

The *ddRAura* OTC RT is a motorized, automated digital X-ray system. It includes a motorized ceiling suspension, motorized wall stand and mobile patient table. The motorized wall stand is synchronized with the ceiling suspension to maintain the selected SID, as well as vertical and horizontal X-ray beam position. This intelligent automation and synchronization allows the *ddRAura* OTC RT to perform advanced applications, such as single focus auto stitching for scoliosis and long leg images, combining up to 5 images. The smart 10.1" tube mounted touchscreen console allows the technologist to control and view generator, collimator, system position and patient procedure list information as well as image preview. Additionally, the concealed cabling and lightweight construction of the *ddRAura* OTC RT allows for easier manual movements. Multiple configurations of fixed or wireless detectors are possible providing state-of-the-art technology and image quality. The *ddRAura* OTC RT offers unlimited and customizable automatic positioning (APS) via a handheld remote and effortless manual positioning for unprecedented efficiency and versatility. The *ddRAura* OTC RT is an excellent choice for demanding orthopedic departments and spine clinics.



## Technical Data

### Ceiling Suspension

Overhead tube system with motorized motions of all movements. Automatic positioning system.

Longitudinal movement	340 cm (134") for 4 m longitudinal rails, motorized
Transversal movement	240 cm (94") for 3 m transversal rails, motorized Customized rail option for both long. and transverse available
Telescope travel range	180.0 cm motorized (150.0 cm optional)
Source to ceiling distance	105 to 285 cm (70.9 to 112")
Tube $\alpha$ rotation	$\pm 175^\circ$ motorized and manual, with stops every $90^\circ$
Tube $\beta$ rotation	$\pm 165^\circ$ motorized and manual
Synchronization	Automatic tracking to table and wall stand
Stop positions	Software configurable
Tube control	10.1" tube mounted touchscreen console for control and view of generator, collimator, system positioning, procedure selection and image preview.

### Wall Stand

Motorized wall stand with motorized tilting option and auto-positioning, rotating bucky tray for wireless 35 x 43 cm detector

Detector vertical travel	Manually from 28 to 180 cm (11.0 to 70.8"), center to floor (optionally motorized) Detector
Detector tilt function	Optional -20 to +90°, manual or motorized
Detector rotation	Internal manual rotation of detector
Synchronization	Tube tracking
X-ray grids	Removable 85 L/cm (215 L/inch) 10:1, FD 110 / 180 cm, 150 cm optional
Built-in AEC chamber	5-field solid state sensors
Automatic collimator control	Wall stand mounted collimation controls (Option)

### Mobile Patient Table

Simple and ergonomic design with a radiolucent tabletop and two independent foot brakes

Table dimensions	Length overall: 212 cm (83.4") Length without handles: 200.6 cm (78.9") Width: 64 cm (25.2") Height: 67.6 cm (26.6")
Maximum weight capacity	225 kg (496 lbs.)
Table weight	49.8 kg (110 lbs.)

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**Thales Flat Panel Detector's**

<b>Brand Model</b>	<b>Pixium RAD 4343R-C</b>	<b>Portable3543EZ-C (WiFi)</b>	<b>Portable 2430EZ-C (WiFi)</b>
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**

<b>Brand Model</b>	<b>PaxScan 4343R v3</b>	<b>PaxScan 4336W v4 (WiFi)</b>	<b>PaxScan 4343W (WiFi)</b>
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**

<b>Brand Model</b>	<b>Mars1717V (WiFi)</b>	<b>Mars 1417V (WiFi)</b>
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

	EMD EPS 50	EMD EPS 65	EMD EPS 80
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

	RAD60	RAD92	SV 150/40/80C-100(L)
Model	RAD60	RAD92	SV 150/40/80C-100(L)
Anode heat capacity	400 kHu	600 kHu	800 kHu
Dual Anode speed	2700/9700 rpm	2700/9700 rpm	3600/10800 rpm
Focal spot	0.6 / 1.2 mm	0.6 / 1.2 mm	0.6 / 1.0 mm
Target angle	12°	12°	12°
Target diameter	100 mm	100 mm	100 mm
Max. Anode cooling rate	100 kHu/min	140 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	1500 kHu	1500 kHu	1500 kHu
Nominal input power	40 / 100 kW	40 / 100 kW	40 / 80 kW

#### Automatic Collimator

Light power	White LED
Shutters	Motorized or manual operation
Filters	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	> 230 lx
Integrated DAP	Optional

#### Workstation

High performance imaging console	Multi-core processor, 500 GB HDD, 4 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	400 kHU, 600 kHU, 800 kHU
Manual collimator	Manual Collimator LED with / without filters, positioning laser
Collimation control on wall bucky	Collimator and light control on mounted on the wall bucky
Detector options	Fixed 43 x 43 cm detector CsI, wireless 35 (36) x 43 cm detector CsI, wireless 24 x 30 cm detector CsI
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
Automated stitching package	Fully automated single focus image acquisition for scoliosis and long leg studies. Up to 5 images. Includes stitching software application and stand.
Shorter OTC column	150 cm (59") column stroke for shorter ceiling height
Custom ceiling rails	Extended/custom rail length for specified room geometry
Weight bearing platform	Various options available
Mobile patient table	Fixed height
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)**

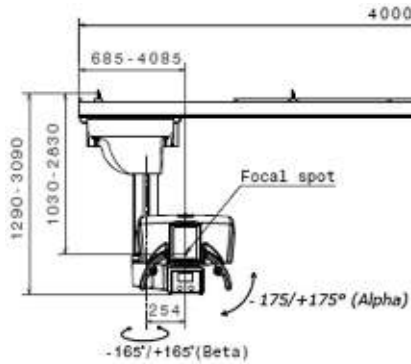
Line voltage	1-phase, 115 – 240 VAC, 50/60 Hz
Automatic line compensation	± 10%
Maximum input power	2.9 kVA

**Weight**

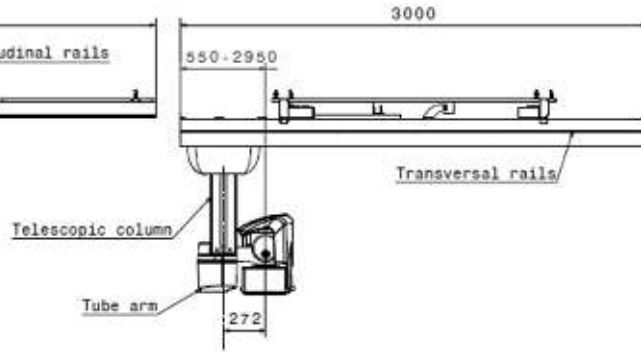
Weight	440 kg (1190 lbs.)
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### Mechanical Dimensions in [mm]

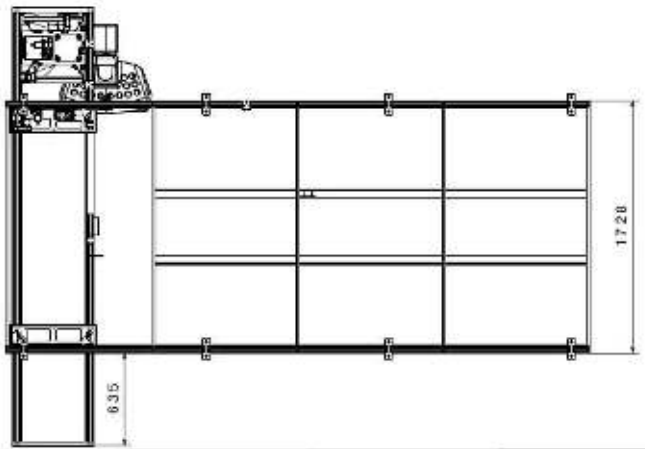
#### Ceiling Suspension Front view



#### Lateral view



#### Top View



#### Wall Stand Tilting

