMENT exceeding 45 kg able to pass over threshold	No castor or wheels	N/A
9.4.3	Instability from unwanted lateral movement (including sliding)		N/A
9.4.3.1	a) Brakes of power-driven MOBILE ME EQUIPMENT normally activated and could only be released by continuous actuation of a control		N/A
	b) MOBILE ME EQUIPMENT provided with locking means to prevent unwanted movements		N/A
	c) No unwanted lateral movement resulted when MOBILE ME EQUIPMENT placed in its transport position when test per 9.4.3.1	See appended Table 9.4.3.1	N/A
9.4.3.2	Instability excluding transport		N/A
	a) MOBILE ME EQUIPMENT provided with wheel locks or braking system compliant with 5° tilt test:	No castor or wheels	N/A
	b) MOBILE ME EQUIPMENT provided with wheel locks or braking system compliant with lateral stability test	No castor or wheels	N/A
9.4.4	Grips and other handling devices		N/A







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Clause	Requirement + Test	Result - Remark	Verdict
	a) ME EQUIPMENT with a mass of over 20 kg requiring lifting in NORMAL USE or transport provided with suitable handling means, or ACCOMPANYING DOCUMENTS specify safe lifting method	No such parts	N/A
	Handles, suitably placed to enable ME EQUIPMENT or its part to be carried by two or more persons and by examination of EQUIPMENT, its part, or ACCOMPANYING DOCUMENTS		N/A
	b) PORTABLE ME EQUIPMENT with a mass > 20 kg provided with one or more carrying-handles suitably placed to enable carrying by two or more persons as confirmed by actual carrying		N/A
	c) Carrying handles and grips and their means of attachment withstood loading test:	See appended Table 9.4.4	N/A
9.5	Expelled parts HAZARD		N/A
9.5.1	expelled parts determined by assessment and examination of RISK MANAGEMENT FILE:	No such parts	N/A
		RMF Reference to specific RISKS:	
	(ISO 14971 Cl. 4.3, 4.4, 5, 6.2-6.5)	(ISO 14971 CI)	
	All identified RISKS associated with expelled parts mitigated to an acceptable level		N/A
9.5.2	Cathode Ray tube(s) complied with IEC	No Cathode Ray tube	N/A
	60065:2001, Clause 18, or IEC 61965:	See appended Table 8.10	
9.6	Acoustic energy (including infra- and ultrasound	l) and vibration	N/A
9.6.1	Human exposure to acoustic energy and vibration from ME EQUIPMENT doesn't result in unacceptable RISK and	No such energy	N/A
	If necessary, confirmed in RISK MANAGEMENT FILE including audibility of auditory alarm signals, and PATIENT sensitivity:		N/A
	If necessary, confirmed in RISK MANAGEMENT FILE including audibility of auditory alarm signals, PATIENT sensitivity, and	RMF Reference to specific RISKS:	N/A N/A N/A N/A N/A N/A
	(ISO 14971 Cl. 4.2-44, 5, 6.2-6.5)	(ISO 14971 Cl)	
	All identified RISKS mitigated to an acceptable level	No mitigation required	N/A
9.6.2	Acoustic energy	1	N/A
9.6.2.1	PATIENT, OPERATOR, and other persons are not exposed to acoustic energy from ME EQUIPMENT in NORMAL USE	No relevant acoustic energy	N/A
	- 80 dBA for a cumulative exposure of 24 h over a 24 h period (dBA)	See above	_
	- 83 dBA (when halving the cumulative exposure time) (dBA):	See above	_







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Clause	Requirement + Test	Result - Remark	Verdict
	- 140 dBC (peak) sound pressure level for impulsive or impact acoustic energy (dB):	See above	_
9.6.2.2	RISK MANAGEMENT FILE examined	RMF Reference to specific RISKS:	N/A
	(100 1407 1 01. 4.2-4.4, 0, 0.2-0.0)	(ISO 14971 CI)	
9.6.3	Hand-transmitted vibration		N/A
	Means provided to protect PATIENT and OPERATOR when hand-transmitted frequency-weighted r.m.s. acceleration generated in NORMAL USE exceeds specified values	No relevant vibration generated	N/A
	– 2.5 m/s <sup>2</sup> for a cumulative time of 8 h during a 24 h period (m/s <sup>2</sup> ):	See above	N/A
	<ul> <li>Accelerations for different times, inversely proportional to square root of time (m/s²):</li> </ul>	See above	N/A
9.7	Pressure vessels and parts subject to pneumation	c and hydraulic pressure	N/A
9.7.2	Pneumatic and hydraulic parts of ME EQUIPMENT or ACCESSORIES met requirements based on examination of RISK MANAGEMENT FILE::	No pressure incorporated	N/A
	(ISO 14971 Cl. 4.3-4.4, 5, 6.2-6.5)		
	- No unacceptable RISK resulted from loss of pressure or loss of vacuum		N/A
	<ul> <li>No unacceptable RISK resulted from a fluid jet caused by leakage or a component failure</li> </ul>	No fluid	N/A
	<ul> <li>Elements of ME EQUIPMENT or an ACCESSORY, especially pipes and hoses leading to an unacceptable RISK protected against harmful external effects</li> </ul>		N/A
	- Reservoirs and similar vessels leading to an unacceptable RISK are automatically depressurized when ME EQUIPMENT is isolated from its power supply	No Reservoirs	N/A
	Means provided for isolation, or local depressurizing reservoirs and similar vessels, and pressure indication when above not possible		N/A
	- All elements remaining under pressure after isolation of ME EQUIPMENT or an ACCESSORY from its power supply resulting in an unacceptable RISK provided with clearly identified exhaust devices, and a warning to depressurize these elements before setting or maintenance activity		N/A
9.7.3	Maximum pressure a part of ME EQUIPMENT can be subjected to in NORMAL and SINGLE FAULT CONDITIONS considered to be highest of following:		Р
	a) RATED maximum supply pressure from an external source	No external source	N/A
	:	•	







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Clause	Requirement + Test	Result - Remark	Verdict
	b) Pressure setting of a pressure-relief device provided as part of assembly		N/A
	c) Max pressure that can develop by a source of pressure that is part of assembly, unless pressure limited by a pressure-relief device		P
9.7.4	Max pressure in NORMAL and SINGLE FAULT CONDITIONS did not exceed MAXIMUM PERMISSIBLE WORKING PRESSURE for EQUIPMENT part, except as allowed in 9.7.7, confirmed by inspection of THE MANUFACTURER'S data for the component, ME EQUIPMENT, and by functional tests:	No pressure incorporated	N/A
).7.5	A pressure vessel withstood a HYDRAULIC TEST PRESSURE when pressure was more than 50 kPa, and product of pressure and volume was more than 200 kPal:	No pressure incorporated	N/A
9.7.6	Pressure-control device regulating pressure in ME EQUIPMENT with pressure-relief device completed 100,000 cycles of operation under RATED load and prevented pressure from exceeding 90 % of setting of pressure-relief device in different conditions of NORMAL USE . :	No pressure incorporated	N/A
9.7.7	Pressure-relief device(s) used where MAXIMUM PERMISSIBLE WORKING PRESSURE could otherwise be exceeded met the following, as confirmed by MANUFACTURER'S data, ME EQUIPMENT, RISK MANAGEMENT FILE, and functional tests:	No pressure incorporated	N/A
	a) Connected as close as possible to pressure vessel or parts of system it is to protect		N/A
	b) Installed to be readily accessible for inspection, maintenance, and repair		N/A
	c) Could be adjusted or rendered inoperative without a TOOL		N/A
	d) With discharge opening located and directed as to not to release material towards any person		N/A
	e) With discharge opening located and directed as to not to deposit material on parts that could result in an unacceptable RISK		N/A
	f) Adequate discharge capacity provided to ensure that pressure will not exceed MAXIMUM PERMISSIBLE WORKING PRESSURE of system it is connected to by more than 10 % when failure occurs in control of supply pressure		N/A
	g) No shut-off valve provided between a pressure-relief device and parts it is to protect		N/A
	h) Min number of cycles of operation 100 000, except for one-time use devices (bursting disks)		N/A







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Clause	Requirement + Test	Result - Remark	Verdict
	RISK MANAGEMENT FILE includes an assessment of the risks associated with the discharge opening of the pressure relief device:	No pressure incorporated	N/A
	(ISO 14971 Cl. 4.3, 4.4, 5, 6.2-6.5)		
9.8	HAZARDS associated with support systems		Р
9.8.1	ME EQUIPMENT parts designed to support loads or provide actuating forces when a mechanical fault could constitute an unacceptable RISK:	Flexing elements (impaired by wear) and actuating system	Р
	<ul> <li>Construction of support, suspension, or actuation system complied with Table 21 and TOTAL LOAD</li> </ul>	Harness Belt: TENSILE SAFETY FACTOR 4, (540Kg) actuation system: TENSILE SAFETY FACTOR 2.5 (338Kg)	P
	- Means of attachment of ACCESSORIES prevent possibility of incorrect attachment that could result in an unacceptable RISK	Complied	Р
	- RISK ANALYSIS of support systems included MECHANICAL HAZARDS from static, dynamic, vibration, foundation and other movements, impact and pressure loading, temperature, environmental, manufacture and service conditions:	See RMF	P
	(ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)		
	<ul> <li>RISK ANALYSIS included effects of failures such as excessive deflection, plastic deformation, ductile/brittle fracture, fatigue fracture, instability (buckling), stress-assisted corrosion cracking, wear, material creep and deterioration, and residual stresses from manufacturing PROCESSES</li> </ul>	See RMF	P
	- Instructions on attachment of structures to a floor, wall, ceiling, included in ACCOMPANYING DOCUMENTS making adequate allowances for quality of materials used to make the connection and list the required materials	In user manual	P
	Additional instructions provided on checking adequacy of surface of structure parts will be attached to	As above	Р
9.8.2	Support systems maintain structural integrity during EXPECTED SERVICE LIFE, and TENSILE SAFETY FACTORS are not less than in Table 21, except when an alternative method used to demonstrate structural integrity throughout EXPECTED SERVICE LIFE, or for a foot rest	Mechanical Protective Device Harness Belt: TENSILE SAFETY FACTOR 4, (540Kg) Support system parts not impaired by wear actuation system: TENSILE SAFETY FACTOR 2.5 (338Kg	P
	Compliance with 9.8.1 and 9.8.2 confirmed by examination of ME EQUIPMENT, RISK MANAGEMENT FILE, specifications and material processing:	See RMF	Р







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Clause	Requirement + Test	Result - Remark	Verdict
	RISK MANAGEMENT FILE includes an assessment of the structural integrity of support system: (ISO 14971 Cl. 4.3-4.4, 5, 6.2-6.5)	See RMF	Р
	All identified RISKS are mitigated to an acceptable level		Р
	When test were conducted, testing consisted of application of a test load to support assembly equal to TOTAL LOAD times required TENSILE SAFETY FACTOR while support assembly under test was in equilibrium after 1 min, or not resulted in an unacceptable RISK	Mechanical Protective Device Harness Belt: TENSILE SAFETY FACTOR 4, (540Kg) Support system parts not impaired by wear actuation system: TENSILE SAFETY FACTOR 2.5 (338Kg	Р
	Where the equipment is not at equilibrium after 1 min, the RISK MANAGEMENT FILE includes an assessment of the test results	RMF Reference to specific RISK: (ISO 14971 CI)	N/A
9.8.3	Strength of PATIENT OF OPERATOR Support or Susp	ension systems	Р
9.8.3.1	ME EQUIPMENT parts supporting or immobilizing PATIENTS presents no unacceptable RISK of physical injuries and accidental loosening of secured joints:	No such risks	Р
	RISK MANAGEMENT FILE includes assessment of the RISKS associated with physical injuries and accidental loosening of fixings:	No such risks	Р
	(ISO 14971 CI. 4.2-4.4, 5, 6.2-6.5)  SAFE WORKING LOAD of ME EQUIPMENT or its parts supporting or suspending PATIENTS or OPERATORS is sum of mass of PATIENTS or mass of OPERATORS plus mass of ACCESSORIES supported by ME EQUIPMENT or its parts	Only the patient is supported	N/A
	Supporting and suspending parts for adult human PATIENTS or OPERATORS designed for a PATIENT or OPERATOR with a min mass of 135 kg and ACCESSORIES with a min mass of 15 kg, unless stated by MANUFACTURER		P
	Maximum mass of PATIENT included in SAFE WORKING LOAD of ME EQUIPMENT or its parts supporting or suspending PATIENTS adapted when MANUFACTURER specified applications		Р
	Max allowable PATIENT mass < 135 kg marked on ME EQUIPMENT and stated in ACCOMPANYING DOCUMENTS		N/A
	Max allowable Patient mass over 135 kg stated in ACCOMPANYING DOCUMENTS	See UM	Р
	Examination of markings, ACCOMPANYING DOCUMENTS, and RISK MANAGEMENT FILE confirmed compliance:	Confirmed	Р







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Clause	Requirement + Test	Result - Remark	Verdict	
9.8.3.2	a) Entire mass of PATIENT or OPERATOR distributed over an area of 0.1 m <sup>2</sup> on a foot rest temporarily supporting a standing PATIENT or OPERATOR:	No such surface	N/A	
	Compliance confirmed by examination of ME EQUIPMENT specifications of materials and their processing, and tests:	See above	N/A	
	b) Deflection of a support surface from PATIENT or OPERATOR loading on an area of support/ suspension where a PATIENT or OPERATOR can sit did not result in an unacceptable RISK	No such surface	N/A	
	Compliance confirmed by examination of ME EQUIPMENT, specifications of materials and their processing, and by a test:	See above	N/A	
9.8.3.3	Dynamic forces that can be exerted on equipment parts supporting or suspending a PATIENT OR OPERATOR IN NORMAL USE maintained BASIC SAFETY and ESSENTIAL PERFORMANCE confirmed test	Not intended for such application	N/A	
9.8.4	Systems with MECHANICAL PROTECTIVE DEVICES		N/A	
9.8.4.1	a) A MECHANICAL PROTECTIVE DEVICE provided for the support system	Protective device not required	N/A	
	b) MECHANICAL PROTECTIVE complies with the requirements as follows:		N/A	
	- Designed based on TOTAL LOAD		N/A	
	<ul> <li>Has TENSILE SAFETY FACTORS for all parts not less than Table 21, row 7</li> </ul>		N/A	
	- Activated before travel produced an unacceptable RISK		N/A	
	- Takes into account Clauses 9.2.5 and 9.8.4.3		N/A	
	Compliance confirmed by examination of ME EQUIPMENT over travel calculations and evaluation plus functional tests::	See appended Table 8.10	N/A	
9.8.4.2	Activation of MECHANICAL PROTECTIVE DEVICE is made obvious to OPERATOR when ME EQUIPMENT can still be used after failure of suspension or actuation means and activation of a MECHANICAL PROTECTIVE DEVICE		N/A	
	MECHANICAL PROTECTIVE DEVICE requires use of a TOOL to be reset or replaced		N/A	
9.8.4.3	MECHANICAL PROTECTIVE DEVICE intended to function once			
	-use of ME EQUIPMENT not possible until replacement of MECHANICAL PROTECTIVE DEVICE :	protective device not provided	N/A	
	ACCOMPANYING DOCUMENTS provided with required information on replacement by service personal		N/A	







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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
	- ME EQUIPMENT permanently marked with safety sign 2 of Table D.		N/A
	- Marking is adjacent to MECHANICAL PROTECTIVE DEVICE		N/A
	- Compliance confirmed by examination and following test:	See appended Table 8.10	N/A
	A chain, cable, band, spring, belt, jack screw nut, pneumatic or hydraulic hose, structural part or the like, employed to support a load, defeated by a convenient means causing maximum normal load to fall from most adverse position permitted by construction of ME EQUIPMENT		N/A
	Load included SAFE WORKING LOAD in 9.8.3.1 when system was capable of supporting a PATIENT OF OPERATOR		N/A
	No evidence of damage to MECHANICAL PROTECTIVE DEVICE affecting its ability to perform its intended function		N/A
9.8.5	Systems without MECHANICAL PROTECTIVE DEVICES		Р
	Support Systems does not require MECHANICAL PROTECTIVE DEVICES:	The support system parts are not impaired by wear and have tensile safety factors greater than the required values	P
	RISK MANAGEMENT FILE includes an assessment of RISKS associated with wear on the support system	See RMF	Р
	(ISO 14971 CI. 4.3,4.4,5,6.2-6.5)		

10	PROTECTION AGAINST UNWANTED AND EXCESSIVE RADIATION HAZARDS		N/A
10.1	X-Radiation		N/A
10.1.1	The air kerma did not exceed 5 µGy/hat 5 cm from surface of ME EQUIPMENT:	No such radiation See Table 10.1.1	N/A
	Annual exposure reduced taking into account the irradiated body part, national regulations, and/or international recommendations for ME EQUIPMENT that has permanent proximity to a PATIENT as part of the INTENDED USE	No such radiation	N/A
10.1.2	RISK from unintended X-radiation from ME EQUIPMENT producing X-radiation for diagnostic and therapeutic purposes addressed application of applicable particular and collateral standards, or:	No X-radiation	N/A







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Clause	Requirement + Test	Result - Remark	Verdict
Oladoc	requirement 1 rest	Tresult Tremain	Voluio
	RISK MANAGEMENT PROCESS as indicated in RISK	No such radiation	N/A
	MANAGEMENT FILE	RMF Reference to specific RISKS:	
		(ISO 14971 CI)	
10.2	RISK associated with alpha, beta, gamma,	No such radiation	N/A
	neutron, and other particle radiation, addressed in RISK MANAGEMENT PROCESS as shown in RISK MANAGEMENT FILE	RMF Reference to specific RISKS:	
	(ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)	(ISO 14971 CI)	
10.3	The power density of unintended microwave radiation at frequencies between 1 GHz and 100 GHz does not exceed 10 W/m2	No such radiation	N/A
	Microwave radiation is propagated intentionally	No such radiation	N/A
10.4	Relevant requirements of IEC 60825-1:2007 applied to lasers, laser light barriers or similar with a wavelength range of 180nm to 1 mm.	No such radiation	N/A
10.5	RISK associated with visible electromagnetic radiation other than emitted by lasers and LEDS, when applicable, addressed in RISK MANAGEMENT PROCESS as indicated in RISK MANAGEMENT FILE	RMF Reference to specific RISKS: (ISO 14971 Cl)	N/A
10.6	RISK associated with infrared radiation other than emitted by lasers and LEDS addressed in RISK MANAGEMENT PROCESS as indicated in RISK MANAGEMENT FILE	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
10.7	RISK associated with ultraviolet radiation other than emitted by lasers and LEDS addressed in RISK MANAGEMENT PROCESS as indicated in RISK MANAGEMENT FILE	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A

11	PROTECTION AGAINST EXCESSIVE TEMPERATURES AND OTHER HAZARDS  Excessive temperatures in ME EQUIPMENT		Р
11.1			Р
11.1.1	Temperatures on ME EQUIPMENT parts did not exceed values in Tables 22 and:	See appended Table 11.1.1	Р
	Surfaces of test corner did not exceed 90 °C		Р
	THERMAL CUT-OUTS did not operate in NORMAL CONDITION		Р
	RISK MANAGEMENT FILE includes an assessment of the duration of contact for all APPLIED PARTS and ACCESSIBLE PARTS	RMF Reference to specific RISK: (ISO 14971 CI)	N/A
11.1.2	Temperature of APPLIED PARTS	1	Р







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	IEC 60601-1	,	
Clause	Requirement + Test	Result - Remark	Verdict
11.1.2.1	APPLIED PARTS (hot or cold intended to supply heat to a PATIENT comply:	Not intended to supply heat	N/A
	Clinical effects determined and documented in the RISK MANAGEMENT FILE	RMF Reference to specific RISKS:	N/A
	(ISO 14971 CI. 4.2-4.4, 5, 6.2-6.5)	(ISO 14971 Cl)	
	Temperature (hot or cold) of APPLIED PARTS intended to supply heat to a PATIENT disclosed in the instructions for use	Not intended to supply heat	N/A
11.1.2.2	APPLIED PARTS not intended to supply heat to a P limits of Table 24 in NORMAL CONDITION and SINGL		Р
	APPLIED PARTS surface temperature exceeds 41°C disclosed in the instruction manual:	Not exceed	N/A
	Maximum Temperature:	See above	-
	Conditions for safe contact, e.g. duration or condition of the PATIENT:	See above	_
	Clinical effects with respect to characteristics taken or surface pressure documented in the RISK MANAGEMENT FILE	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
	(ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)	(130 1497 1 01)	
	APPLIED PARTS surface temperature of equal to or less than 41°C		Р
	Analysis documented in the RISK MANAGEMENT FILE show that APPLIED PART temperatures are not affected by operation of the ME EQUIPMENT including SINGLE FAULT CONDITIONS.  Measurement of APPLIED PART temperature according to 11.1.3 is not conducted:	RMF Reference to specific RISKS:	N/A
	Surfaces of APPLIED PARTS that are cooled below ambient temperatures evaluated in the RISK MANAGEMENT PROCESS	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
	(ISO 14971 CI. 4.2-4.4, 5, 6.2-6.5)	(130 1 101 1 311	
11.1.3	Measurements not made when engineering judgment and rationale by MANUFACTURER indicated temperature limits could not exceed, as documented in RISK MANAGEMENT FILE:	See appended Table 11.1.3d and RMF Reference to specific RISKS:  (ISO 14971 CI)	N/A
	(ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)	()	
	Test corner not used where engineering judgment and rationale by MANUFACTURER indicated test corner will not impact measurements, as documented in RISK MANAGEMENT FILE	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
	(ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)		







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IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Probability of occurrence and duration of contact for parts likely to be touched and for APPLIED PARTS documented in RISK MANAGEMENT FILE:	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
	(ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)		
	e) Where thermal regulatory devices make this method inappropriate, alternative methods for measurement are justified in the RISK MANAGEMENT FILE	RMF Reference to specific RISKS:	N/A
11.1.4	GUARDS preventing contact with hot or cold accessible surfaces removable only with a TOOL		N/A
11.2	Fire prevention		Р
11.2.1	ENCLOSURE has strength and rigidity necessary to prevent a fire and met mechanical strength tests for ENCLOSURES in 15.3	Complied	Р
11.2.2	Me equipment and me systems used in conjunc ENVIRONMENTS	tion with OXYGEN RICH	N/A
11.2.2.1	RISK of fire in an OXYGEN RICH ENVIRONMENT reduced by means limiting spread of:	Not intended for such environment See appended Table 8.10	N/A
	a) No sources of ignition discovered in an OXYGEN RICH ENVIRONMENT under any of the following conditions		N/A
	when temperature of material raised to its ignition temperature		N/A
	2) when temperatures affected solder or solder joints causing loosening, short circuiting, or other failures causing sparking or increasing material temperature to its ignition temperature		N/A
	3) when parts affecting safety cracked or changed outer shape exposing temperatures higher than 300°C or sparks due to overheating		N/A
	4) when temperatures of parts or components exceeded 300°C, atmosphere was 100 % oxygen, contact material solder, and fuel cotton		N/A
	5) when sparks provided adequate energy for ignition by exceeding limits of Figs 35 to 37 (inclusive), atmosphere was 100 % oxygen, contact material solder, and fuel cotton		N/A
	Deviations from worst case limits in 4) and 5) above based on lower oxygen concentrations or less flammable fuels justified and documented in RISK MANAGEMENT FILE:	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
	(ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)		







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IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict
	Alternative test in this clause did not identify existence of ignition sources at highest voltage or current, respectively:	See appended Table 11.2.2.1	N/A
	A safe upper limit determined by dividing upper limit of voltage or current, respectively, with safety margin factor of three:	Not intended for such application	N/A
	b) RESIDUAL RISK of fire in an OXYGEN RICH ENVIRONMENT as determined by application of RISK MANAGEMENT PROCESS is based on following configurations, or in combination:	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
	(ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)		
	1) Electrical components in an OXYGEN RICH ENVIRONMENT provided with power supplies having limited energy levels lower than those considered sufficient for ignition in 11.2.2.1 a) as determined by examination, measurement or calculation of power, energy, and temperatures in NORMAL and SINGLE FAULT CONDITIONS identified in 11.2.3	See appended Tables 4.11, 11.1.1, 11.2.2.1 and 13.2	N/A
	2) Max oxygen concentration measured until it did not exceed 25 % in ventilated compartments with parts that can be a source of ignition only in SINGLE FAULT CONDITION and can be penetrated by oxygen due to an undetected leak (%):	Not intended for such environment	N/A
	3) A compartment with parts or components that can be a source of ignition only under SINGLE FAULT CONDITION separated from another compartment containing an OXYGEN RICH ENVIRONMENT by sealing all joints and holes for cables, shafts, or other purposes	Not intended for such environment	N/A
	Effect of possible leaks and failures under SINGLE FAULT CONDITION that could cause ignition evaluated using a RISK ASSESSMENT to determine maintenance intervals by examination of documentation and RISK MANAGEMENT FILE	See Attachment No	N/A
	4) Fire initiated in ENCLOSURE of electrical components in a compartment with OXYGEN RICH ENVIRONMENT that can become a source of ignition only under SINGLE FAULT CONDITIONS self-extinguished rapidly and no hazardous amount of toxic gases reached PATIENT as determined by analysis of gases:	See Attachment No	N/A
11.2.2.2	RISK of ignition did not occur and oxygen concentration did not exceed 25% in immediate surroundings due to location of external exhaust outlets of an OXYGEN RICH ENVIRONMENT	Not intended for such environment	N/A







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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
11.2.2.3	Electrical connections within a compartment containing an OXYGEN RICH ENVIRONMENT under NORMAL USE did not produce sparks	Not intended for such environment	N/A
	Screw-attachments protected against loosening during use by varnishing, use of spring washers, or adequate torques		N/A
	Soldered, crimped, and pin-and-socket connections of cables exiting ENCLOSURE include additional mechanical securing means		N/A
11.2.3	SINGLE FAULT CONDITIONS related to OXYGEN RICH E ME SYSTEMS considered	NVIRONMENTS ME EQUIPMENT and	N/A
	- Failure of a ventilation system constructed in accordance with 11.2.2.1 b) 2):	Not intended for such environment	N/A
	- Failure of a barrier constructed in accordance with 11.2.2.1 b) 3):	Not intended for such environment	N/A
	- Failure of a component creating a source of ignition (as defined in 11.2.2.1 a):	Not intended for such environment	N/A
	- Failure of solid insulation or creepage and clearances providing equivalent of at least one MEANS OF PATIENT PROTECTION but less than two MEANS OF PATIENT PROTECTION that could create a source of ignition defined in 11.2.2.1 a):	Not intended for such environment	N/A
	- Failure of a pneumatic component resulting in leakage of oxygen-enriched gas::	Not intended for such environment	N/A
11.3	Constructional requirements for fire ENCLOSURES	S OF ME EQUIPMENT	Р
	ME EQUIPMENT met this clause for alternate means of compliance with selected HAZARDOUS SITUATIONS and fault conditions in 13.1.2:		Р
	Constructional requirements were met, or	Requirements met	Р
	- constructional requirements specifically analysed in RISK MANAGEMENT FILE:	RMF Reference to specific RISKS:	N/A
	(ISO 14971 CI. 4.2-4.4, 5, 6.2-6.5)	Specific Requirements not met:	
		(ISO 14971 CI)	
	Justification, when requirement not met:	Requirements met	N/A
	a) Flammability classification of insulated wire within fire ENCLOSURE is FV-1, or better, based on IEC 60695 series as determined by examination of data on materials:	See appended Table 8.10	P
	Flammability classification of connectors, printed circuit boards, and insulating material on which components are mounted is FV-2, or better, based on IEC 60695-11-10 as decided by examination of materials data	See appended Table 8.10	P







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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
	If no FV Certification, FV tests based on IEC 60695-11-10 conducted on 3 samples of complete parts (or sections of it), including area with min. thickness, ventilation openings		N/A
	b) Fire ENCLOSURE met following:		Р
	1) No openings at bottom or, as specified in Fig 39, constructed with baffles as in Fig 38, or made of perforated metal as in Table 25, or a metal screen with a mesh ≤ 2 x 2 mm centre to centre and wire diameter of at least 0.45 mm		Р
	2) No openings on the sides within the area included within the inclined line C in Fig 39	No openings on the sides	Р
	3) ENCLOSURE, baffles, and flame barriers have adequate rigidity and are made of appropriate metal or of non-metallic materials:	See appended Table 8.10	Р
11.4	ME EQUIPMENT and ME SYSTEMS intended for use with flammable anaesthetics		N/A
	ME EQUIPMENT, ME SYSTEMS and parts described in ACCOMPANYING DOCUMENTS for use with flammable with Annex G	Not intended for such environment	N/A
11.5	ME EQUIPMENT and ME SYSTEMS intended for use in conjunction with flammable agents		N/A
	MANUFACTURER'S RISK MANAGEMENT PROCESS addresses possibility of fire and associated mitigations as confirmed by examination of RISK MANAGEMENT FILE	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
	(ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)		
11.6	Overflow, spillage, leakage, ingress of water or particulate matter, cleaning, disinfection, sterilization and compatibility with substances used with the ME EQUIPMENT		Р
11.6.1	Sufficient degree of protection provided against overflow, spillage, leakage, ingress of water or particulate matter, cleaning, disinfection and sterilization, and compatibility with substances used with ME EQUIPMENT:	See Appended Table 11.6.1	Р
11.6.2	Overflow in ME EQUIPMENT		N/A
	ME EQUIPMENT incorporates a reservoir or liquid storage that did not wet any MEANS OF PROTECTION, nor result in the loss of BASIC SAFETY OF ESSENTIAL PERFORMANCE:	No reservoir or liquid storage See Appended Table 11.6.1	N/A







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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
	Maximum fill level is indicated by marking on the ME EQUIPMENT and a warning or safety notice is given, no HAZARDOUS SITUATION (as specified in 13.1) or unacceptable RISK due to overflow developed when the reservoir or liquid storage chamber is filled to its maximum capacity and the TRANSPORTABLE ME EQUIPMENT is tilted through an angle of 10°, or for MOBILE ME EQUIPMENT exceeding 45 kg, is moved over a threshold as described in 9.4.2.4.3.	No reservoir or liquid storage	N/A
	No warning or safety notice provided regarding the maximum fill level, no HAZARDOUS SITUATION (as specified in 13.1) or unacceptable RISK due to overflow developed when the reservoir or liquid storage chamber was filled to 15 % above the maximum capacity and the TRANSPORTABLE ME EQUIPMENT was tilted through an angle of 10°, or in MOBILE ME EQUIPMENT exceeding 45 kg, was moved over a threshold as described in 9.4.2.4.3.	No reservoir or liquid storage	N/A
1.6.3	Spillage on ME EQUIPMENT and ME SYSTEM	No handling liquids	N/A
	ME EQUIPMENT and ME SYSTEMS handling liquids constructed that spillage does not wet parts as determined by review of the RISK MANAGEMENT FILE and test:  (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)	See appended Tables 11.6.1; 8.7, 8.8.3 and RMF Reference to specific RISK: (ISO 14971 Cl)	N/A
	RISK ANALYSIS identifies the type of liquid,	See above	N/A
	volume, duration and location of the spill:	occ above	IVA
1.6.5	Ingress of water or particulate matter into ME EQUIPMENT and ME SYSTEMS		Р
	ME EQUIPMENT with IP Code placed in least favourable position of NORMAL USE and subjected to tests of IEC 60529 (IP Code):	The unit is IPX0 See Appended Table 11.6.1	Р
	ME EQUIPMENT met dielectric strength and LEAKAGE CURRENT tests and there were no bridging of insulation or electrical components that could result in the loss of BASIC SAFETY OR ESSENTIAL PERFORMANCE IN NORMAL CONDITION or in combination with a SINGLE FAULT CONDITION:	See appended Tables 8.7 8.8.3	Р
11.6.6	Cleaning and disinfection of ME EQUIPMENT and ME SYSTEMS		Р
	ME EQUIPMENT/ME SYSTEM and their parts and ACCESSORIES cleaned or disinfected using methods specified in instructions for use:	See Appended Tables 11.6.1, 8.7, and 8.8.3	Р
	Effects of multiple cleanings/disinfections during EXPECTED SERVICE LIFE of EQUIPMENT evaluated by MANUFACTURER:	Not specified	N/A
11.6.7	Sterilization of ME EQUIPMENT and ME SYSTEMS		N/A
	ME EQUIPMENT, ME SYSTEMS and their parts or ACCESSORIES intended to be sterilized assessed and documented and compliant with tests:	Not intended for sterilization	N/A







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Clause	Requirement + Test	Result - Remark	Verdict
	RISK MANAGEMENT FILE includes an assessment of the RISKS associated with any deterioration following sterilization: (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)	Not intended for sterilization	N/A
11.6.8	RISKS associated with compatibility of substances used with ME EQUIPMENT addressed in RISK MANAGEMENT PROCESS	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
11.7	ME EQUIPMENT, ME SYSTEM, and ACCESSORIES coming into direct or indirect contact with biological tissues, cells, or body fluids assessed and documented		N/A
11.8	Interruption and restoration of power supply did not result in a loss of BASIC SAFETY or ESSENTIAL PERFORMANCE		Р

12	ACCURACY OF CONTROLS AND INSTRUMENTS AGAINST HAZARDOUS OUTPUTS	S AND PROTECTION	Р
12.1	RISKS associated with accuracy of controls and instruments stated:	No such risks	N/A
	(ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)		
12.2	RISK of poor USABILITY, including identification, marking, and documents addressed in a USABILITY ENGINEERING:	See ITL IEC 60601-1-6 test report	Р
12.3	MANUFACTURER implemented an ALARM SYSTEM compliant with IEC 60601-1-8:	No alarm system implemented	N/A
12.4	Protection against hazardous output		N/A
12.4.1	RISKS associated with hazardous output arising from intentional exceeding of safety limits addressed in RISK MANAGEMENT PROCESS:	No such risk	N/A
	(ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)		
12.4.2	- need for indication associated with hazardous output addressed in RISK MANAGEMENT PROCESS :		N/A
	(ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)	(ISO 14971 CI)	
12.4.3	RISKS associated with accidental selection of excessive output values for ME EQUIPMENT with	RMF Reference to specific RISKS:	N/A
	a multi-purpose unit addressed in RISK MANAGEMENT PROCESS:	(ISO 14971 CI)	
	(ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)		
12.4.4	RISKS associated with incorrect output addressed in RISK MANAGEMENT PROCESS:	RMF Reference to specific RISKS:	N/A
	(ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)	(ISO 14971 Cl)	
12.4.5	Diagnostic or therapeutic radiation		N/A







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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
12.4.5.1	Adequate provisions to protect OPERATORS, PATIENTS, other persons and sensitive devices in vicinity of unwanted or excessive radiation		N/A
	Radiation safety ensured by compliance with requirements of appropriate standards		N/A
12.4.5.2	ME EQUIPMENT and ME SYSTEMS designed to produce X-radiation for diagnostic imaging purposes complied with IEC 60601-1-3:	See IEC 60601-1-3 Report	N/A
12.4.5.3	RISKS associated with radiotherapy addressed in RISK MANAGEMENT PROCESS as: (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
12.4.5.4	RISKS associated with ME EQUIPMENT producing diagnostic or therapeutic radiation other than diagnostic X-rays and radiotherapy addressed in RISK MANAGEMENT PROCESS as:  (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
12.4.6	RISKS associated with diagnostic or therapeutic acoustic pressure addressed in RISK MANAGEMENT: (ISO 14971 CI. 4.2-4.4, 5, 6.2-6.5)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A

13	HAZARDOUS SITUATIONS AND FAULT CONDIT	IONS	Р
13.1	Specific HAZARDOUS SITUATIONS		Р
13.1.2	Emissions, deformation of ENCLOSURE or exceeding maximum temperature		Р
	<ul> <li>Emission of flames, molten metal, poisonous or ignitable substance in hazardous quantities did not occur</li> </ul>		Р
	Deformation of ENCLOSURE impairing compliance with 15.3.1 did not occur		Р
	- Temperatures of APPLIED PARTS did not exceed allowable values in Table 24:	See appended Table 11.1.1	Р
	- Temperatures of ME EQUIPMENT parts that are not APPLIED PARTS likely to be touched did not exceed values in Table 23:	See appended Table 11.1.1	Р
	-Allowable values for "other components and materials" in Table 22 times 1.5 minus 12.5 °C were not exceeded		Р
	Limits for windings in Tables 26, 27, and 31 not exceeded		Р
	Table 22 not exceeded in all other cases		Р
	After tests of this Clause, settings of THERMAL CUT-OUTS and OVER-CURRENT RELEASES did not change sufficiently to affect their safety function	See appended Table 13.1.2	Р
13.1.3	- limits for LEAKAGE CURRENT in SINGLE FAULT CONDITION did not exceed:	See appended Table 8.7	Р







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Clause	Requirement + Test	Result - Remark	Verdict
	- voltage limits for ACCESSIBLE PARTS including APPLIED PARTS did not exceed:	See appended Table 8.7	Р
13. 2	SINGLE FAULT CONDITIONS		Р
13.2.1	During the application of the SINGLE FAULT CONDITIONS listed in 13.2.2 to 13.2.13 (inclusive), the NORMAL CONDITIONS identified in 8.1 a) also applied in the least favourable combination		Р
	ME EQUIPMENT complied with 13.2.2 -13.2.12 :	See appended Table 13.2	Р
	RISK MANAGEMENT FILE includes and assessment of RISKS associated with leakage of liquid in a SINGLE FAULT CONDITION:	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
	(ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)		
	RISK MANAGEMENT FILE defines the appropriate test conditions	See above	Р
13.2.13	ME EQUIPMENT remained safe after tests of 13.2.13.2 to 13.2.13.4, and cooling down to within 3 °C of the temperature in the test environment	No heating elements	N/A
	ME EQUIPMENT examined for compliance or appropriate tests such as dielectric strength of motor insulation according to 8.8.3 conducted		N/A
	For insulation of thermoplastic materials relied upon as a MEANS OF PROTECTION, the ball-pressure test specified in 8.8.4.1 a) performed at a temperature 25 °C higher than temperature of insulation measured during tests of 13.2.13.2 to 13.2.13.4 (inclusive).		N/A
13.2.13.2	ME EQUIPMENT with heating elements		N/A
	a 1) thermostatically controlled ME EQUIPMENT with heating elements for building-in, r for unattended operation, or with a capacitor not protected by a fuse connected in parallel with THERMOSTAT contacts met tests	No heating elements	N/A
	a 2) ME EQUIPMENT with heating elements RATED for non-CONTINUOUS OPERATION met tests		N/A
	a 3) other ME EQUIPMENT with heating elements met test		N/A
	When more than one test was applicable to same ME EQUIPMENT, tests performed consecutively		N/A
	Heating period stopped when a heating element or an intentionally weak part of a non-SELF-RESETTING THERMAL CUT-OUT ruptured, or current interrupted before THERMAL STABILITY without possibility of automatic restoration		N/A







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Clause	Requirement + Test	Result - Remark	Verdict
	Test repeated on a second sample when interruption was due to rupture of a heating element or an intentionally weak part		N/A
	Both samples met 13.1.2, and open circuiting of a heating element or an intentionally weak part in second sample not considered a failure by itself		N/A
	b) ME EQUIPMENT with heating elements without adequate heat discharge, and supply voltage set at 90 or 110 % of RATED supply voltage, least favourable of the two (V):	No heating elements	N/A
	Operating period stopped when a non-SELF- RESETTING THERMAL CUT-OUT operated, or current interrupted without possibility of automatic restoration before THERMAL STABILITY		N/A
	ME EQUIPMENT switched off as soon as THERMAL STABILITY established and allowed to cool to room temperature when current not interrupted		N/A
	Test duration was equal to RATED operating time for non-CONTINUOUS OPERATION		N/A
	c) Heating parts of ME EQUIPMENT tested with ME EQUIPMENT operated in NORMAL CONDITION at 110 % of RATED supply voltage and as in 11.1, and		N/A
	1) Controls limiting temperature in NORMAL CONDITION disabled, except THERMAL CUT-OUTS		N/A
	2) When more than one control provided, they were disabled in turn		N/A
	3) ME EQUIPMENT operated at RATED DUTY CYCLE until THERMAL STABILITY achieved, regardless of RATED operating time		N/A
13.2.13.3	ME EQUIPMENT with motors		Р
	a 1) For the motor part of the ME EQUIPMENT, compliance checked by tests of 13.2.8- 13.2.10, 13.2.13.3 b), 13.2.13.3 c), and 13.2.13.4, as applicable	See appended Table 13.2	P
	To determine compliance with 13.2.9 and 13.2.10 motors in circuits running at 42.4 V peak a.c./ 60 V d.c. or less are covered with a single layer of cheesecloth which did not ignite during the test	See appended Table 13.2	P
	a 2) Tests on ME EQUIPMENT containing heating parts conducted at prescribed voltage with motor & heating parts operated simultaneously to produce the least favourable condition	Not containing heating parts	N/A
	a 3) Tests performed consecutively when more tests were applicable to the same ME EQUIPMENT		N/A
	b) Motor met running overload protection test of this clause when:	See appended Table 13.2	Р







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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
	1) it is intended to be remotely or automatically controlled by a single control device with no redundant protection, or		N/A
	2) it is likely to be subjected to CONTINUOUS OPERATION while unattended		N/A
	Motor winding temperature determined during each steady period and maximum value did not exceed Table 27 (Insulation Class, Maximum temperature measured °C)::		N/A
	Motor removed from ME EQUIPMENT and tested separately when load could not be changed in appropriate steps		N/A
	Running overload test for motors operating at 42.4 V peak a.c./60 V d.c. or less performed only when examination and review of design indicated possibility of an overload	See appended Table 13.2	P
	Test not conducted where electronic drive circuits maintained a substantially constant drive current		N/A
	Test not conducted based on other justifications (justification):	See above	N/A
	c) ME EQUIPMENT with 3-phase motors operated with normal load, connected to a 3-phase SUPPLY MAINS with one phase disconnected, and periods of operation per 13.2.10	No 3-phase motors	N/A
13.2.13.4	ME EQUIPMENT RATED for NON-CONTINUOUS OPERATION	ON	N/A
	ME EQUIPMENT (other than HAND-HELD) operated under normal load and at RATED voltage or at upper limit of RATED voltage range until increase in temperature was ≤ 5 °C in one hour, or a protective device operated	Continuous operation	N/A
	When a load-reducing device operated in NORMAL USE, test continued with ME EQUIPMENT running idle		N/A
	Motor winding temperatures did not exceed values in 13.2.10:	See above	N/A
	Insulation Class:	See above	_
	Maximum temperature measured (°C):	See above	_
14	PROGRAMMABLE ELECTRICAL MEDICAL SYST	TEMS (PEMS)	Р
14.1	Requirements of this clause not applied to PESS when it provided no BASIC SAFETY OR ESSENTIAL PERFORMANCE, or	, , , , , , , , , , , , , , , , , , ,	Р
	- when application of RISK MANAGEMENT showed that failure of PESS does not lead to	See RMF	Р

unacceptable RISK.....::







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Clause	Requirement + Test	Result - Remark	Verdict
	RISK MANAGEMENT FILE contains an assessment of RISKS associated with the failure of the PESS: (ISO 14971 Cl. 4.2-4.4, 5)	See RMF	Р
	Requirements of 14.13 not applied to PEMS intended to be incorporated into an IT NETWORK	No such intention	N/A
	Software development process for Software Classification applied in accordance with Clause 4.3 of IEC 62304:	See line 1 and 2 of clause 14.1 of this standard	N/A
	Software development process applied according to Clause 5 of IEC 62304:	See line 1 and 2 of clause 14.1 of this standard	N/A
	Software development process for Software risk management applied according to Clause 7 of IEC 62304:	See line 1 and 2 of clause 14.1 of this standard	N/A
	Software development process Configuration Management applied according to Clause 8 of IEC 62304:	See line 1 and 2 of clause 14.1 of this standard	N/A
	Software development process for Software Problem Resolution applied according to Clause 9 of IEC 62304:	See line 1 and 2 of clause 14.1 of this standard	N/A
14.2	Documents required by Clause 14 reviewed, approved, issued and revised according to a formal document control process:	See line 1 and 2 of clause 14.1 of this standard	N/A
14.3	RISK MANAGEMENT plan required by 4.2.2 includes reference to PEMS VALIDATION plan		N/A
14.4	A PEMS DEVELOPMENT LIFE-CYCLE including a set of defined milestones has been documented		N/A
	At each milestone, activities to be completed, and VERIFICATION methods to be applied to activities have been defined		N/A
	Each activity including its inputs and outputs defined, and each milestone identifies RISK MANAGEMENT activities that must be completed before that milestone		N/A
	PEMS DEVELOPMENT LIFE-CYCLE tailored for a specific development by making plans detailing activities, milestones, and schedules		N/A
	PEMS DEVELOPMENT LIFE-CYCLE includes documentation requirements		N/A
14.5	A documented system for problem resolution within and between all phases and activities of PEMS DEVELOPMENT LIFE-CYCLE has been developed and maintained		N/A
14.6	RISK MANAGEMENT PROCESS		N/A







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IEC 60601-1				
Clause	Requirement + Test	Result - Remark	Verdict	
14.6.1	MANUFACTURER considered HAZARDS associated with software and hardware aspects of PEMS including those associated with the incorporating PEMS into an IT-NETWORK, components of third-party origin, legacy subsystems when compiling list of known or foreseeable HAZARDS:	See line 1 and 2 of clause 14.1 of this standard	N/A	
	RISK MANAGEMENT FILE includes known or foreseeable HAZARDS associated with software, hardware, incorporation of the PEMS into an IT-NETWORK, components of 3rd party origin and legacy subsystems	See line 1 and 2 of clause 14.1 of this standard	N/A	
14.6.2	Suitably validated tools and PROCEDURES assuring each RISK CONTROL measure reduces identified RISK(s) satisfactorily provided in addition to PEMS requirements in Clause 4.2.2:		N/A	
	RISK MANAGEMENT FILE documents the suitability of tools and procedures to validate each RISK CONTROL measure:	See line 1 and 2 of clause 14.1 of this standard	N/A	
	(ISO 14971 Cl. 6.1)			
14.7	A documented requirement specification for PEMS and each of its subsystems (e.g. for a PESS) which includes ESSENTIAL PERFORMANCE and RISK CONTROL measures implemented by that system or subsystem:	See line 1 and 2 of clause 14.1 of this standard	N/A	
	(ISO 14971 Cl. 6.3)			
14.8	An architecture satisfying the requirement is specified for PEMS and each of subsystems:	See line 1 and 2 of clause 14.1 of this standard	N/A	
	(ISO 14971 Cl. 6.3)			
14.9	Design is broken up into sub systems and descriptive data on design environment documented:	See line 1 and 2 of clause 14.1 of this standard	N/A	
14.10	A VERIFICATION plan containing the specified information used to verify and document functions implementing BASIC SAFETY, ESSENTIAL PERFORMANCE, or RISK CONTROL measures:	See line 1 and 2 of clause 14.1 of this standard	N/A	
	(ISO 14971 Cl. 6.3)			
	- milestone(s) when VERIFICATION is to be performed for each function		N/A	
	- selection and documentation of VERIFICATION strategies, activities, techniques, and appropriate level of independence of the personnel performing the VERIFICATION		N/A	
	- selection and utilization of VERIFICATION tools		N/A	
	- coverage criteria for VERIFICATION		N/A	







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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
	The VERIFICATION performed according to the VERIFICATION plan and results of the VERIFICATION activities documented		N/A
14.11	A PEMS VALIDATION plan containing validation of BASIC SAFETY & ESSENTIAL PERFORMANCE:	See line 1 and 2 of clause 14.1 of this standard	N/A
	The PEMS VALIDATION performed according to the PEMS VALIDATION plan with results of PEMS VALIDATION activities and methods used for PEMS VALIDATION documented		N/A
	The person with overall responsibility for PEMS VALIDATION is independent		N/A
	All professional relationships of members of PEMS VALIDATION team with members of design team documented in RISK MANAGEMENT FILE		N/A
14.12	(ISO 14971 CI. 6.3)  Continued validity of previous design documentation assessed under a documented modification/change PROCEDURE		N/A
	Software Classification for Software changes applied in accordance with Clause 4.3 of IEC 62304:	See line 1 and 2 of clause 14.1 of this standard	N/A
	Software Process for Software changes applied according to Clause 5 of IEC 62304:	See line 1 and 2 of clause 14.1 of this standard	N/A
	RISK MANAGEMENT for Software changes applied according to Clause 7 of IEC 62304:	See line 1 and 2 of clause 14.1 of this standard	N/A
	Configuration management of software changes applied per Clause 8 of IEC 62304:	See line 1 and 2 of clause 14.1 of this standard	N/A
	Problem resolution for Software changes applied according to Clause 9 of IEC 62304:		N/A
14.13	For PEMS incorporated into an IT-NETWORK not VALIDATED by the PEMS MANUFACTURER, instructions made available for implementing the connection include the following:	Not incorporated into an it- network	N/A
	a) Purpose of the PEMS connection to an IT- NETWORK		N/A
	b) required characteristics of the IT-NETWORK		N/A
	c) required configuration of the IT-NETWORK		N/A
	d) technical specifications of the network connection, including security specifications		N/A
	e) intended information flow between the PEMS, the IT-NETWORK and other devices on the IT-NETWORK, and the intended routing through the IT-NETWORK		N/A







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Clause	Requirement + Test	Result - Remark	Verdict	
	f) a list of HAZARDOUS SITUATIONS resulting from failure of the IT-NETWORK to provide the characteristics required (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.3)	RMF Reference to specific hazardous situations: (ISO 14971 Cl)	N/A	
	ACCOMPANYING DOCUMENTS for the RESPONSIBLE ORGANIZATION include the following:		N/A	
	- statement that connection to IT-NETWORKS including other equipment could result in previously unidentified RISKS TO PATIENTS, OPERATORS or third parties		N/A	
	<ul> <li>Notification that the RESPONSIBLE ORGANIZATION should identify, analyse, evaluate and control these RISKS</li> </ul>		N/A	
	- Notification that changes to the IT-NETWORK could introduce new RISKS that require additional analysis		N/A	
	- Changes to the IT-NETWORK include: - changes in network configuration - connection of additional items - disconnection of items - update of equipment - upgrade of equipment		N/A	

15	CONSTRUCTION OF ME EQUIPMENT		Р
15.1	RISKS associated with arrangement of controls and indicators of ME EQUIPMENT addressed through the application of a USABILITY ENGINEERING PROCESS:	See ITL IEC 60601-1-6 test report	Р
15.2	Parts of ME EQUIPMENT subject to mechanical wear, electrical, environmental degradation or ageing resulting in unacceptable RISK when unchecked for a long period, are accessible for inspection, replacement, and maintenance		P
	Inspection, servicing, replacement, and adjustment of parts of ME EQUIPMENT can easily be done without damage to or interference with adjacent parts or wiring		P
15.3	Mechanical strength		Р
15.3.1	Mould stress relief, push, impact, drop, and rough handling tests did not result in loss of BASIC SAFETY OF ESSENTIAL PERFORMANCE		Р
15.3.2	Push test conducted:	See Appended Table 15.3	Р
	No damage resulting in an unacceptable RISK sustained		Р
15.3.3	Impact test conducted:	See Appended Table 15.3	Р
	No damage resulting in an unacceptable RISK sustained		Р







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	IEC 60601-1		1
Clause	Requirement + Test	Result - Remark	Verdict
15.3.4	Drop test		N/A
15.3.4.1	Sample of HAND-HELD ME EQUIPMENT, ACCESSORIES and HAND-HELD part with SAFE WORKING LOAD tested:	EUT is considered stationary	N/A
	No unacceptable RISK resulted		N/A
15.3.4.2	Sample of PORTABLE ME EQUIPMENT, ACCESSORIES and PORTABLE part with SAFE WORKING LOAD withstood stress as demonstrated by test:	EUT is considered stationary	N/A
	No damage resulting in an unacceptable RISK sustained		N/A
15.3.5	MOBILE ME EQUIPMENT and MOBILE part with SAFE WORKING LOAD and in most adverse condition in NORMAL USE passed Rough Handling tests:	EUT is considered stationary	N/A
	No damage resulting in an unacceptable RISK sustained		N/A
15.3.6	Examination of ENCLOSURE made from moulded or formed thermoplastic material indicated that material distortion due to release of internal stresses by moulding or forming operations will not result in an unacceptable RISK	Enclosure is metalic	N/A
	Mould-stress relief test conducted by placing one sample of complete ME EQUIPMENT, ENCLOSURE or a portion of larger ENCLOSURE, for 7 hours in a circulating air oven at 10°C over the max temperature measured on ENCLOSURE in 11.1.3, but no less than 70 °C	See above	N/A
	No damage resulting in an unacceptable RISK		N/A
15.3.7	INTENDED USE, EXPECTED SERVICE LIFE, and conditions for transport and storage were taken into consideration for selection and treatment of materials used in construction of ME EQUIPMENT		P
	Based on review of EQUIPMENT, ACCOMPANYING DOCUMENTS, specifications and processing of materials, and MANUFACTURER'S relevant tests or calculations, corrosion, ageing, mechanical wear, degradation of biological materials due to bacteria, plants, animals and the like, will not result in an unacceptable RISK		P
15.4	ME EQUIPMENT components and general assembl	у	Р
15.4.1	Incorrect connection of accessible connectors, removable without a TOOL, prevented where an unacceptable RISK exists,:	No such connectors	N/A
	(ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)		
	a) Plugs for connection of PATIENT leads or PATIENT cables cannot be connected to outlets on same ME EQUIPMENT intended for other functions,:	No such connectors	N/A







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	IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict	
	b) Medical gas connections on ME EQUIPMENT for different gases to be operated in NORMAL USE are not interchangeable inspection:	No such parts	N/A	
15.4.2	Temperature and overload control devices		N/A	
15.4.2.1	a) THERMAL CUT-OUTS and OVER-CURRENT RELEASES with automatic resetting not used in ME EQUIPMENT when their use could lead to a HAZARDOUS SITUATION	No such parts	N/A	
	(ISO 14971 Cl. 4.2-4.4, 5)			
	b) THERMAL CUT-OUTS with a safety function with reset by a soldering not fitted in ME EQUIPMENT		N/A	
	c) An additional independent non-SELF- RESETTING THERMAL CUT-OUT is provided:	RMF Reference to specific RISKS:	N/A	
	(ISO 14971 Cl. 4.2-4.4)	(ISO 14971 Cl)		
	d) Operation of THERMAL CUT-OUT or OVER CURRENT RELEASE doesn't result in a HAZARDOUS SITUATION or loss of ESSENTIAL PERFORMANCE:	No such parts	N/A	
	(ISO 14971 Cl. 4.2-4.4)			
	e) Capacitors or other spark-suppression devices not connected between contacts of THERMAL CUT-OUTS		N/A	
	f) Use of THERMAL CUT-OUTS or OVER-CURRENT RELEASES do not affect safety as verified by following tests:		N/A	
	- Positive temperature coefficient devices) complied with IEC 60730-1: 2010, Clauses 15, 17, J.15, and J.17		N/A	
	- ME EQUIPMENT containing THERMAL CUT-OUTS and OVER-CURRENT RELEASES operated under the conditions of Clause 13:	See appended Table 13.2	N/A	
	- SELF-RESETTING THERMAL CUT-OUTS and OVER-CURRENT RELEASES including circuits performing equivalent functions Certified according to appropriate standards		N/A	
	- In the absence of Certification in accordance with IEC standards, SELF-RESETTING THERMAL CUT-OUTS and OVER-CURRENT RELEASES including circuits performing equivalent functions operated 200 times		N/A	
	Manual reset THERMAL CUT-OUTS and OVER- CURRENT RELEASES Certified in accordance with appropriate IEC standards		N/A	
	manual reset THERMAL CUT-OUTS and OVER- CURRENT RELEASES operated 10 times		N/A	
	Thermal protective devices tested separately from ME EQUIPMENT when engineering judgment indicated test results would not be impacted		N/A	







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Clause	Requirement + Test	Result - Remark	Verdict
	g) Protective device incorporating a fluid filled container with heating means, operated when heater switched on with container empty and prevented an unacceptable RISK due to overheating		N/A
	h) ME EQUIPMENT with tubular heating elements provided with protection against overheating.:	RMF Reference to specific RISKS:	N/A
	(ISO 14971 CI. 4.2-4.4)	(ISO 14971 Cl)	
15.4.2.2	Temperature settings clearly indicated when means provided to vary setting of THERMOSTATS	No such settings	N/A
15.4.3	Batteries	,	N/A
15.4.3.1	Battery housings provided with ventilation:	No Batteries	N/A
	(ISO 14971 CI. 4.2-4.4)		
	Battery compartments designed to prevent accidental short circuiting		N/A
15.4.3.2	Means provided to prevent incorrect connection of polarity:	No Batteries	N/A
	RISK MANAGEMENT FILE includes an assessment of RISKS associated with incorrect connection or replacement of batteries:		N/A
	(ISO 14971 CI. 4.2-4.4)		
15.4.3.3	Overcharging of battery prevented by virtue of design:	No Batteries	N/A
	RISK MANAGEMENT FILE includes an assessment of RISKS associated with overcharging of batteries:		N/A
	(ISO 14971 CI. 4.2-4.4)		
15.4.3.4	Primary lithium batteries comply with IEC 80086-4	No batteries	N/A
	Secondary lithium batteries comply with IEC 62133		N/A
15.4.3.5	A properly RATED protective device provided within INTERNAL ELECTRICAL POWER SOURCE to protect against fire:	No Batteries	N/A
	Protective device has adequate breaking capacity		N/A
	Justification for OVER-CURRENT RELEASES or FUSE exclusion is documented		N/A
	Short circuit test between the positive and negative poles of an INTERNAL ELECTRICAL POWER SOURCE between the output and protective device(s) omitted where 2 MOOPS provided, or	No Batteries	N/A







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Clause	Requirement + Test	Result - Remark	Verdict
	Short circuit between the positive and negative poles of an INTERNAL ELECTRICAL POWER SOURCE between the output and protective device(s) does not result in any HAZARDOUS SITUATION		N/A
15.4.4	Indicator lights provided to indicate ME EQUIPMENT is ready for:	Green led for power on	Р
	An additional indicator light provided on ME EQUIPMENT with a stand-by state or a warm-up state exceeding 15 s,		N/A
	Indicator lights provided on ME EQUIPMENT incorporating non-luminous heaters to indicate heaters are operational		N/A
	RISK MANAGEMENT FILE includes an assessment of RISKS associated with the use of indicator lights for EQUIPMENT incorporating non-luminous heaters:  (ISO 14971 CI. 4.2-4.4)	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
	Requirement not applied to heated stylus-pens for recording purposes		N/A
	Indicator lights provided on ME EQUIPMENT to indicate an output exists		N/A
	Colours of indicator lights complied with 7.8.1		Р
	Charging mode visibly indicated		N/A
15.4.5	RISKS associated with pre-set controls addressed in RISK MANAGEMENT PROCESS:	No present controls	N/A
	(ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)		
5.4.6	Actuating parts of controls of ME EQUIPMENT		N/A
15.4.6.1	a) Actuating parts cannot be pulled off or loosened during NORMAL USE	No actuating controls	N/A
	b) Controls secured so that the indication of any scale always corresponds to the position of the control		N/A
	c) Incorrect connection prevented by adequate construction when it could be separated without use of a TOOL		N/A
	When torque values per Table 30 applied knobs did not rotate:	See appended Table 15.4.6	N/A
	Tests conducted with no unacceptable RISK .:	See appended Table 15.4.6	N/A
5.4.6.2	Stops on rotating/ movable parts of controls are of adequate mechanical strength:	See appended Table 15.4.6	N/A
	Torque values in Table 30 applied:	See appended Table 15.4.6	N/A
	No unexpected change of the controlled parameter when tested:	See appended Table 15.4.6	N/A
5.4.7	Cord-connected HAND-HELD and foot-operated co	ontrol devices	N/A







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Clause	Requirement + Test	Result - Remark	Verdict
15.4.7.1	a) HAND-HELD control devices of ME EQUIPMENT complied with 15.3.4.1	No Hand-held control devices	N/A
	b) Foot-operated control device supported an actuating force of 1350 N in its position of NORMAL USE with no damage:	No Foot-operated control devices	N/A
15.4.7.2	Control device of HAND-HELD and foot-operated control devices turned in all possible abnormal positions and placed on a flat surface:		N/A
	No unacceptable RISK caused by changing control setting when accidentally placed in an abnormal position		N/A
15.4.7.3	a) Foot-operated control device is at least rated IPX1	See appended Table 11.6.1 IP Code =	N/A
	b) ENCLOSURE of foot operated control devices containing electrical circuits is at least IPX6:	See appended Table 11.6.1 IP Code =	N/A
15.4.8	Aluminium wires less than 16 mm <sup>2</sup> in cross- sectional area are not used		N/A
15.4.9	a) Oil container in PORTABLE ME EQUIPMENT allows for expansion of oil and is adequately sealed	No oil	N/A
	b) Oil containers in MOBILE ME EQUIPMENT sealed to prevent loss of oil during transport		N/A
	A pressure-release device operating during NORMAL USE is provided		N/A
	c) Partially sealed oil-filled ME EQUIPMENT and its parts provided with means for checking the oil level to detect leakage		N/A
	ME EQUIPMENT and technical description examined, and manual tests conducted to confirm compliance with above requirements		N/A
15.5	MAINS SUPPLY TRANSFORMERS OF ME EQUIPMENT and transformers providing separation in accordance with 8.5	Mains supply transformer evaluated	Р
15.5.1	Overheating		Р
15.5.1.1	Transformers of ME EQUIPMENT are protected against overheating:	Internal thermal protection of approved for construction isolation transformer	Р
	During tests, windings did not open, no HAZARDOUS SITUATION occurred, and maximum temperatures of windings did not exceed values in Table 31	See appended Tables 15.5.1.2 and 15.5.1.3	Р
	Dielectric strength test conducted after short circuit and overload tests:	See appended Table 15.5.2	Р
15.5.1.2	Transformer output winding short circuited, and test continued until protective device operated or THERMAL STABILITY achieved:	See appended Table 15.5.1.2	Р







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Clause	Requirement + Test	Result - Remark	Verdict
	Short circuit applied directly across output windings		Р
15.5.1.3	Multiple overload tests conducted on windings	See appended Table 15.5.1.3	N/A
15.5.2	Transformers operating at a frequency above 1kHz tested according to clause 8.8.3::	Not above 1kHz	N/A
	Transformer windings provided with adequate insulation	As above	N/A
	Dielectric strength tests were conducted:	See appended Table 15.5.2	N/A
15.5.3	Transformers forming MEANS OF PROTECTION as required by 8.5 comply with:	See appended Table 8.10 and attachment 2 Transformer construction	Р
	- Means provided to prevent displacement of end turns		Р
	- protective earth screens with a single turn have insulated overlap		Р
	- Exit of wires form internal windings of toroid transformers protected with double sleeving		Р
	- insulation between primary and secondary windings complies with 8.8.2		Р
	- CREEPAGE DISTANCES and AIR CLEARANCE comply with 8.9.4		Р

16	ME SYSTEMS	Not defined as ME System	N/A
16.1	After installation or subsequent modification, ME SYSTEM didn't result in an unacceptable RISK	Not defined as ME System	N/A
	RISK MANAGEMENT FILE includes an assessment of RISKS associated with installation and modification of an ME SYSTEM	RMF Reference to specific RISKS: (ISO 14971 CI)	N/A
	Only HAZARDS arising from combining various equipment to form a ME SYSTEM considered		N/A
	- ME SYSTEM provides the level of safety within the PATIENT ENVIRONMENT equivalent to ME EQUIPMENT complying with this standard		N/A
	ME SYSTEM provides the level of safety outside PATIENT ENVIRONMENT equivalent to equipment complying with their respective IEC or ISO safety standards		N/A
	tests performed in NORMAL CONDITION, except as specified		N/A
	- tests performed under operating conditions specified by MANUFACTURER of ME SYSTEM		N/A







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Clause	Requirement + Test	Result - Remark	Verdict	
	Safety tests previously conducted on individual equipment of ME SYSTEM according to relevant standards not repeated		N/A	
	RISK MANAGEMENT methods used by MANUFACTURER of an ME SYSTEM reconfigurable by RESPONSIBLE ORGANIZATION OF OPERATOR		N/A	
	Non-ME EQUIPMENT used in ME SYSTEM complied with applicable IEC or ISO safety standards		N/A	
	Equipment relying only on BASIC INSULATION for protection against electric shock not used in ME SYSTEM		N/A	
16.2	ACCOMPANYING DOCUMENTS of an ME SYSTEM		N/A	
	Documents containing all data necessary for ME SYSTEM to be used as intended by MANUFACTURER including a contact address accompany ME SYSTEM or modified ME SYSTEM	Not defined as ME System	N/A	
	ACCOMPANYING DOCUMENTS regarded as a part of ME SYSTEM		N/A	
	a) ACCOMPANYING DOCUMENTS provided for each item of ME EQUIPMENT supplied by MANUFACTURER		N/A	
	b) ACCOMPANYING DOCUMENTS provided for each item of non-ME EQUIPMENT supplied by MANUFACTURER		N/A	
	c) the required information is provided:		N/A	
	- specifications, instructions for use as intended by MANUFACTURER, and a list of all items forming the ME SYSTEM		N/A	
	<ul> <li>instructions for installation, assembly, and modification of ME SYSTEM to ensure continued compliance with this standard</li> </ul>		N/A	
	- instructions for cleaning and, when applicable, disinfecting and sterilizing each item of equipment or equipment part forming part of the ME SYSTEM		N/A	
	- additional safety measures to be applied during installation of ME SYSTEM		N/A	
	- identification of parts of ME SYSTEM suitable for use within the PATIENT ENVIRONMENT		N/A	
	additional measures to be applied during preventive maintenance		N/A	
	- a warning forbidding placement of MULTIPLE SOCKET-OUTLET, when provided and it is a separate item, on the floor		N/A	
	a warning indicating an additional MULTIPLE SOCKET-OUTLET or extension cord not to be connected to ME SYSTEM		N/A	







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Clause	Requirement + Test	Result - Remark	Verdict
	- a warning to connect only items that have been specified as part of ME SYSTEM or specified as being compatible with ME SYSTEM		N/A
	- maximum permissible load for any MULTIPLE SOCKET-OUTLET(S) used with ME SYSTEM		N/A
	- instructions indicating MULTIPLE SOCKET- OUTLETS provided with the ME SYSTEM to be used only for supplying power to equipment intended to form part of ME SYSTEM		N/A
	- an explanation indicating RISKS of connecting non-ME EQUIPMENT supplied as a part of ME SYSTEM directly to wall outlet when non-ME EQUIPMENT is intended to be supplied via a MULTIPLE SOCKET-OUTLET with a separating transformer		N/A
	- an explanation indicating RISKS of connecting any equipment supplied as a part of ME SYSTEM to MULTIPLE SOCKET-OUTLET		N/A
	- permissible environmental conditions of use for ME SYSTEM including conditions for transport and storage		N/A
	- instructions to OPERATOR not to, simultaneously, touch parts referred to in 16.4 and PATIENT		N/A
	d) the following instructions provided for use by RESPONSIBLE ORGANIZATION:		N/A
	- adjustment, cleaning, sterilization, and disinfection PROCEDURES		N/A
	- assembly of ME SYSTEMS and modifications during actual service life shall be evaluated based on the requirements of this standard		N/A
16.3	Instructions for use of ME EQUIPMENT intended to receive its power from other equipment in an ME SYSTEM, describe the other equipment to ensure compliance with these requirements	Not defined as ME System	N/A
	Transient currents restricted to allowable levels for the specified IPS or UPS:		N/A
	Technical description and installation instructions specify the actual transient currents where an IPS or UPS is not specified		N/A
16.4	Parts of non-ME EQUIPMENT in PATIENT ENVIRONMENT subject to contact by OPERATOR during maintenance, calibration, after removal of covers, connectors operated at a voltage ≤ voltage in 8.4.2 c)	Not defined as ME System	N/A







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Clause	Requirement + Test	Result - Remark	Verdict
16.5	Safety measures incorporating a SEPARATION DEVICE applied when FUNCTIONAL CONNECTION between ME EQUIPMENT and other items of an ME SYSTEM or other systems can cause allowable values of LEAKAGE CURRENT to exceed	Not defined as ME System	N/A
	SEPARATION DEVICE has dielectric strength, CREEPAGE and CLEARANCES required for one MEANS OF OPERATOR PROTECTION		N/A
	WORKING VOLTAGE was highest voltage across SEPARATION DEVICE during a fault condition, but not less than MAXIMUM MAINS VOLTAGE (V):		N/A
16.6	LEAKAGE CURRENTS		N/A
16.6.1	Touch current in Normal condition did not exceed 100 µA:	Not defined as ME System	N/A
	TOUCH CURRENT did not exceed 500 µA in event of interruption of any non-PERMANENTLY INSTALLED PROTECTIVE EARTH CONDUCTOR:	Not defined as ME System	N/A
16.6.2	Current in PROTECTIVE EARTH CONDUCTOR of MULTIPLE SOCKET-OUTLET didn't exceed 5 mA:	Not defined as ME System	N/A
16.6.3	PATIENT LEAKAGE CURRENT and total PATIENT LEAKAGE CURRENT of ME SYSTEM in NORMAL CONDITION did not exceed values	Not defined as ME System	N/A
16.7	ME SYSTEM complied with applicable requirements of Clause 9:	Not defined as ME System	N/A
16.8	Interruption and restoration power to the ME SYSTEM or any part of the ME SYSTEM did not result in a loss of BASIC SAFETY OR ESSENTIAL PERFORMANCE	Not defined as ME System	N/A
16.9	ME SYSTEM connections and wiring		N/A
16.9.1	Incorrect connection of accessible connectors, removable without a TOOL, prevented where unacceptable RISK can result:	Not defined as ME System	N/A
	RISK MANAGEMENT FILE includes an assessment of RISKS associated with plugs for connection of PATIENT leads or cables likely to be located in	Not defined as ME System RMF Reference to specific RISKS:	N/A
	the PATIENT ENVIRONMENT: (ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)	(ISO 14971 CI)	
	- Plugs for connection of PATIENT leads or PATIENT cables could not be connected to other outlets of the same ME SYSTEM likely to be located in PATIENT ENVIRONMENT, except when examination of connectors and interchanging them proved no unacceptable RISK results		N/A
	Medical gas connections on the ME SYSTEM for different gasses operated in NORMAL USE are not interchangeable		N/A
16.9.2	Mains parts, components and layout		N/A







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Clause	Requirement + Test	Result - Remark	Verdict
16.9.2.1	a) – MULTIPLE SOCKET-OUTLET only allows connection using a TOOL, or		N/A
	- MULTIPLE SOCKET-OUTLET is of a type that cannot accept MAINS PLUGS of any of the kinds specified in IEC/TR 60083, or		N/A
	MULTIPLE SOCKET-OUTLET is supplied via a separating transformer		N/A
	b) – MULTIPLE SOCKET-OUTLET marked with safety sign 2 of Table D.2 visible in NORMAL USE, and		N/A
	<ul> <li>marked either individually or in combinations, with the maximum allowed continuous output in amperes or volt-amperes, or</li> </ul>		N/A
	marked to indicate the equipment or equipment parts it may safely be attached to		N/A
	- MULTIPLE SOCKET-OUTLET is a separate item or an integral part of ME EQUIPMENT or non-ME EQUIPMENT		N/A
	c) MULTIPLE SOCKET-OUTLET complied with IEC 60884-1 and the following requirements:		N/A
	- CREEPAGE and CLEARANCES complied with 8.9		N/A
	- It is CLASS I, and PROTECTIVE EARTH CONDUCTOR is connected to earthing contacts in socket-outlets		N/A
	- PROTECTIVE EARTH TERMINALS and PROTECTIVE EARTH CONNECTIONS comply with 8.6:		N/A
	- ENCLOSURE complied with 8.4.2 d)		N/A
	<ul> <li>MAINS TERMINAL DEVICES and wiring complied with 8.11.4, when applicable</li> </ul>		N/A
	- RATINGS of components are not in conflict with conditions of use:		N/A
	Electrical terminals and connectors of     MULTIPLE SOCKET-OUTLETS prevent incorrect     connection of accessible connectors     removable without a TOOL		N/A
	- POWER SUPPLY CORD complied with 8.11.3		N/A
	d) Additional requirements applied when MULTIPLE SOCKET-OUTLET combined with a separating transformer:		N/A
	- Separating transformer complied with this standard or IEC 61558-2-1,:	Not defined as ME System	N/A
	- Separating transformer is CLASS I		N/A
	Degree of protection against ingress of water specified as in IEC 60529		N/A
	Separating transformer assembly marked according to 7.2 and 7.3		N/A







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Clause	Requirement + Test	Result - Remark	Verdict
	MULTIPLE SOCKET-OUTLET permanently connected to separating transformer, or socket-outlet of separating transformer assembly cannot accept MAINS PLUGS as identified in IEC/TR 60083		N/A
16.9.2.2	The impedance between the protective earth pin in the MAINS PLUG and any part that is PROTECTIVELY EARTHED did not exceed 200 m $\Omega$	Not defined as ME System	N/A
	Removal of any single item of equipment in ME SYSTEM will not interrupt the protective earthing of any other part without simultaneous disconnection of electrical supply to that part		N/A
	Additional PROTECTIVE EARTH CONDUCTORS can be detachable only by use of a TOOL		N/A
16.9.2.3	Conductors connecting different items within an ME SYSTEM protected against mechanical damage	Not defined as ME System	N/A

17	ELECTROMAGNETIC COMPATIBILITY OF ME EQUIPMENT AND ME SYSTEMS		Р
	RISKS associated confirmed by review:	Reviewed	Р
	- electromagnetic phenomena at locations where ME EQUIPMENT or ME SYSTEM is to be used as stated in ACCOMPANYING DOCUMENTS:	See UM	P
	RISK MANAGEMENT FILE includes an assessment of risks associated with the introduction of electromagnetic phenomena into the environment by the EQUIPMENT or SYSTEM:	See RMF	Р
	(ISO 14971 Cl. 4.2-4.4, 5, 6.2-6.5)		
	<ul> <li>introduction of electromagnetic phenomena into environment by ME EQUIPMENT or ME SYSTEM that might degrade performance of other devices, electrical equipment, and systems</li> </ul>	See ITL IEC 60601-1-2 Report	P

ANNEX G	PROTECTION AGAINST HAZARDS OF IGNITION OF FLAMMABLE ANESTHETIC MIXTURES  Locations and basic requirements		N/A
G.2			N/A
G.2.1	Parts of CATEGORY APG ME EQUIPMENT in which a FLAMMABLE ANAESTHETIC MIXTURE WITH AIR OCCURS are CATEGORY AP or APG ME EQUIPMENT and complied with G.3, G.4, and G.5	Not intended for such application	N/A
G.2.2	FLAMMABLE AESTHETIC MIXTURE WITH		N/A
G.2.3	A FLAMMABLE AESTHETIC MIXTURE WITH OXYGEN OF NITROUS OXIDE		N/A







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Clause	Requirement + Test	Result - Remark	Verdict
G.2.4	ME EQUIPMENT specified for use with FLAMMABLE AESTHETIC MIXTURE WITH AIR complied with G.4 and G.5		N/A
G.2.5	ME EQUIPMENT or parts thereof for use with FLAMMABLE AESTHETIC MIXTURE WITH OXYGEN OR NITROUS OXIDE comply with G.4 and G.6		N/A
	ME EQUIPMENT in G.2.4 to G.2.5 met appropriate tests of G.3-G.5 conducted after tests of 11.6.6 and 11.6.7		N/A
G.3	Marking, ACCOMPANYING DOCUMENTS		N/A
G.3.1	CATEGORY APG ME EQUIPMENT prominently marked "APG" (symbol 23 in Table D.1):	Not intended for such application	N/A
	Length of green-coloured band is ≥ 4 cm, and size of marking is as large as possible for particular case		N/A
	When above marking not possible, relevant information included in instructions for use:	Not intended for such application	N/A
	Marking complied with tests and criteria of 7.1.2 and 7.1.3		N/A
G.3.2	CATEGORY AP ME EQUIPMENT prominently marked, with a green-coloured circle "AP" (symbol 22 in Table D.1):	Not intended for such application	N/A
	Marking is as large as possible for the particular case		N/A
	When above marking not possible, the relevant information included in instructions for use:	Not intended for such application	N/A
	Marking complied with tests and criteria of 7.1.2 and 7.1.3		N/A
G.3.3	The marking placed on major part of ME EQUIPMENT for CATEGORY AP Or APG parts		N/A
G.3.4	ACCOMPANYING DOCUMENTS contain an indication enabling the RESPONSIBLE ORGANIZATION to distinguish between CATEGORY AP and APG parts		N/A
G.3.5	Marking clearly indicates which parts are CATEGORY AP OR APG when only certain ME EQUIPMENT parts are CATEGORY AP OR APG		N/A
G.4	Common requirements for CATEGORY AP and CATE	N/A	
G.4.1	a) CREEPAGE and CLEARANCES are according to Table 12 for one MEANS OF PATIENT PROTECTION		N/A
	b) Connections protected against accidental disconnection		N/A
	c) CATEGORY AP and APG not provided with a DETACHABLE POWER SUPPLY CORD,		N/A
G.4.2	Construction details		N/A







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Clause	Requirement + Test	Result - Remark	Verdict
	a) Opening of an ENCLOSURE protecting against penetration of gases or vapours into ME EQUIPMENT or its parts possible only with a TOOL		N/A
	b) ENCLOSURE complies with:	Not intended for such application	N/A
	- no openings on top covers of ENCLOSURE,		N/A
	openings in side-covers prevented penetration of a solid cylindrical test rod		N/A
	<ul> <li>openings in base plates prevented penetration of a solid cylindrical test</li> </ul>		N/A
	c) Short circuiting conductor(s) to a conductive part (when no explosive gasses) did not result in loss of integrity of the part, an unacceptable temperature, or any HAZARDOUS SITUATION		N/A
G.4.3	a) Electrostatic charges prevented on CATEGORY AP and APG ME EQUIPMENT by a combination of appropriate measures		N/A
	Use of antistatic materials with a limited electrical resistance: :	Not intended for such application	N/A
	- Provision of electrically conductive paths from ME EQUIPMENT or its parts to a conductive floor, protective earth or potential equalization system, or via wheels to an antistatic floor		N/A
	b) Electrical resistance limits of aesthetic tubing, mattresses/ pads, castor tires & other antistatic material comply with ISO 2882:		N/A
G.4.4	Corona cannot be produced by components or parts of ME EQUIPMENT operating at more than 2000 V a.c. or 2400 V d.c. and not included in ENCLOSURES complying with G.5.4 or G.5.5		N/A
G.5	Requirements and tests for CATEGORY AP ME EQUI	PMENT, parts and components	N/A
G.5.1	ME EQUIPMENT, its parts or components do not ignite FLAMMABLE AESTHETIC MIXTURES WITH AIR under NORMAL USE and CONDITIONS based on compliance with G.5.2 to G.5.5		N/A
	Alternatively, ME EQUIPMENT, its parts, and components complied with requirements of IEC 60079-0 for pressurized ENCLOSURES (IEC 60079-2); for sand-filled ENCLOSURES, IEC 60079-5; or for oil immersed equipment, IEC 60079-6; and with this standard excluding G.5.2 to G.5.5:		N/A
G.5.2	Temperature limits::	Not intended for such application	N/A
G.5.3	ME EQUIPMENT, its parts, and components producing sparks in NORMAL USE and CONDITION complied with temperature requirements of G.5.2, and U <sub>max</sub> and I <sub>max</sub> occurring in their circuits, and complied as follows:		N/A







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Clause	Requirement + Test	Result - Remark	Verdict
	Measured U <sub>max</sub> ≤ U <sub>zR</sub> with I <sub>zR</sub> as in Fig. G.1:	U <sub>max</sub> =V U <sub>zR</sub> =V I <sub>zR</sub> =A	N/A
	Measured U <sub>max</sub> ≤ U <sub>c</sub> with C <sub>max</sub> as in Fig. G.2:	U <sub>max</sub> =V U <sub>c</sub> =V C <sub>max</sub> =μF	N/A
	Measured I <sub>max</sub> ≤ I <sub>zR</sub> with U <sub>zR</sub> as in Fig G.1:	I <sub>max</sub> =A I <sub>zR</sub> =A U <sub>zR</sub> =V	N/A
	Measured $I_{max} \le I_{zL}$ with $L_{max}$ and a $U_{max} \le 24$ V as in Fig G.3:	I <sub>max</sub> =A I <sub>zL</sub> =A L <sub>max</sub> =mH	N/A
	<ul> <li>Combinations of currents and corresponding voltages within the limitations IzR.UzR ≤ 50 W extrapolated from Fig G.1</li> </ul>		N/A
	No extrapolation made for voltages above 42 V		N/A
	<ul> <li>Combinations of capacitances and corresponding voltages within limitations of C/2U<sup>2</sup> ≤ 1.2 mJ extrapolated from Fig G.2</li> </ul>		N/A
	No extrapolation made for voltages above 242V		N/A
	U <sub>max</sub> determined using actual resistance R		N/A
	– Combinations of currents and corresponding inductances within limitations L/2l <sup>2</sup> $\leq$ 0.3 mJ extrapolated from Fig G.3		N/A
	No extrapolation made for inductances larger than 900 mH		N/A
	<ul> <li>U<sub>max</sub> was the highest supply voltage occurring in circuit under investigation with sparking contact open</li> </ul>		N/A
	<ul> <li>I<sub>max</sub> was the highest current flowing in circuit under investigation with sparking contact closed</li> </ul>		N/A
	<ul> <li>C<sub>max</sub> and L<sub>max</sub> taken as values occurring at the component under investigation producing sparks</li> </ul>		N/A
	- Peak value considered when a.c. supplied		N/A
	<ul> <li>An equivalent circuit calculated to determine equivalent max capacitance, inductance, and equivalent U<sub>max</sub> and I<sub>max</sub>, either as d.c. or a.c. peak values in case of a complicated circuit:</li> </ul>		N/A
	Temperature measurements made according to 11.1, and $U_{max}$ , $I_{max}$ , $R$ , $L_{max}$ , and $C_{max}$ determined with application of Figs G.1-G.3 :	See appended Table 11.1.1	N/A
	Alternatively, compliance was verified by examination of design data	Not intended for such application	N/A
G.5.4	External ventilation with internal overpressure		N/A







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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict
	ME EQUIPMENT, its parts, and components enclosed in an ENCLOSURE with external ventilation by means of internal overpressure complied with the following requirements:		N/A
	a) FLAMMABLE AESTHETIC MIXTURES WITH AIR t removed by ventilation before EQUIPMENT energized,		N/A
	b) Overpressure inside ENCLOSURE was 75 Pa, min., in NORMAL CONDITION (Pa):	Not intended for such application	N/A
	Overpressure maintained at the site of potential ignition		N/A
	ME EQUIPMENT could be energized only after the required minimum overpressure was present long enough to ventilate the ENCLOSURE		N/A
	ME EQUIPMENT energized at will or repeatedly when overpressure was continuously present		N/A
	c) Ignition sources de-energized automatically when during operation overpressure dropped below 50 Pa (Pa):	Not intended for such application	N/A
	d) External surface of ENCLOSURE did not exceed 150 °C in 25 °C:	Not intended for such application	N/A
G.5.5	ENCLOSURES with restricted breathing		N/A
	ME EQUIPMENT, its parts, and components enclosed in an ENCLOSURE with restricted breathing complied with the following:		N/A
	a) A FLAMMABLE AESTHETIC MIXTURE WITH AIR did not form inside ENCLOSURE with restricted breathing		N/A
	b) Gasket or sealing material used to maintain tightness complied with aging test B-b of IEC 60068-2-2, Clause 15, at 70 °C ± 2 °C and 96 h:	See appended Table 8.10	N/A
	c) Gas-tightness of ENCLOSURE containing inlets for flexible cords maintained		N/A
	Cords are fitted with adequate anchorages to limit stresses as determined by test		N/A
	Overpressure not reduced below 200 Pa		N/A
	Tests waived when examination of ENCLOSURE indicated it is completely sealed or gas-tight without a doubt (100 % degree of certainty)		N/A
	Operating temperature of external surface of ENCLOSURE was ≤ 150 °C in 25 °C (°C):		N/A
	Steady state operating temperature of ENCLOSURE also measured (°C):		N/A
<b>3.6</b>	CATEGORY APG ME EQUIPMENT, parts and componer	nts thereof	N/A







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Clause	Requirement + Test	Result - Remark	Verdict
G.6.1	ME EQUIPMENT, its parts, and components did not ignite FLAMMABLE AESTHETIC MIXTURE WITH OXYGEN OR NITROUS OXIDE under NORMAL USE and SINGLE FAULT CONDITION		N/A
	ME EQUIPMENT, its parts, and components not complying with G.6.3 subjected to a CONTINUOUS OPERATION test		N/A
G.6.2	Parts and components of CATEGORY APG ME EQUIPMENT operating in a FLAMMABLE AESTHETIC MIXTURE WITH OXYGEN OR NITROUS OXIDE supplied from a source isolated from earth by insulation equal to one MEANS OF PATIENT PROTECTION and from electrical parts by insulation twice the MEANS OF PATIENT PROTECTION		N/A
3.6.3	Test of G.6.1 waived when the following requirements were met in NORMAL USE and under NORMAL and SINGLE FAULT CONDITIONS:		N/A
	a) no sparks produced and temperatures did not exceed 90 °C, or	See Tables 11.1.1, 11.2.2.1 and 13.2	N/A
	b) a temperature limit of 90 °C not exceeded, sparks produced in NORMAL USE, and SINGLE FAULT CONDITIONS, except $U_{max}$ and $I_{max}$ occurring in their circuits complied with requirements, taking $C_{max}$ and $L_{max}$ into consideration:	See Tables 11.1.1 and 13.2	N/A
	Measured $U_{max} \le U_{zR}$ with $I_{zR}$ as in Fig. G.4:	U <sub>max</sub> =V U <sub>zR</sub> =V I <sub>zR</sub> =A	N/A
	Measured U <sub>max</sub> ≤ U <sub>z</sub> c with C <sub>max</sub> as in Fig. G.5:	U <sub>max</sub> =V U <sub>c</sub> =V C <sub>max</sub> =μF	N/A
	Measured $I_{max} \le I_{zR}$ with $U_{zR}$ as in Fig G.4:	I <sub>max</sub> =A I <sub>zR</sub> =A U <sub>zR</sub> =V	N/A
	Measured $I_{max} \le I_{zL}$ with $L_{max}$ and a $U_{max} \le 24$ V as in Fig G.6:	I <sub>max</sub> =A I <sub>zL</sub> =A L <sub>max</sub> =mH	N/A
	- Extrapolation from Figs G.4, G.5, and G.6 was limited to areas indicated		N/A
	<ul> <li>U<sub>max</sub> was the highest no-load voltage occurring in the circuit under investigation, taking into consideration mains voltage variations as in 4.10</li> </ul>		N/A
	- I <sub>max</sub> was the highest current flowing in the circuit under investigation, taking into account MAINS VOLTAGE variations as in 4.10		N/A
	- C <sub>max</sub> and L <sub>max</sub> are values occurring in relevant circuit		N/A







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Clause	Requirement + Test	Result - Remark	Verdict
	– $U_{\text{max}}$ additionally determined with actual resistance R when equivalent resistance R in Fig G.5 was less than 8000 $\Omega$		N/A
	- Peak value considered when a.c. supplied		N/A
	<ul> <li>An equivalent circuit calculated to determine max capacitance, inductance, and U<sub>max</sub> and I<sub>max</sub>, either as d.c. or a.c. peak values in case of a complicated circuit:</li> </ul>	Not intended for such application	N/A
	- When energy produced in an inductance or capacitance in a circuit is limited by voltage or current-limiting devices, two independent components applied, to obtain the required limitation even when a first fault (short or open circuit) in one of these components		N/A
	- requirement not applied to transformers complying with this standard		N/A
	<ul> <li>requirement not applied to wire-wound current-limiting resistors provided with a protection against unwinding of the wire in case of rupture</li> </ul>		N/A
	Compliance verified by examination of CATEGORY APG ME EQUIPMENT, parts, and components, or		N/A
	Temperature measurements made in accordance with 11.1:	Not intended for such application	N/A
	- or $U_{max}$ , $I_{max}$ , $R$ , $L_{max}$ and $C_{max}$ determined together with application of Figs G.4-G.6:	$\begin{array}{lll} U_{max} &= & \_V \\ I_{max} &= & \_A \\ R &= & \_\Omega \\ L_{max} &= & \_mH \\ C_{max} &= & \_\mu F \end{array}$	N/A
	Alternatively, compliance verified by comparison with design data	Not intended for such application	N/A
G.6.4	ME EQUIPMENT, its parts, and components heating a FLAMMABLE AESTHETIC MIXTURE WITH OXYGEN OR NITROUS OXIDE provided with a non-SELF-RESETTING THERMAL CUT-OUT and complied with 15.4.2.1	Not intended for such application	N/A
	Current-carrying part of heating element is not in direct contact with FLAMMABLE AESTHETIC MIXTURE WITH OXYGEN OR NITROUS OXIDE		N/A
G.7	Test apparatus for flammable mixtures according to this Clause and Fig G.7		N/A

ANNEX L INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED		N/A
	INSULATION	







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	IEC 60601-1				
Clause	Requirement + Test	Result - Remark	Verdict		
L.1	BASIC, SUPPLEMENTARY, DOUBLE, and REINFORCED INSULATION in wound components without interleaved insulation complied with this Annex	Evaluated as part of approved for construction isolation transformer	N/A		
L.2	Wire construction				
	Overlap of layers when wire is insulated with two or more spirally wrapped layers of tape is adequate to ensure continued overlap during manufacture of wound component		N/A		
	Layers of spirally wrapped wire insulation are sufficiently secured to maintain the overlap		N/A		
L.3	Type Test		N/A		
	The wire subjected to tests of L.3.1 to L.3.4 at a temperature and a relative humidity specified		N/A		
	Temperature (°C):	Evaluated as part of approved for construction isolation transformer	-		
	Humidity (%)::	Evaluated as part of approved for construction isolation transformer	_		
L.3.1	Dielectric strength				
	Dielectric strength test of Clause 8.8.3 for the appropriate type and number of MOP(s) conducted with no breakdown:		N/A		
	- 3000 V for BASIC and SUPPLEMENTARY INSULATION (V):	Evaluated as part of approved for construction isolation transformer	N/A		
	- 6000 V for REINFORCED INSULATION (V):	Evaluated as part of approved for construction isolation transformer	N/A		
L.3.2	Flexibility and adherence				
	Sample subjected to flexibility and adherence		N/A		
	Sample examined per IEC 60851-3: 1997, cl. 5.1.1.4, followed by dielectric test of cl. 8.8.3, with no breakdown		N/A		
	Test voltage was at least the voltage in Tables 6 and 7 but not less than the following:		N/A		
	- 1500 V for BASIC and SUPPLEMENTARY INSULATION (V):	Evaluated as part of approved for construction isolation transformer	N/A		
	- 3000 V for REINFORCED INSULATION (V):	Evaluated as part of approved for construction isolation transformer	N/A		
	Tension applied to wire during winding on mandrel calculated from the wire diameter equivalent to 118 MPa ± 11.8 MPa:	Evaluated as part of approved for construction isolation transformer	N/A		







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Clause	Requirement + Test	Result - Remark	Verdict	
L.3.3	Heat Shock			
	Sample subjected to heat shock test 9 of IEC 60851-6:1996, followed by dielectric strength test of clause 8.8.3		N/A	
	Test voltage was at least the voltage in Tables 6 and 7, but not less than the following:		N/A	
	- 1500 V for BASIC and SUPPLEMENTARY INSULATION (V):	Evaluated as part of approved for construction isolation transformer	N/A	
	- 3000 V for REINFORCED INSULATION (V):	Evaluated as part of approved for construction isolation transformer	N/A	
	Oven temperature based on Table L.2 (°C):	Evaluated as part of approved for construction isolation transformer	_	
	Mandrel diameter and tension applied as in clause L.3.2, (MPa; N/mm²):	Evaluated as part of approved for construction isolation transformer	N/A	
	Dielectric strength test conducted at room temperature after removal from the oven		N/A	
L.3.4	Retention of electric strength after bending			
	Five samples prepared as in L.3.2 subjected to dielectric strength and bending tests		N/A	
	Test voltage was at least the voltage in Tables 6 and 7, but not less than the following:		N/A	
	- 1500 V for BASIC and SUPPLEMENTARY INSULATION (V):	Evaluated as part of approved for construction isolation transformer	N/A	
	- 3000 V for REINFORCED INSULATION (V):	Evaluated as part of approved for construction isolation transformer	N/A	
	Test voltage applied between the shot and conductor		N/A	
	Mandrel diameter and tension applied as in L.3.2, (MPa; N/mm²):	Evaluated as part of approved for construction isolation transformer	N/A	
4	Tests during manufacture		N/A	
4.1	Production line dielectric strength tests done by the manufacture per L.4.2 and L.4.3:	See attached manufacturer's routine testing verification	N/A	
L.4.2	Test voltage for routine testing (100 % testing) is at least the voltage in Tables 6 and 7 but not less than the following:		N/A	
	- 1500 V r.m.s. or 2100 V peak for BASIC and SUPPLEMENTARY INSULATION (V)	See manufacturer's routine testing verification	N/A	





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Clause	Requirement + Test	Result - Remark	Verdict		
	- 3000 V r.m.s. or 4200 V peak for REINFORCED INSULATION (V)	See manufacturer's routine testing verification	N/A		
L.4.3	Sampling tests conducted using twisted pair samples (IEC 60851-5:1996, clause 4.4.1):	See manufacturer's routine testing verification	N/A		
	Minimum breakdown test voltage at least twice the voltage in Tables 6 and 7 but not less than:		N/A		
	- 3000 V r.m.s. or 4200 V peak for BASIC and SUPPLEMENTARY INSULATION:	See manufacturer's routine testing verification	N/A		
	- 6000 V r.m.s. or 8400 V peak for REINFORCED INSULATION:	See manufacturer's routine testing verification	N/A		







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IEC 60601-1			
Clause	Requirement + Test	Result - Remark	Verdict

4.2.2	RM RESULTS TA	ABLE: General requiremen	nts for RISK MANAGEMENT	Р
Clause of ISO	Document Ref. ii paragraph/claus	n RMF (Document No. e, version)	Result - Remarks	Verdict
14971	General process	Particular Medical Device		
3.1	See RMF	_	Risk Management Process (excluding production and post-production)	Р
3.2	See RMF	_	Adequate Resources	Р
3.2	See RMF	_	Assignment of qualified personnel	Р
3.2	See RMF	_	Policy for determining criteria for risk acceptability	Р
3.3	<del></del>	See RMF	Qualification of personnel	Р
3.4a	_	See RMF	Risk Management Plan:	Р
			scope of the planned risk management activities	
3.4b	_	See RMF	Risk Management Plan: assignment of responsibilities and authorities	Р
3.4c	_	See RMF	Risk Management Plan: requirements for review of risk management activities	Р
3.4d	_	See RMF	Risk Management Plan: criteria for risk acceptability	Р
3.4e	_	See RMF	Risk Management Plan: verification activities	Р
3.5	_	See RMF	Risk management file	Р
4.1	_	See RMF	Risk analysis process	Р
4.2	_	See RMF	Intended use and identification of characteristics related to the safety of the medical device	Р
4.3	_	See RMF	Identification of hazards	Р
4.4	_	See RMF	Risk estimation	Р
5	_	See RMF	Risk evaluation	Р
6.2	_	See RMF	Risk control option analysis	Р
6.3	_	See RMF	Implementation of risk control measures	Р
6.4	_	See RMF	Residual risk evaluation	Р
6.5	_	See RMF	Risk-Benefit Analysis	Р
6.6a	_	See RMF	Introduction of new hazards or hazardous situations	Р
6.6b	_	See RMF	Whether the estimated risks for previously identified hazardous situations are affected by the introduction of the risk control measures.	P
6.7	_	See RMF	Completeness of risk control	Р





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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict

4.2.2	RM RESULTS TABLE: General requirements for RISK MANAGEMENT		Р	
Clause of ISO	Document Ref. in paragraph/claus	n RMF (Document No. e, version)	Result - Remarks	Verdict
14971	General process	Particular Medical Device		
7	_	See RMF	Evaluation of overall residual risk acceptability	Р
8	_	See RMF	Risk management report	Р

#### **Supplementary Information:**

Document Ref should be with regards to the policy/procedure documents and documents containing device specific output.

4.3	TABLE: ESSENTIAL PERFORMANCE						
List of ESSENTIAL PERFORMANCE functions		MANUFACTURER'S document number reference or reference from this standard or collateral or particular standard(s)	Remarks				

#### **Supplementary Information:**

ESSENTIAL PERFORMANCE is performance, the absence or degradation of which, would result in an unacceptable risk.







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		IEC 60601-1		
(	Clause	Requirement + Test	Result - Remark	Verdict

4.11	TABLE: Power Input					
Operating Conditions / Ratings		Voltage (V)	Frequency (Hz)	Current (A)	Power (W or VA)	Power factor (cos φ)
Normal con	ditions, Max. Load	180	50	8.4	1486	0.98280423
Normal conditions, Max. Load		200	50	7.8	1510	0.96794872
Normal con	ditions, Max. Load	240	50	7.3	1731	0.9880137
Normal con	ditions, Max. Load	264	50	6.7	1741	0.98428313
Normal con	ditions, Max. Load	180	60	8.4	1479	0.9781746
Normal conditions, Max. Load		200	60	7.9	1502	0.95063291
Normal conditions, Max. Load		240	60	7.3	1717	0.98002283
Normal conditions, Max. Load		264	60	6.8	1779	0.99097594
Supplemer	ntary Information:	- 1				1

5.9.2	TABLE: Determination of ACCESSIBLE parts						
Location		Determination method (NOTE1)	Comments				
Unit enclosure		Visual, rigid test finger, jointed test finger.	Only EUT enclosure, screen, and button are accessible				
Applied pa	art	Viability	Applied part Harness belt				
Isolation Transformer		Visual, rigid test finger, jointed test finger.	Only The Isolation Transformer enclosure accessible				
Suppleme	entary information	on:					
NOTE 1 –	The determinatio	n methods are: visual; rigid test finger; jo	inted test finger; test hook.				







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Clause	Requirement + Test	Result - Remark	Verdict

7.1.2	TABLE: Legibility of Marking					
Markings tested		Ambient Illuminance (Ix)	Remarks			
Outside Markings (Clause 7.2):		100-1500	Correctly visible			
Inside Markings (Clause 7.3):		100-1500	Correctly visible			
Controls & Instruments (Clause 7.4):		100-1500	Correctly visible			
Safety Signs (Clause 7.5):		100-1500	Correctly visible			
Symbols (Clause 7.6):		100-1500	Correctly visible			

#### Supplementary information:

Observer, with a visual acuity of 0 on the log Minimum Angle of Resolution (log MAR) scale or 6/6 (20/20) and is able to read N6 of the Jaeger test card in normal room lighting condition (~500lx), reads marking at ambient illuminance least favourable level in the range of 100 lx to 1,500 lx. The ME EQUIPMENT or its part was positioned so that the viewpoint was the intended position of the OPERATOR or if not defined at any point within the base of a cone subtended by an angle of 30° to the axis normal to the centre of the plane of the marking and at a distance of 1 m.

7.1.3	TABLE: Durability of marking test					
Characteri	Remarks					
Material of	Polymeric held by adhesive		-			
Ink/other p	printing material or process::	Printed ink		-		
Material (c		-				
Ink/other p	-					
Other		-				
	:	Re	marks			
Product la	bel		l	Pass		
printing or	I	Pass				

#### **Supplementary information:**

Marking rubbed by hand, first for 15 s with a cloth rag soaked with distilled water, then for 15 s with a cloth rag soaked with ethanol 96%, and then for 15 s with a cloth rag soaked with isopropyl alcohol.







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Clause	Requirement + Test	Result - Remark	Verdict

Oladoo	rtoquironioni :		- Tromain		voluiot				
8.4.2	TABLE: TABL	ABLE: TABLE: Working Voltage / Power Measurement							
Test suppl	y voltage/frequ	uency (V/Hz)	1		:				
Location									
From/To	Vrms	Vpk or Vdc	Peak-to- peak ripple <sup>2</sup>	Power W/VA	Energy (J)	Rema	arks		

#### Supplementary Information:

- 1. The input supply voltage to the ME EQUIPMENT was the RATED voltage or the voltage within the RATED voltage range which results in the highest measured value. See clause 8.5.4.

  2. If the d.c peak-to-peak ripple >10%, waveform considered as a.c. See clause 8.4.2.2

8.4.3 TABLE: ME EQUIPM - measurement of disconnection of	voltage	e or cal	culation	of stor						P
Maximum allowable voltage (V) 60										
Voltage measured (V)										
Voltage Measured Between:	Voltage Measured Between: 0 0 0 0 0 0 0 0 0									0
Plug pins 1 and 2	0	0	0	0	0	0	0	0	0	0
Plug pin 1 and plug earth pin	0	0	0	0	0	0	0	0	0	0
Plug pin 2 and plug earth pin	0	0	0	0	0	0	0	0	0	0
Plug pin 1 and enclosure	0	0	0	0	0	0	0	0	0	0
Plug pin 2 and enclosure	0	0	0	0	0	0	0	0	0	0
Maximum allowable stored c	harge v	vhen me	easured	voltage	e excee	ded 60	v (μc)	: 45		
		Calcula	ted sto	red cha	rge (μc)	)				
Voltage Measured Between:	1	2	3	4	5	6	7	8	9	10
Plug pins 1 and 2										
Plug pin 1 and plug earth pin										
Plug pin 2 and plug earth pin										
Plug pin 1 and enclosure										
Plug pin 2 and enclosure										
Supplementary information:		•	ı		,	1	ı		ı	





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		IEC 60601-				
Clause	Requirement + Test Result -				Verdict	
8.4.4 TABLE: Internal capacitive circuits – measurement of residual voltage or calculation of the stored charge in capacitive circuits (i.e., accessible capacitors or circuit parts) after de-energizing ME EQUIPMENT						
Maximum a	60 V					
Maximum a	allowable stored charge w	hen residual voltage	exceeded 60 V:	45 μC		
Description of the capacitive circuit (i.e., accessible capacitor or circuit parts)		Measured residual voltage (V)	Calculated stored charge (μC)	Remarks		
Supplemen	ntary information:					
8.5.5.1a TABLE: defibrillation-proof applied parts – measurement of hazardous						

	TABLE: defibrillation-proof applied parts – measurement of hazardous electrical energies						
Test Condition: Figs. 9 & 10		Applied part with test voltage	Test voltage polarity	Measured voltage between Y1 and Y2 (mV)	Remarks		
Supplementary information:							

8.5.5.1b	b TABLE: defibrillation-proof applied parts – verification of recovery time					
	part with test oltage	Test voltage polarity	Recovery time from documents (s)	Measured recovery time (s)	Rem	arks
Suppleme	ntary informati	on:		ı	l	







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Clause	Requirement + Test	Result - Remark	Verdict		

8.5.5.2	TABLE: DEFIBRILLATION-PROOF APPLIED PARTS or PATIENT CONNECTIONS of DEFIBRILLATION-PROOF APPLIED PARTS - Energy reduction test –measurement of Energy delivered to a 100 $\Omega$ load				
Test Voltage applied to		Measured Energy E1 (mJ)	Measured Energy E2 (mJ)		nergy E1 5 of E2 (%)

Energy delivered to a 100 32 load			
Test Voltage applied to	Measured Energy E1 (mJ)	Measured Energy E2 (mJ)	Energy E1 as % of E2 (%)
PATIENT CONNECTION 1 or APPLIED PART with PATIENT CONNECTIONS 2, 3, and 4 of the same APPLIED PART connected to earth			
PATIENT CONNECTION 2 or APPLIED PART with PATIENT CONNECTIONS 1, 3, and 4 of the same APPLIED PART connected to earth			
PATIENT CONNECTION 3 or APPLIED PART with PATIENT CONNECTIONS 1, 2, and 4 of the same APPLIED PART connected to earth			
PATIENT CONNECTION 4 or APPLIED PART with PATIENT CONNECTIONS 1, 2, and 3 of the same APPLIED PART connected to earth			

Supplementary information: For compliance: E1 must at least 90% of E2 E1= Measured energy delivered to 100  $\Omega$  with ME Equipment connected; E2= Measured energy delivered to 100  $\Omega$  without ME equipment connected.

8.6.4	TABLE: Impedance and current-carrying capability of PROTECTIVE EARTH CONNECTIONS					
Type of ME EQUIPMENT & impedance measured between parts		Test current (A) /Duration (s)	Voltage drop measured between parts (V)	Maximum calculated impedance (mΩ)	Maximum allowable impedance (mΩ)	
Isolator Transformer device Inlet PE to Metal chassis		40A/120sec	40A/120sec 0.8	20	200	
		407/120360			200	
Isolator Tra	nsformer device	40A/120sec	0.7	17.5	200	
Inlet PE to output Protective earth		40A/120SeC	0.7	17.5	200	
PE to hand	les	40A/120sec	3.8	95	200	
PE to enclosure surface		40A/120sec	3.7	92.5	200	
PE to handles		25A/5sec	2.3	92	200	
PE to enclosure surface		25A/5sec	2.1	84	200	

#### Supplementary information:

PERMANENTLY INSTALLED ME EQUIPMENT, impedance between PROTECTIVE EARTH TERMINAL and a PROTECTIVELY EARTHED part - Limit 100  $\textbf{m} \underline{\Omega} \textbf{ME} \ \textbf{EQUIPMENT} \ \textbf{with an APPLIANCE INLET, impedance between earth pin in the APPLIANCE INLET and a PROTECTIVELY EARTHED part -$ 

ME EQUIPMENT with an APPLIANCE INLET, impedance between earth pin in the protective earth pin on the DETACHABLE POWER SUPPLY CORD and a PROTECTIVELY EARTHED part - Limit 200  $\text{m}\Omega$ 

ME EQUIPMENT with a non-DETACHABLE POWER SUPPLY CORD, impedance between the protective earth pin in the MAINS PLUG and a PROTECTIVELY EARTHED part - Limit 200 m $\Omega$ 







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Clause	Requirement + Test	Result - Remark	Verdict

8.7	TABLE: leakage current					Р
	leakage current and test (including single faults)	Supply voltage (V)	Supply frequency (Hz)	Measured max. value (µA)	Remark	s
Fig. 13 - Ea	rth Leakage (ER)	_	_	_	Maximum allowed values to mA NC; 10 mA SFC	
-		Isolato	r Transforme	er	13 MA NO, 10 MA SEC	
ER, NC (S5	-1, S1-1)	264	60	4.6	Loaded with13A	
ER, NC (S5	-	264	60	2.9	Loaded with13A	
ER, SFC (S	•	264	60	4.7	Loaded with13A	
ER, SFC (S	5-0, S1-0)	264	60	4.6	Loaded with13A	
,	· · · · · · · · · · · · · · · · · · ·	I.	BT100	I	ı	
ER, NC (S5	-1, S12-1, S1-1)	264	60	135		
ER, NC (S5	-0, S12-1, S1-1)	264	60	8.5		
ER, NC (S5	-1, S12-0, S1-1)	264	60	136		
ER, NC (S5	-0, S12-0, S1-1)	264	60	8.9		
,	5-1, S12-1, S1-0)	264	60	121		
ER, SFC (S	5-0, S12-1, S1-0)	264	60	121		
	5-1, S12-0, S1-0)	264	60	121		
ER, SFC (S	5-0, S12-0, S1-0	264	60	121		
	uch Current (TC)	_	_	_	Maximum allowed valued 100 uA NC; 500 uA SI	
•	onitor / Patient touch screen	1	1		T	
	-1, S7-1 S13-1, S1-1)	264	60	2.1 / 2.1		
	-1, S7-1 S13-0, S1-1)	264	60	14.9 / 4.2		
	-1, S7-0 S13-1, S1-1)	264	60	2.3 / 2.2		
	-1, S7-0 S13-0, S1-1)	264	60	15.1 / 14.8		
	-0, S7-1 S13-1, S1-1)	264	60	2.1 / 3.5		
	-0, S7-1 S13-0, S1-1)	264	60	14.9 / 14.2		
•	-0, S7-0 S13-1, S1-1)	264	60	2.4 / 2.3		
,	-0, S7-0 S13-0, S1-1)	264	60	14.9 / 14.8		
	5-1, S7-1 S13-1, S1-0)	264	60	14.7 / 12.1		
	5-1, S7-1 S13-0, S1-0)	264	60	14.8 / 12.3		
	5-1, S7-0 S13-1, S1-0)	264	60	14.7 / 11.9		
	5-1, S7-0 S13-0, S1-0)	264	60	14.8 / 11.8		
•	5-0, S7-1 S13-1, S1-0)	264	60	14.7 /10.9		
	5-0, S7-1 S13-0, S1-0) 5-0, S7-0 S13-1, S1-0)	264	60	14.8 / 9.8		
, ,	5-0, S7-0 S13-1, S1-0) 5-0, S7-0 S13-0, S1-0)	264	60	14.7 / 9.8		
· · · · · · · · · · · · · · · · · · ·		264	60	14.8 / 9.9		
	andles / Patient bottom surfa		60	79/94	<u> </u>	
	-1, S7-1 S13-1, S1-1) -1, S7-1 S13-0, S1-1)	264 264	60	7.3 / 3.1 135 / 46		
, ,	-1, S7-1 S13-0, S1-1) -1, S7-0 S13-1, S1-1)	264	60 60	7.2 / 3.2		
	-1, S7-0 S13-1, S1-1) -1, S7-0 S13-0, S1-1)	264	60			
•	· · · · · · · · · · · · · · · · · · ·			134 / 46		
	-0, S7-1 S13-1, S1-1) -0, S7-1 S13-0, S1-1)	264 264	60 60	7.1 / 3.3 135 / 46		
	-0, S7-1 S13-0, S1-1) -0, S7-0 S13-1, S1-1)	264	60	7.1 / 3.3		
•	<u> </u>			135 / 46		
10, NC (35	-0, S7-0 S13-0, S1-1)	264	60	133 / 40	1	







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Clause Requirement + Test			Result - Re	mark	Verdict
TC, SFC (S5-1, S7-1 S13-1, S1-0)	264	60	122/43	1	
TC, SFC (S5-1, S7-1 S13-1, S1-0)	264	60 60	122/43		
TC, SFC (S5-1, S7-1 S13-0, S1-0)	264	60	121/43		
TC, SFC (S5-1, S7-0 S13-1, S1-0)	264	60	121/43		
TC, SFC (S5-0, S7-1 S13-1, S1-0)	264	60	120/43		
TC, SFC (S5-0, S7-1 S13-0, S1-0)	264	60	122/40		
TC, SFC (S5-0, S7-0 S13-1, S1-0)	264	60	123/41		
TC, SFC (S5-0, S7-0 S13-0, S1-0)	264	60	122/43		
Fig. 15 - Patient Leakage Current (P)	_	_	_	Maximum allowed Type B or BF AP: SFC (d.c. current); 100 uA NC; 500 u. Type CF AP: 10 u. (d.c. or a.c. curren	10 uA NC; 50 uA A SFC (a.c.) A NC; 50 uA SFC
Harnesses belt Applied Part					,
AP, NC (S5-1, S7-1 S13-1, S1-1)	264	60	12.5		
AP, NC (S5-1, S7-1 S13-0, S1-1)	264	60	2.5		
AP, NC (S5-1, S7-0 S13-1, S1-1)	264	60	12.4		
AP, NC (S5-1, S7-0 S13-0, S1-1)	264	60	2.5		
AP, NC (S5-0, S7-1 S13-1, S1-1)	264	60	12.7		
AP, NC (S5-0, S7-1 S13-0, S1-1)	264	60	2.5		
AP, NC (S5-0, S7-0 S13-1, S1-1)	264	60	12.5		
TC, NC (S5-0, S7-0 S13-0, S1-1)	264	60	2.5		
TC, SFC (S5-1, S7-1 S13-1, S1-0)	264	60	11.5		
TC, SFC (S5-1, S7-1 S13-0, S1-0)	264	60	11.6		
TC, SFC (S5-1, S7-0 S13-1, S1-0)	264	60	11.5		
TC, SFC (S5-1, S7-0 S13-0, S1-0)	264	60	11.4		
TC, SFC (S5-0, S7-1 S13-1, S1-0)	264	60	11.2		
TC, SFC (S5-0, S7-1 S13-0, S1-0)	264	60	11.5		
TC, SFC (S5-0, S7-0 S13-1, S1-0)	264	60 60	11.2 11.4		
TC, SFC (S5-0, S7-0 S13-0, S1-0)  Fig. 16 - Patient leakage current with mains on the F-type applied parts (PM)	264 —	_	—	Maximum allowed Type B: N/A Type BF AP: 5000 Type CF AP: 50 u	uA
PM (S <sub>5</sub> -1, S <sub>7</sub> -1, S <sub>9</sub> -1, S <sub>10</sub> -1, S <sub>13</sub> -1, S <sub>1</sub> -1)	264	60	17.5		
PM (S <sub>5</sub> -0, S <sub>7</sub> -1, S <sub>9</sub> -1, S <sub>10</sub> -1, S <sub>13</sub> -1, S <sub>1</sub> -1)	264	60	7.5		
PM (S <sub>5</sub> -1, S <sub>7</sub> -1, S <sub>9</sub> -1, S <sub>10</sub> -0, S <sub>13</sub> -1, S <sub>1</sub> -1)	264	60	17.5		
PM (S <sub>5</sub> -0, S <sub>7</sub> -1, S <sub>9</sub> -1, S <sub>10</sub> -0, S <sub>13</sub> -1, S <sub>1</sub> -1)	264	60	7.5		
PM (S <sub>5</sub> -1, S <sub>7</sub> -1, S <sub>9</sub> -1, S <sub>10</sub> -1, S <sub>13</sub> -0, S <sub>1</sub> -1)	264	60	17.5		
PM (S <sub>5</sub> -0, S <sub>7</sub> -1, S <sub>9</sub> -1, S <sub>10</sub> -1, S <sub>13</sub> -0, S <sub>1</sub> -1)	264	60	7.5		
PM (S <sub>5</sub> -1, S <sub>7</sub> -1, S <sub>9</sub> -1, S <sub>10</sub> -0, S <sub>13</sub> -0, S <sub>1</sub> -1)	264	60	17.5		
PM (S <sub>5</sub> -0, S <sub>7</sub> -1, S <sub>9</sub> -1, S <sub>10</sub> -0, S <sub>13</sub> -0, S <sub>1</sub> -1)	264	60	7.5		
PM (S <sub>5</sub> -1, S <sub>7</sub> -1, S <sub>9</sub> -0, S <sub>10</sub> -1, S <sub>13</sub> -1, S <sub>1</sub> -1)	264	60	17.5		
PM (S <sub>5</sub> -0, S <sub>7</sub> -1, S <sub>9</sub> -0, S <sub>10</sub> -1, S <sub>13</sub> -1, S <sub>1</sub> -1)	264	60	7.5		
PM (S <sub>5</sub> -1, S <sub>7</sub> -1, S <sub>9</sub> -0, S <sub>10</sub> -0, S <sub>13</sub> -1, S <sub>1</sub> -1)	264	60	17.5		







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PM (S <sub>5</sub> -0, S <sub>7</sub> -1, S <sub>9</sub> -0, S <sub>10</sub> -0, S <sub>13</sub> -1, S <sub>1</sub> -1)	264	60	7.5		
PM (S <sub>5</sub> -1, S <sub>7</sub> -1, S <sub>9</sub> -0, S <sub>10</sub> -1, S <sub>13</sub> -0, S <sub>1</sub> -1)	264	60	17.5		
PM (S <sub>5</sub> -0, S <sub>7</sub> -1, S <sub>9</sub> -0, S <sub>10</sub> -1, S <sub>13</sub> -0, S <sub>1</sub> -1)	264	60	17.5		
PM (S <sub>5</sub> -1, S <sub>7</sub> -1, S <sub>9</sub> -0, S <sub>10</sub> -0, S <sub>13</sub> -0, S <sub>1</sub> -1)	264	60	17.5		
PM (S <sub>5</sub> -0, S <sub>7</sub> -1, S <sub>9</sub> -0, S <sub>10</sub> -0, S <sub>13</sub> -0, S <sub>1</sub> -1)	264	60	17.5		
Fig. 17 - Patient leakage current with external voltage on Signal Input/Output part (SIP/SOP)	_	_	_	Maximum allowed values: Type B or BF AP: 10 uA NC; 50 u SFC(d.c. current); 100 uA NC; 500 uA SFC (a.c.); Type CF AP: 10 uA NC; 50 uA SF (d.c. or a.c. current)	
Fig. 18 - Patient leakage current with external voltage on metal Accessible Part that is not Protectively Earthed	_	_	_	Maximum allowed Type B or BF AP: Type CF: N/A	
Fig. 19 – Patient Auxiliary Current	_	_	_	Maximum allowed Type B or BF AP: SFC (d.c. current) 100 uA NC; 500 u Type CF AP: 10 u (d.c. or a.c. curren	10 uA NC; 50 uA ; A SFC (a.c.) ; A NC;50 uA SFC
Fig. 17 and 20 – Total Patient Leakage Current with all AP of same type connected together with external voltage on SIP/SOP	_	_	_	Maximum allowed Type B or BF AP: 100uA SFC (d.c. of 500 uA NC;1000 to Type CF AP: 50 u SFC (d.c. or a.c. of	50 uA NC; current); uA SFC (a.c.); A NC; 100 uA
Fig. 16 and 20 – Total Patient Leakage Current with all AP of same type connected together with external voltage on F-type AP	_	_	_	Maximum allowed Type B: NA Type BF: 5000uA Type CF: 100 uA	values:
Fig. 18 and 20 – Total Patient Leakage Current with all AP of same type connected together with external voltage on metal Accessible Part not Protectively Earthed	_	_	_	Maximum allowed Type B & BF: 100 Type CF: N/A	
	-	-	-		

#### Supplementary information:

- Note 1: For EARTH LEAKAGE CURRENT see 8.7.3 d) and 8.7.4.5;
- Note 2: For TOUCH CURRENT see 8.7.3 c) and 8.7.4.6;
- Note 3: For PATIENT LEAKAGE CURRENT SEE 8.7.3.b) and 8.7.4.7
- Note 4: Total PATIENT LEAKAGE CURRENT values are only relative to equipment with multiple APPLIED PARTS of the same type. See 8.7.4.7 h). The individual APPLIED PARTS complied with the PATIENT LEAKAGE CURRENT values.
- Note 5: In addition to conditions indicated in the Table, tests conducted at operating temperature and after humidity preconditioning of 5.7, EQUIPMENT energized in stand-by condition and fully operating, max rated supply frequency, at 110 %







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of the max rated mains voltage, and after relevant tests of Clause 11.6 (i.e., overflow, spillage, leakage, ingress of water and particulate matter, cleaning & disinfection, & sterilization).

8.8.3		ABLE: Dielectric strength test of solid insulating materials with safety function MEANS OF OPERATOR PROTECTION (MOOP) / MEANS OF PATIENT PROTECTION (MOPP)					
		Inculation Time	Reference	e Voltage	A C 4004	Dielectric	
Insulation under test (area from insulation diagram)		(1012	PEAK WORKING VOLTAGE (U) V peak	PEAK WORKING VOLTAGE (U) V d.c.	A.C. test voltages in V r.m.s <sup>1</sup>	breakdown after 1 minute Yes/No <sup>2</sup>	
(A1) L/N to		1 MOOP	325	-	1500	No	
(A2) L/N to Transformer enclosure		1 MOOP	325	-	1500	No	
(A3) L/N to BT100 PE		1 MOOP	325	-	1500	No	
(B) L/N to Applied Part (Harness belt)		2 MOPP	325	-	4000	No	
(C) L/N to Transformer output		2 MOPP	325	-	4000	No	
(D) L/N to touch scree	•	2 MOPP	325	-	4000	No	

#### **Supplementary information:**

<sup>1</sup> Alternatively, per the Table (i.e., \_\_dc), a d.c. test voltage equal to the peak value of the a.c. test voltage used.

<sup>2</sup> A) Immediately after humidity treatment of 5.7, ME EQUIPMENT de-energized, B) after required sterilization PROCEDURE, ME EQUIPMENT de-energized, C) after reaching steady state operating temperature as during heating test of 11.1.1, and D) after relevant tests of 11.6 (i.e., overflow, spillage, leakage, ingress of water, cleaning, disinfection, and sterilization).

Note\*: Humidity conditioning: ambient temperature: 25.0 °C ,Humidity: 57%, Atm.Pressure: 760 mmHg

Note\*\*: Dielectric strength test performed before and after humidity conditioning

8.8.4.1	TABLE: Resistance to heat - Ball pressure test of thermoplastic parts			Р
	Allowed impression diameter (mm):	≤ 2	2 mm	_
	Force (N):	20		_
Part/mate	rial		Test temperature (°C)	ression eter (mm)
Enclosure/External insulating parts			75	0
Insulating	material supporting un-insulated Mains Parts			
Suppleme	entary information:			







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8.9.2	TABLE: Short circuiting of each single one of the CREEPAGE DISTANCES and AIR CLEARANCES for insulation in the MAINS PART between parts of opposite polarity in lieu of complying with the required measurements in 8.9.4					N/A
Specific areas of circuits short- circuited and test conditions		Test in lieu of CREEPAGE DISTANCE OF AIR CLEARANCE <sup>1</sup>	HAZARDOUS SITUATION observed (i.e., fire hazard, shock hazard, explosion, discharge of parts, etc.)? Yes/No		Remarks	
	entary information: AC - AIR CLEARANCE	CD - CREEPAGE DIS	STANCE			

8.9.3.2	Table: Thermal cycling tests on one sample of insulating compound forming N/A solid insulation between conductive parts						
Part Test	8.9.3.4 - Test duration and temperature for 10 cycles after which the sample was subjected to Humidity Preconditioning per Cl. 5.7	Dielectric test voltage	Dielectric strength test after humidity preconditioning per cl. 5.7 except for 48 h only, Breakdown: Yes/No	the ir	or voids in nsulating ınd: Yes/No		
	68 h at T1 ± 2 °C = °C 1						
	1 h at 25 °C ± 2 °C						
	2 h at 0 °C ± 2 °C						
	1 or more h at 25 °C ± 2 °C						

#### **Supplementary information:**

<sup>&</sup>lt;sup>1</sup> T1 = 10 °C above the maximum temperature of relevant part determined per 11.1.1, or 85 °C, the higher of the two. 10 °C not added to T1 when temperature measured by an embedded thermocouple. Used gradual transition from one temperature to another.







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8.9.3.3	Table: Thermal cycling tests on one sample of cemented joint with other insulating parts (see 8.9.3.3)				
Part tested	Sample	Each test duration and temperature	Dielectric test voltage	Dielectric stre Breakdown:	
	1	10 Cycles conducted of the following:			
		1 - 68 h at T1 ± 2 °C =°C¹			
		2 - 1 h at 25 °C ± 2 °C			
		3 - 2 h at 0 °C ± 2 °C			
		4 - 1 or more h at 25 °C ± 2 °C			
	2	Humidity Conditioning per 5.7			
	3	Humidity Conditioning per 5.7			

#### **Supplementary information:**

<sup>&</sup>lt;sup>1</sup> T1 = 10 °C above the maximum temperature of relevant part determined per 11.1.1, or 85 °C, the higher of the two. 10 °C not added to T1 when temperature measured by an embedded thermocouple. Used gradual transition from one temperature to another.







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Clause	Requirement + Test	Result - Remark	Verdict	

8.10 TABL	E: List of critica	al components	<b>S</b>		Р
Component/ Part No.	Manufacturer/ Trademark	Type No./model No./	Technical data	Standard No./, Edition	Mark(s) & Certificates of conformity <sup>1</sup>
Isolation Transformer	HULDA TRANSFORM	1135010800 20	Input: 230V, 50/60Hz, Output 230V ,10A ,2300VA,	Approved for construction	UR: E116554(m)
	ERS		UL Recognized, System B-3, Insulation system 130° c/class B, Primary/ Secondary Windings Isomid 180° C		
Isolation Transformer Thermal Protector	Thermik	S06.120.05. 100	250V ,2.5A,100°C	UL 2111	UL E 54236(M)
(Interchangeable)		11001170			
Isolation Transformer	Schneider Electric	MG24452	2-Pole ,277Vac, 13A, DIN Rail (35mm), Type C	UL 1077	UR E217688
Input Circuit Breaker				IEC 60898	Dekra: 2160998.03
(Interchangeable)					
Isolation Transformer Insulator sheet	Nomex	Nomex-410	Thickness 0.18mm	UL746, UL510	UR,E245249, E20780(M), E34739(M)
Line Filter (Interchangeable)	Schurter	5500.2605.0 4	Rated current 1-36A at 40°C 250V50Hz	UL 1283	UL E72928
,			Hi-Pot Line to Line 1700Vdc		
			Line to Ground 2750Vdc		
Perturbation	Emerson /	EP204-I00-	Servo digital drive 240V 4A	UL 508C	UL LISTED
servo driver	Epsilon EP	EN00	indexing 4A/8A peak encoder	EN 61800-5-	51Y8
<del>-</del>		<b>FB</b> 000 100	0 " '	1:2003	(E 58592 Sec.5)
Treadmill servo driver	Emerson / Epsilon EP	EP206-I00- EN00	Servo digital drive 240V 6A, 6A/12A peak encoder	UL 508C	UL LISTED 51Y8
				EN 61800-5- 1:2003	(E 58592 Sec.5)
Treadmill motor			UL 1004-1	UL (E215243)	
		ACAA10019 0	servo motor, 220Vac, 3000 rpm, 5.9Nm, 100°C winding 40°C maximum ambient	EN 60034 EN 60204	
Perturbation motor	Exmek (CONTROL TECHNIQUES	DD600W300 0RPM	Servo motor, 3kRPM, 2.1Nm, 600W ,HiPOT-1800Vac/1s 2mA,Insulation Class F, IP54,	UL 1004	UL (E215243)







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IEC 60601-1				
Clause	Requirement + Test	Result - Remark	Verdict	

	DYNAMICS LTD)		thermal protector 145 °C		
Touch screen (operator)	MIMO	M18568C- OF	18.5 inches, 1366 x 768 (WSVGA) LCD, 20W	IEC 60601-1	Evaluated
Emergency switch (Interchangeable)	Allen-Bradley	800FP- LMT44	NC Emergency switch	UL508,	UL E14840, CSA
Power supplies	Mean Well Mean Well	SDR-75-12 SDR-75-24	DIN Rail 75W 12V/6.3A  DIN Rail 75W 24V/3.2A	IEC 60950 UL 508	CB: JPTUV- 052024 UR: E215312 TUV: R 50259011
Inrush Current Limiter (Interchangeable)	Camtec	ESB101.16	11.3 Amax, 230Vac	IEC 60601	Evaluated
Feed-through terminal (Interchangeable)	ContaClip	1001.2 1001.3 1001.4 1001.5 1001.9 1212.2	600V, 55A	UL 1953	UL E95701
Load cell x4 (Interchangeable)	ZEMIC	L6E	Force load cell (4 units) Ingress Protection P65	EN 60529	NTEP certificate no. 11-062
AC wiring (Interchangeable)	Alpha Wire	PVC Hook Up Wire 600v	PVC Hook Up Wire 600v	UL758	UL (E163869)
Connector C19 (Interchangeable)	Shurter	4790.1200	16A, 250V	C19 acc. to IEC/EN 60320-1, UL 60320-1, CSA C22.2 no. 60320-111 (for cold conditions) pintemperature  70 °C, 16 A, Protection Class I	- VDE Certificate Number: 40040046 - CSA File Number: 205419 - CCC File Number: 2009010204383 057
Plug I Cord Connector	Shurter	4789.1200	16A, 250V	Type I acc. to IEC/EN 60320-2-2,	VDE Certificate Number: 40008629







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IEC 60601-1				
Clause	Requirement + Test	Result - Remark	Verdict	

L L			•		<u>'</u>
(Interchangeable)				UL 60320-1, CSA C22.2 no. 60320- 111 (for cold conditions) pin- temperature 70 °C, 16 A,	CSA File Number: 27324 CCC File Number: 2009010204383 058
				Protection Class I	
Inlet C20 Screw-on Mounting (Interchangeable)	Shurter	4798.9000	16A, 250V	C20 acc. to IEC 60320, UL 498, CSA C22.2 no. 42 (for cold conditions) pin- temperature 70 °C, 16 A, Protection Class I	UL File Number: E96454 CCC File Number: 2012010204576 578
Outlet J Screw- on Mounting (Interchangeable)	Shurter	4797.0000	16A, 250V	J acc. to IEC 60320 UL 498, CSA C22.2 no. 42 (for cold conditions) pin- temperature 70 °C, 16 A, Protection Class I	- UL File Number: E103791 - CCC File Number: 2007010204247 449
Limit Switch (Interchangeable)	Comepi	AP1T007X1 1	Slow action, brake before make, 1NO, 1NC, PG 13.5 cable gland	IEC 60601-1	Evaluated
Mini Contactor 24VDC 3NO+1NC (Interchangeable)	ABB	BC6-30-01	24VDC 3NO+1NC, 300V, 12A max	ANSI/UL 60947-1 IEC 60947- 4-1	UR: E63822
3-Wire DC Proximity Sensor (Interchangeable)	Allen Bradley	872C- D2NP8-D4	8mm diameter, 2mm sensing distance, IP67,	ANSI/UL 508 ANSI/UL 60947-5-2 ANSI/UL 60947-1	UL: E143423
Cable 3x2.5 ÖLFLEX (Interchangeable)	LAPP	221403	UL MTW (Machine-tool Wire) [E155920]; UL AWM (Appliance Wiring Material- Component) [E100338]; UL Wet	Various	UL







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IEC 60601-1								
Clause	Requirement + Tes	t		Result - Rer	nark	Verdict		
			Approval 75°C; UI (Tray Cable) - ER Run) [E171371] o PLTC (Power Lim Cable); UL ITC (Instrumentat Cable); UL WTTC [E323700]; OIL R RES. II; UL AWM 21098 (Oil); P-07-KA050016-N (ÖLFLEX® TRAY c(UL) CIC / TC ar CSA-AWM I/II A/E	(Exposed r DP-1; UL ited Tray ion Tray ES. I, OIL 2587 &				
Flexible Conductor 1x ÖLFLEX CHAIN	LAPP	1062900	6mm diameter, 60	00V	ANSI/UL 758	UR: E63634		
(Interchangeable	e)							
Fanless Box PC (Interchangeable		ARK-1550- Fam ilyb	Intel Dual Core Co 2980U 1.6 GHz / 4300U 1.9 GHz S One Hot Swappa SATA HDD Bay a slot Triple Independe by VGA + HDMI + (LVDS option) Optional VESA / Mounting kits Supports 2 x Inte x GPIO Built-in 1 x full siz (i.e.: 3G module) size MiniPCle slot (i.e.: WIFI mo	Core i5 oC ble 2.5" and mSATA ort Displays LVDS DIN Rail I GbE and 1 ce MiniPCle and 1 x half	IEC 60601-1	Evaluated		
Miniature sol state relay (Interchangeable	Contact	2967989	24Vdc, 3A,		ANSI/UL 508	UR: E195083		
Support Lanyard 231 1.5 (Interchangeable	Cresto 0-	012203500	Rope-rat lock, not under load • 1 9687 and 1 93 karabiner • 11 mm, 32-braid kernmantle rope • Cover and core polyamide • > 35 kN rope street weight 0.079 kg complies with EN	73 led made of enght /meter	IEC 60601-1	Evaluated		
Fall Protection Harness 111 L/XL (Interchangeable	8-	012200085	D ring on the bawhere relevant two loops on the chest attaching to proted equipment against the control of	ack, or o textile t, for ctive	IEC 60601-1	Evaluated		







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			IEC 60601-1				
Clause Re	quirement + Test			Result - Ren	nark		Verdict
			EN355, EN 353-1 Attachment points products are labe the harness. 2. Textile loops 3. Buckle for shou adjustment 4.Buckle for leg st adjustment 5. Chest strap with buckle 6. D-Rings for sup positioning accord 358 and EN-813. to CNB/P11.043, Max weight 141kg	s for these lled "A" on ulder upport h plastic port and ding to EN-According Rev 2.			
Karabiner (Interchangeable)	Edelrid	7196700000 60	22Kn tensile strer		IEC 60601-1	Evalu	ated
MONITOR (Interchangeable)	Samsung	S22 family	21.5", 100-240Va	С,	CB (EU): IEC60950-1, EN60950-1, cULus ( US,Canada): UL60950-1, KC(Korea): K60950-1, PSB(singapo re), Soncap(Neg eria), Kucas(Kwuit) , SASO(Saudi Arabia): IEC60950-1, CCC(China): GB4943- 2011  EMCFCC(U SA), IC(Canada): FCC Part15 Subpart B, CE(Europe): EN55022,EN 55024, KCC(korean) KN22,KN24, C-tick (Australia): AS/NZS3548 (CISPR22), CCC(China):	CB, U	JR





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							•			
						GB9254-				
						2008 GB176				
						25.1-2012				
Supplem	enta	ry informatio	n:							
1) An asterisk indicates a mark which assures the agreed level of surveillance. See Licenses and Certificates										
		or verification		Ŭ						

8.10 b	TA	TABLE: List of identified components with HIGH INTEGRITY CHARACTERISTICS					
Compone Part No.		Manufacturer/ Trademark	Type No./model No./	Technical data	Standard No./, Edition	Ce	Mark(s) & rtificates of onformity 1

### **Supplementary information:**

1) An asterisk indicates a mark which assures the agreed level of surveillance. See Licenses and Certificates of Conformity for verification.

8.11.3.5	TABLE: Cord an	TABLE: Cord anchorages					
Cord under test		Mass of equipment (kg)	Pull (N)	Torque Nm)	Rem	narks	
Supplementary information:							

8.11.3.6	TABLE: Cord guard						
Cord under test		Test mass	Measured curvature	Remark	(S		
Supplementary information:							

9.2.2.2	TABLE:	TABLE: Measurement of gap "a" according to Table 20 (ISO 13852: 1996)				
Part of body		Allowable adult gap <sup>1</sup> , mm	Measured adult gap, mm	Allowable children gap <sup>1</sup> , mm		ed children p, mm
Body		> 500		> 500		
Head		> 300 or < 120		> 300 or < 60		
Leg		> 180		> 180		
Foot		> 120 or < 35		> 120 or < 25		





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	> 50	> 50	
		1. 22	
st, fist	> 100	> 100	
	> 25 or < 8	> 25 or < 4	
		Requirement + Test   > 50	> 50 > 50 > 50 > 120 > 120 > 100

**Supplementary information:** <sup>1</sup> In general, gaps for adults used, except when the device is specifically designed for use with children, values for children applied.

9.2.3.2	TABLE: Over-travel End Stop Test				
ME EQUIPMENT end stop		Test Condition (cycles, load, speed)	Remarks		
Supplementary information:					

9.4.2.1	TABLE: Instab	ΓABLE: Instability—overbalance in transport position				
	QUIPMENT eparation	Test Condition (transport position) Remarks				
	osition (not ent treatment)	The unit inclined 10° from the horizontal plane	Not overbalance			
Suppleme	ntary informatio	n:	<u> </u>			

9.4.2.2	TABLE: Instability—overbalance excluding transport position		
	ME EQUIPMENT  preparation  Test Condition (excluding transport position) Test either 5 ° incline and verify Warning marking or 10 ° incline)		Remarks
Suppleme	entary information	on:	





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9.4.2.3	TABLE: Instabi	lity—overbalance from horizontal and verti	cal forces	Р
	EQUIPMENT Test Condition (force used, direction of reparation force, weight of equipment, location of force)		Remarks	
a) UUT is provided with all the accessories connected in the position most unfavourable for stability		The UUT is placed on a horizontal plane and a force of 25% of UUT Weight (not more than 220N) applied in all the directions, except a direction having an upward component. The UUT is prevented from sliding on the floor by a horizontal obstruction of 20 mm height	force was 220N unit Weight 255Kg	
the accesso in the positi	orovided with all ories connected ion most ole for stability	The UUT is placed on a horizontal plane and a constant downward force of 800N applied at the point of maximum moment to the upper sitting surface of enclosure, on the 20 cm by 20 cm area,	No adverse affect	
Suppleme	ntary informatio	 n:		

9.4.2.4.2	TABLE: Castors	N/A		
	ME EQUIPMENT Test Condition (force location and height) Remarks preparation			
Supplementary information:				

9.4.2.4.3	TABLE: Castors and wheels – Movement over a threshold			
ME EQUIPMENT preparation		Test Condition (speed of movement)	Remarks	
Supplementary information:				

9.4.3.1	TABLE: Instability from unwanted lateral movement (including sliding) in transport position				
ME EQUIPMENT Preparation		Test Condition (transport position, working load, locking device(s), caster position)	Remarks		
		•			





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Clause	Requirement +	est		Result - F	Remark	Verdict
	•					
Suppleme	Supplementary information:					





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9.4.3.2	TABLE: Instability from unwanted lateral movement (including sliding) excluding transport position				
ME EQUIPMENT Preparation		Test Condition (working load, locking device(s), caster position, force, force location, force direction)	Remarks		
Suppleme	ntary informatior	1:			

9.4.4 TABLE: Grips and other handling devices				
Clause and Name of Test		Test Condition	Remarks	
Supplementary information:				

9.7.5	TABL	ABLE: Pressure vessels					
Hydrau Pneuma Suitable I and Te Pressu	tic or Media est	Vessel Burst	Permanent Deformation	Leaks	Vessel fluid substance	Remarks	
Suppleme	Supplementary Information:						

ME EQUIPMENT par or area	Position	Load	Area	Remarks
treadmill	vertical	540Kg	Middle	





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	TABLE: Support/Suspension System – Dynamic forces due to loading from persons					
ME EQUIPMENT part or area	Position	Safe Working Load	Area	Remark	(S	
treadmill	vertical	600Kg	Middle			
Harness Belt	vertical	600Kg	Harness Belt			
Supplementary Information:						

10.1.1	TABLE: Measurement of X - radiation		N/A	
Maximur	m allowable radiation pA/kg ( μSv/h) (mR/h)	36 (5 μSv/h) (0.5 mR/h)	·	
	Surface area under test Surface no./ Description <sup>1</sup>	Measured Radiation, pA/kg (μSv/h) (mR/h)	Remarks	
1/ /				
2/ /				
3/ /				
4/ /				
5/ /				
6/ /				
7/ /				
8/ /				
9/ /				
10/ /				

**Supplementary information:** <sup>1</sup> Measurements made at a distance of 5 cm from any surface to which OPERATOR (other than SERVICE PERSONNEL) can gain access without a TOOL, is deliberately provided with means of access, or is instructed to enter regardless of whether or not a TOOL is needed to gain access







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			IEC 60	601-1			
Clause	Requireme	nt + Test			esult - Remai	·k	Verdict
11.1.1	TABLE: Ex	cessive tempe	eratures in ME EQ	UIPMENT			Р
Model No	:	BT100					
Test ambier	nt (°C) .:	21.9					
Test supply voltage/fred (V/Hz)4	/ quency	264V/60Hz					
Test condit	ion:	Normal conditions					
Model No.	Thermo- couple No.	Thermocoup le location <sup>3</sup>	Max allowab Table 22, 23 o			Max measured temperature <sup>2</sup> , (°C)	Remarks
BT100	1		former enclosure		48	24.9	75.9 (48- 40+21.9)
	2	Power in Term enclosure	inals Plastic		86	22.2	67.9 (86- 40+21.9)
	3	Treadmill Moto enclosure	r Driver	,	105	28.7	86.9 (105- 40+21.9)
	4	Side Motor Dri	ver enclosure		105	28.1	86.9 (105- 40+21.9)
	5	Treadmill Moto	r		105	43.3	86.9 (105- 40+21.9)
	6	Side Motor		,	105	24.1	86.9 (105- 40+21.9)
	7	Patient Monitor	r enclosure		71	30.2	52.9 (71- 40+21.9)
	8	Operator touch	screen		71	30.7	52.9 (71- 40+21.9)
	9	On/Off button			71	23.3	52.9 (71- 40+21.9)
	10	Enclosure (Me	tal)		56	23.4	37.9 (56- 40+21.9)
	11	Harness belt (A	Applied Part)		43	22.8	24.9 (43- 40+21.9)
	12	Line Filter for enclosure	Treadmill Motor	,	105	24.1	86.9 (105- 40+21.9)
	13	AC socket outle	et		85	23.3	66.9 (85- 40+21.9)
	14	AC/DC PS (24) drivers	V) for Motor		70	28.3	51.9 (70- 40+21.9)
	15	Circuit Breaker			70	23.3	51.9 (70- 40+21.9)
	16	Relay			70	24.7	51.9 (70- 40+21.9)







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			IEC 60601-	1		
Clause	Requireme	ent + Test		Result - Rem	ark	Verdict
	17	PC enclosure		60	31.8	41.9 (60- 40+21.9)

#### Supplementary information:

- <sup>1</sup> Maximum allowable temperature on surfaces of test corner is 90 °C
- <sup>2</sup> Max temperature determined in accordance with 11.1.3e)
- <sup>3</sup> When thermocouples used to determine temperature of windings, limits of Table 22 reduced by 10 °C.
- <sup>4</sup> Supply voltage:
  - ME EQUIPMENT with heating elements 110 % of the maximum RATED voltage;
  - Motor operated ME EQUIPMENT least favourable voltage between 90 % of the minimum RATED and 110 % of the maximum RATED voltage. ME EQUIPMENT operated under normal load and normal DUTY CYCLE.
  - Combined heating and motor operated and other ME EQUIPMENT tested both at 110 % of the maximum RATED voltage and at 90 % of the minimum RATED voltage.
- <sup>5</sup> **APPLIED PARTS** intended to supply heat to a **PATIENT S**ee RISK MANAGEMENT FILE containing temperatures and clinical effects. Also, see instructions for use.

\*Note: Maximum allowable temperature is calculated according to worst-case normal use including the maximum ambient operating temperature specified in the technical description ( $T_{max\ Ambient} = 40^{\circ}C$ ) in Remarks

11.1.3d	TABLE: Temperature of windings by change-of-resistance method						N/A	
Temperature T of winding:		t <sub>1</sub> (°C)	R <sub>1</sub> (Ω)	t <sub>2</sub> (°C)	R <sub>2</sub> (Ω)	T (°C)	Allowed T <sub>max</sub> (°C)	Insulatio n class
Suppleme	Supplementary information:							







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		IEC 60601-1			
Clause	Requirement + Test		Result - Rer	nark	Verdict
11.2.2.1	TABLE: Alternative method to ignition source	o 11.2.2.1 a) 5) to dete	ermine exis	tence of an	N/A
Areas whe	re sparking might cause ignition	on:		Remarks	S
1.					
2.					
3.					
4.					
5.					
6.					
	f the parts between which spa gnation, Manufacturer):	rks could occur (Con	nposition,	Remarks	S
1.					
2.					
3.					
4.					
5.					
6.					
Test param EQUIPMENT:	eters selected representing w	orst case conditions	for ME	Remarks	S
Oxygen co	ncentration (%):				
Fuel	·····:				
Current (A)	·····:				
Voltage (V)	:				
Capacitano	e (μF)::				
Inductance	or resistance (h or Ω):				
No. of trials	s (300 Min):				
Sparks res	ulted in ignition (Yes/No):				
Figs 35-37, values to de	ntary information: Test procedutest voltage or current set at 3 tiletermine if ignition can occur.  In from Risk Management, as a	mes the worst case val			





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			IEC 60	0601-1			
Clause	Requireme	ent + Test			Result - Remark		Verdict
11.6.1		overflow, spillage, leakage, ingress of water, cleaning, disinfection, on, compatibility with substances					
Clause / T	est Name	Test Condition	on	Part	under test	Rer	narks
Cleaning ar disinfection	leaning and According to method of cleaning mentioned in instructions for use			Whole unit			
	ntary inforn	nation: k Management, as a	pplicable:	cl 5.5. Saf	e Design and Info	orming User	
13.1.2	waive SING emission	neasurement of powe GLE FAULT CONDITIONS of flames, molten me	in 4.7, 8.1 etal, or ign	b), 8.7.2, a itable sub	nd 13.2.2 relativ		o N/A
Power diss	sipated less	s than (W)	:	15			
Energy dis	sipated les	s than (J)	:	900	<u>-</u>		
	omponent sted	Measured power dissipated (W)	Calculate dissipa		Single Fault co waived (Yes		Remarks
Suppleme	ntary inforn	nation:					







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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict

13.2	TABLE: SINGLE FAULT CONDITIONS in accordance wi	th 13.2.2 to 13.2.13, inclusive	P
Clause No.	Description of SINGLE FAULT CONDITION	Results observed	HAZARDOUS SITUATION (Yes/No)
13.2.2	Electrical SINGLE FAULT CONDITIONS per Clause 8.1:	_	_
	PC power disconnected	Immediately Operator Monitor and patient monitor turned off, EUT continue operation. Operator intervention is required for stopping the EUT. Duration 10min No hazard no fire	No
	Micro switch interrupted	EUT Immediately stopped, After removing the Micro switch interruption, EUT returned to normal operation	No
	SC, Isolation Transformer output windings pines 3,4	Immediately Isolation Transformer Circuit breaker operated and EUT stopped. Maximum measured temperatures: Transformer windings 29.2°C Ambient 24.1°C. Duration :30min No Hazard No fire	No
13.2.3	Overheating of transformers per Clause 15.5:	_	_
	SC Output legs 3,4	Immediately Isolation Transformer Circuit breaker operated and EUT stopped. Maximum measured temperatures: Transformer windings 29.2°C Ambient 24.1°C. Duration :30min No Hazard No fire	No
	Over Load	Tested windings Output, legs 3,4 , Max Temperature 103°C	No
	Over Load	Tested windings Input, legs 1,2, Max Temperature 101°C	No
13.2.4	Failure of THERMOSTATS according to 13.2.13 & 15.4.2, overloading - THERMOSTATS short circuited or interrupted, the less favourable of the two:	_	-





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IEC 60601-1					
Clause	Requirement + Test	Result - Remark	Verdict		

Clause No.	Description of SINGLE FAULT CONDITION	Results observed	HAZARDOUS SITUATION (Yes/No)
13.2.5	Failure of temperature limiting devices according to 13.2.13 & 15.4.2, overloading, THERMOSTATS short circuited or interrupted, the less favourable of the two:	_	_
13.2.6	Leakage of liquid - RISK MANAGEMENT FILE examined to determine the appropriate test conditions (sealed rechargeable batteries exempted)	_	-
13.2.7	Impairment of cooling that could result in a HAZARD using test method of 11.1:	_	_
	Single ventilation fans locked consecutively	EUT continue normal operation Main Transformer: windings 32.6°C Cart internal ambient 30.8°C ambient 22.5°C Duration:2h	No
	Ventilation openings on top and sides impaired by covering openings on top of ENCLOSURE or positioning of ME EQUIPMENT against walls	EUT continue normal operation Main Transformer: windings 32.8°C Cart internal ambient 30.6 °C ambient 22.5 °C Duration:2h	No
	Simulated blocking of filters	D GIGGOTT IZT	
	Flow of a cooling agent interrupted		
13.2.8	Locking of moving parts – Only one part locked at a time – Also see 13.2.10 below:	_	_
13.2.9	Interruption and short circuiting of motor capacitors – Motor capacitors short & open circuited <sup>1</sup> – Also see 13.10	_	_
		V measured =	
		V measured =	







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	IEC 60601-1		
Clause	Requirement + Test	Result - Remark	Verdict

Clause No.	Description of SINGLE FAULT CONDITION	Results observed	HAZARDOUS SITUATION (Yes/No)
13.2.10	Additional test criteria for motor operated ME EQUIPMENT in 13.2.8 &13.2.9:	_	_
	For every test in SINGLE FAULT CONDITION of 13.2.8 and 13.2.9, motor-operated EQUIPMENT stared from COLD CONDITION at RATED voltage or upper limit of RATED voltage range for specified time:		
	Temperatures of windings determined at the end of specified test periods or at the instant of operation of fuses, THERMAL CUT-OUTS, motor protective devices		
	Temperatures measured as specified in 11.1.3 d)		
	Temperatures did not exceed limits of Table 26		
13.2.11	Failures of components in ME EQUIPMENT used in conjunction with OXYGEN RICH ENVIRONMENTS:	ı	1
13.2.12	Failure of parts that might result in a MECHANICAL HAZARD (See 9 & 15.3):	_	_
			_

#### Information from Risk Management, as applicable:

Supplementary information:

1 Test with short-circuited capacitor not performed when motor provided with a capacitor complying with IEC 60252-1 and the ME EQUIPMENT not intended for unattended use including automatic or remote control. See Attachment # and appended Table 8.10.





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IEC 60601-1				
Clause	Requirement + Test	Result - Remark	Verdict	

15.3	TABLE: Mechanical St	rength tests <sup>1)</sup>		Р
Clause	Name of Test	Test conditions	Observed result	s/Remarks
15.3.2	Push Test	Force = 250 N ± 10 N for 5 s	Enclosure	
			No adverse effect	
15.3.3	Impact Test	Steel ball (50 mm in dia., 500 g ± 25 g)	top enclosure	
		falling from a 1.3 m		
15.3.4.1	Drop Test (hand-held)	Free fall height (m) = 1 m	N/A	
			No hand-held	
15.3.4.2	Drop Test (portable)	Drop height (cm) =	N/A	
			Not portable	
15.3.5	Rough handling test	Travel speed (m/s) =	Not mobile	
15.3.6	Mould Stress Relief	7 h in oven at temperature (°C) = 70 °C	No adverse effect	

Supplementary information: <sup>1)</sup>As applicable, Push, Impact, Drop, Mould Stress Relief and Rough Handling Tests (delete not applicable rows).

15.4.6	TABLE: ac	TABLE: actuating parts of controls of ME EQUIPMENT – torque & axial pull tests					
Rotating unde	ć.	Gripping diameter "d" of control knob (mm) <sup>1</sup>	Torque from Table 30 (Nm)	Axial force applied (N)	Unacceptable RISK occurred Yes/No	R	emarks

**Supplementary information:** <sup>1</sup> Gripping diameter (d) is the maximum width of a control knob regardless of its shape (e.g. control knob with pointer)







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Clause	Requirement + Test	Result - Remark	Verdict	

15.5.1.2	TABLE: transformer short circuit test short-circuit applied at end of windings or at the first point that could be short circuited under SINGLE FAULT CONDITION		
Primary voltage (most adverse value from 90 % to 110 % of RATED voltage)(V) <sup>1</sup> : 264			_
RATED inp	RATED input frequency (Hz): 60		

Winding tested	Class of insulation (A, B, E, F, or H)	Type of protective device (fuse, circuit breaker) /Ratings	Protective device operated Yes/No	Time to THERMAL STABILITY (when protective device did not operate)(Min)	Maximum allowed temp from Table 31 (°C)	Maximum winding temp measured (°C)	Ambient (°C)
Output legs 3,4	В	circuit breaker 20A	Yes	1s	175	29.2	24.1

#### **Supplementary information:**

<sup>&</sup>lt;sup>1</sup> Loads on other windings between no load and their NORMAL USE load. Short-circuit applied at end of windings or at the first point that could be short circuited under SINGLE FAULT CONDITION.

15.5.1.3 TABLE: transformer overload test – conducted only when protective device under short-circuit test operated		
Primary vo	oltage, most adverse value between 90 % to 110 % of RATED voltage (V)1:	264
RATED inp	ut frequency (Hz):	60
	nt just below minimum current that would activate protective device & HERMAL STABILITY under method a) (A)	13A
	nt based on Table 32 when protective device that operated under method a) to transformer, and it was shunted (A):	-

Winding tested	Class of insulation (A, B, E, F, H)	Type of protective device used (fuse, circuit breaker)/Ratings	Maximum allowed temp from Table 31 (°C)	Maximum winding temp measured (°C)	Ambient (°C)
OUTPUT LEGS 3,4	В	CIRCUIT BREAKER 20A	175	103	24.1

#### **Supplementary information:**

Time durations: - IEC 60127-1 fuse: 30 min at current from Table 32.

Non IEC 60127-1 fuse: 30 min at the current based on characteristics supplied by fuse manufacturer, specifically, 30 min clearing-time current. When no 30 min clearing-time current data available, test current from Table 32 used until THERMAL STABILITY achieved.

- Other types of protective devices: until THERMAL STABILITY achieved at a current just below minimum current operating the protective device in a). This portion concluded at specified time or when a second protective device opened.

15.5.2 T	TABLE: Transformer dielectric strength after humidity preconditioning of 5.7					
Transform Model/Type/ No	_	Test voltage applied between	Test voltage, (V)	Test frequency (Hz)	Breakdown Yes/No	Deterioration Yes/No
Output legs 3,	,4	Leg 3 to leg 4	1150	300	No	No
Input legs 1,2	)	Leg 1 to leg 2	1150	300	No	No

**Supplementary information:** Tests conducted under the conditions of 11.1, in ME EQUIPMENT or under simulated conditions on the bench. See Clause 15.5.2 for test parameters & other details

<sup>&</sup>lt;sup>1</sup> Loads on other windings between no load and their NORMAL USE load.







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IEC 60601-1				
Clause	Requirement + Test	Result - Remark	Verdict	

16.6.1	TABLE: LEAKAGE CURRENTS IN ME SYSTEM _ TOUCH CURRENT MEASUREMENTS N/				N/A	
Specific area where TOUCH CURRENT measured (i.e., from or between parts of ME SYSTEM within PATIENT ENVIRONMENT)		Allowable TOUCH CURRENT in NORMAL CONDITION (μA)	Measured ΤΟUCH CURRENT in NORMAL CONDITION (μΑ)	Allowable TOUCH CURRENT in event of interruption of PROTECTIVE EARTH CONDUCTOR, (µA)		
		100		500		
		100		500		
		100		500		
		100		500		
		100		500		
Supplemer	ntary information:	1				

SP	TABLE: Addition	al or special tests conducted		Р
Clause and Name of Test		Test type and condition	Observed result	s
11.8 Interruption of power supply		The power supply was interrupted – the power cable was disconnected from the UUT	Interruption and restoration of supply did not result in a HAZ SITUATION, except interrupt intended function	ZÁRDOUS
Supplem	entary information	n:		





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		ATTACHMENT		
Clause	Requirement + Test		Result - Remark	Verdict

### **Attachment 1 NATIONAL DIFFERENCES**

### ATTACHMENT TO TEST REPORT IEC 60601-1 **US NATIONAL DIFFERENCES**

Medical electrical equipment, Part 1: General Requirements

Differences according to ....: US National standard AAMI / ANSI ES60601-1:2005/(R)2012

Attachment Form No ....: US\_ND\_IEC60601\_1H

Attachment Originator ..... Underwriters Laboratories Inc.

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	US NATIONAL DIFFERENCES		
4.8 b	Replacement: where there was no relevant IEC/ISO standard, the relevant US ANSI standard applied	All parts were evaluated as part of this standard.	N/A
	- when no relevant US ANSI standard existed, the requirements of this standard applied		Pass
4.10.2	Replacement: Rated voltage not exceeding 250V dc or single phase ac. or 600V poly-phase ac for ME EQUIPMENT and ME SYSTEMS up to 4kVA	Not exceed	Pass
	Rated voltage not exceeding 600 V for all other ME EQUIPMENT and ME SYSTEMS		N/A
6.6	Addition: To comply with NFPA 70, X-Ray systems are classified as long time operation (> 5 min) or momentary operation (< 5 sec)	Not x-ray equipment.	N/A
7.2.11	Addition: To comply with NFPA 70, X-Ray systems are marked as long time operation or momentary operation	Not x-ray equipment.	N/A
7.2.21	New Sub-clause: Colors of medical gas cylinders		-
	To comply with NFPA 99: Cylinders containing medical gases and their connection points are colored in accordance with the requirements of NFPA 99	Does not contain medical gases.	N/A
8.2	Addition: All fixed me equipment & permanently Installed me equipment are class I me equipment	No fixed & permanently installed equipment	N/A
8.6.1	Addition: To comply with NFPA 99, the enclosure of X-ray ME EQUIPMENT operating over 600 Vac, 850Vdc MAINS VOLTAGE, or containing voltages up to 50 V peak and enclosed in protectively earthed enclosure as well as connections to X-ray tubes and other high voltage components that include high voltage shielded cables are PROTECTIVELY EARTHED.	Not x-ray equipment.	N/A







N/A

N/A

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	ATTACHMENT		
Clause	Requirement + Test	Result - Remark	Verdict
	To comply with NFPA 99, non-current carrying conductive parts of X-Ray ME EQUIPMENT likely to become energized are PROTECTIVELY EARTHED		N/A
8.7.3 d	EARTH LEAKAGE CURRENT values are not higher that the stated values	an	Р
	5 mA in NORMAL CONDITION		Р
	10 mA in SINGLE FAULT CONDITION		Р
8.11	Addition prior to the first paragraph: a) To comply with the NEC, add the following requ	uirements to this clause:	-
	Addition: PERMANENTLY CONNECTED ME EQUIPMENT provided with field wiring provision in accordance with NEC  No permanently connected equipment		N/A
	Installation of connecting cords between EQUIPMENT parts comply with NEC		N/A
	Cable used as external interconnection between u	le used as external interconnection between units	
	1) Exposed to abuse: Type SJT, SJTO, SJO, ST, SO, STO, or equivalent, or similar multiple-conductor appliance-wiring material,	No external interconnection cables	N/A
	2) Not exposed to abuse: The cable was as in iter 1) above, or	n	N/A
	i) Type SPT-2, SP-2, or SPE-2, or equivalent		N/A
	ii) Type SVr, SVRO, SVE, or equivalent or similar multiple-conductor appliance wiring material,		N/A
	iii) An assembly of insulated wires each with a nominal insulation thickness of 0.8 mm (1/32 inch or more,	)	N/A
	- enclosed in acceptable insulating tubing having nominal wall thickness of 0.8 mm (1/32 inch) or more	а	N/A
	Receptacles provided as part of ME EQUIPMENT an ME SYSTEMS for use in the patient care areas of pediatric wards, rooms, or areas are Listed tamper resistant		N/A
	- or employ a Listed tamper resistant cover in accordance with NEC		N/A
	Addition at the end of the clause: b) For ME EQUIPMENT provided with NEMA configuration non-locking plug types 120 V/15 A, 125 V/20 A, 250 V/15 A, 250 V/20 A "Hospital Grade" mains plug is provided and the POWER		N/A

8.11.3.2

SUPPLY CORD is marked

the particular application,

Addition: The flexible cord is a type acceptable for

- and it is acceptable for use at a voltage not less than the rated voltage of the appliance







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ATTACHMENT					
Clause	Clause Requirement + Test Result - Remark		Verdict		
	- and has an ampacity as in NEC, not less than the current rating of the appliance		N/A		
8.11.3.3	Addition: To comply with NFPA 99, for X-Ray ME EQUIPMENT with an attachment plug, the current rating on a hospital grade plug is 2X the maximum input current of the equipment	Not x-ray equipment.	N/A		







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	ATTACHMEN <sup>-</sup>			
Clause	Requirement + Test	Result - Rema	·k	Verdict

#### ATTACHMENT TO TEST REPORT IEC 60601-1 3rd edition **CA - CANADIAN NATIONAL DIFFERENCES to** CAN/CSA-C22.2 No. 60601-1:08

Differences according to ..... Canadian National standard: CAN/CSA-C22.2 No. 60601-1:14

Attachment Form No..... CA\_ND\_IEC60601\_1H

Attachment Originator .....: **CSA** International

Master Attachment ..... 2014-12

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	A - Canadian National Differences as per Ca	1	
1	Scope, object and related documents		
1.1	Scope		
	This standard applies to the BASIC SAFETY and ESSENTIAL PERFORMANCE of MEDICAL ELECTRICAL EQUIPMENT and MEDICAL ELECTRICAL SYSTEMS designed to be installed in accordance with the Canadian Electrical Code (CEC), Part I, CSA C22.1; CAN/CSA-C22.2 No. 0; and CAN/CSA-Z32.		Pass
	NOTE 1A: In the IEC 60601 standards series adopted for use in Canada, the Canadian-particular standards may modify, replace, or delete requirements contained in this standard as appropriate for the particular ME EQUIPMENT and ME SYSTEMS under consideration, and may add other BASIC SAFETY and ESSENTIAL PERFORMANCE requirements.		
1.3	Collateral standards		
	Applicable Canadian collateral standards become normative at the date of their publication and apply together with this standard.		Pass
	NOTE 1: When evaluating compliance with CAN/CSA-C22.2 No. 60601-1, it is permissible to assess independently compliance with the adopted Canadian collateral standards.		
1.4	Particular standards		
	A requirement of a Canadian-particular safety standard takes precedence over this standard.		N/A
3	Terminology and definitions		
3.41	HIGH VOLTAGE		
	any voltage above 750 V, 1 050 V peak, as defined in the Canadian Electrical Code (CEC), Part I	No such voltages	N/A
4	General requirements		
4.8	Components of ME EQUIPMENT		







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	ATTACHMENT		
Clause	Requirement + Test	Result - Remark	Verdict

	NOTE 1: For the components, it is not necessary to carry out identical or equivalent tests already performed to check compliance with the component standard.		
	b) where there is no relevant CSA, IEC, or ISO standard, the requirements of this standard have to be applied		Pass
	NOTE 2: If there are neither requirements in this standard nor in a CSA, IEC, or ISO standard, any other applicable source (e.g., standards for other types of devices, national standards) could be used to demonstrate compliance with the RISK MANAGEMENT PROCESS.		
4.10.2	SUPPLY MAINS for ME EQUIPMENT and ME SYSTEMS		
	and shall be in accordance with the Canadian Electrical Code (CEC), Part I, CSA C22.1:		Р
7	ME EQUIPMENT identification, marking and documents		
7.7.1 to 7.7.5	and shall be in accordance with the Canadian Electrical Code (CEC), Part I, CSA C22.1		Р
	A PROTECTIVE EARTH CONDUCTOR or a PROTECTIVE EARTH CONNECTION or insulation shall be identified by either green or green and yellow colour. Colours of neutral and POWER SUPPLY CORD conductors shall be in accordance with the <i>Canadian Electrical Code (CEC)</i> , <i>Part I</i> , CSA C22.2 No. 21, and CSA C22.2 No. 49		Р
8	Protection against electrical HAZARDS from ME EQUIPMENT		
8.7.3	Allowable values		
	Allowable values shall be in accordance with the Canadian Electrical Code (CEC), Part I, CSA C22.1.		Р
8.11.3	POWER SUPPLY CORDS		
8.11.3.2	Types		
	a) The MAINS PLUG of non-PERMANENTLY INSTALLED EQUIPMENT shall be		
	i) if molded-on type, hospital grade mains plug complying with CSA C22.2 No. 21;	appropriate type will be provided by the manufacturer to any country it will be sold	Р
	ii) hospital grade disassembly attachment plug type complying with CSA C22.2 No. 42; or	As above	Р







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	ATTACH	MENT	
Clause	Requirement + Test	Result - Remark	Verdict

iii) Class II equipment having fuses on the line	Class I equipment	N/A
side/sides and neutral and may use a non-polarized attachment plug or a polarized attachment plug — CSA configuration type 1-15P shall be required and shall meet all applicable requirements in CSA C22.2 No. 21 and CSA C22.2 No. 42. Where a polarized attachment plug is used, the POWER SUPPLY CORD shall be connected to the wiring of the EQUIPMENT on the ungrounded side of the line when any of the following devices are used in the primary circuit::		
1- the centre contact of an Edison base lampholder;		N/A
2- a single pole switch;		N/A
3- an automatic control with a marked off position;		N/A
4- a solitary fuse/fuse holder; or		N/A
5- any other single pole overcurrent protective device		N/A
b) Detachable POWER SUPPLY CORD for non- PERMANENTLY INSTALLED EQUIPMENT (cord- connected equipment) shall be of a type that		
<ul> <li>i) can be shown to be unlikely to become detached accidentally, unless it can be shown that detachment will not constitute a safety HAZARD to a PATIENT or OPERATOR;</li> </ul>		P
ii) can be shown that the impedance of the earth (ground) circuit contacts will not constitute a safety HAZARD to a PATIENT or OPERATOR; and		Р
iii) has a terminal configuration or other constructional feature that will minimize the possibility of its replacement by a detachable POWER SUPPLY CORD which could create a HAZARDOUS SITUATION		N/A
c) A detachable POWER SUPPLY CORD shall		
i) comply with the applicable requirements of CSA C22.2 No. 21; and		N/A
ii) not be smaller than No. 18 AWG, and the mechanical serviceability shall be not less than:		N/A
Type SJ or equivalent for mobile or exposed to abuse ME EQUIPMENT; and:		N/A
Type SV or equivalent for ME     EQUIPMENT not exposed to abuse (or Type     HPN if required because of temperature):		N/A
<b>NOTE 1A:</b> See CSA C22.2 No. 49 for requirements on the cord types mentioned in Sub-item 2).		







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	ATTACHMENT		
lause	Requirement + Test	Result - Remark	Verdict
	d) Power supply cords shall meet the requirements of the <i>Canadian Electrical Code</i> , <i>Part I</i> , as applicable		Р
	Connecting cords between equipment parts shall meet the requirements of the Canadian Electrical Code, Part I, as applicable		N/A
8.11.5	Mains fuses and OVER-CURRENT RELEASES		
	Mains fuses and OVER-CURRENT RELEASES shall be in accordance with the Canadian Electrical Code (CEC), Part I, CSA C22.1	Np such parts	N/A
9	Protection against MECHANICAL HAZARDS of ME EQUIPMENT and ME SYSTEMS		
9.7.5	Pressure vessels		
	Pressure vessels shall comply with the requirement of CSA B51, as applicable		. N/A
9.7.7	Pressure-relief device		
	A pressure-relief device shall also comply as applicable to the requirements of ASME PTC 25 or equivalent Canadian requirements		N/A
15	Construction of ME EQUIPMENT		
15.4.1	Construction of connectors		
15.4.1	bA) The point of connection of gas cylinders to EQUIPMENT shall be gas specific and clearly identified so that errors are avoided when a replacement is made. Medical gas inlet connectors on EQUIPMENT shall be		
	i) gas specific, yoke type, or nut and nipple type valve connections complying with CGA V-1 for pressures over 1 380 kPa (200 psi); or	No gas connections with pressure over 200 psi.	N/A
	ii) DISS type complying with CGA V-5 for pressures 1 380 kPa (200 psi) or less and configured to permit the supply of medical gases from low-pressure connecting assemblies complying with CAN/CSA-Z5359.	t	N/A
	NOTE 1A: Users of this standard should consult the CSA Z305 series of standards, CAN/CSA-Z9170-1, CAN/CSA-Z9170-2, CAN/CSA-Z10524, and CAN/CSA-Z15002 for further information regarding inlet connectors; ISO 407 for requirements addressing yoke-type valve connections; and ISO 32 for colour coding.		
15.4.8	Internal wiring of ME EQUIPMENT		
	Internal wiring of ME EQUIPMENT shall be in accordance with the Canadian Electrical Code (CEC), Part I, CSA C22.1		Р







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Clause	Requirement + Test	Result - Rema	rk	Verdict

16	ME SYSTEMS		
16.1	General requirements for the ME SYSTEMS		
	An ME SYSTEM shall provide		
	- within the PATIENT ENVIRONMENT, the level of safety equivalent to ME EQUIPMENT complying with this standard; and		N/A
	- outside the PATIENT ENVIRONMENT, the level of safety equivalent to equipment complying with their respective CSA, IEC, or ISO safety standards		N/A
	Non-ME EQUIPMENT, when used in an ME SYSTEM, shall comply with CSA, IEC, or ISO safety standards that are relevant to that equipment.		N/A
16.9.2.1	MULTIPLE SOCKET OUTLET		
	c) The MULTIPLE SOCKET-OUTLET shall comply with the requirements of CSA C22.2 No. 42, CSA C22.2 No. 49, and the following requirements:	No socket-outlet	N/A
	- The separating transformer shall comply with the requirements of CAN/CSA-E61558-2-1 with a rated output not exceeding		
	- 1 kVA for single-phase transformers; and		N/A
	- 5 kVA for polyphase transformers  The separating transformer shall also have a degree of protection not exceeding IPX4.		N/A





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## Attachment 2 Photos



Fig.1 General View (1)







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Fig.2 General View (2)







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Fig.3 General internal view



Fig.4 Isolation transformer box internal View







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Fig.5 Isolation transformer box front View



Fig. 6 Treadmill motor transmission system

### **End of Test Report**