Technical Data Sheet

*ddR*Aura™ U

The *ddR*Aura U features a U arm design with the X-ray tube always centered to the detector for fast, precise and convenient patient positioning. Swissray's unique APS – Automated Positioning System automates system positioning and image acquisition requirements with the simple push of a button on a wireless handheld remote control or optional wireless foot pedal. The system also offers automated variable SID and intuitive incremental movement controls for precise system positioning. The X-ray tube rotation enables off-detector imaging on a CR cassette, analog cassette or optional wireless flat panel detector for the occasional patient who cannot be moved from a wheelchair or stretcher. With a preview image display time of less than 3 seconds and convenient image view on the tube mounted touchscreen technologists can perform studies in less time than ever before.

The tube mounted touchscreen console allows the technologist to select and control system position, modify predefined generator settings, adjust collimation and view current patient information and images already taken without leaving the patient's side.

Optionally, the *ddR*Aura U can be programmed to perform advanced applications, such as the single focus automated image stitching for scoliosis and long leg images. System height, required angles and number of exposures needed are automatically calculated to ensure proper image acquisition.

Technical Data

Stand

U-Arm rotation	−30 to +120° (150°), motorized
Detector swivel range	± 45°, motorized
Central beam – floor – distance	43.4 to 165.5 cm (17.09 to 65.16")
Source image distance (SID)	Variable: 100 to 180 cm (39.37 to 70.87")
Tube rotation	± 90° (5° indexing)
Off-center Imaging	Allows imaging on edge of detector
Off-detector imaging	Allows imaging on wireless detector or CR cassette
X-ray grids	Removable aluminum 85 L/cm (215 L/inch) 10:1, FD 150 FD 110 / 180 cm optional
Built-in AEC chamber	5-field ionization chamber

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

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Swissray
1200 US Highway 22 E
Suite 2000
Bridgewater Township, NJ 08807 USA

Office: 800 903 5543
info@swissrayus.com

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Manual Collimator

Light power	White LED
Shutters	Manual operation (optional motorized or manual operation)
Integrated 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

Automatic Collimator (Option)

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

Flat Panel Detector's

Brand	**Thales**	**Varex**
Model	**Pixium RAD 4343R-C**	**PaxScan 4343R v3**
Technology	Amorphous silicium/CsI	Amorphous silicium/CsI
Active area	423.3 x 425.4 mm	424 x 424 mm
Active pixel matrix	2860 x 2874	3052 x 3052
Pixel size	148 µm	139 µm
Limiting resolution	3.38 lp/mm	3.6 lp/mm
DQE @ 0 lp/mm	65%	78%
MTF @ 1 lp/mm	61%	56%
AD conversion	16-bit	16-bit
Detector dimensions	500 x 490 x 45.5 mm	469 x 469 x 37 mm
Weight	11.7 kg	6.2 kg

User Interface

High performance imaging console	Multi-core processor, 1TB HDD, 8GB RAM, CD/DVD, keyboard and mouse, Wi-Fi router
Imaging console 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
Tube mounted touchscreen	9.7" touchscreen tablet with dedicated Wi-Fi router, controls generator, system positioning, collimation (with auto-collimator option), procedure list and image preview

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

Automatic Stitching Package	Fully automated single focus image acquisition for scoliosis and long leg studies. Includes stitching software and stand with ruler.
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
Detector options	Wireless 35 (36) x 43 cm (14 x 17 in) detector CsI Wireless 24 x 30 cm (10 x 12 in) detector CsI
Additional X-ray grids	Carbon fiber removable 85 L/cm (215 L/inch) 10:1, FD 110 cm, 150 cm, 180 cm
Automatic collimator	Automatic Collimator LED with motorized filters, FOV change with SID change, filter and collimation setting from imaging console, positioning laser
Weight bearing platform	Two step platform positioned over the detector for AP and lateral weight bearing foot and ankle studies
Mobile patient table	Fixed height
Additional wireless pedal controls	Wireless foot petals for vertical movement and APS positioning of the U-arm
Barcode reader	2D codes scanner
Card access reader	Individual identification cards for effortless system login

Environmental Conditions

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 - Stand

Line voltage	1-phase, 230 VAC 50/60 Hz	1-phase, 208 VAC 50/60 Hz
Automatic line compensation	± 10%	± 10%
Maximum input power	2.3 kVA	2.3 kVA

Weight

Weight	640 kg (1410 lbs.)

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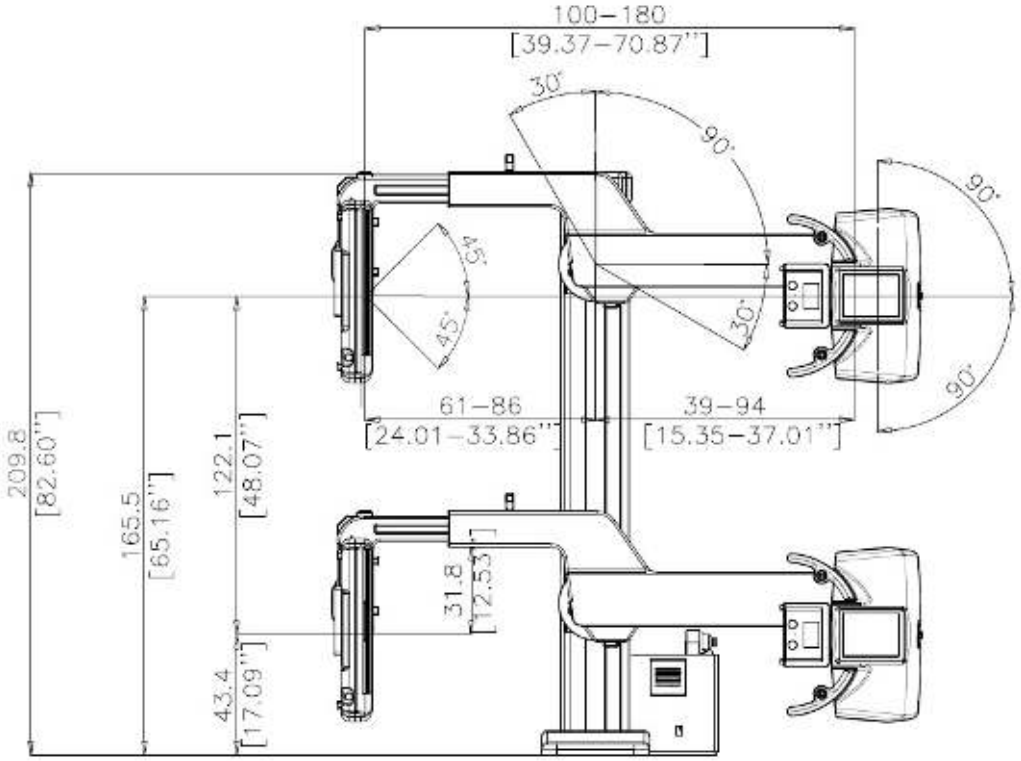
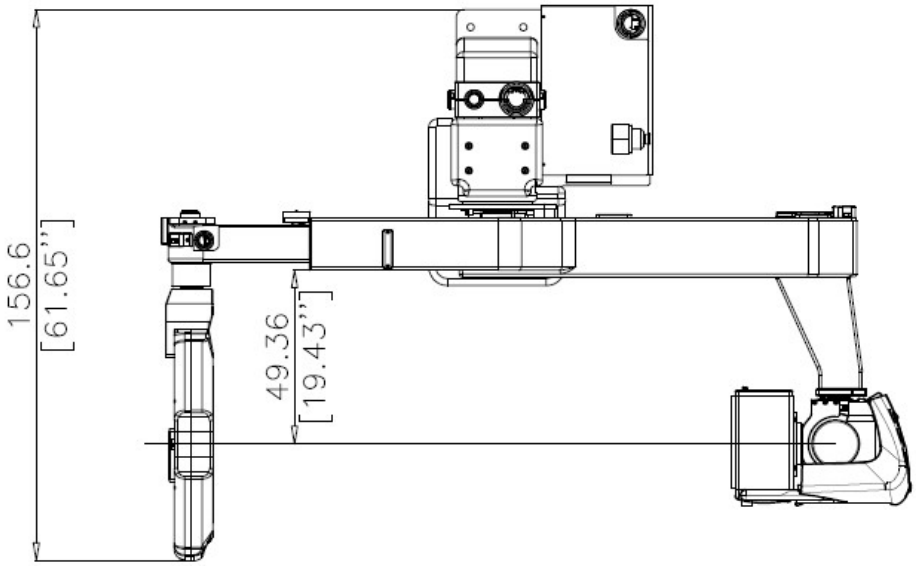
Mechanical Dimensions in cm [inches]





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