

# MEDICAL DIRECTIVE—SAFETY TEST REPORT

For

**Multifunctional Nd:Yag Laser Beauty Machine** 

Model: Yinhe-V18, Yinhe-V12, Yinhe-280, Yinhe-V8, Yinhe-2, Yinhe-King,

Yinhe-C6, Yinhe-V28

Brand Name: Yinhe Lasylaser

Report No.: ENC121217GZ55L1

Date of Issue: Dec. 17, 2012

Prepared For

Yiwu Lasy Science & Technology Co.,Ltd NO. 207 Jingfa Road Yiwu City 322000, Zhejiang China

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Prepared By

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## TEST REPORT

#### EN 60601-1

#### Medical electrical equipment --

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

Report reference No. .....: ENC121217GZ55L1

Tested by .....: Samliu

Review by (+ Signature). .....: Yemig

Approved by (+ signature) .....: Rayzhou

Date of issue ...... Dec. 17, 2012

Contents .....: Total 33 pages

Testing laboratory

Name .....: East Notice Certification Service Co., Ltd.

Address ...... 1/F, Haohui Commercial Building, Zhuji Street, Dongpu Town,

Tianhe District, Guangzhou City, China

Testing location .....: Same as above

Application

Name...... Yiwu Lasy Science & Technology Co.,Ltd

Manufacturer

Name...... Yiwu Lasy Science & Technology Co.,Ltd

Address...... NO. 207 Jingfa Road Yiwu City 322000, Zhejiang China

**Test specification** 

Standard ...... EN 60601-1:2006+A11:2011, EN 60825-1:2007

Test procedure .....: CCA

Procedure deviation .....: N/A

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

Test Report Form/blank test report

Test Report Form No. .....: ENC60601-1-A11

TRF originator. ..... : ENC

Test item

Description .....: Multifunctional Nd:Yag Laser Beauty Machine

Brand name .....: Yinhe Lasylaser

Model and/or type reference .....: Yinhe-V12

Series models .....: Yinhe-V18, Yinhe-V12, Yinhe-280, Yinhe-V8, Yinhe-2,

Yinhe-King, Yinhe-C6, Yinhe-V28

Rating(s) ...... : 110-240V~, 50/60Hz, 600W

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#### **Test case verdicts**

Test case does not apply to the test object....: N(/A)

Test item does meet the requirement ......: P(ass)

Test item does not meet the requirement.....: F(ail)

#### **Testing**

Date of receipt of test item ...... Dec. 7, 2012

Date(s) of performance of test ...... Dec. 7, 2012 – Dec. 17, 2012

#### **General remarks**

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

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

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

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

Throughout this report a comma is used as the decimal separator.

When determining the test result, measurement uncertainty has been considered.

#### Note:

This report shall not be altered, increase and deleted.

The results relate only to the items tested.

This report shall not be published as advertisement without the approval of ENC.

This report shall not be copied partly without the written approval of ENC.

Should any objections to the test reports occurred, should submit it to the Company within ten days since the issuing of the report, Fail to accept.

#### Special description:

- 1. All tests are basic on model Yinhe-V12.
- 2. The series models have same electrical structural as Yinhe-V12, except for the different energy, power and the laser lamp.
- 3. Specified maximum ambient temperature is 40°C.

#### Summary of testing

All tests were found satisfactory in accordance with EN 60601-1:2006+A11:2011

The product was classified as Class 4 Laser product according to EN 60825-1: 2007.

#### Marking on the appliance:

**East Notice Certification** 

Multifunctional Nd:Yag Laser Beauty Machine

Model: Yinhe-V12

Voltage: 110-240V~, 50/60Hz

Power: 600W

Yiwu Lasy Science & Technology Co.,Ltd

**MADE IN CHINA** 

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	EN	I 60601-1	
Clause	Requirement - Test	Result	Verdict
4.11	POWER INPUT AND CURRENT	·	
کیر	Power input Measurement	(see appended table 4.11)	P

5	GENERAL REQUIREMENTS		
5.1	Equipment when transported, stored, installed, operated in normal use and maintained according to the instructions of the manufacturer, causes no safety hazard which could reasonably be foreseen and which is not connected with its intended application in normal condition (N.C.) and in single fault condition (S.F.C.)	文·4节·04节	OPT
5.2	An alternative means of construction is used to that detailed in this standard and it can be demonstrated that an equivalent degree of safety is obtained	304 TO 4 TO 4 TO 1	OPT

6	CLASSIFICATION		
6.1	General	.047 .047	00
	For purposes of this standard, equipment shall be classified as follows.		P
6.2	Type of protection against electric shock	1 20 20	P 3
000	Class I equipment	Class I equipment	OB
	Class II equipment	T AT AT	N
	Internally powered equipment	X X	N
6.3	Protection against harmful ingress of water or particulate matter (see 6.1.1)	IP X0	OPP
6.4	Methods of sterilization or disinfection	T AT A	N
6.5	Suitability for use in an oxygen rich environment	X X	7
Line.	Category AP equipment	£ 5	N
14	Category APG equipment	104, 104,	ON
6.6	Mode of operation:	N 67 6	Y Q
	-continuous operation	0.00	Р (
1 15	-short-time operation, specified operation; period	11 15th 11 15th	N N
14	-intermittent operation, specified operation; rest period	TOA TOA	N
	-continuous operation with short-time, stated permissible loading time		N 3
045	-continuous operation with intermittent, stated permissible loading/rest time	,04° ,04°	ON

	7	IDENTIFICATION, MARKING AND DOCUMENTS	-	-
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	EN 60601-1		
Clause	Requirement - Test	Result	Verdict
7.1	General	9 *9 *9 ^ ^	Р
7.1.1	Usability of the identification, marking and documents		P
7.1.2	Legibility of markings	Legibility.	OP
7.1.3	Durability of markings	Durability.	Р
7.2	Marking on the outside of equipment or equipment parts	30 30	Р
7.2.1	Minimum requirements for marking on equipment and on interchangeable parts	÷04' +04'	P
7.2.2	Identification	See marking plate	Р
7.2.3	Consult accompanying documents	- A	P
7.2.4	Accessories shall be marked with the name or trade-mark of their manufacturer or supplier, and with a model or type reference.	Yiwu Lasy Science & Technology Co.,Ltd Model: Yinhe-V12	P
7.2.5	Equipment intended to receive power from other equipment	CATE CATE	P
7.2.6	Connection to the supply mains shall be marked with the following information:	To y at a	¥ -
,0	- the rated supply voltage(s)	110-240V	Р
005	- nature of supply	~005 005	OBS
7	- the rated supply frequency	50/60Hz	Р
4	- For class II equipment, symbol IEC 60417-5172	9 49	N
7.2.7	Electrical input power from the supply mains	600W	P
7.2.8	Output connectors	,04",04"	,00
7.2.8.1	Mains power output	T AT A	N
7.2.8.2	Other power sources	3 X X	N
7.2.9	IP classification	IP X0	N
7.2.10	Applied parts	704 704	P
7.2.11 🕢	Mode of operation	Continuous operation	N
7.2.12	Fuses O O O	0,0,0	Р
7.2.13	Physiological effects (safety signs and warning statements)	2045 2045	O.P.
7.2.14	High voltage terminal devices	3 4 4 A	Р
7.2.15	Cooling conditions	0.0	N
7.2.16	Mechanical stability	Stability	N
7.2.17	Protective packaging	200	P
7.2.18	External pressure source	Normal	N
7.2.19	Functional earth terminals	0,000	Р





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	EN 60601-1			
Clause	Requirement - Test	Result	Verdict	
7.2.20	Removable protective means	*	N	
7.3	Marking on the inside of equipment or equipment parts	کئے کئے	کیر	
7.3.1	Heating elements or lampholders	,04",04"	ON	
7.3.2	High voltage parts	T DT D	Р	
7.3.3	Batteries	No battery.	N	
7.3.4	Fuses, thermal cut-outs and over-current releases	A THE A THE	P	
7.3.5	Protective earth terminals	700 700	Р	
7.3.6	Functional earth terminals	1 47 49	Р	
7.3.7	Supply terminals	0,000	N	
7.3.8	Temperature of supply terminals	005 005	N.	
7.4	Marking of controls and instruments	d d	-	
7.4.1	Power switches			
10.75	<ul> <li>marked with symbols IEC 60417-5007 (DB:2002-10)</li> <li>and IEC 60417-5008</li> </ul>	CLAST CLAST	P	
7	- indicated by an adjacent indicator light; or	July July	Р	
4	- indicated by other unambiguous means.	4 4	N	
7.4.2	Control devices	40 40	P .	
7.4.3	Units of measure	.047 .047	ON	
7.5	Safety signs	F AF A		
Š	a) Constructing a safety sign according to ISO 3864-1:2002,	20 20	Р	
14	b) Using the general warning sign ISO 7010:2003-W001	÷ 04' 04'	P	
, C	c) Using the general prohibition sign ISO 7010:2003-P001	, 6	Р	
14 T	d) Using the general mandatory action sign ISO 7010:2003-M001	2047 2047	OP	
7.6	Symbols	" 4" 4"		
C THE C	Used symbols comply with Appendix D or IEC 417 and/or IEC 878 or ISO publications (if applicable)	2000	Р	
7.7	Colors of the insulation of conductors	700 PO	70 A	
4	a)Protective earth conductor has green/yellow insulation	Green/yellow	Р	
45	b) All insulations of internal protective earth conductors are green/yellow at least at their terminations	04 04	ON	
9	c) Only protective or functional earthing, or potential equalization conductors are green/yellow	7 47 4	Р	





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	EN 60601-1			
Clause	Requirement - Test	Result	Verdict	
~	d)Color of neutral conductor	*Y *Y	N	
- A	e) Colors of phase conductor(s)	Single phases	N	
14	- Compliance with IEC 227 and IEC 245	Live parts was colored with brown	P	
	f) Additional protective earthing in multi-conductor, cords are marked green/yellow at the ends of the additional conductors		N	
7.8	Indicator lights and push -buttons	204 204	N	
4	a)Red indicator lights used exclusively to indicate a warning of danger and/or a need for urgent action		N	
17.5	-Yellow used to indicate caution or attention required	115	N	
A.	b)Color red used only for push-buttons by which a function is in case of emergency	+ 4 h	N	
7.9	Accompanying documents	0.0	Р	
7.9.1	Equipment accompanied by documents containing at least instructions for use, a technical description and an address to which the user can refer	Integrally contained all that required document.	OP	
10	Classifications specified in Clause 5 included in both the instructions for use and the technical description	Technical description include in instruction	N	
) 4) Y 4)	Markings specified in Sub-clause 7.1 included in the accompanying documents if they have not been permanently affixed to equipment	704 O4 B	N	
40	Warnings statements and the explanation of warning symbols provided in the accompanying documents	\$0 \$0	N	
7.9.2	Instructions for use	704, 704,	04	
4	a)General information provided in instructions for use	Y DY D	Р	
.0	-state the function and intended applications for use	0,00	Р	
45	-include an explanation of: the function of controls, displays and signals	2045 2045	O.P.	
4	-the sequence of operation	7 45 46	Р	
4	-the connection and disconnection of detachable Parts and accessories	40 40	Р	
) 4) A	-the replacement of material which is consumed during operation	\$ 15 A	Ň	
30	-information regarding potential electromagnetic or other interference and advice regarding avoidance	30 30	Р	
) 4) Y	-include: indications of recognized accessories detachable parts and materials, if the use of other Parts or materials can degrade minimum safety	+ 04 D	P	





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	EN 60601-1		
Clause	Requirement - Test	Result	Verdict
N. Fri	-instructions concerning cleaning, preventive inspection and maintenance to be performed including the frequency of such maintenance		Р
1	General information provided in instructions:	204 204	V 4
4	-information for the safe performance or routine maintenance	0 0	Р
AT TO	-parts on which preventive inspection and maintenance shall be performed by other persons including the periods to be applied	404th 04th	OPP
30	-explanation of figures, symbols, warning statements and abbreviations on the equipment	30 30	Р
4	c)Signal output or signal input parts intended only for connection to specified equipment described	No signal output and signal input parts used.	N
4	d)Details about acceptable cleaning, disinfection or sterilization methods include	0.0	Р
A.T.	e)Warning statement for mains operated equipment with additional power source	No additional power source.	ON
4	f)A warning to remove primary batteries if equipment is not likely to be used for some time	No battery used.	N
45	g) Instructions to ensure safe use and adequate maintenance of rechargeable batteries	No rechargeable batteries.	O N S
4	h) Identification of specified external power supplies or battery chargers necessary to ensure compliance with the requirements of IEC 601-1	\$ 45 45 0 0	N
45	j) Identification of any risks associated with the disposal of waste products, residues, etc.	2045 2045	ON
4	- Advice in minimizing these risks	Y DY D	N
.9.3	Technical description	,0 ,0	,
4º	a)All characteristics essential for safe operation	Technical description included in insulation	OPT
4	b)Required type and rating of fuses utilized in the mains supply circuit external to permanently installed equipment		N
4	-Instructions or reference information for repair of equipment parts designated by the manufacturer as repairable provided	\$ 04° 04°	Ž
4. FA	c)Instructions or reference information for repair of equipment parts designated by the manufacturer as repairable provided	,04 <sup>4</sup> 0,04 <sup>4</sup> 0	N S
4	d)Environmental conditions for transport or storage specified in accompanying documents and marked on packaging	7 47 49 0 0	Р





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			EN 60601-1		
-	Clause	Requirement - Test		Result	Verdict

8	PROTECTION AGAINST ELECTRICAL HAZARDS FF	ROM EQUIPMENT	
8.1	Fundamental rule of protection against electric shock	,04",04"	OP
4	The limits specified in 8.4 shall not be exceeded for accessible parts and applied parts in normal condition or single fault condition.	See Clause 8.4	Р
3.2	Requirements related to power sources	-05 05	OB
3.2.1	Connection to a separated power source	No separated power source.	N
3.2.2	Connection to an external d.c. power source	Connection to an external a.c. power source.	N
3.3	Requirements related to classification	700	P
4	Class I and Class II equipment in addition to basic insulation provided with an additional protection	Class I equipment.	Р
47	Equipment supplied from external d.c .source of reverse polarity results in no safety hazard	104° 104°	ON
A TO	Internally powered equipment complies with requirements for Class I Class II equipment while connected to supply mains, and with requirements for internally powered equipment when not connected		N
Y A	Applied parts intended for direct cardiac application are of type CF	A A A	N
3.4	Limitation of voltage, current or energy	0,000	Р
3.4.1	Patient connections intended to deliver current	000 000	N
3.4.2	Accessible parts including applied parts	FOR FOR	Р
3.4.3	Equipment intended to be connected to a power source by a plug		Р
3.4.4	Internal capacitive circuits	(See appended table 8.4.4a and 8.4.4b)	ON
.5 👍	Separation of parts	V 40 40	N
,0	Separation method of the applied part from live parts:	0,0,0	
125	Basic insulation: applied part earthed.	No such parts.	ANS
4	2)by protectively earthed intermediate circuit limiting leakage current to applied part in event of insulation failure	No protectively earthed circuit	N
D. F.	3)by separate earthed intermediate circuit limiting leakage current to applied part in event of insulation failure	404 × 04 ×	ON
4	4)by double or reinforced insulation		N





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	EN 60601-1			
Clause	Requirement - Test	Result	Verdict	
, 0	5)by protective impedances limiting current to applied part	, , ,	N	
100	-Additional leakage current test single fault conditions	(see appended table 8.5)	ON	
4	There is no conductive connection between applied parts and accessible conductive parts which are not protectively earthed		N	
47	Supplementary insulation between hand-held flexible shafts and motor shafts(Class I)	104th 104th	O.N.	
4	Separation method of accessible parts other than applied parts from live parts:			
The state of	1)basic insulation: accessible part earthed	ej ej	N	
14	2)by protectively earthed conductive part(e.g.screen)	104, 104,	ON	
4	3)by separate earthed intermediate circuit limiting leakage current to enclosure in event of insulation failure		N	
125	4)by double or reinforced insulation	.00 .00	ON	
4	5)by protective impedances limiting current to accessible part	T AT A	N	
LA TO	-Additional leakage current test in single fault conditions	(see appended table 8.5)	N.	
4	Arrangements used to isolate defibrillation-proof applied parts so designed that:	\$ 45 B	÷	
40	-no hazardous electrical energies appear during a discharge of a cardiac defibrillator	(see appended table 8.5a)	N	
) 40j = Di	-after exposure to the defibrillation voltage, the equipment continues to perform its intended function	(see appended table 8.5b)	N	
3.6	protective earthing, functional earthing and potential			
	Accessible parts of Class I equipment separated from live parts by basic insulation connected to the protective earth terminal	Class I equipment.	OP	
, C	Protective earth terminals suitable for connection to the protective earth conductor	0,00	Р	
10,5	Potential equalization conductor	005 005	005	
Ÿ	-Readily accessible	7 7	N	
4	-Accidental disconnection prevented in normal use		N	
1	-Conductor detachable without the use of a tool	40 40	N	
12	-Accidental disconnection prevented in normal use	,04,04	ON	
	-Connection means marked with Symbol9,Table DI	The state of	N	

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EN 60601-1			
Clause	Requirement - Test	Result	Verdict
, AF	For equipment without power supple cord, impedance between protective earth terminal and accessible metal part ≤0.1Ω		N
4	-For equipment with an appliance inlet, impedance between protective earth terminal and accessible metal part ≤0.1Ω	(see appended table 8.6)	Р
4 Th	For equipment without power supple cord, impedance between protective earth terminal and accessible metal part ≤0.2Ω	204th 204th	OP
4.7	If the impedance of protective earth connections Other than in CI.18f)exceed 0.1Ω,the allowable value of the enclosure leakage current is not exceeded in single fault condition	0 000	N O 45
	Functional earth terminal not used to provide protective earthing	7 4 4	N
40	Class II equipment with isolated internal screens	40 40	3
4	-insulation of screens and all internal wiring connected to them is double insulation or reinforced insulation	\$04° \$04°	SON
4	-functional earth terminal clearly marked		N
A.F.	-explanation of functional earth terminal provided in the accompanying documents	CAT CAT	N
¥	protective earthing-terminals and connections	Fry Fry	N
4	Clamping means of the protective earth terminal		N
40	Not be able to loosen without the aid of a tool	40 40	N
4	Screws for internal earth connections are covered or protective against loosening from outside	\$04° \$04°	SO N
, C	Earth pin of the appliance inlet regarded as the protective earth terminal	0 0	N
47	The protective earth connections are covered or protected against loosening from outside	104° 104°	ON
A TO	Where the protective earth connections are made via a plug or socket device the protective earth connection is made before and interrupted after the supply connections during connection and interrupting	0 0 0	N O Ø
3.7	continuous leakage currents and patient auxiliary currents	7 47 4	
,0	Leakage currents	(see appended table 8.7)	Р
25	-earth leakage current	005 005	ON
7	-enclosure leakage current	F F	P
4	-patient leakage current	\$ \$\phi\$	N





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EN 60601-1				
Clause	Requirement - Test	Result	Verdict	
~	-patient auxiliary current	<b>Y Y</b>	N	
8.8	Dielectric strength	کتبر کتبر	کیر	
14	Overall compliance with Clause 20	(see appended table 8.8)	OP	
8.11	Mains parts, components and layout	5 A5 A	Р	
8.11.1	Isolation from supply mains	1 6 6	Р	
145	a)Equipment provides means to isolate its circuits electrically from the supple mains on all poles simultaneously	Connect the power with a three pins plug	Р	
, Ó	b)Means for isolation incorporated in equipment or ,if external, specified in the accompanying documents	, 6 , 6	N	
) 45 T	c)Switches used to comply with Sub-clause 57,1a comply with the creepage distances and air clearances as specified in IEC Publication 328	\$0\$ 50 W	P	
di C	f)Mains switches not incorporated in a power supply cord	No such switch.	Р	
14	h)Appliance couplers and flexible cords with mains plugs provide compliance with Sub-clause 57.1a	\$ 04° 104°	N	
20	m)Fuses and semiconductor devices not used as isolating devices	20 30	Р	
8.11.2	Mains connectors and appliance inlets	.00 .00	00	
4	e)Auxiliary mains socket-outlets on non-permanently installed equipment of a type that cannot accept a mains plug		Р	
145	g)Unless functional earth needs to be provided ,Class I appliance inlet is not used in Class II equipment	204 204	ON	
8.11.3	Power supply cords	y by b		
4	a)Not more than one connection to a particular supply mains	±0 ±0	Р	
) 47 D	If alternatives supply allowed, no safety hazards when more than one connection is made simultaneously	÷ 12 1	N	
Ž	The mains plug has only one power supply cord	, & &	Р	
147	Non-permanently connected equipment provided with power supply cord or appliance inlet	,047,047	08	
4	b)Power supply cords sufficiently robust to comply with the requirements of IEC227,designation 53 and IEC245,designation 53	53(RVV)	Р	
145	Polyvinyl chloride insulated power supply cords not used for equipment having external metal parts with a temperature exceeding 75°C	\$04° \$04°	OPT	





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EN 60601-1			
Clause	Requirement - Test	Result	Verdict
20	c)Nominal cross-sectional area of conductors of power supply cords not less than in Table XV	3*0.75mm <sup>2</sup>	Р
4	d)Stranded conductors not soldered if fixed by any clamping means	3047 3047	ON
4	Connection of power supply cords	1 49 49	Р
3.11.3.5	Cord anchorage	1 20 20	2
4	Equipment provided with power supply cords has cord anchorage such that the conductors are relieved from strain, including twisting	+ 04° 04°	N
-10	Tying the cord into a knot or trying the ends with string not used	30 30	N
4	Cord an anchorages made of insulating material or metal insulated from unearthed accessible metal parts by supplementary insulation	中山村 中	Z
125	Cord anchorages made of metal provided with an insulating lining	0000	N
4	Clamping screws do not bear directly on the cord insulation	F AF A	Z
40	Screws associated with cable replacement are not used to secure other components	***	N
	Conductors of the power supply cord arranged that the protective earth conductor is not subject to strain as long as the phase conductors are in contact with their terminal		N
45	Power supply cord protected against excessive bending	2045 2045	ON
4	Adequate space inside equipment to allow the supply cable conductors to be introduced and connected	7 47 49 0 0	Р
3.11.4	Mains terminal devices and wiring of mains part	1 1 7 1 1 7	
4	Mains connected equipment other than those with a detachable supply cord provided with mains terminals, where connections are made with screws ,nuts or equally effective methods	\$ 45 45 AS	N
47	If a conductor breaks away, barriers are provided such that creepage distances and air clearances cannot be reduced	+ 04 TO 45	OP
Ó	Screws and nuts which clamp external conductors not serve to fix any other component.	30 30	N
12	b)Terminal closely grouped with any protective earth terminal	204 204	N

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Clause Requirement - Test Result Verdict				
Ciause	A77 A77 A77 A7	Result	verdic	
中节	Mains terminal devices located or shielded that, should a wire of a stranded conductor escape when the conductors are fitted, there is no risk of accidental contact.	20470 20470	N.A	
	c)Internal wiring not subject to stress when the means for clamping the conductors are tightened or loosened	7 47 4	N	
47	d)Cord terminals nor require special preparation of the conductor	047 047	N	
3.11.5	Mains fuses and over current releases	\$ 15 1	Р	
40	Fuses or over-current releases provided accordingly for Class I and Class II	, 6	Р	
47	Current rating of mains fuses and over-current releases such that they reliably carry the normal operation current	+ 04° 04° 4	O P	
, 0	Protective earth conductor not fused	0,00	Р	
145	Neutral conductor not fuses for permanently installed equipment	2045 2045	ON	
8.11.6	Wiring of the mains part	Y BY B		
474	a)Individual conductor in the mains part with insulation not at least electrically equipment to that of the individual conductors of flexible supply cords complying with IEC227or 245,treated as bare conductor	文·《本···································	ON	
47	b)Cross-section area of conductors up to protective device not less than the minimum required for the power supply cord	04th 04th	PA	
4	Cross-sectional area of other wiring and the sizes of ranks on printed wiring circuits sufficient to prevent any fire hazard		N	
105	Mains supply transformers	Compliance	OBS	
Y	construction and layout	The state of the s	P	
49	Internal wiring	4 4		
10 THE	a)Cables and wiring protected against contact with a moving part	Fan as a moving part	PÁ	
4	Wiring having basic insulation only protected by additional fixed sleeving	+ 4+ 4	N	
1740	Components are not likely to be damaged in the normal assembly or replacement of covers	2.250	Р	
resp D	b)Movable leads are not bent around a radius of less than five times the outer diameter of the lead	\$ 5 D.	P	
7	c)Insulating sleeving adequate	A A	Р	





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EN 60601-1				
Clause	Requirement - Test	Result	Verdict	
a de la company	If the sheath of a flexible cable or cord is used as supplementary insulation it complies with requirements of IEC 227 and IEC245 and dielectric test	None	Р	
) 49 D	Conductors subjected to temperatures exceeding 70°C have an insulation of heat-resistant material	7 5 5	N	
, in the	d)Aluminum wires of less than 16m² cross section not used	No any aluminum wire	N	
) 4) "	f)Connecting cords between equipment parts considered as belonging to the equipment	÷ 04, 13, 13	P	
3	Insulation	¥ \$		
中华	b) Mechanical strength and resistance to heat and fires retained by all types of insulation	Ball-pressure test for enclosure at a temperature of 125°C	OPT	
. C	c)Insulation not likely to be impaired by deposition of dirt or by dust resulting from wear of parts	9 9	N	
17.50	Parts of rubber resistant to ageing	No such part.	N	

9	MECHANICAL STRENGTH		
9.1	Mechanical hazards of equipment	1 30 30	P
047	Sufficient rigidity of an enclosure tested by: force of 45 N	(see appended table 9)	OP
4	Sufficient strength of an enclosure tested by: impact hammer	(see appended table 9)	Р
045	On portable equipment carrying handles or grips withstand the requirements of the loading test	No such equipment.	ON
4	No damage to parts of patient support and/or immobilization system after the loading test	No such part.	N
045	Hand held equipment to equipment parts are safe after drop test	(see appended table 9)	ON TO
4	Portable and mobile equipment is able to withstand rough handing	T AT A	N
9.2	moving parts	40 40	
047	Moving parts of a transportable equipment are provided with guards which form an integral parts of the equipment	Fan as a moving part	P
047	Moving parts of a stationary equipment are provided with similar guards as above, unless it is evident that equipment protection is separately provided during installation	400 to 00 to	OB

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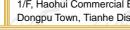


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EN 60601-1			
Clause	Requirement - Test	Result	Verdict
	Cords(ropes), chains and bands are provided with guides to prevent them from running off or from jumping out of their guiding devices		Р
1 ~4 L	Guides or other safeguards are removable only with a tool	A PA PA	P
如节	Dangerous movements of equipment parts, which may cause physical injury to the patient, are possible only by the continuous activation by the operator	0470 0470	N.
4	Parts of equipment subject to mechanical wear are accessible for inspection	学 好 好	N
A THE	Means provided for emergency switching of an electrically produced mechanical movement which could cause a safety hazard	2047 2047 O	O N F
40	The means for emergency switch is readily identifiable and accessible and does not introduce a further safety hazard		N
14) 4) 4)	Devices for emergency stopping able to break the full load current of the relevant circuit, taking into account possible stalled motor currents	\$ 6\$ C\$	N
- Fi	Means for stopping of movements operate as a result of one single action	, ±0, ±0	N
9.3	Hazard associated with surfaces, corners and edges	700 700	S P
4	Rough surfaces ,sharp corners and edges which may cause injury or damage avoided or covered	Edges and corners are well rounded and smooth	Р
9.4	Instability hazards		P
) 49 D	Equipment does not overbalance during normal Use when titled through an angle of 10 <sup>0</sup>	\$ 0 th 0 th	P
á	Equipment overbalance when titled through an angel of 10 <sup>0</sup>		N
14	-does not overbalances when titled through an angle of 5 <sup>0</sup> any position excluding transport	\$04° \$04°	N
, O	-carry a warning notice stating that transport should only be undertaken in a certain position	20 20	N
147	-in the position specified for transport does not overbalance when tilted to an angle of 10°	304 304	ON
4	Equipment or its parts with a mass of more than 20 kg is provided with:		N
15	-suitable handing devices(grips etc.),or	Not such equipment.	N
149	-instructions for lifting and handing during assembly	704 704	N

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EN 60601-1			
Clause	Requirement - Test	Result	Verdict
· AFA	b)On portable equipment with a mass of more than 20 kg carrying handle(s) is (are) so situated that equipment may be carried by 2 or more persons		N
9.5	Expelled parts	700 700	N
4	Protective means are provided where expelled parts of the equipment could be a hazard	No expelled parts	N
145	Display vacuum tubes with a face dimension exceeding 16 cm are provided with adequate protection against implosion	+04° 04°	ON
9.8.3	Support systems	× ×	N
- Eil	Support system with safety device	No support system	N
14) 4	Safety device provided where the integrity of a suspension depends on parts which may have hidden defects ,or on parts having safety factors not complying with Sub-clause28.4	\$ 45 45 A	N
1 4 Th	Safety device has safety factors complying with Sub-clause28.4	2045 2045	ON
4	Clear indication to the operator that the safety device has been activated after failure of suspension means	7 47 47	N
- E	Suspension systems of metal	4	N.
14	1)Total load does not exceed the safe working load	204 204	N
4	2)Safety factors not less than 4 where it is unlikely that supporting characteristics will be impaired	7 47 47	N
145	3)Safety factors not less than 8 where impairment is expected	.047 .047	ONT
4	4)Safety factors multiplied by 1.5 for metal having an elongation at break of less than 5%	F QF Q	N
14740	5)Sheaves, sprockets, band wheels and guides so constructed that the safety factors maintained till replacement	,04 <sup>th</sup> ,04 <sup>th</sup>	ON

10	X-RADIATION		
045	EQUIPMENT not intended to produce X-radiation produces an exposure ≤130 nC/kg (0.5Mr)	(see appended table 10)	ON
10.5	electromagnetic compatibility	4 4 4	N 🧳
, 0	Equipment complies with IEC 601-1-2	0,0,0	N C

11	EXCESSIVE TEMPERATURES	
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EN 60601-1			
Clause	Requirement - Test	Result	Verdict
11.1.1	Equipment does not attain temperatures exceeding the Values given in Table Xa over the range of ambient temperatures per Clause10.2.1	(see appended table 11)	Р
~4) L	Equipment does not attain temperatures exceeding the Values given in Table Xb at 25 ambient	7 67 6	Р
40	Applied parts not intended to supply heat have surface temperatures not exceeding 41°C	30 30	N
4	Guards to prevent contact with hot surfaces surface temperatures not exceeding 41Guards to prevent contact with hot surfaces	No Guards.	N
11.2	Fire prevention	30 30	Р
47	Strength and rigidity necessary to avoid a fire hazard	Refer to table 10	OB
11.6	overflow, spillage, leakage, humidity, ingress of liquids, cleaning, sterilization and disinfection		Р
40	Equipment contain a liquid reservoir	30 30	3
4	-the equipment is electrically safe after 15% overfill steadily over a period of 1 min	2047 2047	OP
4 5 to C	-transportable equipment is electrically safe after additionally having been tilted through an angle of 15 <sup>o</sup> in the least favourable direction(s)(if necessary with refilling)	,04 <sup>th</sup> ,04 <sup>th</sup>	P
4	Electrical properties of the equipment do not change in connection of spillage test(200 ml of water)	T OF O	Р
NA STA	Liquid which might escape in a single fault condition does not wet parts which may cause a safety hazard	CAST CAST	N
4	Equipment sufficiently protected against the effects of humidity	节 前 前	Р
4.TA C	Enclosure designed to give a protection against harmful ingress of water classified according to IEC Publication 529	,0470,0470	N.S
4	Equipment capable of withstanding cleaning sterilization or disinfection without deterioration of safety provisions	(see appended table 11.6)	N
1.7	Biocompatibility	005 005	ON.
4	Parts of equipment and accessories intended to come into contact with biological tissues, cell or body fluids are evaluated in accordance with ISO 10993-1	T 45 45	N
1.8	Interruption of the power supply	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	PS
4	Thermal cut-outs and over-current releases with automatic resetting not used if they may cause a safety hazard	No thermal cut-outs and over-current releases.	N





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EN 60601-1			
Clause	Requirement - Test	Result	Verdict
~ ~ <del>*</del> *	Interruption and restoration of power supply does not result in a safety hazard other than interruption of intended function		Р
) 49 D	Means are provided for removal of mechanical constraints on patient in case of a supply mains failure	No mechanical constraints on patient.	N

12.4	PROTECTION AGAINST OTHER HAZARDS			
4	Equipment furnishing both low-intensity and high-intensity outputs provided with means minimizing possibility of a high intensity output being selected accidentally.	1 4 4 4 4 4 A	N	C. 10

13	HAZARDOUS SITUATIONS AND FAULT CONDITIONS		
047	Equipment furnishing both low-intensity and high-intensity outputs provided with means minimizing possibility of a high intensity output being selected accidentally	(see appended table 13)	P
4	The safety of equipment incorporating programmable electronic systems is checked by applying IEC601-1-4	No such system.	N
į, di	Failure of thermostats presents no safety hazards	الله الله الله الله الله الله الله الله	N
) Uj	Short-circuiting of either part of double insulation presents no safety hazard	\$ 15 A	P
30	Impairment of cooling: temperatures not exceeding 1.7 times the values of Clause 42 minus 17.5	30 30	N
147	Locking of moving parts presents no safety hazard	,04",04"	OP
4	Interruption and short-circuiting of motor capacitors presents no safety hazard	F 45 4	Р
105	Duration of motors locked rotor test in compliance with CI.52.5.8	CAST CLAST	P
4	Failure of one component at a time presents no safety hazard	TO GIT W	Р
TA C	Overload of heating elements presents no safety hazard	1 to 1 to	Р
4	f) Motors intended to be remotely controlled, automatically controlled, or liable to be operated continuously provided with running overload protection	+ 4 + 4	N
70,75	h) Equipment with three-phase motors can safety operate with one phase disconnected	0000 000	N.S

14 PROGRAMMABLE ELECTRICAL MEDICAL SYSTEMS (PEMS)
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	EN 60601-1		
Clause	Requirement - Test	Result	Verdict
14.1	General	No programmable electrical medical systems.	N
4	-The PESS provides no basic safety or essential performance	2045 2045	ON
4	Essential performance - the application of ISO 14971 demonstrates that the failure of the PESS does not lead to an unacceptable	20 20	N
14.2	The documents required by Clause 14 shall be reviewed, approved, issued and changed in accordance with a formal document control	7 4 4 4 4	N
14.3	The risk management plan required by 3.5 of ISO 14971 shall also include a reference to the PEMS validation plan (see 14.11).	104th 104th	O N
14.6	Risk management process	TO BY BY	N
14.6.1	The manufacturer shall consider those hazards associated with software and hardware aspects of the PEMS including those associated with network/data coupling, components of third-party origin and legacy subsystems.	1 0 0 pt 0 0 pt 0	ON
14.6.2	PEMS supplement Subclause 6.1 of ISO 14971.	0,00	N
14.7	For the pems and each of its subsystems (e.g. for a PESS) there shall be a documented requirement specification.	\$045 045	N
14.8	the architecture specification shall make use of:	8 8	N
	a) Components with high-integrity characteristics;	4	N.
149	b) fail-safe functions;	704, 704,	N
4	c) redundancy;	y by by	N
,0	d) diversity;	0,000	N
125	e) partitioning of functionality;	005 005	N
7	f) defensive design;	E E	N
,0	g) allocation of risk control measures to subsystems and components of the pems.	0 0	N
10,5	h) failure modes of components and their effects;	005 005	N
Y	i) common cause failures;	2 2	N
49	j) systematic failures;	9 49	N
- i	k) test interval duration and diagnostic coverage;	30 30	N
14) Y	I) maintainability;	,04",04"	ON
A	m) protection from reasonably foreseeable misuse;	T AT AS	N
,0	n) the network/data coupling specification, if applicable.	, , , , , , ,	N





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EN 60601-1				
Clause	Requirement - Test	Result	Verdict	
14.9	The design shall be decomposed into subsystems, each having both a design and test specification.	, , , , , ,	N	
14.10	Verification is required for all functions that implement basic safety, essential or risk control measures.	3047 3047	ON	
4	- at which milestone(s) verification is to be performed for each function;		N	
45	- the selection and documentation of verification Strategies, activities, techniques, and the appropriate level of independence of the personnel performing the verification;	中心中中心中中	N	
40	- the selection and utilization of verification tools;	40 40	N	
10	- coverage criteria for verification.	.00 00	ON	
14.11	a pems validation include the validation of basic safety and essential, and shall require checks for unintended functioning of the pems.		N	
14.12	A new design or the continued validity of any previous design documentation shall be assessed under a documented modification/change procedure.	+045 045	ON	
14.13	Connection of pems by network/data coupling to other equipment	30 30	N	
) 45° 2	a) specify the characteristics of the network/data coupling necessary for the pems to achieve its intended use;	7 4 4	N	
) 45 <sup>th</sup> C	b) list the hazardous situations resulting from a failure of the network/data coupling to provide the specified characteristics;	04700	N S	
A	c) instruct the responsible organization	T 15 1	N	

15.4	COMPONENTS AND GENERAL ASSEMBLY		
15.4.1	List of critical components	200	P
4	Ratings of components not in conflict with the conditions of use in equipment	Components are used according to their ratings	Р
145	Components, movements of which could result in a safety hazard mounted securely	Well secured.	OB
2	Conductors and connectors secured and/or insulated to prevent accidental detachment resulting in a safety hazard		Р
045	Connectors provide separation required by Sub-clause 17g	2045 2045	ON
4	Plugs for connection of patient circuit leads can not be connected to other outlets on the same equipment	No patient circuit leads.	N





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	EN 60601-1	1	1
Clause	Requirement - Test	Result	Verdict
3	Medical gas connections not interchangeable	Y Y	N
145	Accessible metal parts can not become live when detachable interconnection cord between different parts of equipment is loosened or broken	304 304 TO	OB
4 0 4 TH	Leads with conductive connection to a patient are constructed such that no conductive connection remote from the patient can contact earth or hazardous voltages.	0 0	N 04 <sup>5</sup>
, i	Connections of capacitors	The state of	<del></del>
20	Not connected between live parts and non-protectively earthed accessible parts	, , , , ,	Р
147 A	If connected between mains parts and non-protectively earthed metal parts comply with: IEC publication 384-14	+ 04 04 b	N
のながら	Enclosure of capacitors connected to mains part and providing only basic insulation, is not secured to non-protectively earthed metal parts	,047,047	N.
4	Capacitors or other spark-suppression devices are not connected between contacts of thermal cutouts	No thermal cut-outs.	N
145	Protective devices which cause disconnection from the supply mains by producing a short-circuit not provided in equipment	204th 204th	OPT
15.4.2	Temperature and overload control devices	Y 47 4	
- FAC	a)Thermal cut-outs which have to be reset by a soldering not fitted in equipment	1 to 0	Р
) 40) Di	Thermal safety devices provided where necessary to prevent operating temperatures exceeding the limits	\$ 04 O4	P
) 45 th	Independent non-self-resetting thermal cut-out provided where a failure of a thermostat could constitute a safety hazard	OF OF	N
4	Audible warning provided where the loss of function caused by operation of a thermal cut-out presents a safety hazard		N
145	Self-resetting thermal cut-outs and self-resetting over-current releases operated 200 times	,04° ,04°	OPT
4	Non-self resetting over-current releases operated 10 times	7 4 4	N
100	Thermostats with varying temperature settings clearly indicated	047 047	ON É
7	Operating temperature of thermal cut-outs indicated	7 7	N
15.4.3	Batteries	4 4	N





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EN 60601-1				
Clause	Requirement - Test	Result	Verdict	
*	a)Battery compartments;	No such component	N	
	-adequately ventilated	- i	N	
14	-accidentally short-circuiting is prevented	,04",04"	ON	
Di	b)Incorrect polarity of connection prevented	Y 25 25	N	
15.4.3.5	Excessive current and voltage protection	0 0		
中村	Internal electrical power source provided with device for protection against fire hazard	,04° ,04°	O.P.	
4	Fuse elements replaceable without opening the enclosure fully enclosed in a fuse holder	F 47 47	Р	
中节	Protective devices between an isolated applied part and the body of the equipment do not operate below 500 V r.m.s.	304 th 304 th	ON	
15.4.4	Indicators-unless indication provided by other means(from the normal operation position),indicator lights are used	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	N	
4	-to indicate that equipment is energized	204 204	ON	
4	-to indicate the operation of non-luminous heaters if a safety hazard could result		N	
145	-to indicate when output exists if a safety hazard could result	.047 .047	O N S	
Ä	-charging mode indicator provided	7 47 45	Z	
15.4.6	Actuating parts of controls	Controlled by soft.	Z	
The state of the s	Actuating parts are adequately secured to prevent them working loose during normal use	000	N	
4	Controls are secured to prevent the movement relative to scale marking(safety related only)	7 47 4	N	
CATE O	Detachable indicating devices are prevented from incorrect connection without the use of tool	CATO CATO	N	
7	Stops are provided on rotating controls:	Fry Fry	Y Y	
4	-to prevent an unexpected change from maximum to minimum or vice versa where this could produce a safety hazard	40 40	N	
47	-to prevent an unexpected change to writing	704 704	N	
15.4.7	Cord-connected hand-held and foot-operated control devices	7 47 49		
47	a)Contain voltages not exceeding 25V a.c. or 60 V d.c. and isolated from the mains part by CI.17g	047 047	ONS	
4	b)Hand-held control devoices designed to support the weight of an adult human being	T AT AT	N	





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EN 60601-1				
Clause	Requirement - Test	Result	Verdict	
Ž	-Foot-operated control devices comply with the support the weight of an adult human being	(see appended table 15.4.7)	N	
14,4	c)Devices not change their setting when inadvertently placed	3047 3047	ON	
4	d)Foot-operated control devices are at least IPX1	(see appended table 15.4.7)	N	
70	-For surgical use, electrical switch parts are IPX8	1 20 20	N	
145	e)Adequate strain relief at the cord entry provided	(see appended table 11.3.5a and 11.3.5b)	ON	
15.4.9	Oil containers	1 4 4		
10	Oil containers adequately sealed	Not contain oil.	N	
125	Containers allow for the expansion of the oil	00 00	O.N.	
4	Oil containers in mobile equipment sealed to prevent the loss of oil during transport	F 4 4	N	
12540	Partially sealed oil-filled equipment or equipment parts provided with means for checking the oil level	CATE CATE	N	
15.5	Mains supply transformers of me equipment and transformers providing separation in accordance with 8.5	÷ 4 4 4		
i in	Overheating	المن المن	Pé	
) 4) 4	External to the transformer protective devices connected in such a way that failure of any component cannot render the protective devices inoperative	+ 4 4 4	P	
LANGE C	Short-circuit of secondary windings not caused excessive temperature	nat nat	P	
4	Overload of secondary windings not caused excessive temperature	(see appended table 15.5B)	N	
THE C	The dielectric strength of the electrical insulation of a mains supply transformer such that it passes tests	(see appended table 15.5)	N	
147	Construction	704 704	N	
4	a)Separation of primary and secondary windings	~ 4° 4°	N	
, 0	-separate bobbins or formers	0,00	N	
1 Dig	-one bobbin with insulating partition	005 005	N	
- A	-one bobbin with concentric windings and having copper screen with a thickness of not less than 0.13 mm	F ST ST	N	
40	-concentrically wound on one bobbin with windings separated by double insulation	40 40	N	
) 49 B	c)Means provided to prevent displacement of end turns	÷ 04 05	Ň	
20	d)Insulated overlap of not less than 3mm if a protective earthed screen has only one turn	20 20	N	





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EN 60601-1				
Clause	Requirement - Test	Result	Verdict	
20	e)Insulated between the primary and secondary in transformers with double insulation	, , , , , , ,	N	
1254	-1 insulation layer with thickness of at least 1mm	04 04	ON	
4	-at least 2 insulation layer with a total thickness of at least0.3mm	F 4F 4	N	
かが	-three layers provided that each combination of two layers can withstand the dielectric strength test for reinforced insulation	see appended table 15.5	N F	
4	g)Exit of the wires of toroidal transformers provided with double sleeving complying with requirements for double insulation and having total thickness at least 0.3mm extending at least 20 mm outside the winding		N	
	Creepage distances and air clearances	FILE FLOW	Z-Y	
4	a)Values: compliance with at least the values of Table XVI	(see table for insulation diagram)	Р	
147	Creepage distances for slot insulation of motors at least 50% of the specified values	2045 2045	ON	
40	b)Minimum Creepage distances and air clearances in the mains parts of opposite polarity not required if short-circuiting does not produce a safety hazard		N	
D. A. T.	c)Creepage distances or clearances of at least 4 mm are maintained between defibrillation-proof applied parts and parts	No such part.	N	

	EN 60825-1				
Model	Laser wave length (nm)	Radiant Power under operation condition	Class		
Yinhe-V12	1064	10-165 J/cm <sup>2</sup>	4		
TITITIE-V 12	532	10-165 J/cm <sup>2</sup>	4		

I.11 TABLE: Pov	ver input				Р
Operation condition	Voltage(V)	Frequency (Hz)	Current (A)	Power(W)	Remark
running	230	50	1009 -00	747,1	OP

7.2	TABLE: marking durability	P
Marking	tested	Remark
Rubber f	or 15s with a doth rage socked with distilled water	clearly legible, not become curled at edges
Rubber f	or 15s with a doth rage socked with mentholated spirit	Ditto





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Rubber for 15s with a doth rage socked with isopropyl alcohol

Supplementary information: --

8.4.4a	TABLE: resid	ual vo	Itage i	n attac	hment	plug						N.
Voltage measured	503	Measurements\[V]							504			
between		1	2	3	4	5	6	7	8	9	10	Remark
Supply p	ins (pin1&pin2)		50		50		50		50		50	*
Line pin1	and enclosure	04	y	, 04	C	,04	y	,04	y	,04		,00
Line pin1	and enclosure		- 20	ÿ	-20	è.,	1	y	200		4	*
Pin 1 and	d earth pin		-6		-6		6		Ó		Ó	*
Pin 2 and	d earth pin	7.7	32	7.	1 T	7.7	Til.	7.7	- T-	7.7	2 <sup>2</sup> -	***

Supplementary information: \*) The capacitor connected between supply pins is less than 45uF, so the test between lines needs not to be done.

8.4.4b	TABLE: resi	dual voltage	or energy in capacit	ors		ON
	citor and its	Residual voltage(v)	Time after disconnection (s)	Capacitor value (μF)	Residual energy (mJ)	Remarks
30	1	50	-30	30 30	50	<
10,4	() D) Y	0.0	00 0	0, -0,0,	OAY	CA

8.5a	TABL	E: defibrillation-pro	of applied parts	15 CU	15 115 T	N.
Test Cor Fig.50		Accessible part of measurements	Applied part with test voltage	Test voltage polarity	Measured voltage between Y1 and Y2(mV)	Remarks
- F-		÷ - ÷	2 2 T	A - C.	÷ . ÷	0.05
Suppleme	entary in	formation:				

: defibrillation-	proof recovery time		N
Test voltage polarity	Recovery time from accompanying documents(s)	Measured recovery time(s)	Remarks
49 <u></u>	49 49 49	Q Q	
Z	10 A	- i	کثیر
-04	,04" ,04"	04 04	04
	Test voltage		Test voltage Recovery time from Measured recovery

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8.6	TABLE: prote	ctive earthing	000 0	0 0 0 0 T	OPS
Te	st location	Test current (A)	Measured voltage	Resistance(ohms)	Remarks
L/N t	o enclosure	10A	12V	0,038Ω	
Supplem	entary informatio	n: Class Lunit	1	4 4	

Type of leakage current and test condition(including single faults)	Supply voltage	Supply frequency	Measured max. value	Remarks
ER, NC	264V	50Hz	<0,15mA	P
ER, SFC	264V	50Hz	<0,02mA	Р
EN, NC	264V	50Hz	<0,02mA	P
EN, SFC	264V	50Hz	<0,15mA	OP

#### Abbreviations used:

ER - earth leakage current

EN - Enclosure leakage current

P - Patient leakage current

PM - Patient leakage current with mains on the applied parts

PA - Patient auxiliary current

Fig.15 -refers to Fig.15 in IEC601-1

MD -Measuring device

A -After humidity conditioning

B - Before humidity conditioning

1 -Switch closed or set normal polarity

0 -Switch open or set to reversed polarity

NC -Normal condition

SFC -Single fault condition

8.8	TABLE: dielectric st	rength	704	7040	P
	ation under test (area n insulation diagram)	Insulation type(OP-operational/ BI-basic/SI -supplementary/ DI-double/RI-reinforced)	Reference Voltage(V)	Reference Voltage(V)	Remarks
L/N to a	accessible parts	BI JOH	250	1500	P
Live pa	rts to parts of the ire	ві ві	250	1500	Р
isolated basic in	ure to Conductive parts If from live parts by Isulation forming part of Insulation	ST CATE CATE	250	2500	OPT
Applied	part to live part	RIO S	250	4000	P
Supple	mentary information:	8,04,04	04	00	00

7	7 7	7	7	7
8.11.3a	TABLE: cord anchorages			O N C

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Cord under test	Mass of equi	oment	Pull	Torque	Remarks	Verdict
75	A	2.7	25	7.5	1 - L	
Supplementary inf	ormation:	7	, and a	7,	7, 7	, )

8.11.3b	TABLE: cord bend	ling	70	4 704	700	N
Co	rd under test	4	Test mass	Measur	ed curvature	Remarks
40	- 40	40	30	50 5	0 50	3
Suppleme	ntary information:	4	04,0	4,04	,04	,04

TABLE: m	nechanical strength	6 P
Part under test	Test(impact, drop, force, handle, rough handing, mobile)	Remarks
Enclosure	Impact energy 0.5J,three times	No damage
Enclosure	Inward force 45N	No damage

9.4 TABLE: stability	45	45	45	45	45	Р
Part under test	,0	Test cond	lition	,0	Remark	(S
The whole equipment	25 O.	10 degr	ee	0,5	No over ba	lance
Supplementary information:	7	T	7	7	7	

10 TABLE: X- radiation	4 4	4	N.
Part under test	Test condition	Measured radiation(m R)	Remarks
4 4 ·	4 4	4- 4	47 4
Supplementary information:	20 20	20 20	20 20

11 1	ABLE: normal temperature	15 15 15 T	P
8	Supply voltage: 230V, 50Hz	Test condition	: Normal operation
Monitored po	oint:	dT (°C)	Limit dT (°C)
AC inlet	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	8,0	65
Supply cord	4 4 4	8,3	65
Plug	30 30 30	8,2	65
Inside wire	04 04 04 04	21,7	80
Key switch		7,9	65
Button switc	h ó ó ó	7,9	65





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					-
Laser head	9,9			9,9	65
PCB	7	23,8 1			130
C1 6	Ö	;	6 1	3,6	130
Outside enclosure near control circuit	1 1	1 1		8,0	65
Ambient	70.40	70.0	20.40	7,8	70.40
Winding temperature rise me	easurements:	asurements:			N A
Ambient temperature t1 (°C)	40	25,1°C			- 5
Ambient temperature t2 (°C)	04	,00	25,2°C	047	,04
temperature rise DT of winding:	R1(Ω)	R2(Ω)	dT (K)	IT (K) Required dT (K)	
Primary winding of mains transformer	-4	ئے	·		
second winding 1	200	20.0	204		
second winding 2	· - 4		\$	15 Q	9 2

11.6a	TABLE: overflow, spillage, leakage cleaning, sterilization, disinfection		uids, PO 4
Test type	e and condition	Test type and condition	Remarks
Humidity	<sup>,</sup> 93%, 25 <sup>0</sup> C, 48h	Sample	No damage
Dearing	alcohol	Main body, accessorize	No damage
Sterilizat	tion alcohol	- 5º 5º	DT DT-
Supplem	nentary information:	0 0	0 0

11.6b	N			
Test	type and condition	Part under test	Test pressure	Remarks
3		40 - 40	40 40	40
Suppler	mentary information:	4,04	04,04,0	4,04

13 TABLE: abnormal operation	,0 ,0 ,0	O P 0
Test type, condition and clause reference	Observed results	Remarks
Locked motor	There is no obvious change and the highest	P

15.4.7	TABLE: list of critical components parts				
Component	Manufacturer/trade mark	Type/model	Technical data	Mark(s) of conformity	
Key switch	BEIJING HAIXING	KR22	Ui=660V, 10A	CE	





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Button switch	BEIJING HAIXING	KR22	Ui=660V, 10A	CE
Appliance inlet	Yinhe Lasylaser	Yinhe-V12	10A, 250V $\sim$	VDE
Internal wire	GUANGDONG DIANXIAN	Various	450/750V	UL
Foot switch	TENDEFS	04 T-1, 04	220V, IPX1	CE
Fuse	45 - 45°	F5AL250V	5A, 250V~	CE
Fan	0 - 0	9225AT	DC12V	UL/CE
PCB	Various	Yinhe-V12	V-0, 130°C	_ UL S

15.5B	TABLE: ov	erload					N _
Winding	Protection	Meas	ured tempera	tures()	Test	Test current or	Remarks
under test	Protection	Primary	Secondary	Ambient	duration	thermal cutout temp	
, 0	, 0		.0	,0	,0	,0 ,0	

N	15.5 TABLE: transformer dielectric strength						
Remarks	Test frequency	Test voltage	Test voltage applied to	rmer under test	Transforn		
504	04 304	10 to 1	704 - 704	704	149		
Ź	47 4	67 47	7	 nentary informati	Suppleme		

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### **APPENDIX A PHOTOS OF PRODUCT**

Front View



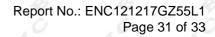
**Back View** 



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# Right View



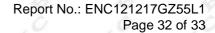
Left View



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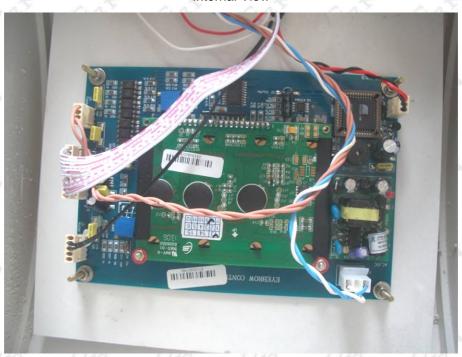




# Overall View of Application Parts



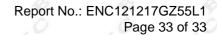
Internal View



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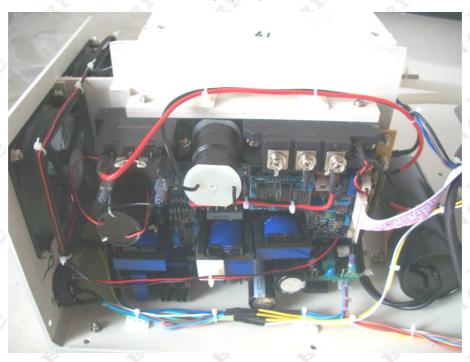
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#### Internal View



-- End of Report ---

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