E-CUBE 15 EX

Product Specification

V3.2 *Rev.01*

ALPINION
MEDICAL SYSTEMS

General Specifications

Physical Specification

- Width: 580 mm
- Depth: 895 mm
- Height: 1,413 - 1,848 mm
- Weight: 105 Kg (System only)

System Design

- 19.5” LCD monitor and articulated arm
- Front and Rear handle
- 4 active probe connectors
- 1 pencil probe port
- 4 swivel wheels
- Integrated HDD
- Built-in DVD-R drive
- ECG (Optional)
- Thermal printer storage
- Built-in stereo speaker
- Built-in cable management
- Anti-dust probe connector door
- System boot-up: 120sec

Main Monitor

- 19.5” high definition LED
- Resolution: 1366 X 768 (16:9 wide)
- 16.2M color display
- Contrast: 1:1,000
- IPS (In Plane Switching) technology
- Bright and contrast adjustment
- Articulated monitor arm
  - Up/down: 140 mm
  - Swivel: +/- 90°
  - Tilt: +15° / -90°

Control Panel

- Electric motorized control panel adjustment
  - Up/down: 175 mm
  - Swivel: +/- 25°
- Alphanumeric keyboard with backlit
- Ergonomic key layout
- 8 TGC control levers
- 6 user customizable keys
- 5 removable probe holders
- Built-in gel warmer

Touch Screen

- 10.4” high definition LED
- Resolution: 1024 X 768
- 16.2M color display
- Bright and contrast adjustable (OSD)

Computing Power

- Main processor: Intel core i5-2510E 2.5 GHz
- Main memory: 4 GB
- HDD: 500 GB

Electrical Specification

- 100 - 120 V, 220-240 V, 50/60 Hz
- Power consumption: Max. 900 VA

System Standard Feature

Architecture

- Digital beamforming
- High density transducer connector
- Triple multi-beam
- FleXcan™
- SensitiView™
- Crystal Signature™
- MicroFit™
- Optimal Imaging Suite™
- Needle enhancement
- Multi-layer transducer
- OS: WindowsXP Embedded

Transducer Type

- Convex
- Micro convex
- Endo cavity
- Linear
- Phased (Sector)
- Volume
- Pencil
- TEE

Application

- Abdomen
- Breast
- Cardiac
- EM
- Gynecology
- Musculoskeletal
- Obstetrics
- Pediatric
- Small Parts
- Urology
- Vascular

Preset

- Abdomen
- Abdomen (Pen)
- Renal
- OB1, OB2, OB3

- Fetal Echo
- Thyroid
- Testicle
- MSK
- Superficial
- MSK deep
- Nerve
- Shoulder/Knee
- Wrist/Elbow
- Breast
- EM
- Cardiac
- Cardiac (Pen)
- TCD

Imaging Mode

- 2D (B)
- Color flow (CF)
- Pulse wave dopper (PW)
- Power doppler (PD)
- Directional power doppler (DPDI)
- Tissue doppler Imaging (TDI)
- Continuous wave Doppler (CW)
- Motion (M)
- Color M
- Anatomical M
- 3D / 4D (Volume)
- Live HQ™
- Panoramic
- Elastography
- Needle Vision™ / Needle Vision™ Plus
- Dual Live

Complex Mode

- Duplex: B+B, B+PW, B+CW, B+CF, B+PD, B+DPDI, B+M, B+3D, B+4D, B+Live HQ, A+B+C+3D, A+B+C+4D, B+Elastography
- Triplex: B+CF+PWD, B+CF+CWD, B+CF+M

Scanning Parameters

- System frequency range: 1 ~ 20 MHz
- Processing channel: 294,912
- ADC: 12 bits
- Displayed imaging depth: 0 ~ 30cm
- Max. frame rate (Probe dependant)
  - 2D: 1,369 (Hz/FPS)
  - Color: 269 (Hz/FPS)
  - Volume: 70 (Hz/VPS)
- Dynamic range: Max. 192dB
- Gray scale: 256 levels
- Focus
  - Focal number: Max.8
  - Focal position: Max. 17
- Zoom
  - Write zoom
  - Read zoom
- CF
  - 300 Hz ~ 18.1 KHz
  - 6 cm/s ~ 34.8 m/s
- PW
  - 330 Hz ~ 18.1 KHz
  - 2 cm/s ~ 50.4 m/s
- CW
  - 300 Hz ~ 78.1 KHz
  - 2.5 cm/s ~ 300.7 m/s

Imaging Presentation

- Dual
- Quad
- Duplex image format
  - 1:1 / 1:2 / 2:1 / full screen
- Image reverse: Left/right
- Image rotation: 0°, 90°, 180°, 270°

Display and User Interface

Display Annotation

- Patient ID: Up to 64 characters
- Patient name: First, last and middle
- Gender, age and birth date
- Gestational age from LMP, EDD and GA
- Transducer name
- Institution / hospital name: up to 25 characters
- Date format: 3 types
  - YYYY/MM/DD
  - MM/DD/YYYY
  - DD/MM/YYYY
- Time format: 2 types
  - 12 hours
  - 24 hours
- Acoustic power
  - Mechanical index (MI)
  - Thermal index (TI): TIS, TIB, TIC
- Transducer name
- Preset
- Transducer orientation
- Depth
- Focus
- TGC line
- Frequency
- Frame rate
- Power
- Mode name
- 2D mode
  - Gain
  - Dynamic range

- Gray scale bar
- Doppler mode
  - Wall filter
  - Persistence
  - PRF
  - Sample volume position, size and angle
  - Velocity or frequency scale
  - Time
- Color flow mode
  - Wall filter
  - ROI box
  - PRF
  - Velocity or frequency scale
  - Color scale bar
- M mode
  - Gain
  - Dynamic range
  - Time
- Arrow
- Indicator
- Text
  - Size: Small, medium, large
- Body pattern (Marker)
  - 201 sets
  - Size: Small, medium, large
- Biopsy guide line
- Thumbnail
- Stored image info
- Cine gauge
- Measurement result

Live Mode Display

- 2D
  - Angle steer (Probe dependent): 7 steps (-15 ~ 15°)
  - Colorize: 0 ~ 254
  - Dynamic range: 30 ~ 192dB
  - Edge enhance: 0 ~ 4
  - Frequency: 3 steps
  - Full SRI: 0 ~ 5
  - Gray map: 0 ~ 37
  - Gain: 0 ~ 100
  - Harmonic
  - Pulse inversion harmonic
  - Invert
  - Line density: 0 ~ 5
  - Persistence: 0 ~ 5
  - Power: 1 ~ 100%
  - Reject: 1 ~ 9
  - Spatial compound: 0 ~ 3
- M
  - Anatomical M: On, off
  - AMM angle
  - Colorize: 0 ~ 22
  - Dynamic range: 30 ~ 150dB
  - Gray map: 0 ~ 22
  - Gain: 0 ~ 100
  - Reject: 0 ~ 10
  - Power: 1 ~ 100%
  - Sweep speed: 0 ~ 6
- PWD
  - Angle: -89° ~ 89°
  - Angle steer (Probe dependent): 7 steps (-15 ~ 15°)
  - Auto angle
  - Base line: -8 ~ 8
  - Dynamic range: 30 ~ 120dB
  - Frequency: 3 steps
  - Gray map: 0 ~ 13
  - Gain: 0 ~ 100
  - Line density: 0 ~ 5
  - Power: 1 ~ 100%
  - Reject: 0 ~ 10
  - Scale (PRF): 0.3 ~ 18.1 KHz
  - SV size: 0.7 ~ 15mm
  - Sweep speed: 0 ~ 6
  - Sound: 0 ~ 100%
  - Wall filter: 0 ~ 7
- CWD
  - Angle: -89° ~ 89°
  - Base line: -8 ~ 8
  - Dynamic range: 30 ~ 120dB
  - Gray map: 0 ~ 13
  - Gain: 0 ~ 100
  - Scale (PRF): 0.3 ~ 78.1 KHz
  - Frequency: 3 steps
  - Power: 1 ~ 100%
  - Reject: 0 ~ 10
  - Sound: 0 ~ 100%
  - Sweep speed: 0 ~ 6
  - Wall filter: 0 ~ 9
- CF/PD
  - Angle steer (Probe dependent): 7 steps (-15 ~ 15°)
  - Auto angle
  - Base line: -8 ~ 8
  - Color map: 13
  - Dynamic range: 30 ~ 120dB
  - Ensemble: 6 ~ 16
  - Frequency: 3 steps
  - Flow state: Low, mid, high
  - Gain: 0 ~ 100
  - Line density: 0 ~ 5
  - Power: 1 ~ 100%
  - Scale (PRF): 0.3 ~ 18.1 KHz
  - Smooth: 0 ~ 10
  - Wall filter: 0 ~ 7
- 3D/4D
  - Quality: Low, Mid, H1, H2

- Volume angle: 15 ~ 75°
- View direction: Up, down, Lt, Rt, front, back
- Threshold: 0 ~ 255
- Brightness: 1 ~ 100
- Contrast: 1 ~ 100
- MPR
  Display format
  Ref. plane
  3D orientation
  Smooth: 1 ~ 6
  Render mode: Surface, MaxIP, MinIP, XRay, Light
  Volume review
  Easy cut
- Cube CT
  Play / Stop
  Play mode: YoYo, Loop
  Rotation Axis: X, Y, Z
- Multi Slice
  Display format: 1*1 / 1*2 / 2*2 / 3*3 / 4*4
  Reference Plane: A / B / C
- Live HQ
  Light Direction
  HQ Scatter: 0 ~ 10
  Move light

• Panoramic
- Colorize: 0 ~ 254
- Dynamic range: 30 ~ 192dB
- Edge enhancement: 0 ~ 4
- Frequency: 3 steps
- Full SRI: 0 ~ 5
- Gray map: 0 ~ 37
- Gain: 0 ~ 100
- Harmonic
- Pulse inversion harmonics
- Line density: 0 ~ 5
- Persistence: 0 ~ 5
- Power: 1 ~ 100%
- Reject: 1 ~ 9

• Elastography
- Live dual: On / off
- Invert: On / off
- E persistence: 1 ~4
- Alpha blending: 0 ~ 100
- Color map: 0 ~ 8

• Needle Vision plus
- L/R Flip
- Angle: Shallow, Medium, Steep

Post Processing

• 2D
- Dynamic range
- Colorize
- Full SRI / SRI
- Gray map
- Reject
- TGC

• M
- AutoCalc
- Baseline
- Colorize
- Dynamic range
- Gray map
- Reject
- Sweep speed

• PWD
- Angle correction
- AutoCalc
- Baseline
- Colorize
- Dynamic range
- Gray map
- Reject
- Sweep speed

• CWD
- Angle correction
- AutoCalc
- Baseline
- Colorize
- Dynamic range
- Gray map
- Reject
- Sweep speed

• CF/PD
- Baseline
- Colorize
- Color map
- Threshold

Technology and Feature

Imaging Technology

• Filtered tissue harmonic imaging (FTHI)
• Pulse inversion tissue harmonic imaging (PTHI)
• Speckle reduction imaging (SRI)
• Full speckle reduction imaging (Full SRI)
• Frequency compounding imaging (FCI)
• Needle Vision™
• Needle Vision™ Plus
• Xpeed™
• Live HQ™
• Beam steer
• Virtual Convex (Trapezoidal)
• S-FOV (Extended view)
• Automated intima media thickness measurement

Features (Options)

- Auto NT
- Auto IMT Measurement
- CV measure & report
- SRI
- Full SRI
- Xpeed™
- Frequency Compounding
- Spatial Compounding
- Filtered Tissue Harmonic Imaging (FTHI)
- Continuous Wave (CW)
- DICOM
- DICOM SR: OB, Adult Echo, Vascular
- Anatomical M
- Panoramic
- Elastography
- Tissue Doppler Imaging (TDI)
- Live HQ™
- Cube View™
- Cube Strain™
- Stress Echo
- Needle Vision™
- Needle Vision™ Plus
- 3D/4D
- 4 probe port
- ECG (IHE / AHA)
- Pencil probe port
- Side basket
- Foot switch (3 pedals)

Transducer

SC1-4H

- Convex array
- Frequency: 1.0 - 4.0 MHz
- Field of view: 60°
- Elements: 192
- Radius of curvature: 60 mm
- Footprint: 72.4 X 16.8 mm
- Application: Abdomen, EM, Gynecology, Obstetrics
- Crystal Signature Technology
- Biopsy available

SC1-4HS

- Convex array
- Frequency: 1.0 - 4.0 MHz
- Field of view: 73°
- Elements: 166
- Radius of curvature: 46 mm
- Footprint: 68 X 15.9 mm
- Application: Abdomen, EM, Gynecology, Obstetrics
- Crystal signature technology
- Biopsy is not available

SC1-6H

- Convex array
- Frequency: 1.0 - 6.0 MHz
- Field of view: 60°
- Elements: 192
- Radius of curvature: 60 mm
- Footprint: 72.4 X 16.8 mm
- Application: Abdomen, EM, Gynecology, Obstetrics
- Crystal signature technology
- Biopsy available

C5-8

- Micro convex array
- Frequency: 5.0 - 8.0 MHz
- Field of view: 92°
- Elements: 128
- Radius of curvature: 14 mm
- Footprint: 35 X 6.2 mm
- Application: Abdomen, Cardiac, EM
- Biopsy is not available

C5-8N

- Micro convex array
- Frequency: 5.0 - 8.0 MHz
- Field of view: 93.6°
- Elements: 128
- Radius of curvature: 15 mm
- Footprint: 25.5 X 9 mm
- Application: Abdomen, Cardiac, EM
- Biopsy is not available

L3-8

- Linear array
- Frequency: 3.0 - 8.0 MHz
- Field of view: 38.4 mm
- Elements: 128
- Footprint: 44.8 X 7.8 mm
- Application: Breast, EM, MSK, Vascular, Small Parts
- Biopsy available

L3-12H

- Linear array
- Frequency: 3.0 - 12.0 MHz
- Field of view: 38.4 mm
- Elements: 192
- Footprint: 44.8 X 7.8 mm
- Application: Breast, EM, MSK, Vascular, Small Parts
- Biopsy available

L3-12X

- Linear array
- Frequency: 3.0 - 12.0 MHz
- Field of view: 51.2 mm
- Elements: 256
- Footprint: 58.2 X 10.4 mm
- Application: Breast, EM, MSK, Vascular, Small Parts
- Biopsy is not available

L8-17X

- Linear array
- Frequency: 8.0 - 17.0 MHz
- Field of view: 51.2 mm
- Elements: 256
- Footprint: 58.2 X 10.4 mm
- Application: Breast, EM, MSK, Vascular, Small Parts
- Biopsy is not available

IO3-12

- Linear array
- Frequency: 3.0 - 12.0 MHz
- Field of view: 16 mm
- Elements: 80
- Footprint: 22.8 X 6 mm
- Application: EM, Small Parts
- Biopsy is not available

IO8-17

- Linear array
- Frequency: 8.0 - 17.0 MHz
- Field of view: 25.6 mm
- Elements: 128
- Footprint: 36.7 X 4.2 mm
- Application: Small Parts, MSK
- Biopsy is not available

SP1-5X

- Phase array
- Frequency: 1.0 - 5.0 MHz
- Field of view: 90°
- Elements: 96
- Footprint: 24.8 X 17.6 mm
- Application: Abdomen, Cardiac, EM, TCD
- Crystal signature technology
- Biopsy is not available

MP1-5X

- Phased array
- Frequency: 1.0 - 5.0 MHz
- Field of view: 90°
- Elements: 96
- Footprint: 24.8 X 17.6 mm
- Application: Abdomen, Cardiac, EM, TCD
- Biopsy is not available

SP3-8

- Phase array
- Frequency: 3.0 - 8.0 MHz
- Field of view: 90°
- Elements: 64
- Footprint: 16 X 12.8 mm
- Application: Abdomen, Cardiac, EM, Pediatric
- Crystal signature technology
- Biopsy is not available

E3-10H

- Endo cavity
- Frequency: 3.0 - 10.0 MHz
- Field of view: 150°
- Elements: 192
- Footprint: 21.5 X 18.2 mm
- Application: GYN, OB, Urology, EM
- Biopsy available

EC3-10H/EV3-10H

- Endo cavity
- Frequency: 3.0 - 10.0 MHz
- Field of view: 156°
- Elements: 192
- Footprint: 21.5 X 18.6 mm
- Application: GYN, OB, Urology, EM
- Biopsy available

EC3-10X/EV3-10X

- Endo cavity
- Frequency: 3.0 - 10.0 MHz
- Field of view: 230°
- Elements: 256
- Footprint: 21.5 X 18.6 mm
- Application: GYN, OB, Urology, EM
- Biopsy available

SVC1-6H

- Volume convex array
- Frequency: 1.0 - 6.0 MHz
- Field of view: 79°
- Sweep angle: 75°
- Radius of curvature: 40 mm
- Elements: 192
- Footprint: 59.2 X 45.2 mm
- Application: Abdomen, OB, GYN, EM
- Crystal signature technology

- Biopsy is not available

VE3-10H

- Volume endo cavity
- Frequency: 3.0 - 10.0 MHz
- Field of view: 160°
- Sweep angle: 105°
- Radius of curvature: 10 mm
- Elements: 192
- Footprint: 24.4 X 24.4 mm
- Application: GYN, OB, Urology
- Biopsy is not available

TEE3-7

- Phased array
- Frequency: 3.0 - 7.0 MHz
- Field of view: 90°
- Footprint: 11 X 11 mm
- Array rotation: 0 - 180°
- Application: Cardiac, EM
- 4 ways control
- Biopsy is not available

CW2.0

- Pencil
- Frequency: 2.0 MHz
- Footprint: 17.2 X 17.2 mm
- Application: Cardiac
- Biopsy is not available

CW5.0

- Pencil
- Frequency: 5.0 MHz
- Footprint: 17.2 X 17.2 mm
- Application: Cardiac
- Biopsy is not available

Data Management

Image Archive

- E-View™
- Image store: Up to 52,000 images (382 GB)
- Image format
  - BMP, JPEG, DICOM, AVI, WMV
- Export / Backup / Restore
- Network storage
- Cube View™
- DVR

Cine

- Cine memory: 500 MB, 2,000 frames, 35 volumes
- Prospective and retrospective
- Cine review, save and edit
- Run, stop, frame move
- Play speed: 50% 100%, 200%, 300%, 400%

Measurement and Calculation

Basic (Caliper)

- 2D
  - Distance
  - Area circumference
  - Volume
  - Angle
  - A/B ratio
  - Disk Volume
- M
  - Distance, Time, Slope,
  - %Stenosis
  - HR
  - A/B Ratio
  - Distance
- Doppler
  - Velocity
  - Time
  - PI
  - Trace
  - Acceleration
  - A/B Ratio
  - VTI
  - RI
  - Volume Flow

Abdomen Measurement

- AO
- Renal
- %Stenosis
- A/B ratio

Breast

- 2D
  - Lesion
- M
  - HR
- Doppler
  - Ves
  - HR

Cardiology Measurement

- 2D
  - Ao/LA
  - LA Vol(Diam)
  - Aorta Diam

- Pul. Diam
- Vena Cava
- RV
- Simpson BP
- Simpson SP
- Modified Simpson
- Area Length
- Teichholz
- LV Mass T-E
- LV Mass A-L
- LA Vol (A-L)
- LA Vol (Simpson)
- RA Vol (A-L)
- RA Vol (Simpson)
- TV
- PISA
- MV
- AV
- PV
- Shunts
- AVDia

• M
- Teichholz
- Ao/LA
- MV
- RV
- Pul. Vein

• Doppler
- TV
- Pul. Vein
- TDI
- AV
- PV
- Shunts
- PISA
- MV

Emergency Medicine

• 2D
- AO
- Renal L
- Bladder Vol.

• M
- %Stenosis
- A/B Ratio
- HR

• Doppler
- AO
- Renal A
- SMA
- IMA
- IVC
- Uterine A
- Ovarian A
- Ves
- HR

Gynecology Measurement

• 2D
- Cervix
- Endo
- OV Vol.
- UT Vol.
- Bladder Vol.
- OV
- UT
- Follicle
- Bladder
- Early Gest.
- Uterine

• M
- HR

• Doppler
- AO
- Umbilical A
- Placenta
- Des.Aorta
- Uterine A
- Mid Cerebral A
- Ovarian A
- Ves
- HR

Obstetrics Measurement

• 2D
- AC
- HC
- FL
- BPD
- CRL
- GS
- MSD
- OFD
- YS
- Humerus
- Radius
- Ulna
- Fibula
- NB
- Foot
- MAD
- FAD
- TC
- APTD
- APAD
- APTDxTTD

- CTAR
- NT
- AFI

• M
- HR
- Heart
- Teichholz

• Doppler
- AO
- Umbilical A
- Placenta
- Des. Aorta
- Uterine A
- MCA
- Ovarian A
- Ves
- DV
- Valves
- Ventricles
- Arteries
- Veins
- HR

MSK Measurement

• 2D
- Volume
- Hip (BA) / Hip (AB)

• M
- HR

• Doppler
- Ves
- HR

Pediatric

• 2D
- AO
- Renal L
- Renal Vol.
- Hip

• M
- HR

• Doppler
- AO
- Renal A
- CHA
- IVC
- Hepatic V
- Mid HV
- MPV
- PV
- Splenic A
- Splenic V
- SMA
- SMV
- IMA
- Iliac A
- lilac V
- Ves
- HR

Small Parts

• 2D
- Thyroid Vol.
- Testicle Vol.

• M
- HR

• Doppler
- Ves
- HR

Urology

• 2D
- Renal L
- Renal Vol.
- Bladder Vol.
- Prostate Vol.

• M
- HR

• Doppler
- Ves.
- HR

Vascular

• Carotid 2D
- CCA
- ICA
- Bulb
- ECA
- Vert. A

• Renal 2D
- Arcuate A Sup.
- Arcuate A Med.
- Arcuate A Inf
- Renal A
- Kidney

• Aortic lilac. 2D
- Renal A
- CFA

• Mesenteric 2D
- Abd. Ao
- Celiac A
- SMA
- IMA
- Hepatic A
- Portal Vein
- Splenic A

- Upper Extremity 2D
  - Subclav. A
  - Brachial A
  - Radial A
  - Ulnar A
- Lower Extremity 2D
  - CFA
  - SFA
  - PFA
  - Pop. A
  - PTA
  - ATA
  - Pero. A
- Carotid M / Renal M / Aorta lilac M / Mesenteric M / Upper Extremity M / Lower Extremity M
  - HR
- Carotid Doppler
  - CCA
  - ICA
  - ECA
  - Bulb
  - Vert. A
  - HR
- Renal Doppler
  - Arcuate A Sup.
  - Arcuate A Med.
  - Arcuate A Inf
  - Renal A
  - Kidney
  - HR
- Aortic lilac. M
  - Renal A
  - CFA
  - HR
- Mesenteric Doppler
  - Abd. Ao
  - Celiac A
  - SMA
  - IMA
  - Hepatic A
  - Portal Vein
  - Splenic A
  - HR
- Upper Extremity Doppler
  - Subclav. A
  - Brachial A
  - Radial A
  - Ulnar A
  - HR
- Lower Extremity 2D
  - CFA
  - SFA
  - PFA
  - Pop. A
  - PTA
  - ATA
  - Pero. A
  - HR
- TCD
  - ICA
  - MCA
  - ACA
  - PCA P1
  - PCA P2
  - AComA
  - PComA
  - Vert A
  - BA
  - Ves

Connectivity

Peripheral

- USB 2.0 (8 ports)
- Ethernet 10/100 Base-T
- Remote control
- HDMI video / audio out
- DVI out
- VGA (D-Sub) out
- S-VHS out
- Composite video out
- BNC out
- Audio in L/R
- Audio out L/R

DICOM

- DICOM 3.0
- Image storage
- Multi-frame image storage
- Secondary image capture storage
- Structured report
- Grayscale print management
- Color print management
- Storage commitment push model
- Modality performed procedure step
- Worklist
- Verification
- Media storage: USB media, DVD, CD-R

Thermal printer

- BW
  - Sony UP-D897MD
  - Sony UP-D898MD
  - Sony UP-X898MD
  - Mitsubishi P95DE

- Color
  - Sony UP-D25MD
  - Sony UP-25MD

Safety and Compliance

- IEC/EN 60601-1:6.8.1:
  - Type of protection against electrical shock: Class I
  - Degree of protection against electrical shock (Patient connection): Type BF equipment
  - Degree of protection against harmful ingress of water: Ordinary equipment and all of applied parts (IPX7, IPX8) except ECG meet ingress protection level according to IEC 60529.
  - Degree of safety of application in the presence of a flammable anesthetic material with air or with oxygen or nitrous oxide: Equipment not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.
  - Mode of operation: Continuous operation
- EN 60601-1:1988+A1:1991+A2:1995 (IEC 60601-1:1988 + A1:1991+A2:1995)
- EN 60601-1:2006+A11:2011+A1:2013 (IEC 60601-1:2005 + A1:2012)
- EN 60601-1-2:2007 (IEC 60601-1-2:2007)
- EN 60601-1-4:1996+A1:1999 (IEC 60601-1-4:1996 + A1: 1999)
- EN 60601-1-6:2010 (IEC 60601-1-6:2010+A1:2013)
- EN 60601-2-37: 2008+A11:2011 (IEC 60601-2-37:2007)
- EN 55022:2010, Class B (CISPR 22:2008, modified)
- EN 55011:2009+A1:2010, Group 1, Class B
- EN 61000-4-2:2009 (IEC 61000-4-2:2008)
- EN 61000-4-3:2006+A1:2008+A2:2010 (IEC 61000-4-3: 2006 + A1:2007+A2:2010)
- EN 61000-4-4:2004+A1:2010 (IEC 61000-4-4: 2004 + A1: 2010)
- EN 61000-4-5:2006 (IEC 61000-4-5:2005)
- EN 61000-4-6:2009 (IEC 61000-4-6:2008)
- EN 61000-4-8:2010 (IEC 61000-4-8:2009)
- EN 61000-4-11:2004 (IEC 61000-4-11:2004)
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