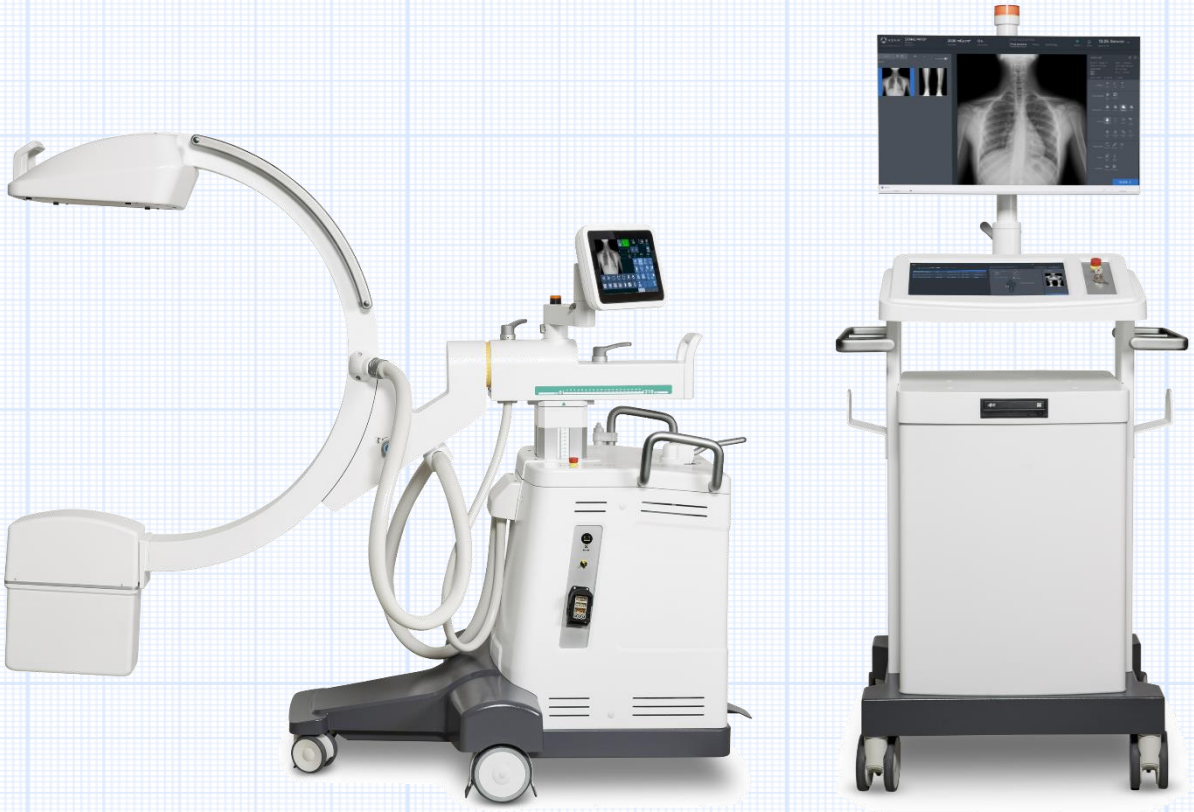


Technical Data
Evo-R+ FP

DMS IMAGING

Electrical data

Features	Data
Power Supply	230 Vac ±10% standard monophase 105 / 115 / 125 / 220 / 240 Vac ±10% monophase on request
Frequency	50/60 Hz ±5 Hz
Absorbed current	see following schedule
Line compensation	Automatic
Line resistance	< 0,4 Ω @230Vac < 0,2 Ω @115Vac
Standard mains plug	16 A @230 Vac
Supply cable	8 m
Insulation class	Class I with applied parts type B
Use conditions	Continuous working with intermitting load
Classification according to the liquids seepage	Equipment: IPx0 Fluoroscopy footswitch: IPx8
Safety in presence of inflammable anesthetic gases	The equipment is not type AP or APG

Absorbed current

5kW version

Mode	230 Vac	115 Vac
Fluoroscopy (120kV 8 mA)	5 A	10 A
Radiography (100kV 50mA 2mAs @ 230Vac or 100kV 35 mA 2mAs @ 115Vac) (1)	20 A	30 A
Stand-by	2 A	4 A

(1) - Temporary load

20kW version

Mode	230 Vac	115 Vac
Fluoroscopy (120kV 8 mA)	5 A	8 A
Radiography (100kV 150 mA 20 mAs) (1)	18 A	20 A
Stand-by	2 A	4 A

(1) - Temporary load

Environmental conditions

Environmental Factor	In normal use	Warehouse and transport
Temperature	from 10 °C to 35 °C	from -10°C to 70°C
Relative humidity	from 10 % to 90 % non-condensing	from 10% to 90% non-condensing
Pressure	from 700 hPa to 1060 hPa	from 500 hPa to 1060 hPa

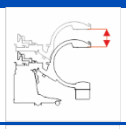
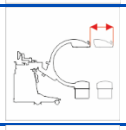
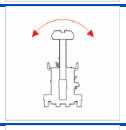
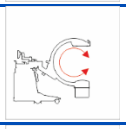
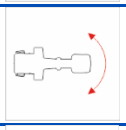
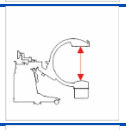
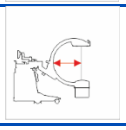
Total equipment filtration

Description	Data
Monobloc	1,4 mmAl
Additional permanent filter	1 mmAl
Collimator	0 mmAl
Monobloc cover	0,1 mmAl
Total filtration of monobloc group	2,5 mm Al
Additional permanent DAPMeter filtration	0,3 mmAl
Total filtration	2,8 mmAl
Additional 4 positions collimator filtration	0 mm / 0,1 mmCu / 0,2 mmCu / 0,3 mmCu

Mechanical data

Mobile stand with "C" arm

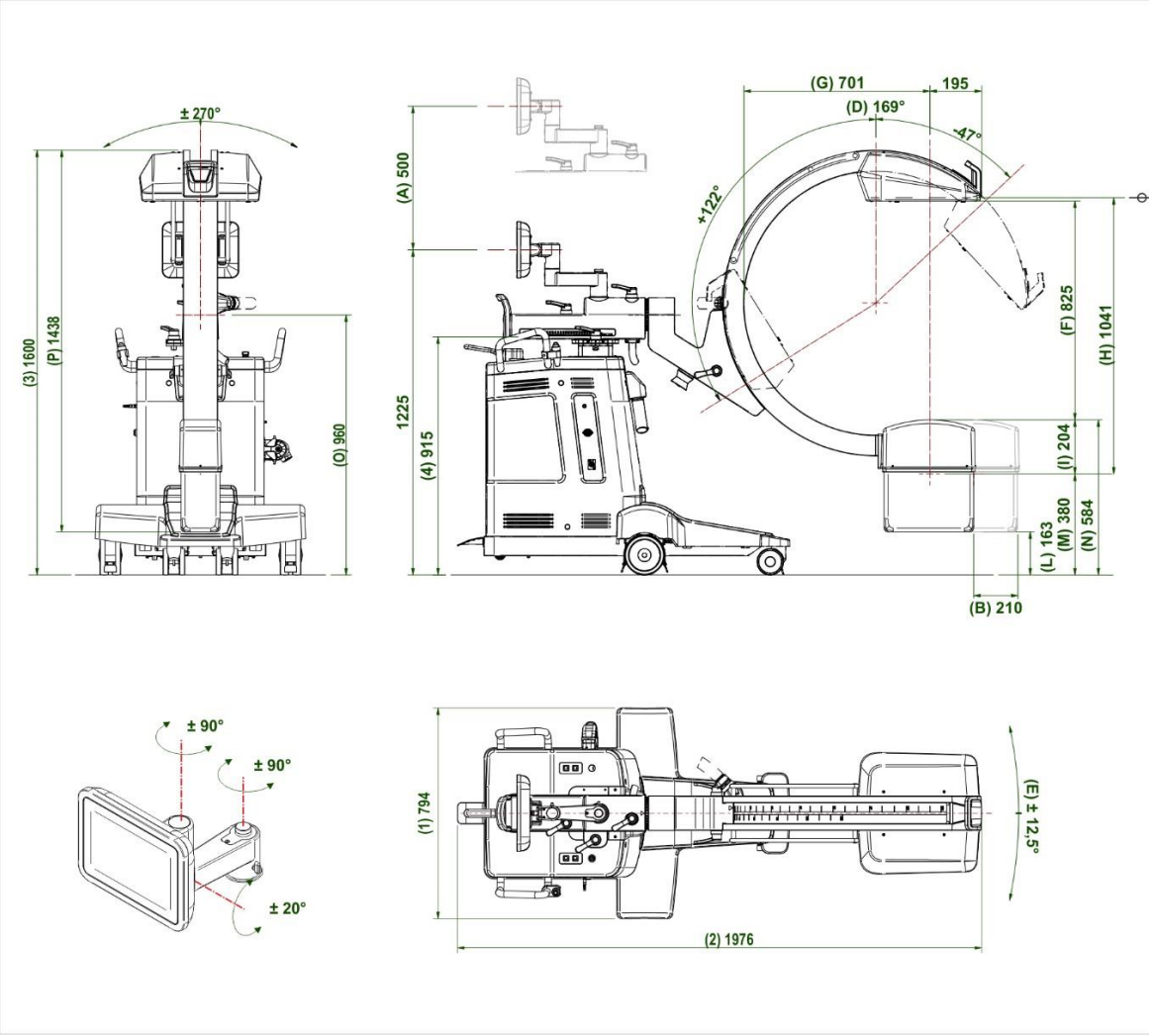
Dimensions in transport position		Data	
Width	(1)	794 mm	(31.26 in)
Depth	(2)	1976 mm	(77.80 in)
Height	(3)	1600 mm	(62.99 in)
Transport handles height	(4)	915 mm	(36.02 in)

Description			Data	
Vertical run		(A)	500 mm motorized in 60 sec	(19,69 in)
Horizontal run		(B)	210 mm manual movement	(8,27 in)
Arm rotation around the horizontal axis		(C)	±270° manual movement	
Orbital rotation		(D)	169° +122° ÷ - 47° manual movement	
Arm group overview		(E)	±12,5° manual movement	
Useful space		(F)	825 mm	(32.48 in)
Arm depth		(G)	701 mm	(27.60 in)

Description		Data	
S.I.D.	(H)	1040 mm	(40.98 in)
Focus-skin distance	(I)	204 mm	(8,03 in)
Min. distance from floor	(L)	163 mm	(6.42 in)
Floor-focus distance	(M)	380 mm	(14,96 in)
Floor-skin distance	(N)	584 mm	(22.99 in)
Min. FPD center-floor distance in oblique projection	(O)	960 mm	(37.80 in)
Width in oblique projection	(P)	1438 mm	(56.61 in)

Description	Data
Equipment movement	Rear drive wheels with manual control from the operator, front castor. Manual parking brake.
Rear wheels	150 x 80 mm (5.91 x 3.15 in)
Front wheels	100 x 80 mm (3.94 x 3.15 in)
Protection against the cables squeezing	Cable pusher on all wheels of the mobile stand.

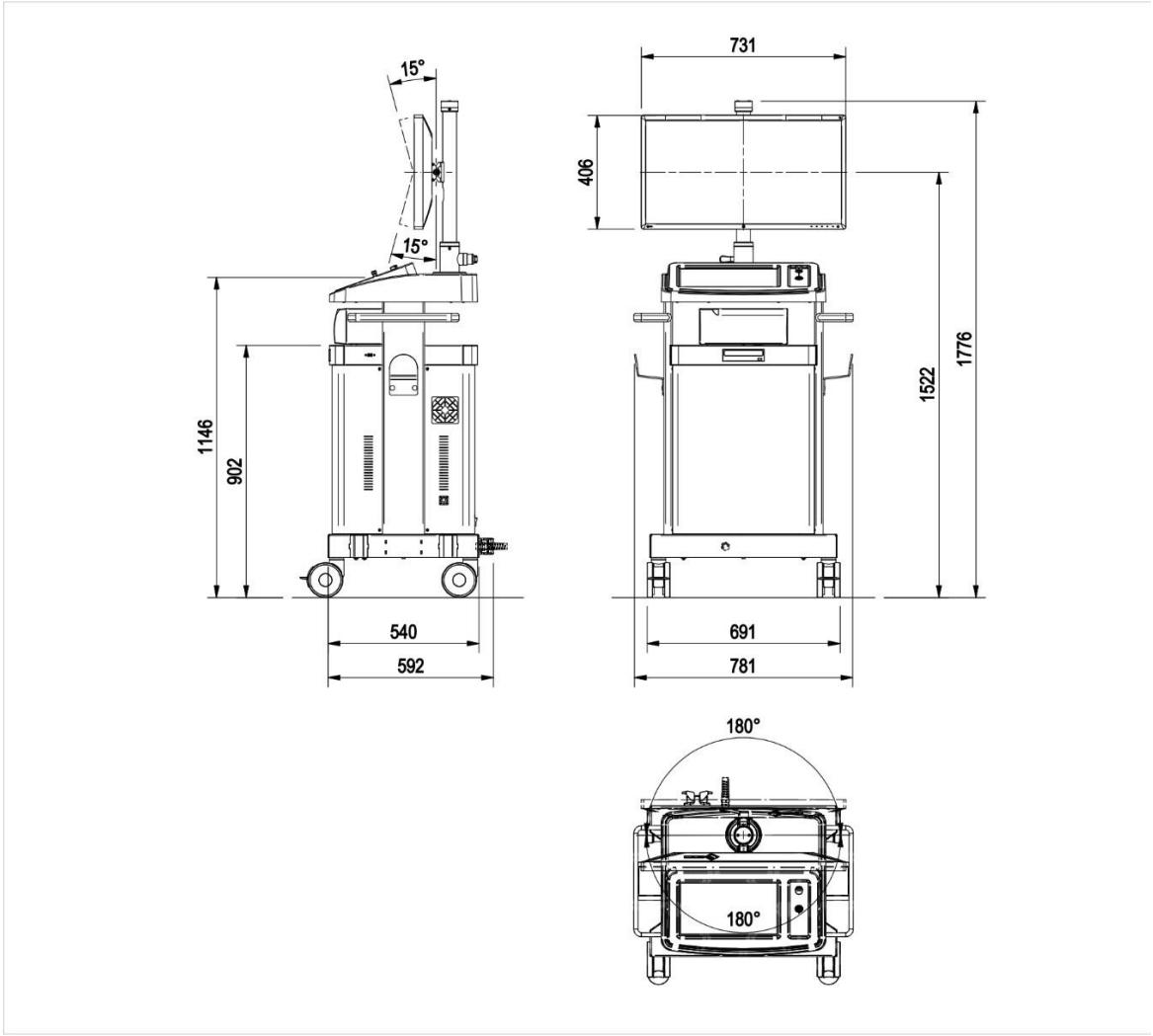
Description	Data
Weight	300 kg (661.39 lb)



All dimensions are in mm. Linear tolerances ±5 mm, angular ±1°

Display station dimensions

Description	Data
Weight	140 kg (308,64 lb)



All dimensions are in mm. Linear tolerances ±5 mm, angular ±1°

User interface and languages

Description	Data
User interface on mobile stand	Control panel managed by microprocessor, touch- screen LCD monitor 10,1" for the management of all operative parameters
User interface on Display Station	TFT LCD color monitor 27" for image management Touch-screen LCD Full HD monitor 15,6" for the management from the operator of all operative parameters
Selectable languages on control console	English, French, Italian, German, Spanish

Radiological data

Version 5 kW

Description	Rotating anode version
Generator, power in DC current	2,5 kW @100 kV (100 kV, 25 mA, 100 ms)
Generator, max power in DC current	5 kW (100 kV, 50 mA) mAs < 2,2 @230 Vac;
Max high voltage (fluoroscopy and radiography)	120 kVp
Inverter Frequency	40 kHz
Max. current in continuous fluoroscopy	8,0 mA (standard curve)
Max. current in radiography	18 mA @115 Vac - 25 mA @230 Vac
Max. current in radiography (Hi-Rad)	35 mA @ 115 Vac - 50 mA @ 230 Vac
Max. mAs in radiography	90 mAs @115 Vac - 125 mAs @230 Vac

Version 20 kW

Description	Rotating anode version
Generator, power in DC current	Max 20 kW (100 kV, 200 mA, 100 ms @115/230 Vac)
Generator, max power in DC current	20 kW (100 kV, 200 mA) mAs ≤ 20 @ 115/230 Vac;
Generator, max power in DC current	max 15 kW (100 kV 150 mA, pulse mode 25 fps)
Max high voltage (fluoroscopy and radiography)	120 kVp
Inverter Frequency	40 kHz
Max. current in pulsed fluoroscopy	8,0 mA (standard curve)
Max current in High Level HCF	30 mA
Max. current in “SNAPSHOT” fluoroscopy	200 mA
Max current in Cine	90 mA @115 Vac – 150 mAs @230 Vac
Max current in radiography	50 mA
Max current in radiography (Hi-Rad)	200 mA
Max mAs in radiography	100 mAs

Exposure mode: fluoroscopy

Pulsed fluoroscopy

Description	Data
Focus	0,3 mm small focus (IEC 336)
Exposure cadence (selectable from console)	See §"Exposure cadences"
kV-mA relationship	See §"APR kV-mA relationship"
Safety timer	Audible signal after five interrupted minutes or cumulative of the load application [1]. After 10 interrupted minutes of load application [1] (non cumulative) the x-ray emission stops.

[1] intended as supply of electric energy to the anode of the x-ray tube (IEC 60601-2-54).

Fast Fluoro

Description	Data
Focus	0,3 mm small focus (IEC 336)
Exposure cadence (selectable from console)	fixed 30 fps
kV-mA relationship	See §"APR kV-mA relationship"
Safety timer	Audible signal after five interrupted minutes or cumulative of load application [1]. After 10 interrupted minutes of load application [1] (non cumulative) the x-ray emission stops.

Fluoroscopy High Level HCF (only version 20kW)

Description	Data
Focus	0,6 mm large focus (IEC 336)
Exposure cadence (selectable from console)	See Exposure cadences
mA variation range	15/30 mA
Images storage	Manual

Cine mode (only version 20 kW)

Description	Data
Focus	0,6 mm large focus (IEC 336)
Exposure cadence (selectable from memory)	See Exposure cadences
mA variation range	from 15 mA to 150 mA in step of 15 mA
Images storage	Automatic storage in RAM memory or in non-volatile memory.

Exposure cadences

The exposure cadence depends on the FPD size and the selected zoom level.

Panel	Zoom	Cadences (fps)
2323	0 (23x23)	15 - 7,5 -5 - 3 - 1 - 0,5
	1 (16x16)	15 - 7,5 -5 - 3 - 1 - 0,5
	2 (10x10)	15 - 7,5 -5 - 3 - 1 - 0,5
3030	0 (30x30)	15 - 7,5 -5 - 3 - 1 - 0,5
	1 (20x20)	15 - 7,5 -5 - 3 - 1 - 0,5
		15 - 7,5 -5 - 3 - 1 - 0,5

Single image Digital Snapshot

Version 5kW

mA variation range - 0.6 mm large focus (IEC 336)

kV	mA@230 Vac	mA@115 Vac
40	60	45
50	60	45
60	60	45
70	60	45
80	60	45
90	60	45
100	60	45
110	60	45
120	60	45

Version 20kW

mA variation range - 0.6 mm large focus (IEC 336)

kV	mA@230 Vac	mA@115 Vac
40	150	150
50	150	150
60	150	150
70	200	200
80	200	200
90	200	200
100	200	200
110	150	135
120	135	120

APR kV-mA relationship

The APR programs proposed and preloaded in the equipment by the manufacturer represent only recommendations to apply to the patient in order to optimize the working and the exam outcome. The kV and mAs values set by factory in the APR programs can be modified and stored at any time by the user.

	Standard anatomics curve		Limbs or paediatrics curve		Thorax curve		Tubby patient curve[2]		Half-mA curve	
		Dose [1]		Dose [1]		Dose [1]		Dose [1]		Dose [1]
kV	**mA**	**µGy/s**	**mA**	**µGy/s**	**mA**	**µGy/s**	**mA**	**µGy/s**	**mA**	**µGy/s**
40	0.50	9,0	0.70	12,1	0.50	9,1	0.50	9,1	0.25	5,5
50	2.50	68,27	2.40	65,33	1.00	33,79	1.00	33,79	1.25	39,56
60	5.00	197,4	4.20	169,4	3.00	126,9	3.00	126,9	2.50	109,3
70	7.50	398,2	5.60	307,1	5.00	279,3	5.00	279,3	3.75	218,7
80	7.60	530,5	6.40	455,4	7.00	493,5	7.00	493,5	3.80	293,7
90	7.70	676,1	6.40	577,3	6.50	583,9	6.50	583,9	3.85	379,2
100	7.80	840,8	6.40	710,2	6.25	697,8	6.25	697,8	3.90	478,4
110	8.00	1029	6.60	875,6	6.00	812,5	6.00	812,5	4.00	593,1
120	8.00	1211	6.60	1031	5.50	899,2	5.50	899,2	4.00	705,0

[1] The dose measure (indicated in µGy/s) has been performed in compliance with IEC 60601-1-3 §5.2.4.2. and 60601-2-54 §203.5.2.4.5.101.
For more information about the dose measurement and the test setup, refer to paragraph §"Dosimetric information".
[2] Only for version5 kW

Exposure mode: radiography

Version 5kW

Description	Data
Focus	0,6 mm large focus (IEC 336)
kVp variation range	40 - 120 kV
mA variation range	see schedules
mAs variation range	1 – 125 mAs @230 Vac; 1 - 90 mAs @115 Vac
mA HiRad variation range (mAs < 2,2)	see schedules
HiRad exposure times range	20 - 67 ms @ 230 Vac; 28 - 96 @115 Vac
Exposure times range	0,04 - 5 s @230 Vac; 0,05 - 5 s @ 115 Vac
Duty cycle	Calculated according to the anode dissipation

mA variation range @230Vac

kV	Rad mA	mAs max	High Rad mA	mAs max
40	25	125	50	2
50	25	125	50	2
60	25	125	50	2
70	25	125	50	2
80	25	125	50	2
90	25	125	50	2
100	25	125	50	2
110	22,7	100	32,7	2
120	20,8	100	30,0	2

mA variation range @115Vac

kV	Rad mA	mAs max	High Rad mA	mAs max
40	18	90	35	2
50	18	90	35	2
60	18	90	35	2
70	18	90	35	2
80	18	90	35	2
90	18	90	35	2
100	18	90	35	2
110	16,4	71	22,7	2
120	15,0	71	20,8	2

Version 20kW

Description	Data
Focus	0,6 mm large focus (IEC 336)
kVp variation range	40 - 120 kV
mA variation range	see schedules
mAs variation range	1 – 100 mAs (0,02 – 2,5 s)
mA HiRad variation range (mAs < 16)	see schedules
HiRad exposure times range	5 - 133 ms

Exposure times range	0,02-2 s
Duty cycle	Calculated according to the anode dissipation

mA variation range

kV	Standard mA	Standard mAs	High Rad mA	High Rad mAs
40	50	100	150	20
50	50	100	150	20
60	50	100	150	20
70	50	100	200	20
80	50	100	200	20
90	50	100	200	20
100	50	100	200	20
110	45	100	120	16
120	41	100	120	16

APR radiography

The APR programs proposed and preloaded in the equipment by the manufacturer represent only recommendations to apply to the patient in order to optimize the working and the exam outcome. The kV and mAs values set by factory in the APR programs can be modified and stored at any time by the user.

Description		 Set	Dose[1] mGy		Dose[1] mGy		Dose[1] mGy
	APR 1 (Head)	77 kV - 56 mAs	6,769	74 kV - 45 mAs	5,026	80 kV - 71 mAs	9,261
	APR 2 (Lungs)	110 kV - 11 mAs	2,462	107 kV - 9 mAs	1,911	110 kV - 14 mAs	3,154
	APR 3 (Pelvis)	85 kV - 22 mAs	3,153	82 kV - 28 mAs	3,777	88 kV - 18 mAs	2,741

[1] The dose measurement (indicated in mGy) has been performed in compliance with IEC 60601-1-3 § 5.2.4.2 and 60601-2-54 §203.5.2.4.5.101 Skin dose level.

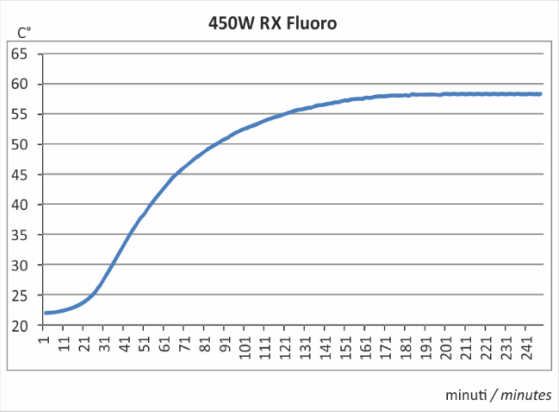
For more information about the dose measurement and the test setup, refer to paragraph "Dosimetric information".

Version 5kW

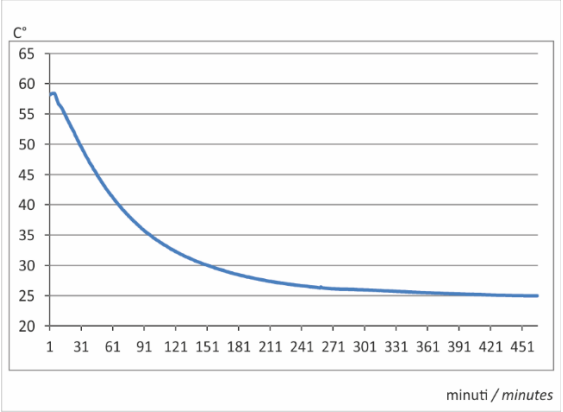
Monobloc I-40R 5 RF LC+

Description	Data
Monobloc model	I-40R 15 RF LC+
Nominal power	5 kW (100 kV 50 mA)
Max. tube voltage	120 KV
Ripple at the max. power	<1%
kV Rise time at max. power	<1 ms
Mechanical housing features	
Min. inherent filtration @75kV	1.4 mmAl
Weight	21.5 kg (47,4 lb)
Thermal housing features	
Available thermal capacity (RX)	1560 kJ
Total thermal capacity	2106 kJ
Thermal safety	70°C ±5°C
Compensation lung	480 cm^3 (29.3 cubic inch)
Continuous thermal dissipation	90 W, 120 HU/sec, 7200 HU/min
Available continuous thermal dissipation (XR) with heat exchanger	450 W
Total continuous thermal dissipation with heat exchanger	600 W
Leakage radiation (IEC 60601-1-3)	<1 mGy/h

Thermal Curves



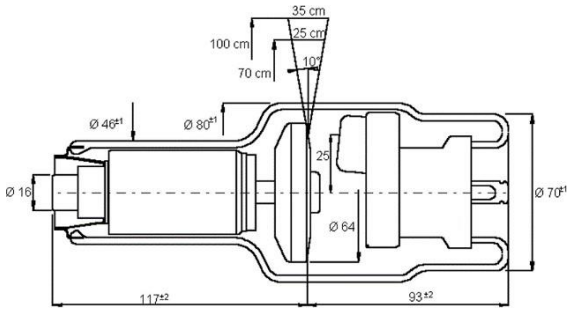
Heating curves without forced ventilation - continuous fluoroscopy



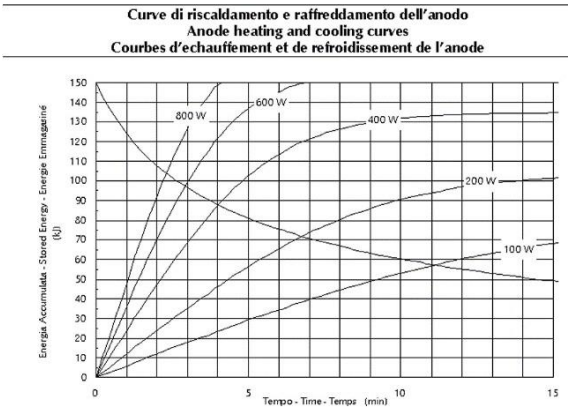
Cooling curve without forced ventilation

X-Ray insert model IAE X20P 0,3-0,6

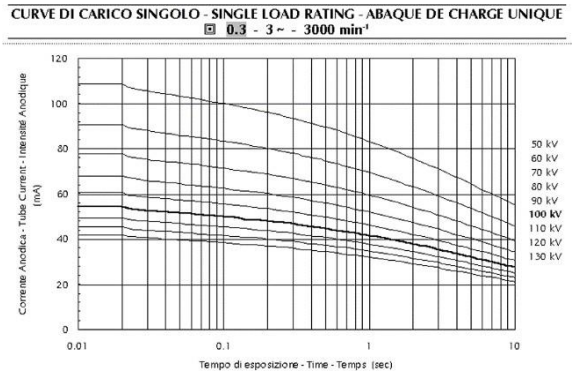
Description	Data
Max. peak voltage	120 kVP
Max. filament current	5,4 A
Nominal focus dimension: small focus	0,3 mm
Nominal focus dimension: large focus	0,6 mm
Nominal anodic power: small focus	5 kW
Nominal anodic power: large focus	17 kW
Anode material	Rhenium / Tungsten / Molybdenum
Anodic diameter	64 mm
Anode inclination angle	10°
Thermal anode capacity	150 kJ (200kHU)
Anode continuous thermal dissipation	300 W (24kHU/min, 18 kJ/min)
Anode max. thermal dissipation	500 W (800 kHU/min)
Min. inherent filtration	0,7 mm Al
Tube material	glass
Speed of rotation of the anode	3000 rpm



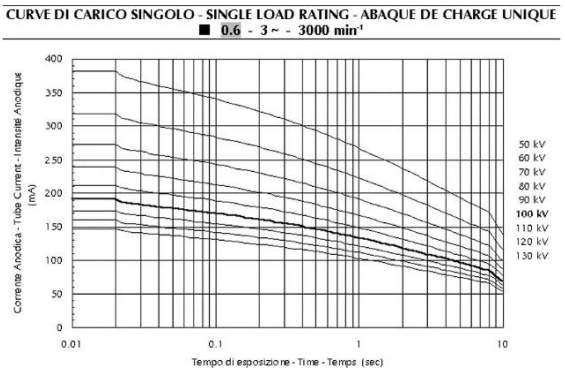
Mechanical dimensions



Anode heating and collision curves



0,3mm focus load curves



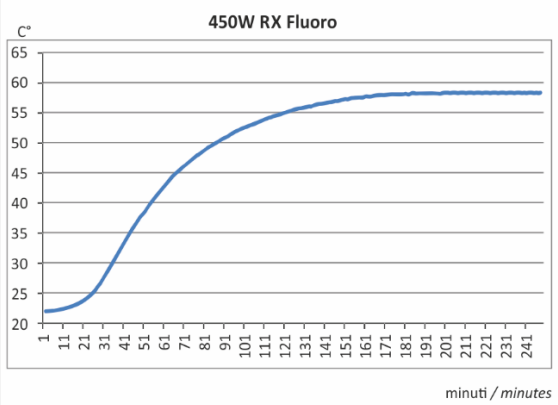
0,6mm focus load curves

Version 20 kW

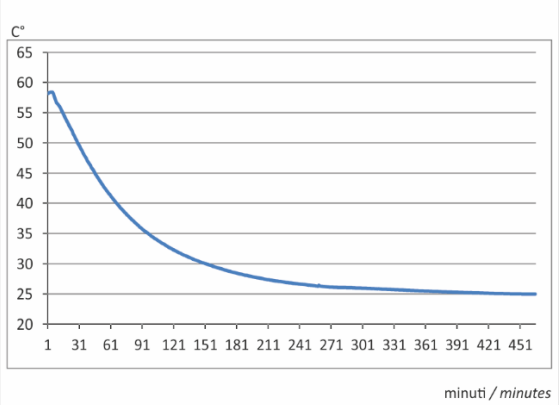
Monobloc I-40R 15 RF LC+

Description	Data
Monobloc model	I-40R 15 RF LC+
Nominal power	20 kW (100 kV 200 mA)
Max. tube voltage	120 KV
Ripple at the max. power	<1%
kV Rise time at max. power	<1 ms
Mechanical housing features	
Min. inherent filtration @75kV	1.4 mmAl
Weight	21.5 kg (47,4 lb)
Thermal housing features	
Available thermal capacity (RX)	1560 kJ
Total thermal capacity	2106 kJ
Thermal safety	70°C ±5°C
Compensation lung	480 cm^3 (29.3 cubic inch)
Continuous thermal dissipation	90 W, 120 HU/sec, 7200 HU/min
Available continuous thermal dissipation (XR) with heat exchanger	450 W
Total continuous thermal dissipation with heat exchanger	600 W
Leakage radiation (IEC 60601-1-3)	<1 mGy/h

Thermal Curves



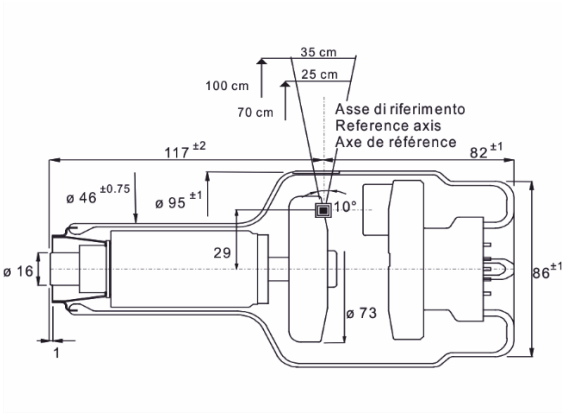
Heating curves with active liquid cooling - continuous fluoroscopy

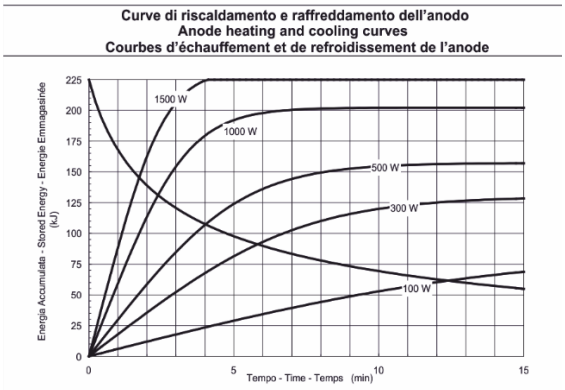


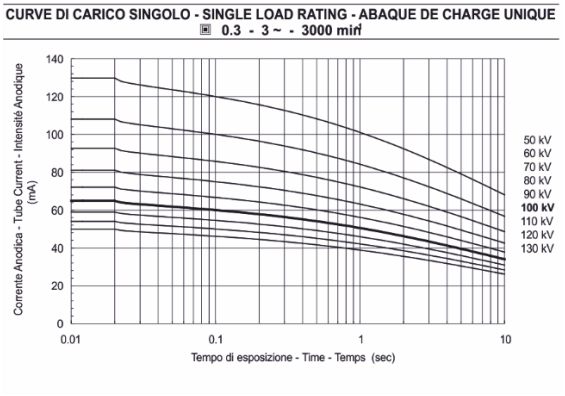
Cooling curve with active liquid cooling

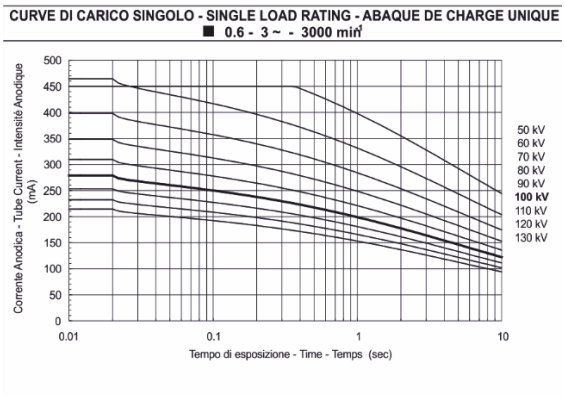
Rotating anode X-ray insert - IAE RTM 70 0,3-0,6

Description	Data
High nominal voltage	130 kVp
Max. filament current	490 mA (rms)
Nominal dimension of small focus	0,3 mm
Nominal dimension of large focus	0,6 mm
Nominal anode power of small focus	6 kW
Nominal anode power of large focus	25 kW
Anodic material	RTM focal track: Tungsten - Renium - Molybdenum
Anodic diameter	73 mm (2,9 in.)
Anodic angle	10°
Thermal anodic capacity	225 kJ (300 kHU)
Thermal continuous anode dissipation	750 W
Max. thermal continuous anode dissipation	1300 W
Min. inherent filtration (IEC 522)	0,7 mm Al eq.
Tube material	glass
Rotation speed	3000 rpm (f=50Hz), 3600 rpm (f=60Hz)









Seasoning

In case it is idle for more than three months, proceed with the tube reset as indicated below.
If during the procedure some operation irregularities or anomalies are found, it is necessary to stop it for at least half an hour and start it again from the beginning.

Fluoroscopy

Focus	kV	mA	Exposure (sec)	Stand-by (sec)	Nr of exposures
SF	80	2	30	3	1
SF	90	2	30	3	1
SF	100	2	30	3	1
SF	110	2	30	3	1
SF	120	2	30	3	2

Radiography

Warm-up

Focus	kV	mA	Exposure (sec)	Stand-by (sec)	Nr of exposures
LF	80	50	0,5	4	28

kV Step-up

Focus	kV	mA	Exposure (sec)	Stand-by (sec)	Nr of exposures
LF	80	50	0,01	2	3
LF	90	50	0,01	2	3
LF	100	50	0,01	2	3
LF	110	50	0,01	2	3
LF	120	50	0,01	2	20

Radiography 1

Focus	kV	mA	Exposure (sec)	Stand-by (sec)	Nr of exposures
LF	80	80	0,1	3	5
LF	90	80	0,1	3	5
LF	100	80	0,1	3	5
LF	110	80	0,1	3	5

Radiography 2

Focus	kV	mA	Exposure (sec)	Stand-by (sec)	Nr of exposures
LF	115	80	0,1	3	10
LF	120	80	0,1	3	20

Heat exchanger

Description	Data
Model	HE30, water-air heat exchanger
Dissipation rate	500 W (air temperature: 25°C, water temperature 40°C)

Power supply	24 Vdc 2.6 A
Cooling Fluid	50 % water, 50 % Ethylene glycol.

Collimator

Description	Data
Long + Cross + Secondary shutters + Motorized filters	R650/027/QDASM
Long + Cross + Motorized filters	R650/027B/DASM
Fields size (DF 100cm - 40") Long Cross field delimitation	0 ± 35 cm
Fields size (DF 100cm - 40") secondary shutters delimitation	0 ± 35 cm
Leakage radiation (IEC 60601-1-3)	< 1 mGy/h
Inherent filtration (IEC 60601-1-3)	0 mm
Additional filtration	Motorized filters 4 positions 0 mm 0,1 mm Cu 0,2 mm Cu 0,3 mm Cu
Classification IEC 60601-1 par.6:	
Protection against electric hazards	Class I
Protection against direct and indirect contacts	equipment with applied part Type B
Protection against the water seepage	common protection (IPXO)

Detector

Description	Data	
Model	VIVIX-D 2323G	VIVIX-D 3030G
Image Sensor	TFT: IGZO (Indium Gallium Zinc Oxide)	TFT: IGZO (Indium Gallium Zinc Oxide)
X-ray Scintillator Type	Csi: TI (Thallium doped Caesium Iodide)	Csi: TI (Thallium doped Caesium Iodide)
Pixel Pitch	0.148 mm (148 μm)	0.148 mm (148 μm)
Field of View	9″ x 9″	12″ x 12″
Active Area (H x V)	227.328 mm x 227.328 mm	TBD
Active Array	1536 x 1536 pixels	TBD
Effective Area	223.776 mm x 223.776 mm	TBD
Effective Array	1512 x 1512	TBD
Grayscale	16 bit	16 bit
Spatial Resolution (Min.)	3.3 ~ 3.4 lp/mm	3.3 ~ 3.4 lp/mm
Frame Rate (Max.)	30 fps @1x1 / 60 fps @2x2 (including image processing)	30 fps @1x1 / 60 fps @2x2 (including image processing)
X-ray Synchronization Control	Internal Trigger External Trigger (External Line Trigger)	Internal Trigger External Trigger (External Line Trigger)
Rated Power Supply	DC +12 V, Max. 1.7 A	DC +12 V, Max. 1.7 A
Power Consumption	Max. 24 W	Max. 24 W
Dimensions (H × W × D)	261.1 mm × 255.8 mm × 44.35 mm	261.1 mm × 255.8 mm × 44.35 mm
Weight	2.9 kg	2.9 kg
Image Transfer	1 port Nbase-T Ethernet	1 port Nbase-T Ethernet
Data Transmission Rate (Wired)	Max. 2.5 Gbps	Max. 2.5 Gbps
X-ray Energy Range	40 kVp ~ 150 kVp	40 kVp ~ 150 kVp

Description	Data	
Detector Model	2121 DXV	3030 DX
Receptor type	Amorphous silicon	Amorphous silicon
Conversion screens	CsI: TI	CsI: TI
Area pixel – total	209,9 mm (h) x 209,9 mm (v)	298 mm (h) x 298 mm (v)
Pixel matrix – total	1024 (h) x 1024 (v)	1536 (h) x 1536 (v)
Pixel matrix – effective	1004 (h) x 1004 (v)	1516 (h) x 1516 (v)
Pixel size	205 μm	194 μm
Max resolutions	2,43 lp/mm (1x1) 1,22 lp/mm (2x2)	2,58 lp/mm @15 fps (1x1) 1,29 lp/mm @30 fps (2x2)
Image quality (RQA5)		
MTF @ 1 lp/mm	55%	55%
MTF @ 2 lp/mm	22%	22%
DQE @ 0 lp/mm, 1lp/mm, 2. lp/mm	80%, 65%, 40%	77%, 55%, 30%
NED	2,15nGy	3 nGy

Fill factor	77,4%	68%
Range kV	40 – 150 kVp	40 – 150 kVp
A/D conversion	16 bit	16 bit
Weight	3.2 kg	5.6 kg
External dimensions	241 mm (h) x 241 mm (v)	337,97 x 327,76

Removable antiscattering grid

Description	21/21 DVX / VIVIX-D 2323G	3030 DX
Line rate	60 l/cm	70 l/cm
Ratio	11:1	10 : 1
Focus	1030 mm	1030 mm
Material	Fiber interspacer and carbon cover	Fiber interspacer and carbon cover

Image processor

Software data

Features	Data ADAM
Dynamic storage	Yes
Acquisition	16 bits
Image Resolution	1500 x 1500 pixels / image
Image display	3840 x 2160 pixels (two images on single monitor)
Post processing	LIH, Image reversals, Image rotation, Brightness and contrast adjustment, B&W inversion, Edge enhancement, Cineloop, Digital zoom, Noise reduction, Motion detection, Metal detection, Mosaic overview, Live-Ref monitor swap, Automatic image/series storage, Automatic Ref storage, Image processing dedicated to exams, GPU processing. Optional: DSA, Min/Max Opacity, RoadMapping, Pixel shift.
Virtual collimators	Yes
Dosimetry measurements	Yes
Measures	Calculation of distances Angles Stenosis Text annotations
Mass memory	300,000 images
Interfaces	Ethernet TCP/IP Ethernet TCP/IP: standard DICOM® 3 Wireless network adapter: 802.11 n (optional) CD/DVD Recorder USB
DICOM® functions	Verify Storage Worklist Print CD/DVD MPPS Storage Commitment RDSR
User interface languages	French, English

Features	Data TDS
Dynamic storage	Yes
Acquisition	16 bits
Post processing	LIH, H/V image inversion, Brightness and contrast adjustment, Grey scale inversion, Edge enhance, Cineloop Shifting pixel, DSA, Max Opacity, Road Map, Virtual Road Map, Land Marking, Digital zoom, Electronic lens, Recursive Filter, Motion detection filter, Metal detection, Adaptive gamma curve, Images composition, Land marking, Mosaic overview, Image subtraction.
Virtual collimators	Yes
Dosimetry measurements	Yes
Measures	Calculation of distances Angles Stenosis Text annotations
Mass memory	About 110.000 images with standard disc 220.000 with optional disc
Interfaces	Ethernet TCP/IP Ethernet TCP/IP: standard DICOM® 3 Wireless network adapter: 802.11 n (optional) CD/DVD Recorder USB
DICOM® functions	Verify Storage Worklist Print CD/DVD Query retrieve MPPS Storage Commitment RDSR
User interface languages	Italian, English

Hardware data

Features	Data ADAM
Processor	Intel® Core™ i7
Memory	32 GB
Mass memory	SSD 500 GB; 1 TB optional
Operating system	Windows 10 IoT Enterprise 64 bits
UPS protection	Protection against power outages Backup time 30 mn
CD/DVD recorder	SATA-USB

Features	Data TDS
Processor	Intel® Core™ i7 – 6700 8M cache
Memory	16 GB
Mass memory	SSD 500 GB; 1 TB optional
Operating system	Windows 10 IoT Enterprise High End
CD/DVD recorder	
USB 3.0	

Monitors ADAM Imaging system

Color base Monitor 27"

Description	Data
Brand	EIZO
Model	EV2740X
Type	27" (68.50 cm) IPS (anti-glare)
Display angle	Hor: 178° Vert: 178°
Contrast Ratio	2000 : 1
Resolution	3840 x 2160 lines
Pixel dimensions	0.155 x 0.155 mm / 163 ppi
Display color	16,7 million colors
Brightness Max. luminance	350 cd/m2
Aspect Ratio	16:9
DICOM part 14 compliant	Yes
Ambient light brightness control	Yes
Response time	5 ms (gray-to-gray)
Input signals	DisplayPort x 1, HDMI x 2, USB-C x 1
Audio Speakers	2 x 1 W
Brightness / Contrast	OSD menu, frontal pushbuttons
Power supply	100-120 / 200-240V~ 50-60Hz 1.65A – 0.75 A
Absorption	163 W
Dimensions (W x H x D)	611.6 x 358.8 x 60.5 mm
Weight	5.5 kg
Mounting interface	VESA 100x100 mm

Colour base Monitor 31,5 " - medical (optional)

Description	Data
Brand	EIZO
Model	EV3240X
Type	31.5" (80 cm) IPS (anti-glare)
Display angle (H / V)	178˚ / 178˚
Brightness	350 cd/m2
Contrast Ratio	2000:1
Resolution	3840 x 2160 lines
Pixel pitch	0.182 x 0.182 mm / 140 ppi
Display colour	16,7 million colours
DICOM part 14 compliant	Yes
Ambient light brightness control	Yes
Aspect Ratio	16/9

Response time	5 ms (gray-to-gray)
Input signals	DisplayPort x 1, HDMI x 2, USB-C x 1
Brightness / Contrast	OSD menu, frontal pushbuttons
Audio Speakers	2 x 1 W
Power supply	100-120 / 200-240V~ 50-60Hz 1.65A – 0.75 A
Absorption	163 W
Dimensions (W × H × D)	712.2 x 415.3 x 59 mm
Weight	6.7 kg
Mounting interface	VESA 100x100 mm

Monitors TDS Imaging system

Color base Monitor 27"

Description	Data
Brand	EIZO
Model	EV2750X
Type	27" (68.50 cm) IPS (anti-glare)
Display angle	Hor: 178° Vert: 178°
Contrast Ratio	1000 : 1
Resolution	2560 x 1440 pixel
Pixel dimensions	0.23 x 0.23 mm
Display color	16,7 million colors
Brightness Max. luminance	350 cd/m2
Aspect Ratio	16:9
Response time	5 ms
Input signals	DisplayPort, HDMI, DVI-D
Brightness / Contrast	OSD menu, frontal pushbuttons
Power supply	100-120 / 200-240V~ 50-60Hz
Absorption	67 W max
Weight	8 kg
Mounting interface	VESA 100x100 mm

Colour base Monitor 31 " - medical (optional)

Description	Data
Brand	EIZO
Model	RadiForce MX315W
Type	31.1" IPS (anti-glare)
Display angle (H / V)	Hor: 178˚ / 178˚
Brightness	350 cd/m2
Contrast Ratio	1300:1
Resolution	2560 x 1440 pixels
Pixel pitch	0.17 x 0.17 mm /
Display colour	1,07 billions of colours (Display Port, 10 bit) 16,7 millions of colours (Display Port, 8 bit)
Brightness max luminance	450 cd/m2
Aspect Ratio	17/9
Response time	20 ms
Input signals	DisplayPort, DVI-D
Brightness / Contrast	OSD menu, frontal pushbuttons
Power supply	100-120 / 200-240V~ 50-60Hz
Absorption	67 W max
Weight	7.5 kg
Mounting interface	VESA 100x100 mm

Optional: laser targeting device

Device for dose reduction

Description	Data
Wave Length	635 nm
Optical Output Power	≤ 2.5 mW
Safety class IEC 60825-1:2014	Class 1

Optional: Dose Area Product Meter (DAP Meter)

Round chamber for panels 2323

Description	Data
Model	DIAMENTOR CM-T T11048
Manufacturer	PTW-Freiburg
Use mode	Measuring device for finding the "Dose area product" in diagnostic radiology according to the standard IEC 60580.
Measuring category	Dose area product, dose area product rate
Data interface	CAN
Linear deviation	< 2,5 %
Offset current (coming from zero)	< 0.2 pA at 25°C
Arrangement time	max. 1 second
Readiness measure	10 seconds after the switching-ON
Nominal useful DAP rate range	(0.01 ... 4500) µGym²/s
Chamber voltage	+ 400 Vdc ±10 V
Current limitation of the chamber voltage	< 100 µA
Dose area product:	
Unit	µGym²
Measure range	(0.1 ... 99 999 999) µGym²
Accuracy	±1 Digit
Digital resolution	0.01 µGym²
Dose area product rate:	
Unit	µGym²
Measure range	(0.1 ... 15 000) µGym²/s
Accuracy	±1 Digit
Digital resolution	0.01 µGym²/s
Chamber:	
Type	Type TA34037
kV Range	(40 ... 120) kV
Max energetic dependence	± 8 % according to IEC60580, Table 6
Min. inherent filtration	< 0.3 mmAl / 70 kV (IEC 60522)
Chamber field dimension	72 mm diameter
Electrodes distance	6.5 mm
Connecting system	A

Optional: Thermal printer

Thermal printer

Description	Data
Model	Sony UP971AD
Printing Method	Direct thermal printing
Resolution	325 dpi
Gradations	8 bits (256 levels) processing
Picture elements	Digital: 7680 x 2560 dots, Video NTSC: 720 x 504 dots, Video PAL: 720 x 604 dots
Paper size	Paper width of 210 mm
Picture area	Digital: 600 x 200 mm (Max)
	Video: STD NTSC: 182 x 144 mm PAL: 188 x 140 mm SIDE NTSC: 244 x 184 mm PAL: 244 x 183 mm
Picture memory	Digital: 2816 x 7680 x 8 bits Video: 6 frames (720 x 608 x 8 bits for one frame)
Printing time	Approx. 8 seconds/image (in standard mode)
Interface	USB Terminal (type A) for USB flash units (x1) Hi-Speed USB (USB 2.0) (x1) VIDEO INPUT: BNC type (X1) NTSC or PAL composite video signals 1.0Vp-p, 75ohm (NTSC/PAL automatically discriminated) VIDEO OUTPUT: BNC type (x1) Loop-through REMOTE: Stereo mini jack (x1)
Power requirements	AC 100 V to 240 V, 50/60 Hz
Dimensions (W x H X D)	316 x 132.5 x 265 mm
Weight	7 Kg

ESU (Energy Storage Unit)

Present only with 20 kW C-arm version

Description	Data
Brand, Model	IMD, ESU Power Supply
Input voltage	Single phase, 115 or 230 Vac 50/60 Hz
Max. absorbed nominal power	6900 VA (max 30 A @ 230 V)
Output power supply	365 Vdc max 30 A
Max. output power load	20,0 kW (200mA @ 100 kV 0,1 sec)
Max load output in RAD mode	200 mA @ 100 kV (0,1 sec)
Max load output FLUORO in continuous mode	10 mA @ 100 kV
Max load output in PULSE mode	200 mA @ 100 kV 25 fps @ 8 ms
Classification	EN 60601-1

UPS device

Description	Data
Brand, model	Eaton, 5SC 750i
Output Power @ 230 V	750 VA, 525 W
AC Input power	
Rated input voltage	Single phase 220-240 V
Input voltage range	184 to 276 V
Input frequency range	45 to 55 Hz (50 Hz system), 55 to 65 Hz (60 Hz system)
Output on battery power	
Voltage	220/230/240 V (-10/+6 %)
Frequency	50/60 Hz ±0.1 Hz
Battery (sealed lead acid, maintenance free)	
Standard	2 x 12 V, 7 Ah
Environment	
Operating temperature range	0 to 35 °C / 32 to 95 °F
Storage temperature range	-15 to +40 °C / 5 to 104 °F
Relative humidity	0 to 90 % (without condensation)
Noise level	< 40 dBA in normal mode

Wireless board

Description	Data
Brand, model	Intel® Wireless-AC 9260
Bluetooth Version	5.1
Wi-Fi	IEEE 802.11b/g/n 2.4 GHz, IEEE 802.11a/n/ac 5 GHz
Technology	2x2 DL MU-MIMO, up to 1.73 Gbps with channel at 160 MHz
Safety	WPA2, WPA3, 802.1X (EAP-TLS, TTLS, PEAP,EAP-SIM, EAP-AKA, EAP-AKA)

The features of frequency, modulation and irradiated power are listed in the following table:

Description	Data	Data
Frequency band	5 GHz (802.11 a/n/ac)	2.4 GHz (802.11 b/g/n)
Modulation	OFDM	DSSS, CCK, OFDM
Max. irradiated EIRP power	24,32 dBm	13,53 dBm
Max. irradiated ERP power	18,58 dBm	10,15 dBm

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