

BUREAU OF INDIAN STANDARDS

Program of Work

MHD 15 : Electromedical, Diagnostic Imaging and Radiotherapy Equipment

Scope: To prepare Standards for: i) Electrical equipment concerning diagnostic, surgical, therapeutic and monitoring equipment for various specialties ; ii) Ionizing radiation imaging and radiotherapy, dentistry, equipment for radiotherapy, nuclear medicine and radiation dosimetry

Liaison: **IEC TC-62 (P): Medical equipment, software, and systems IEC TC-62 SC-62 A (P): Common aspects of medical equipment, software, and systems IEC TC-62 SC-62 B (P): Medical imaging equipment, software, and systems IEC TC-62 SC-62 C (P): Equipment for radiotherapy, nuclear medicine and radiation dosimetry IEC TC-62 SC-62 D (P): Particular medical equipment, software, and systems**

Published Standards

S.No	IS No.	TITLE	Reaffirm M-Y	No. of Amds	Eqv.
1	IS/ISO/TS 10974:2018 ISO TS 10974 : 2018 Reviewed In : 2024 ISO 10974 : 2018	Assessment of the Safety of Magnetic Resonance Imaging for Patients with an Active Implantable Medical Device	August, 2024	-	Identical under single numbering
2	IS 11393:1985 Reviewed In : 2021	Specification for scintillation counters	December, 2021	-	Indigenous
3	IS 11478:2018 IEC/TR 60930 : 2008 Reviewed In : 2023 IEC/TR 60930 : 2008	Guidelines for administrative, medical, and nursing staff concerned with the safe use of medical electrical equipment and medical electrical systems (First Revision)	August, 2023	-	Identical under dual numbering
4	IS 11753:1986 Reviewed In : 2021	Specification for electrical impedance plethysmograph	December, 2021	-	Indigenous
5	IS 11789:2024 IEC 60806:2022	Determination of the Maximum Symmetrical Radiation Field of X-Ray Tube Assemblies and X-Ray Source Assemblies for Medical Diagnosis (IEC 60806 : 2022, MOD) (First Revision)		-	Modified/Technically Equivalent
6	IS 13450 (Part 1):2024 IEC 60601-1:2020	Medical electrical equipment Part 1 General requirements for basic safety and essential performance (Third Revision)		-	Modified/Technically Equivalent
7	IS 13450 (Part 1/Sec 2):2024 IEC 60601-1-2:2020	Medical electrical equipment : Part 1 General requirements for basic safety and essential performance, Section 2 Electromagnetic disturbances Requirements and tests (Second Revision)		-	Modified/Technically Equivalent
8	IS 13450 (Part 1/Sec	Medical electrical equipment : Part		-	Modified/Technically

	3):2024 IEC 60601-1-3:2021	1 General requirements for basic safety and essential performance, Section 3 Radiation protection in diagnostic X-ray equipment (First Revision)			Equivalent
9	IS 13450 (Part 1/Sec 6):2024 IEC 60601-1-6:2020	Medical electrical equipment : Part 1 General requirements for basic safety and essential performance, Section 6 Usability (First revision)		-	Modified/Technically Equivalent
10	IS 13450 (Part 1/Sec 8):2024 IEC 60601-1-8:2020	Medical electrical equipment : Part 1 General requirements for basic safety and essential performance, Section 8 General requirements tests and guidance for alarm systems in medical electrical equipment and medical electrical systems (First Revision)		-	Modified/Technically Equivalent
11	IS 13450 (Part 1/Sec 9):2024 IEC 60601-1-9:2020	Medical electrical equipment Part 1 General requirements for basic safety and essential performance Section 9 Requirements for environmentally conscious design		-	Modified/Technically Equivalent
12	IS 13450 (Part 1/Sec 10):2024 IEC 60601-1-10:2020	Medical electrical equipment : Part 1 General requirements for basic safety and essential performance, Section 10 Requirements for the development of physiologic closed-loop controllers (First Revision)		-	Modified/Technically Equivalent
13	IS 13450 (Part 1/Sec 11):2024 IEC 60601-1-11:2020	Medical electrical equipment : Part 1 General requirements for basic safety and essential performance , Section 11 Requirements for medical electrical equipment and medical electrical systems used in the home healthcare environment (First Revision)		-	Modified/Technically Equivalent
14	IS 13450 (Part 1/Sec 12):2024 IEC 60601-1-12:2020	Medical electrical equipment : Part 1 General requirements for basic safety and essential performance, Section 12 Requirements for medical electrical equipment and medical electrical systems intended for use in the emergency medical services environment		-	Modified/Technically Equivalent
15	IS 13450 (Part 2/Sec 1):2018 IEC 60601-2-1 :2009 Reviewed In : 2023 IEC 60601-2-1 :2009	Medical Electrical Equipment Part 2 Particular Requirements for the Basic Safety and Essential Performance Section 1 Electron accelerators in the range 1 MeV to 50 MeV (First Revision)	March, 2023	-	Identical under dual numbering
16	IS 13450 (Part 2/Sec 2):2024 IEC 60601-2-2:2023	Medical electrical equipment Part 2 Particular requirements for basic safety and essential performance Section 2 High frequency surgical equipment and high frequency surgical accessories First revision		-	Modified/Technically Equivalent
17	IS 13450 (Part 2/Sec 3):2024	Medical electrical equipment Part 2 Particular requirements for basic		-	Modified/Technically Equivalent

	IEC 60601-2-3:2022	safety and essential performance Section 3 Short-wave therapy equipment First revision			
18	IS 13450 (Part 2/Sec 4):2018 IEC 60601-2-4 : 2010 Reviewed In : 2023 IEC 60601-2-4 : 2010	Medical electrical equipment: Part 2 particular requirements for the basic safety and essential performance: Sec 4 cardiac defibrillators (First Revision)	August, 2023	1	Identical under dual numbering
19	IS 13450 (Part 2/Sec 5):2018 IEC 60601-2-5 : 2009 Reviewed In : 2023 IEC 60601-2-5 : 2009	Medical electrical equipment: Part 2 particular requirements for the basic safety and essential performance: Sec 5 ultrasonic physiotherapy equipment (First Revision)	August, 2023	-	Identical under dual numbering
20	IS 13450 (Part 2/Sec 6):2018 IEC 60601-2-6 : 2012 Reviewed In : 2023 IEC 60601-2-6 : 2012	Medical electrical equipment: Part 2 particular requirements for the basic safety and essential performance: Sec 6 microwave therapy equipment	August, 2023	-	Identical under dual numbering
21	IS 13450 (Part 2/Sec 8):2019 IEC 60601-2-8 : 2015 IEC 60601-2-8_2010	Medical Electrical Equipment Part 2 Particular Requirements for the Basic Safety and Essential Performance Section 8 Therapeutic X-ray equipment operating in the range 10 kV to 1 MV		-	Identical under dual numbering
22	IS 13450 (Part 2/Sec 10):2018 IEC 60601-2-10 : 2012 Reviewed In : 2023 IEC 60601-2-10 : 2012	Medical electrical equipment: Part 2 particular requirements for the basic safety and essential performance: Sec 10 nerve and muscle stimulators	July, 2023	-	Identical under dual numbering
23	IS 13450 (Part 2/Sec 11):2018 IEC 60601-2-11 : 2013 Reviewed In : 2023 IEC 60601-2-11 : 201	Medical electrical equipment: Part 2 particular requirements for the basic safety and essential performance: Sec 11 gamma beam therapy equipment (First Revision)	August, 2023	-	Identical under dual numbering
24	IS 13450 (Part 2/Sec 16):2019 IEC 60601-2-16 : 2018 IEC 60601-2-2_2017	Medical electrical equipment: Part 2 particular requirements for the basic safety and essential performance: Sec 16 haemodialysis, haemodiafiltration and haemofiltration equipment		-	Identical under dual numbering
25	IS 13450 (Part 2/Sec 17):2018 IEC 60601 -2-17 : 2018 Reviewed In : 2023 IEC 60601 -2-17 : 2018	Medical electrical equipment: Part 2 particular requirements for the basic safety and essential performance: Sec 17 automatically - Controlled brachytherapy afterloading equipment (First Revision)	August, 2023	-	Identical under dual numbering
26	IS 13450 (Part 2/Sec 18):2014	Medical electrical equipment: Part 2 particular requirements for the	August, 2025	-	Identical under dual numbering

	IEC 60601-2-18 : 2009 Reviewed In : 2025 IEC 60601-2-18 : 2009	basic safety and essential performance: Sec 18 endoscopic equipment			
27	IS 13450 (Part 2/Sec 19):2023 IEC 60601-2-19:2020 IEC 60601-2-19 : 2009	Medical Electrical Equipment Part 2 Particular Requirements for the Basic Safety and Essential Performance Section 19 Infant Incubators First Revision		-	Identical under dual numbering
28	IS 13450 (Part 2/Sec 20):2023 IEC 60601-2-20 : 2009	Medical Electrical Equipment Part 2 Particular Requirements for the Basic Safety and Essential Performance Section 20 Infant Transport Incubators First Revision		-	Identical under dual numbering
29	IS 13450 (Part 2/Sec 21):2023 IEC 60601-2-21:2020 IEC 60601-2-21:2020	Medical Electrical Equipment Part 2 Particular Requirements for the Basic Safety and Essential Performance Section 21 Infant Radiant Warmer First Revision		-	Identical under dual numbering
30	IS 13450 (Part 2/Sec 22):2021 IEC 60601-2-22:2019 IEC 60601-2-22:2019	Medical electrical equipment Part 2 Particular requirements for basic safety and essential performance Section 22 surgical cosmetic therapeutic and diagnostic laser equipment First Revision		-	Identical under dual numbering
31	IS 13450 (Part 2/Sec 23):2018 IEC 60601-2-23 : 2011 Reviewed In : 2023 IEC 60601-2-23 : 2011	Medical electrical equipment: Part 2 particular requirements for the basic safety and essential performance: Sec 23 transcutaneous partial pressure monitoring equipment	August, 2023	1	Identical under dual numbering
32	IS 13450 (Part 2/Sec 24):2019 IEC 60601-2-24 ; 2012 IEC 60601-2-24 : 201	Medical electrical equipment: Part 2 particular requirements for the basic safety and essential performance: Sec 24 infusion pumps and controllers (First Revision)		-	Identical under dual numbering
33	IS 13450 (Part 2/Sec 25):2018 IEC 60601-2-25 : 2011 Reviewed In : 2023 IEC 60601-2-25:2011 Medical electrical equipment - Part 2 Particular requirements for the basic safe	Medical Electrical Equipment Part 2 Particular Requirements for the Basic Safety and Essential Performance Section 25 Electrocardiographs	March, 2023	1	Identical under dual numbering
34	IS 13450 (Part 2/Sec 26):2021 IEC 80601-2-26 : 201 IEC 60601-2-26 : 2012	Medical electrical equipment Part 2 Particular requirements for basic safety and essential performance Section 26 Electroencephalographs		-	Identical under dual numbering

35	IS 13450 (Part 2/Sec 27):2018 IEC 60601-2-27 : 2011 Reviewed In : 2023 IEC 60601-2-27:2011	Medical electrical equipment: Part 2 particular requirements for the basic safety and essential performance: Sec 27 electrocardiographic monitoring equipment	March, 2023	-	Identical under dual numbering
36	IS 13450 (Part 2/Sec 29):2018 IEC 60601-2-29 : 2008 Reviewed In : 2023 IEC 60601-2-29:2008	Medical electrical equipment: Part 2 particular requirements for the basic safety and essential performance: Sec 29 radiotherapy simulators (First Revision)	October, 2023	-	Identical under dual numbering
37	IS 13450 (Part 2/Sec 31):2021 IEC 60601-2-31:2020 IEC 60601-2-31:2020	Medical Electrical Equipment Part 2 Particular Requirements for the Basic Safety and Essential Performance Section 31 External Cardiac Pacemakers with Internal Power Source First Revision		-	Identical under dual numbering
38	IS 13450 (Part 2/Sec 33):2025 IEC 60601-2-33: 2022	Medical Electrical Equipment Part 2 Particular Requirements for Basic Safety and Essential Performance Section 33 Magnetic resonance equipment for medical diagnosis IEC 60601-2-33: 2022 MOD First Revision		-	Modified/Technically Equivalent
39	IS 13450 (Part 2/Sec 34):2019 IEC 60601-2-34 : 2011 IEC 60601-2-34_2011	Medical Electrical Equipment Part 2 Particular Requirements for the Basic Safety and Essential Performance Section 34 Invasive blood pressure monitoring equipment		-	Identical under dual numbering
40	IS 13450 (Part 2/Sec 35):2023 IEC 60601-2-35:2020 IEC 60601-2-35:2020	Medical Electrical Equipment Part 2 Particular Requirements for the Basic Safety and Essential Performance Section 35 Heating devices using blankets pads or mattresses and intended for heating in medical use		-	Identical under dual numbering
41	IS 13450 (Part 2/Sec 36):2019 IEC 60601-2-36 : 2014 IEC 60601-2-36:2014	Medical electrical equipment: Part 2 particular requirements for the basic safety and essential performance: Sec 36 equipment for extra corporeally induced lithotripsy		-	Identical under dual numbering
42	IS 13450 (Part 2/Sec 37):2019 IEC 60601-2-37 : 2017 IEC 60601-2-37_2007	Medical electrical equipment: Part 2 particular requirements for the basic safety and essential performance: Sec 37 ultrasonic medical diagnostic and monitoring equipment		-	Identical under dual numbering
43	IS 13450 (Part 2/Sec 39):2019 IEC 60601-2-39 : 2018 IEC 60601-2-39_2018	Medical electrical equipment: Part 2 particular requirements for the basic safety and essential performance: Sec 39 peritoneal dialysis equipment		-	Identical under dual numbering
44	IS 13450 (Part 2/Sec	Medical Electrical Equipment Part		-	Identical under dual

	40):2020 IEC 60601-2-40 : 2016 IEC 60601-2-40_2016	2 Particular Requirements for the Basic Safety and Essential Performance Section 40 Electromyographs and evoked response equipment			numbering
45	IS 13450 (Part 2/Sec 41):2025 IEC 60601-2-41: 2021	Medical Electrical Equipment Part 2 Particular Requirements for Basic Safety and Essential Performance Section 41 Surgical luminaires and luminaires for diagnosis IEC 60601-2-41: 2021 MOD First Revision		-	Modified/Technically Equivalent
46	IS 13450 (Part 2/Sec 43):2024 IEC 60601-2-43:2022	Medical electrical equipment Part 2 Particular requirements for basic safety and essential performance Section 43 X-ray equipment for interventional procedures Second revision		-	Modified/Technically Equivalent
47	IS 13450 (Part 2/Sec 44):2016 IEC 60601-2-44 : 2009 Reviewed In : 2021 IEC 60601-2-44:2009	Medical electrical equipment: Part 2 particular requirements for the basic safety and essential performance: Sec 44 X-ray equipment for computed tomography (First Revision)	May, 2021	1	Identical under dual numbering
48	IS 13450 (Part 2/Sec 45):2024 IEC 60601-2-45:2022	Medical electrical equipment Part 2 Particular requirements for basic safety and essential performance Section 45 Mammographic X-ray equipment and mammographic stereotactic devices Second revision		-	Modified/Technically Equivalent
49	IS 13450 (Part 2/Sec 46):2025 IEC 60601-2-46: 2023	Medical Electrical Equipment Part 2 Particular Requirements for Basic Safety and Essential Performance Section 46 Operating tables IEC 60601-2-46: 2023 MOD First Revision		-	Modified/Technically Equivalent
50	IS 13450 (Part 2/Sec 47):2018 IEC 60601-1-2 : 2014 Reviewed In : 2023 IEC 60601-1-2 : 2014	Medical electrical equipment: Part 2 particular requirements for the basic safety and essential performance: Sec 47 ambulatory electrocardiographic systems	June, 2023	-	Identical under dual numbering
51	IS 13450 (Part 2/Sec 50):2022 IEC 60601-2-50:2020 IEC 60601-2-50:2020	Medical electrical equipment Part 2 Particular requirements for the Basic Safety and essential performance Section 50 Infant Phototherapy Equipment		-	Identical under dual numbering
52	IS 13450 (Part 2/Sec 52):2020 IEC 60601-2-52 : 2015 Reviewed In : 2025 IEC 60601-2-52_2018	Medical Electrical Equipment Part 2 Particular Requirements for the Basic Safety and Essential Performance Section 52 Medical beds	January, 2025	-	Identical under dual numbering
53	IS 13450 (Part 2/Sec	Medical electrical equipment Part		-	Modified/Technically

	54):2024 IEC 60601-2-54:2022	2 Particular requirements for basic safety and essential performance Section 54 X-ray equipment for radiography and radioscopy First revision			Equivalent
54	IS 13450 (Part 2/Sec 62):2018 IEC 60601-2-62 : 2013 Reviewed In : 2023 IEC 60601-2-62 : 2013	Medical electrical equipment: Part 2 particular requirements for the basic safety and essential performance: Sec 62 high intensity therapeutic ultrasound (Hitu) equipment	August, 2023	-	Identical under dual numbering
55	IS 13450 (Part 2/Sec 63):2024 IEC 60601-2-63:2021	Medical electrical equipment Part 2 Particular requirements for basic safety and essential performance Section 63 Dental extra-oral X-ray equipment First revision		-	Modified/Technically Equivalent
56	IS 13450 (Part 2/Sec 65):2024 IEC 60601-2-65:2021	Medical electrical equipment Part 2 Particular requirements for basic safety and essential performance Section 65 Dental intra-oral X-ray equipment First revision		-	Modified/Technically Equivalent
57	IS 13450 (Part 2/Sec 68):2020 IEC 60601-2-28 : 2014 IEC 60601-2-68 : 201	Medical Electrical Equipment Part 2 Particular Requirements for the Basic Safety and Essential Performance Section 68 X-ray-based image-guided radiotherapy equipment for use with electron accelerators, light ion beam therapy equipment and radionuclide beam therapy equipment		-	Identical under dual numbering
58	IS 13450 (Part 2/Sec 76):2019 IEC 60601-2-76 : 2018 IS/IEC 60601-2-76	Medical electrical equipment: Part 2 particular requirements for basic safety and essential performance: Sec 76 low energy ionized gas haemostasis equipment		-	Identical under dual numbering
59	IS/ISO 13450-2-10):2024 IEC 60601-2-10 : 2012	Medical electrical equipment Part 2 Particular requirements for basic safety and essential performance Section 10 Nerve and muscle stimulators First revision		-	Identical under dual numbering
60	IS 13709:1993 Reviewed In : 2015	Medical electrical equipment - Dental X-ray equipment radiation safety		-	Indigenous
61	IS 14180:2019 IEC 60878 : 2015 IEC 878	Graphical symbols for electrical equipment in medical practice (First Revision)		-	Identical under dual numbering
62	IS/ISO 14708-2:2019 ISO 14708-2:2019 ISO 14708-2:2019	Implants for surgery Active implantable medical devices Part 2: Cardiac pacemakers First Revision		-	Identical under single numbering
63	IS 15584:2005 Reviewed In : 2022	Medical X-ray films	July, 2022	-	Indigenous
64	IS 18443:2025 IEC 60336:2020	Medical electrical equipment X-ray tube assemblies for medical diagnosis Focal spot dimensions and related characteristics		-	Modified/Technically Equivalent
65	IS 18448 (Part 1):2024	Medical electrical equipment Diagnostic X-rays Part 1		-	Modified/Technically Equivalent

	IEC 60522-1:2020	Determination of quality equivalent filtration and permanent filtration			
66	IS 18448 (Part 2):2024 IEC/TR 60522-2:2020	Medical electrical equipment Diagnostic X-rays Part 2 Guidance and rationale on quality equivalent filtration and permanent filtration		-	Modified/Technically Equivalent
67	IS 18470:2024 IEC 61689:2022	Ultrasonics Physiotherapy Systems Field Specifications and Methods of Measurement in the Frequency Range 05 MHz to 5 MHz		-	Modified/Technically Equivalent
68	IS/ISO 4090:2001 Reviewed In : 2023	Photography - Medical radiographic cassettes/screens/films and hard - Copy imaging films - Dimensions and specifications	July, 2023	-	Indigenous
69	IS/IEC 60335-2-27):2009 IEC 60335-2-27 : 200 IEC 60335-2-27 : 200	Household and Similar Electrical Appliances Safety Part 2-27 Particular Requirements for Appliances for Skin Exposure to Optical Radiation		-	Identical under single numbering
70	IS/IEC 60580:2019 IEC 60580:2019 IEC 60580:2019	Medical electrical equipment Dose area product meters		-	Identical under single numbering
71	IS/IEC/TR 60788:2004 IEC/TR 60788:2004 Reviewed In : 2020 IEC/TR 60788:2004	Medical electrical equipment - Glossary of defined terms	April, 2020	-	Identical under single numbering
72	IS/IEC 61168:1993 IEC 61168 : 1993 IEC 61168:1993	Radiotherapy simulators - Functional performance characteristics		-	Identical under single numbering
73	IS/IEC 61170:1993 IEC 61170 : 1993 IEC 61170:1993	Radiotherapy simulators - Guidelines for functional performance characteristics		-	Identical under single numbering
74	IS/IEC 61217:2011 IEC 61217 : 2011 IEC 61217:2011	Radiotherapy Equipment - Coordinates, Movements and Scales		-	Identical under single numbering
75	IS/IEC 61262-1:1994 Reviewed In : 2020 IEC 61262-1:1994	Medical Electrical Equipment - Characteristics of Electro-Optical X-Ray Image Intensifiers	February, 2020	-	Identical under single numbering
76	IS/IEC 61262-2:1994 Reviewed In : 2025 IEC 61262-2:1994	Medical electrical equipment characteristics of electro - Optical X-ray image intensifiers: Part 2 determination of the conversion factor	August, 2025	-	Identical under single numbering
77	IS/IEC 61262-3:1994 IEC 61262_3 : 1994 Reviewed In : 2021 IEC 61262-1:1994	Medical electrical equipment - Characteristics of Electro - Optical X-ray image intensifiers: Part 3 determination of the luminance distribution and luminance non - Uniformity	December, 2021	-	Identical under single numbering
78	IS/IEC 61262-4:1994 IEC 61262-4:1994 Reviewed In : 2020 IEC 61262-4:1994	Medical Electrical Equipment - Characteristics of Electro-Optical X-Ray Image Intensifiers Part 4 Determination of the Image Distortion	April, 2020	-	Identical under dual numbering
79	IS/IEC	PROTECTIVE DEVICES	March, 2024	-	Identical under dual

	61331-1:2014 IEC 61331-1 : 2014 Reviewed In : 2024 IEC 61331-1 : 2014	AGAINST DIAGNOSTIC MEDICAL X-RADIATION PART 1: DETERMINATION OF ATTENUATION PROPERTIES OF MATERIALS			numbering
80	IS/IEC 61331-2:2014	Protective Devices Against Diagnostic Medical X-Radiation Part 2 Translucent Protective Plates		-	Identical under single numbering
81	IS/IEC 61331-3:2014 IEC 61331-3 : 2014 IEC 61331-3 : 2014	PROTECTIVE DEVICES AGAINST DIAGNOSTIC MEDICAL X-RADIATION PART 3: PROTECTIVE CLOTHING, EYEWEAR AND PROTECTIVE PATIENT SHIELDS		-	Identical under dual numbering
82	IS/IEC 61675-1:2022 IEC 61675-1:2022 IEC 61675-1:2022	Radionuclide Imaging Devices â€™ Characteristics and Test Conditions Part 1 Positron Emission Tomographs (First Revision)		-	Identical under single numbering
83	IS/IEC 61675-2:2015 IEC 61675-2 : 2015 IEC 61675-2 : 2015	Radionuclide imaging devices - Characteristics and test conditions: Part 2 gamma cameras for planar, whole body, and spect imaging		-	Identical under single numbering
84	IS/IEC 61676:2002 IEC 61676:2002 IEC 61676:2002	Medical electrical equipment Dosimetric instruments used for non-invasive measurement of X- ray tube voltage in diagnostic radiology		-	Identical under single numbering
85	IS/IEC 61685:2001 IEC 61685 : 2001 IS/IEC 61685:2001	Ultrasonics - Flow measurement systems - Flow test object		-	Identical under single numbering
86	IS/IEC 61847:1998 IS/IEC 61847 : 1998 IS/IEC 61847:1998	Ultrasonics - Surgical systems - Measurement and declaration of the basic output characteristics		-	Identical under single numbering
87	IS/IEC/TR 61948-3:2018 IEC TR 61948-3 : 2018 Reviewed In : 2023 IS/IEC TR 61948-3:20	Nuclear medicine instrumentation - Routine tests: Part 3 positron emission tomographs	April, 2023	-	Identical under single numbering
88	IS/IEC 62083:2009 IEC 62083:2009 IEC 62083:2009	Medical electrical equipment Requirements for the safety of radiotherapy treatment planning systems		-	Identical under single numbering
89	IS/IEC 62220-1-1):2015 IEC 62220-1-1 : 2015 IEC 62220-1-1:2015	Medical Electrical Equipment â€™ Characteristics of Digital X-ray Imaging Devices Part 1-1 Determination of the Detective Quantum Efficiency â€™ Detectors Used in Radiographic Imaging		-	Identical under single numbering
90	IS/IEC 62220-1-3:2008 IEC 62220-1-3:2008 Reviewed In : 2023 IEC 62220-1-3:2008	Medical electrical equipment- characteristics of digital X-ray imaging devices – Part:1-3 Determination of the detective quantum efficiency - Detectors used in dynamic imaging	March, 2023	-	Identical under dual numbering
91	IS/IEC 62220-1-	Medical electrical equipment -	May, 2022	-	Identical under single

	2:2007 IEC 62220-1-2 : 2007 Reviewed In : 2022 IEC 62220-1-2 : 2007	Characteristics of digital X-ray imaging devices: Part 1 - 2 determination of the detective quantum efficiency detectors used in mammography			numbering
92	IS/IEC 6235:2014 IEC 62353 : 2014 Reviewed In : 2022 IEC 62353:2014	Medical electrical equipment - Recurrent test and test after repair of medical electrical equipment (First Revision)	December, 2022	-	Identical under single numbering
93	IS/IEC/TS 62556:2014 IEC TS 62556 : 2014 IEC TS 62556 : 2014	Ultrasonics - Field characterization - Specification and measurement of field parameters for high intensity therapeutic ultrasound (HITU) transducers and systems		-	Identical under single numbering
94	IS/IEC 62563-1:2016 IEC 62563-1 : 2016	Medical Electrical Equipment â€” Medical Image Display System Part 1 Evaluation Method		-	
95	IS/IEC/TS 62566:2014 IEC TS 62556 : 2014 IEC TS 62556 : 2014	Ultrasonics â€” Field Characterization â€” Specification and Measurement of Field Parameters for High Intensity Therapeutic Ultrasound (HITU) Transducers and Systems		-	Identical under single numbering
96	IS 7620 (Part 1):1986 Reviewed In : 2019	Specification for diagnostic medical X-ray equipment: Part 1 general and safety requirements (First Revision)	December, 2019	3	Indigenous
97	IS 7620 (Part 2):1986 Reviewed In : 2019	Specification for diagnostic medical X-ray equipment: Part 2 performance requirements (First Revision)	December, 2019	1	Indigenous
98	IS 7620 (Part 3):1991 Reviewed In : 2016	Medical electrical equipment - Diagnostic X-ray equipments: Part 3 radiation safety requirements	December, 2016	-	Indigenous
99	IS/IEC 80601-2-35):2009 IEC 80601-2-35 : 2009 IEC 80601-2-35:2009	Medical Electrical Equipment Part 2 Particular Requirements for the Basic Safety and Essential Performance Section 35 Heating devices using blankets, pads or mattresses and intended for heating in medical use		-	Identical under single numbering
100	IS/IEC 80601-2-49):2018 IEC 80601-2-49:2018 IEC 80601-2-49:2018	Medical electrical equipment Part 2- Particular requirements for basic safety and essential performance- Sec 49 Multifunction patient monitors		-	Identical under single numbering
101	IS/ISO 80601-2-56):2017 ISO 80601-2-56 : 2017 ISO 80601-2-56 : 201	Medical electrical equipment: Part 2 particular requirements for basic safety and essential performance: Sec 56 clinical thermometers for body temperature measurement		1	Identical under single numbering
102	IS/IEC 80601-2-58):2016 IEC 80601-2-58:2016	Medical electrical equipment Part 2 Particular requirements for the basic safety and essential performance Section 58 Lens		-	Identical under single numbering

	IEC 80601-2-58:2016	removal devices and vitrectomy devices for ophthalmic surgery			
103	IS/IEC 80601-2-59):2017 IEC 80601-2-59 : 2017 IEC 60601-2-59:2017	Medical Electrical Equipment Part 2 Particular Requirements for the Basic Safety and Essential Performance Section 59 Screening thermographs for human febrile temperature screening		-	Identical under dual numbering
104	IS/ISO 80601-2-61):2017 ISO 80601-2-61:2017 ISO 80601-2-61:2017	Medical electrical equipment Part 2-61: Particular requirements for basic safety and essential performance of pulse oximeter equipment		-	Identical under single numbering

Standards under Development

Projects Approved

SI. No.	Doc No.	Title
No Records Found		

Preliminary Draft Standards

SI. No.	Doc No.	Title
No Records Found		

Drafts Standards in WC Stage

SI. No.	Doc No.	Title
No Records Found		

Draft Standards Completed WC Stage

SI. No.	Doc No.	Title
No Records Found		

Finalized Draft Indian Standard

SI. No.	Doc No.	Title
1	MHD 15 (24732) Amendment of: IS 13450:2018	Medical Electrical Equipment Part 2 Particular Requirements for Basic Safety and Essential Performance Section 6 Particular requirements for the basic safety and essential performance of microwave therapy equipment IEC 60601-2-6 2022 MOD First Revision
2	MHD 15 (24734) Amendment of: IS/IEC 62563:2016	Medical Electrical Equipment Medical Image Display Systems Part 1 Evaluation methods First Revision
3	MHD 15 (25315)	Medical electrical equipment Part 2 Particular requirements for the basic safety and essential performance Section 75 Photodynamic therapy and photodynamic diagnosis equipment
4	MHD 15 (25327)	Medical electrical equipment Part 2 Particular requirements for the basic safety and essential performance Section 83 Home light therapy equipment
5	MHD 15 (25328)	Medical electrical equipment Dosimeters with ionization chambers as used in Radiotherapy IEC 60731 2011AMD1 2016 CSV MOD

Finalized Draft Indian Standards under Print

SI. No.	Doc No.	Title
No Records Found		

Total Published Standards:98 Total Standards Under development:5

Aspect Wise Report

Product : 59
Code of Practices : 2
Methods of Test : 16
Terminology : 2
Dimensions : 1
System Standard : 0
Safety Standard : 4
Others : 10
Service Specification : 0
Process Specification : 0
Unclassified : 10

Annexure-I :List of Indian Standards Withdrawn/Superseded

Sl. No.	IS No. & Year	Title
1	IS 10550:1983 Reviewed In : 2016	Specification for medical treatment lamps
2	IS 10554:1983 Reviewed In : 2006	Radiographic intensifying screens for medical use - dimensions
3	IS 11302 (Part 1):1985 Reviewed In : 2016	Electro-encephalograph EEG - Part 1 General and Safety Requirements
4	IS 11302 (Part 2):1985 Reviewed In : 2016	Specification for electroencephalograph EEG Part 2 performance requirements
5	IS 11331:1985 Reviewed In : 2016	Electrical Muscle and Nerve Stimulators for Therapeutic Purpose
6	IS 11478 (Part 1):1985 Reviewed In : 2016	Application guide for medical electrical equipment Part 1 General requirements and electrical installations
7	IS 11478 (Part 2):1985 Reviewed In : 2016	Application guide for medical electrical equipment Part 2 Safety provisions application operation and maintenance
8	IS 11661:1986 Reviewed In : 2016	Safety of Lung Ventilator for Medical Use
9	IS 11701:1986 Reviewed In : 2021	Guide for testing and calibration of ultrasonic therapeutic equipment
10	IS 11754:1986 Reviewed In : 2016	Implantable Ventricular Pacemaker
11	IS 12311:1987 Reviewed In : 2016	Microwave Diathermy Equipment for Therapeutic Purposes
12	IS 13069:1991	Methods of measuring the performance of ultrasonic pulse-echo diagnostic equipment
13	IS 13450 (Part 1/Sec 1):2006 IEC 60601-1-1 Reviewed In : 2011	Medical Electrical Equipment Part 1 General Requirements for Safety Section 1 Collateral Standard - Safety Requirements for Medical Electrical System
14	IS 13450 (Part 1/Sec 4):2009 IEC 60601-1-1 Reviewed In : 2014	Medical Electrical Equipment Part 1 General Requirements for Safety Section 1 Collateral Standard - Safety Requirements for Medical Electrical System
15	IS 13450 (Part 2/Sec 7):2006 IEC 60601-2-7 Reviewed In : 2011	Medical Electrical Equipment Part 2 Particular Requirements for the Safety Section 7 High-Voltage Generators of Diagnostic X-Ray Generators
16	IS 13450 (Part 2/Sec 30):2008 IEC 60601-2-30	Medical electrical equipment Part 2 particular requirements for the safety Sec 30 essential performance of automatic cycling non - Invasive blood pressure monitoring equipment

	Reviewed In : 2018 IEC 60601-2-30	
17	IS 13450 (Part 2/Sec 32):2006 IEC 60601-2-32 Reviewed In : 2011	Medical Electrical Equipment Part 2 Particular requirements for safety Section 32 Associated equipment of X-Ray equipment
18	IS 13450 (Part 2/Sec 49):2018 IEC 60601 Par 2 Section 49 : 2011 IEC 60601 Par 2 Section 49 : 2011	Medical electrical equipment Part 2 particular requirements for the basic safety and essential performance Sec 49 multifunction patient monitoring equipment First Revision
19	IS 13523 (Part 1):1992 Reviewed In : 2016	Medical Electrical Equipment - Shortwave Therapy Equipment Part 1 General And Safety Requirements
20	IS 13523 (Part 2):1992 Reviewed In : 2016	Medical Electrical Equipment - Shortwave Therapy Equipment Part 2 Performance Requirements
21	IS 13812 (Part 19):1994 IEC 601-2-19 Reviewed In : 2015 IEC 601-2-19	Medical electrical equipment - Particular requirements for safety Part 19 Baby incubators
22	IS 13814:1993 IEC 858 Reviewed In : 2015 IEC 858	Determination of the image distortion of electro - Optical X-ray image intensifiers
23	IS/IEC 60336:2005 Reviewed In : 2020 IEC 60336:2005	Medical electrical equipment - X-ray tube assemblies for medical diagnosis - Characteristics of focal spots
24	IS/IEC 61689:2013 IEC 61689 : 2013 Reviewed In : 2023 IEC 61689 : 2013	Ultrasonics - Physiotherapy systems - Field specifications and methods of measurement in the frequency range 0.5 mhz to 5 mhz
25	IS/IEC/TR 61852:1998 IEC TR 61852 : 1998 IEC TR 61825 : 1998	Medical electrical equipment - Digital imaging and communications in medicine DICOM - Radiotherapy objects
26	IS/IEC/TR 61859:1997 IEC/TR 61859 : 1997 IEC/TR 61859 : 1997	Guidelines for Radiotherapy Treatment Rooms Design
27	IS 6991:1985	Radiographic Cassettes
28	IS 7352:1974 Reviewed In : 2017	Specification for X-ray lead - Rubber protective aprons
29	IS 7583:1991 Reviewed In : 2016	Medical Electrical Equipment - High Frequency Surgical Equipment
30	IS 8048:1985 Reviewed In : 2016	Specification for electrocardiograph First Revision
31	IS 8607 (Part 1):1977 Reviewed In : 1987	General and safety requirements for electrical equipment used in medical practice Part 1 General
32	IS 8607 (Part 2):1978 Reviewed In : 1987	General and safety requirements for electrical equipment used in medical practice Part 2 Protection against electric shock
33	IS 8885:1994 Reviewed In : 2019	Medical electrical equipment electromyograph - Specification First Revision
34	IS 9286 (Part 1):1988 Reviewed In : 2010	Cardiac Defibrillators - Part 1 Safety Requirements

Annexure-II :List of Indian Product Standards

Sl. No.	IS No. & Year	Title
1	IS 11393:1985 Reviewed In : 2021	Specification for scintillation counters

2	IS 11753:1986 Reviewed In : 2021	Specification for electrical impedance plethysmograph
3	IS 13450 (Part 2/Sec 2):2024	Medical electrical equipment Part 2 Particular requirements for basic safety and essential performance Section 2 High frequency surgical equipment and high frequency surgical accessories First revision
4	IS 13450 (Part 2/Sec 3):2024	Medical electrical equipment Part 2 Particular requirements for basic safety and essential performance Section 3 Short-wave therapy equipment First revision
5	IS 13450 (Part 2/Sec 4):2018 IEC 60601-2-4 : 2010 Reviewed In : 2023 IEC 60601-2-4 : 2010	Medical electrical equipment Part 2 particular requirements for the basic safety and essential performance Sec 4 cardiac defibrillators First Revision
6	IS 13450 (Part 2/Sec 5):2018 IEC 60601-2-5 : 2009 Reviewed In : 2023 IEC 60601-2-5 : 2009	Medical electrical equipment Part 2 particular requirements for the basic safety and essential performance Sec 5 ultrasonic physiotherapy equipment First Revision
7	IS 13450 (Part 2/Sec 6):2018 IEC 60601-2-6 : 2012 Reviewed In : 2023 IEC 60601-2-6 : 2012	Medical electrical equipment Part 2 particular requirements for the basic safety and essential performance Sec 6 microwave therapy equipment
8	IS 13450 (Part 2/Sec 8):2019 IEC 60601-2-8 : 2015 IEC 60601-2-8_2010	Medical Electrical Equipment Part 2 Particular Requirements for the Basic Safety and Essential Performance Section 8 Therapeutic X-ray equipment operating in the range 10 kV to 1 MV
9	IS 13450 (Part 2/Sec 11):2018 IEC 60601-2-11 : 2013 Reviewed In : 2023 IEC 60601-2-11 : 201	Medical electrical equipment Part 2 particular requirements for the basic safety and essential performance Sec 11 gamma beam therapy equipment First Revision
10	IS 13450 (Part 2/Sec 16):2019 IEC 60601-2-16 : 2018 IEC 60601-2-2_2017	Medical electrical equipment Part 2 particular requirements for the basic safety and essential performance Sec 16 haemodialysis haemodiafiltration and haemofiltration equipment
11	IS 13450 (Part 2/Sec 18):2014 IEC 60601-2-18 : 2009 Reviewed In : 2025 IEC 60601-2-18 : 2009	Medical electrical equipment Part 2 particular requirements for the basic safety and essential performance Sec 18 endoscopic equipment
12	IS 13450 (Part 2/Sec 19):2023 IEC 60601-2-19:2020 IEC TS 62600-2 2019	Medical Electrical Equipment Part 2 Particular Requirements for the Basic Safety and Essential Performance Section 19 Infant Incubators First Revision
13	IS 13450 (Part 2/Sec 20):2023 IEC TS 62600-10-2021	Medical Electrical Equipment Part 2 Particular Requirements for the Basic Safety and Essential Performance Section 20 Infant Transport Incubators First Revision
14	IS 13450 (Part 2/Sec 21):2023 IEC 60601-2-21:2020 ISO 18562-1: 2024	Medical Electrical Equipment Part 2 Particular Requirements for the Basic Safety and Essential Performance Section 21 Infant Radiant Warmer First Revision
15	IS 13450 (Part 2/Sec 22):2021 IEC 60601-2-22:2019 IS 16102 (Part 2) : 2017, (IEA) SSL Annex 4E, US Energy Star Program for LED Lamps	Medical electrical equipment Part 2 Particular requirements for basic safety and essential performance Section 22 surgical cosmetic therapeutic and diagnostic laser equipment First Revision

16	IS 13450 (Part 2/Sec 24):2019 IEC 60601-2-24 ; 2012 IEC 60601-2-24 : 201	Medical electrical equipment Part 2 particular requirements for the basic safety and essential performance Sec 24 infusion pumps and controllers First Revision
17	IS 13450 (Part 2/Sec 25):2018 IEC 60601-2-25 : 2011 Reviewed In : 2023 IEC 60601-2-25:2011 Medical electrical equipment - Part 2 Particular requirements for the basic safe	Medical Electrical Equipment Part 2 Particular Requirements for the Basic Safety and Essential Performance Section 25 Electrocardiographs
18	IS 13450 (Part 2/Sec 26):2021 IEC 80601-2-26 : 201 IEC 61853-4 : 2018	Medical electrical equipment Part 2 Particular requirements for basic safety and essential performance Section 26 Electroencephalographs
19	IS 13450 (Part 2/Sec 27):2018 IEC 60601-2-27 : 2011 Reviewed In : 2023 IEC 60601-2-27:2011	Medical electrical equipment Part 2 particular requirements for the basic safety and essential performance Sec 27 electrocardiographic monitoring equipment
20	IS 13450 (Part 2/Sec 29):2018 IEC 60601-2-29 : 2008 Reviewed In : 2023 IEC 60601-2-29:2008	Medical electrical equipment Part 2 particular requirements for the basic safety and essential performance Sec 29 radiotherapy simulators First Revision
21	IS 13450 (Part 2/Sec 31):2021 IEC 60601-2-31:2020 IECTS 61400-25-71:	Medical Electrical Equipment Part 2 Particular Requirements for the Basic Safety and Essential Performance Section 31 External Cardiac Pacemakers with Internal Power Source First Revision
22	IS 13450 (Part 2/Sec 33):2025	Medical Electrical Equipment Part 2 Particular Requirements for Basic Safety and Essential Performance Section 33 Magnetic resonance equipment for medical diagnosis IEC 60601-2-33 2022 MOD First Revision
23	IS 13450 (Part 2/Sec 34):2019 IEC 60601-2-34 : 2011 IEC 60601-2-34_2011	Medical Electrical Equipment Part 2 Particular Requirements for the Basic Safety and Essential Performance Section 34 Invasive blood pressure monitoring equipment
24	IS 13450 (Part 2/Sec 35):2023 IEC 60601-2-35:2020 ISO 20126:2022	Medical Electrical Equipment Part 2 Particular Requirements for the Basic Safety and Essential Performance Section 35 Heating devices using blankets pads or mattresses and intended for heating in medical use
25	IS 13450 (Part 2/Sec 36):2019 IEC 60601-2-36 : 2014 IEC 60601-2-36:2014	Medical electrical equipment Part 2 particular requirements for the basic safety and essential performance Sec 36 equipment for extra corporeally induced lithotripsy
26	IS 13450 (Part 2/Sec 37):2019 IEC 60601-2-37 : 2017 IEC 60601-2-37_2007	Medical electrical equipment Part 2 particular requirements for the basic safety and essential performance Sec 37 ultrasonic medical diagnostic and monitoring equipment
27	IS 13450 (Part 2/Sec 39):2019 IEC 60601-2-39 : 2018 IEC 60601-2-39_2018	Medical electrical equipment Part 2 particular requirements for the basic safety and essential performance Sec 39 peritoneal dialysis equipment
28	IS 13450 (Part 2/Sec 40):2020 IEC 60601-2-40 : 2016 IEC 60601-2-40_2016	Medical Electrical Equipment Part 2 Particular Requirements for the Basic Safety and Essential Performance Section 40 Electromyographs and evoked response equipment
29	IS 13450 (Part 2/Sec 41):2025	Medical Electrical Equipment Part 2 Particular Requirements for Basic Safety and Essential Performance Section 41 Surgical luminaires and luminaires for diagnosis IEC 60601-2-41 2021

		MOD First Revision
30	IS 13450 (Part 2/Sec 43):2024	Medical electrical equipment Part 2 Particular requirements for basic safety and essential performance Section 43 X-ray equipment for interventional procedures Second revision
31	IS 13450 (Part 2/Sec 45):2024	Medical electrical equipment Part 2 Particular requirements for basic safety and essential performance Section 45 Mammographic X-ray equipment and mammographic stereotactic devices Second revision
32	IS 13450 (Part 2/Sec 46):2025	Medical Electrical Equipment Part 2 Particular Requirements for Basic Safety and Essential Performance Section 46 Operating tables IEC 60601-2-46 2023 MOD First Revision
33	IS 13450 (Part 2/Sec 50):2022 IEC 60601-2-50:2020	Medical electrical equipment Part 2 Particular requirements for the Basic Safety and essential performance Section 50 Infant Phototherapy Equipment
34	IS 13450 (Part 2/Sec 52):2020 IEC 60601-2-52 : 2015 Reviewed In : 2025 IEC 60601-2-52_2018	Medical Electrical Equipment Part 2 Particular Requirements for the Basic Safety and Essential Performance Section 52 Medical beds
35	IS 13450 (Part 2/Sec 54):2024	Medical electrical equipment Part 2 Particular requirements for basic safety and essential performance Section 54 X-ray equipment for radiography and radioscopy First revision
36	IS 13450 (Part 2/Sec 63):2024	Medical electrical equipment Part 2 Particular requirements for basic safety and essential performance Section 63 Dental extra-oral X-ray equipment First revision
37	IS 13450 (Part 2/Sec 65):2024	Medical electrical equipment Part 2 Particular requirements for basic safety and essential performance Section 65 Dental intra-oral X-ray equipment First revision
38	IS 13450 (Part 2/Sec 68):2020 IEC 60601-2-28 : 2014 IEC 60601-2-68 : 201	Medical Electrical Equipment Part 2 Particular Requirements for the Basic Safety and Essential Performance Section 68 X-ray-based image-guided radiotherapy equipment for use with electron accelerators light ion beam therapy equipment and radionuclide beam therapy equipment
39	IS 13450 (Part 2/Sec 76):2019 IEC 60601-2-76 : 2018 IS/IEC 60601-2-76	Medical electrical equipment Part 2 particular requirements for basic safety and essential performance Sec 76 low energy ionized gas haemostasis equipment
40	IS/ISO 13450-2-10):2024	Medical electrical equipment Part 2 Particular requirements for basic safety and essential performance Section 10 Nerve and muscle stimulators First revision
41	IS 13709:1993 Reviewed In : 2015	Medical electrical equipment - Dental X-ray equipment radiation safety
42	IS/ISO 14708-2:2019 ISO 14708-2:2019 IEC 60068-2-38:2021	Implants for surgery Active implantable medical devices Part 2 Cardiac pacemakers First Revision
43	IS 15584:2005 Reviewed In : 2022	Medical X-ray films
44	IS/ISO 4090:2001 Reviewed In : 2023	Photography - Medical radiographic cassettes screens films and hard - Copy imaging films - Dimensions and specifications
45	IS/IEC 60335-2-27):2009 IEC 60335-2-27 : 200 60974-1:2021	Household and Similar Electrical Appliances Safety Part 2-27 Particular Requirements for Appliances for Skin Exposure to Optical Radiation
46	IS/IEC 60580:2019 IEC 60580:2019 IEC 60068 -Part 2-1 : 2007	Medical electrical equipment Dose area product meters
47	IS/IEC 61168:1993 IEC 61168 : 1993 IEC 61168:1993	Radiotherapy simulators - Functional performance characteristics
48	IS/IEC 61331-3:2014 IEC 61331-3 : 2014	PROTECTIVE DEVICES AGAINST DIAGNOSTIC MEDICAL X-RADIATION PART 3 PROTECTIVE CLOTHING EYEWEAR AND PROTECTIVE PATIENT SHIELDS

49	IS/IEC 61675-2:2015 IEC 61675-2 : 2015 IEC 61675-2 : 2015	Radionuclide imaging devices - Characteristics and test conditions Part 2 gamma cameras for planar whole body and spect imaging
50	IS/IEC 61685:2001 IEC 61685 : 2001 IS/IEC 61685:2001	Ultrasonics - Flow measurement systems - Flow test object
51	IS/IEC 61847:1998 IS/IEC 61847 : 1998 IS/IEC 61847:1998	Ultrasonics - Surgical systems - Measurement and declaration of the basic output characteristics
52	IS 7620 (Part 1):1986 Reviewed In : 2019	Specification for diagnostic medical X-ray equipment Part 1 general and safety requirements First Revision
53	IS 7620 (Part 2):1986 Reviewed In : 2019	Specification for diagnostic medical X-ray equipment Part 2 performance requirements First Revision
54	IS 7620 (Part 3):1991 Reviewed In : 2016	Medical electrical equipment - Diagnostic X-ray equipment Part 3 radiation safety requirements
55	IS/IEC 80601-2-35):2009 IEC 80601-2-35 : 2009 IEC 80601-2-35:2009	Medical Electrical Equipment Part 2 Particular Requirements for the Basic Safety and Essential Performance Section 35 Heating devices using blankets pads or mattresses and intended for heating in medical use
56	IS/IEC 80601-2-49):2018 IEC 80601-2-49:2018 ISO 12097-3	Medical electrical equipment Part 2- Particular requirements for basic safety and essential performance- Sec 49 Multifunction patient monitors
57	IS/ISO 80601-2-56):2017 ISO 80601-2-56 : 2017 ISO 80601-2-56 : 201	Medical electrical equipment Part 2 particular requirements for basic safety and essential performance Sec 56 clinical thermometers for body temperature measurement
58	IS/IEC 80601-2-58):2016 IEC 80601-2-58:2016 ISO 13906:2008	Medical electrical equipment Part 2 Particular requirements for the basic safety and essential performance Section 58 Lens removal devices and vitrectomy devices for ophthalmic surgery
59	IS/ISO 80601-2-61):2017 ISO 80601-2-61:2017 ISO 2919 : 2012	Medical electrical equipment Part 2-61 Particular requirements for basic safety and essential performance of pulse oximeter equipment