

The ddRAura FMTS is an ergonomic, manually positioned digital radiography system with a floor mounted tube stand, a vertical wall stand and a fixed table with a four-way floating tabletop. Designed for easy positioning, this space-saving yet highly functional Swissray system requires minimal space and eliminates the need for costly ceiling support. The ddRAura FMTS intuitive imaging workstation is an advanced multi-language platform supporting a range of detector configurations providing maximum imaging flexibility and with excellent image quality. In addition, a large touchscreen workstation is conveniently integrated tube-side and controls all aspects of the work process including generator parameters, system position, patient procedures and image view. The ddRAura FMTS is a compact and affordable Swissray solution. Optional upgrades include an elevating table and a motorized wall stand.



Technical Data

Patient Table

Fixed height radiographic table with four-way floating tabletop

Table height	76 cm (30"), fixed height
Tabletop size	228 x 80.6 cm (89.76" x 31.73")
Tabletop longitudinal movement	90 cm (35.42") / ±45 cm (±17.71")
Tabletop lateral movement	25 cm (9.84") ±12.5 cm (±4.92")
Table brake system	Electromagnetic brake with foot switch controls
Tabletop X-ray absorption	< 1 mm Al equivalent (0.03")
Max. patient weight capacity	250 kg (551 lbs.)
Detector bucky housing travel range	50 cm (19.68")
Smart bucky system	Rotation and grid status indication
Object detector distance	Max. 7 cm (2.76")
X-ray grid	Removable 85 L/cm (215 L/inch) 10:1, FD 110 cm
Built-in AEC chamber	5-field solid state sensors

Floor Mounted Tube Stand

Floor Mounted manually positioned tube stand

Longitudinal movement	254 cm (100")
Transversal movement	25 cm (9.84") / ±12.5 cm (4.92")
Vertical travel range	153 cm manual (60.23") from 40 cm to 193 cm (15.7" to 75.9")
Max SID to table top	Up to 128 cm (50.4")
Minimum beam to floor distance	40 cm (15.7")
Tube α rotation	270° / ±135° manual, with stops every 90°
Tube column rotation	360° / ±180° manual stop at 90°
Tube control	10.1" tube mounted touchscreen console for control and view of generator, collimator (with auto-collimator option), system positioning, procedure selection and image preview.

Wall Stand

Manually positioned wall stand, optionally motorized, rotating bucky tray for wireless 35 cm x 43 cm detector

Detector vertical travel	Manual (optionally motorized) 30 to 182 cm (11.81" to 71.65"), center to floor
Detector tilt function	Optional -20° to +90°, manual or motorized
Detector rotation	Internal manual rotation of detector
Synchronization	Wall stand bucky tracking with optional motorized wall stand
X-ray grids	Removable 85 L/cm (215 L/inch) 10:1, FD 100 / 180 cm, 150 cm optional
Built-in AEC chamber	5-field solid state sensors

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Thales Flat Panel Detector's

Brand Model	Pixium RAD 4343R-C	Portable3543EZ-C (WiFi)	Portable 2430EZ-C (WiFi)
Technology	Amorphous silicium/CsI	Amorphous silicium/CsI	Amorphous silicium/CsI
Active area	423.3 x 425.4 mm	421 x 345 mm	284 x 222 mm
Active pixel matrix	2860 x 2874	2846 x 2330	1920 x 1500
Pixel size	148 µm	148 µm	148 µm
Limiting resolution	3.38 lp/mm	3.38 lp/mm	3.38 lp/mm
DQE @ 0 lp/mm	65%	70%	65%
MTF @ 1 lp/mm	61%	61%	61%
AD conversion	16-bit	16-bit	16-bit
Detector dimensions	500 x 490 x 45.5 mm	459.5 x 383.5 x 15.6 mm	327.5 x 267.5 x 15.6 mm
Weight	11.7 kg	2.8 kg	1.6 kg
Ingress protection		IP43	IP43
Battery autonomy		8h	8h
Distributed load		300 kg	150 kg
Point load		150 kg	100 kg

Varex Flat Panel Detector's

Brand Model	PaxScan 4343R v3	PaxScan 4336W v4 (WiFi)	PaxScan 4343W (WiFi)
Technology	Amorphous silicium/CsI	Amorphous silicium/CsI	Amorphous silicium/CsI
Active area	424 x 424 mm	424 x 339 mm	421 x 421 mm
Active pixel matrix	3052 x 3052	3032 x 2436	3032 x 3032
Pixel size	139 µm	139 µm	139 µm
Limiting resolution	3.6 lp/mm	3.6 lp/mm	3.6 lp/mm
DQE @ 0 lp/mm	78%	78%	76%
MTF @ 1 lp/mm	56%	57%	57%
AD conversion	16-bit	16-bit	16-bit
Detector dimensions	469 x 469 x 37 mm	459.5 x 383.5 x 15 mm	459.5 x 459.5 x 15 mm
Weight	6.2 kg	3.0 kg	3.3 kg
Ingress protection		IP54	IP68
Battery autonomy		1600 images/8h	1600 images/8h
Distributed load		150 kg	300 kg
Point load		100 kg	200 kg

iRay Flat Panel Detector's

Brand Model	Mars1717V (WiFi)	Mars 1417V (WiFi)
Technology	Amorphous silicium/CsI	Amorphous silicium/CsI
Active area	427 x 427 mm	420 x 345.6 mm
Active pixel matrix	3072 x 3072	2800 x 2304
Pixel size	139 µm	150 µm
Limiting resolution	3.6 lp/mm	3.3 lp/mm
DQE @ 0 lp/mm	66%	59%
MTF @ 1 lp/mm	70%	67%
AD conversion	16-bit	16-bit
Detector dimensions	460 x 460 x 15.1 mm	460 x 384 x 15.2 mm
Weight	4.3 kg	3.6 kg
Ingress protection	IPX1	IPX1
Battery autonomy	5h	5h
Distributed load	150 kg	150 kg
Point load	100 kg	100 kg

X-Ray HV Generator

Model	EMD EPS 50	EMD EPS 65	EMD EPS 80
Max. power	50 kW	65 kW	80 kW
Frequency	up to 240 kHz	up to 240 kHz	up to 240 kHz
kV range	40 to 150 kV	40 to 150 kV	40 to 150 kV
mA range	10-630 mA	10-800 mA	10-1000 mA
Time range	1 to 10'000 ms	1 to 10'000 ms	1 to 10'000 ms
mAs range	0.1 to 630 mAs	0.1 to 800 mAs	0.1 to 1000 mAs
Automatic exposure control (AEC)	Yes	Yes	Yes
Dual speed starter	Yes	Yes	Yes

X-Ray Tube

Model	RAD14	RAD60	RAD92
Anode heat capacity	300 kHu	400 kHu	600 kHu
Dual Anode speed	2700/9700 rpm	2700/9700 rpm	2700/9700 rpm
Focal spot	0.6 / 1.2 mm	0.6 / 1.2 mm	0.6 / 1.2 mm
Target angle	12°	12°	12°
Target diameter	74 mm	100 mm	100 mm
Max. Anode cooling rate	1750 W / 60 kHu/min	100 kHu/min	140 kHu/min
Nominal X-ray tube voltage	40-150 kV	40-150 kV	40-150 kV
X-Ray Tube Housing heat content	1250 kHu	1500 kHu	1500 kHu
Nominal input power	32 / 77 kW	40 / 100 kW	40 / 100 kW

Manual Collimator

Light power	White LED
Shutters	Manual operation (optional motorized or manual operation)
Manual filters	Optional; 1 mm Al + 0.1 mm Cu, 1 mm Al + 0.2 mm Cu, 2 mm Al + 0.3 mm Cu
Collimator rotation	± 90°
Light field luminosity	> 160 lx
Integrated DAP	Optional

Workstation

High performance imaging console	Multi-core processor, 1TB HDD, 8 GB RAM, CD/DVD, keyboard and mouse, Wi-Fi router
User interface monitor size	23" 2MP DICOM calibrated touchscreen monitor
Features	Avanse DR imaging software, Image copy / paste, crop and annotate, DICOM MWL, Print and Store, CD/DVD burn with DICOM viewer, Exposure index / Deviation index, Auto and manual image processing, Query Retrieve, Procedure mapping, MPPS, Reject analysis, Undo / Image reload, Auto shutter, Image measurements, Image preview, Automated storage

Standards

According to	FDA: This product complies with CDRH 21 CFR, Subchapter J, as of the date of manufacture. CE: This medical product corresponds to the "COUNCIL DIRECTIVE concerning medical devices 93/42/EEC".
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Options

DAP meter	Dose area product (DAP) meter to measure, record and store the applied radiation dose in the DICOM header of the patient's image.
X-ray generator	50 kW, 3-phase, 65 kW, 3-phase, 80 kW, 3-phase
X-ray tube	300 kHU, 400 kHU, 600 kHU
Automatic collimator	Automatic Collimator LED with motorized filters, FOV change with SID change, filter and collimation setting from imaging console, positioning laser
Motorized table bucky	Auto-tracking tube / table detector
Motorized wall bucky	Motorized elevation of wall bucky (auto-tracking)
Tilting of wall bucky manual	Manual bucky tilt of +90 to -20
Collimation control on wall bucky	Collimator and light control on mounted on the wall bucky (with auto-collimator)
Detector options	Fixed 43 x 43 cm detector Csl, wireless 35 (36) x 43 cm detector Csl, wireless 24 x 30 cm detector Csl
Additional X-ray grids	Carbon fiber removable 85 L/cm (215 L/inch) 10:1, FD 110 cm, 150 cm, 180 cm, external holder with grid for 353EZ detector, 40 L/cm (103 L/inch) 8:1 FD 100 to 180 cm
Elevating table	Elevating radiographic table with four-way floating tabletop
Additional wireless foot control	Additional table controls for rear of table (with elevating table)
Weight bearing platform	Various options available
Patient table hand grip	Adjustable handle mounted to table for positioning tabletop and patient comfort
Lateral detector holder	Detector holder mounted to table for cross table exams using the 3543 wireless detector
Barcode reader	2D codes scanner
Card access reader	Individual identification cards for effortless system login

Environmental Conditions

Operating

Ambient temperature	+15 °C to +30 °C (59 °F to 86 °F)
Recommended room temperature	+20 °C to +25 °C (68 °F to 77 °F)
Relative air humidity	30 to 75%
Air pressure	700 to 1060 hPa

Storage / Transport

Ambient temperature	-20 °C to +55 °C (-4 °F to 131 °F)
Relative air humidity	10 to 95%
Air pressure	700 to 1060 hPa

Main Power Input - Generator

Line voltage	3-phase, 400 / 415 / 440 and 480 VAC 50/60 Hz
Automatic line compensation	± 10%
Momentary power consumption	65 kVA / 50 kW, 85 kVA / 65 kW, 105 kVA / 80 kW

Main Power Input - System (Ceiling Suspension, Table, Wall Stand)

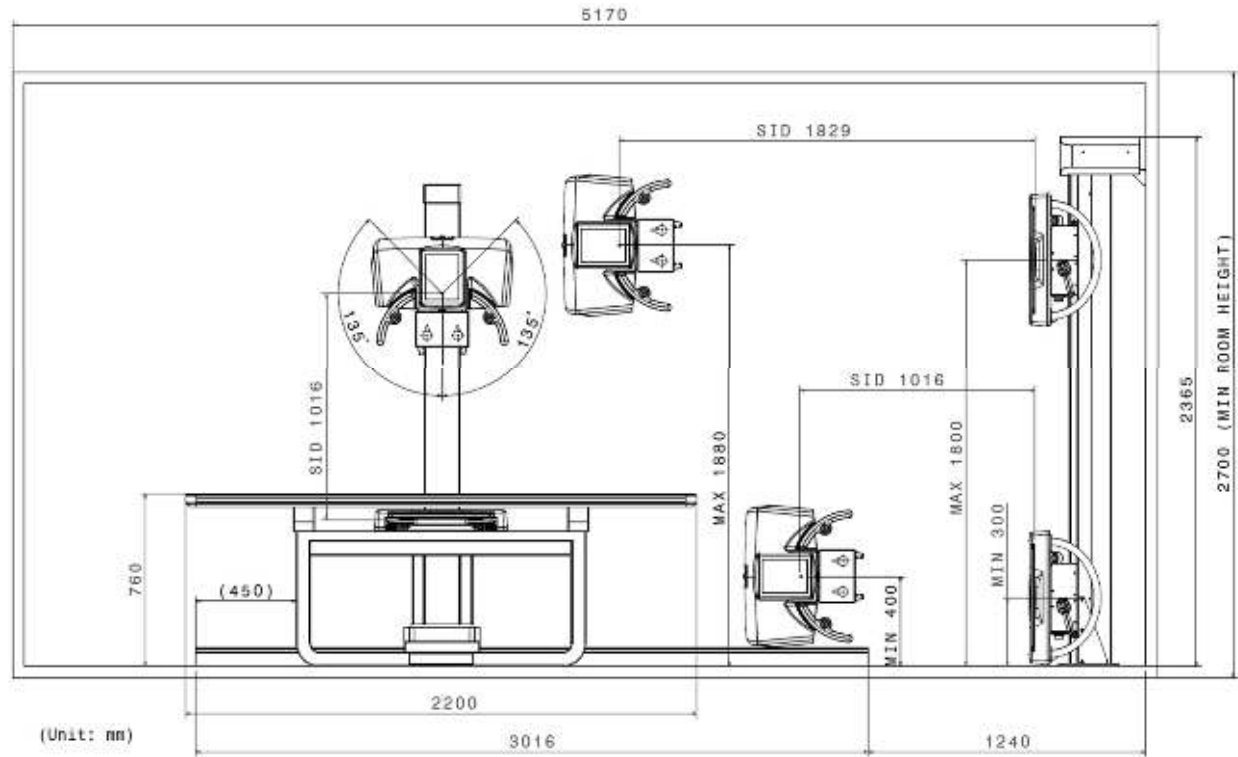
Line voltage	1-phase, 115 – 240 VAC, 50/60 Hz
Automatic line compensation	± 10%
Maximum input power	1.2 kVA

Weight

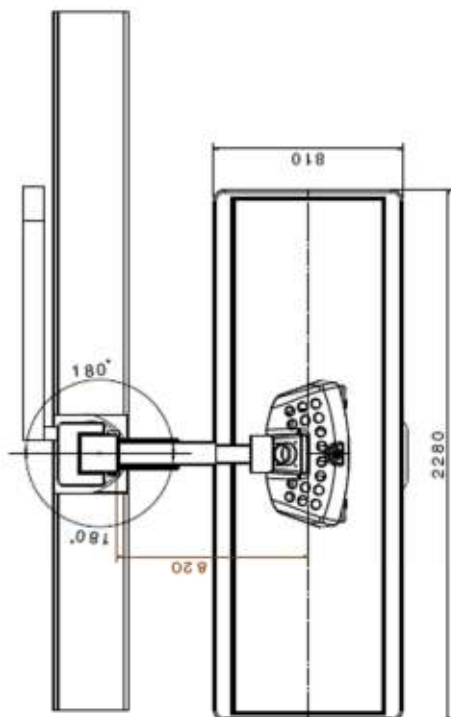
Table incl. 4-way floating tabletop	150 kg (330 lbs.) w/o detector
FMTS	250 kg (551 lbs.)
Wall stand	90 kg (198 lbs.) w/o detector

Mechanical Dimensions [mm]

FMTS
 Front view



Top view



Lateral view

