



Bucky to DR in one smart step

Philips ProGrade DR solution specifications

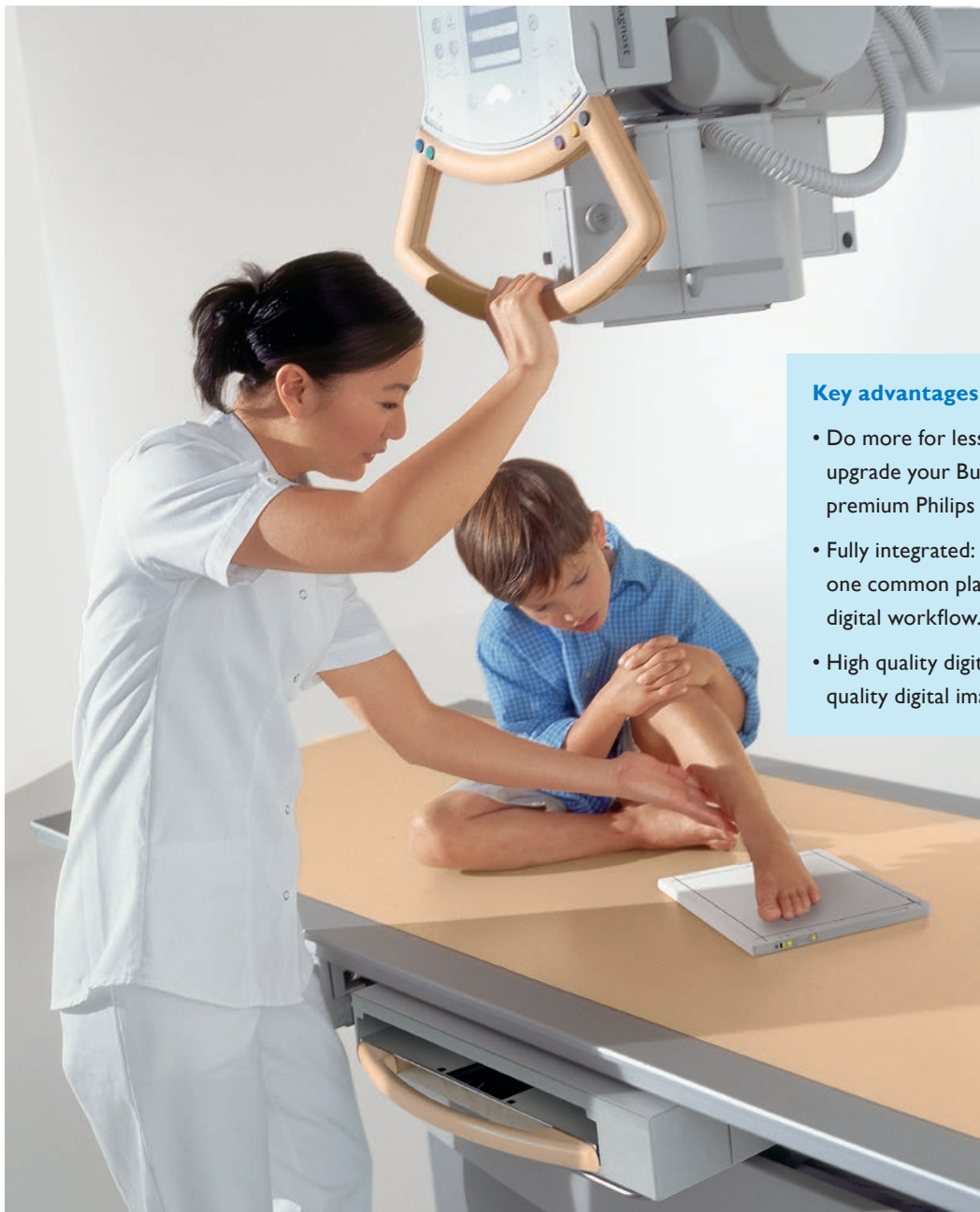
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1. Introduction

Philips ProGrade converts your analog BuckyDiagnost X-ray room to full Philips digital without the hassle and expense of a geometry replacement. Just add the new SkyPlate cassette-sized wireless portable detector and an Eleva workspot to experience premium digital imaging, enhanced digital productivity and high patient throughput. Meanwhile, stay within the trusted Philips family for a truly integrated digital workflow and excellent service support from a single point of contact.



Key advantages

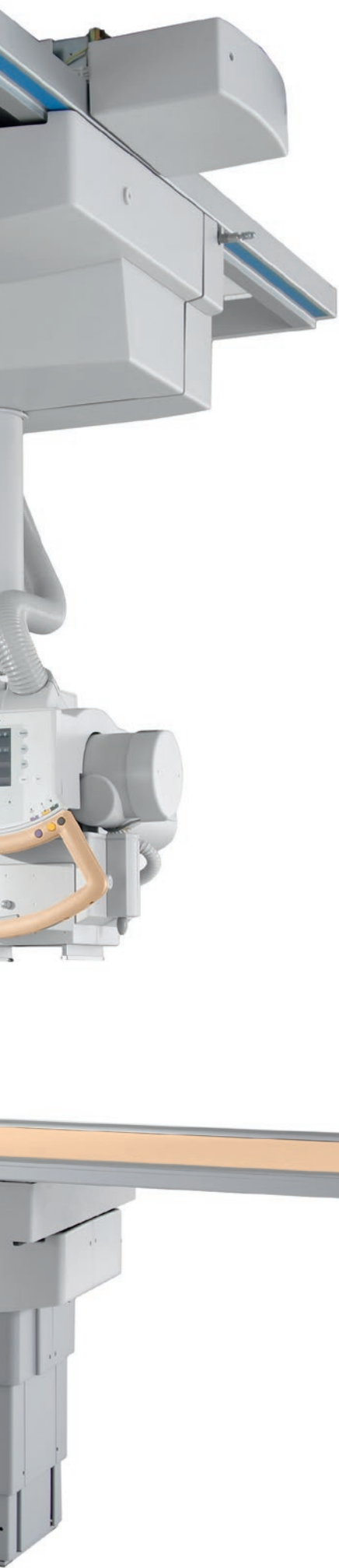
- Do more for less: Cost effectively upgrade your Bucky equipment to premium Philips digital.
- Fully integrated: Includes Eleva for one common platform and smart digital workflow.
- High quality digital imaging: Add high quality digital imaging to a Bucky system.

2. System overview

As a direct digital upgrade solution for BuckyDiagnost, ProGrade provides a truly integrated digital workflow that will transform your exam room without a geometry replacement. Radiologists will appreciate powerful premium imaging features like Csl detector technology and UNIQUE image processing. Another key benefit of ProGrade is digital workflow. There is no need to open the Bucky tray between exposures, and Dose Area Product (DAP) values are transferred automatically to the Eleva workspot.

Compared to DR geometry replacements, ProGrade simplifies your team's learning curve by allowing you to retain your familiar Philips geometry, and offers a more cost-effective way to upgrade to premium Philips digital.





The Eleva workspot is a common digital platform and user interface that promotes seamless workflow across different Philips modalities, putting a powerful set of image and patient information management tools at your fingertips.



Available in two sizes, the wireless SkyPlate detector is suitable for table and wall stands, as well as challenging free exposures such as angulated projections. It supports increased workflow through enhancements such as a non-opening Bucky tray.

3. SkyPlate detector

SkyPlate is compact, wireless and, at 2.8 kg (6.2 lbs), our lightest detector yet. SkyPlate offers superb image resolution and sensitivity with excellent X-ray dose management because it uses the same premium Cesium Iodide (CsI) detector technology as is in Philips' flagship DR systems.

SkyPlate is compatible with Philips digital radiography systems, allowing you to continue to use - and get value from - your investment in Philips equipment.



Large SkyPlate detector		
Type	Digital Cesium Iodide (CsI) flat detector (ISO 4090)	
Housing material	Carbon fiber	
Sensor protection material	Carbon fiber	
Detector size	35 cm x 43 cm (14" x 17")	
Active area	34.48 cm x 42.12 cm (13.6" x 16.6")	
Image matrix size	2.330 pixel x 2.846 pixel	
Detector pixels	6.6 Megapixel	
Pixel size	0.148 µm	
Image resolution	3.38 Lp/mm	
DQE @ 2 µGy	0.05 Lp/mm	66
	1.0 Lp/mm	50
	2.0 Lp/mm	40
	3.0 Lp/mm	24
MTF	0.05 Lp/mm	Not specified
	1.0 Lp/mm	61
	2.0 Lp/mm	30
	3.0 Lp/mm	15
Energy range	40 to 150 kVp	
AD conversion	16 bits	
Weight	2.8 kg (6.2 lbs) incl. battery	
Maximum patient weight	100 kg (220 lbs) for weight bearing examinations on 4 cm disk diameter.	
	135 kg (298 lbs) for distributed load	
WLAN network standards	WLAN standard IEEE 802.11 a, b, g and n (configurable)	
Encryption	WPA2 encryption according to IEE 802.11i	
IP class	IP41 compliant (IEC 60529)	

4. Battery and battery charger

SkyPlate is powered by a heavy duty rechargeable lithium-ion battery that delivers an impressive 3.5 hours or 525 images of continuous performance from a single four-hour charge. The easy-to-use SkyPlate charging unit holds three batteries and has a LED charge status indicator, helping to keep your exam room running continuously.

Battery	
Technology	Internal lithium ion battery
Size	64 mm x 248 mm x 7.1 mm
Weight	200 g (0.44 lbs)
Expected lifetime	> 1 year (500 charge/discharge cycles)
Battery charging time	4 hours max. for 100 % charge
Autonomy operation mode	Min. 3.5 hours or max. 525 images
Autonomy listen mode	6 hours without image acquisition
IP41 compliant (IEC 60529)	

Battery charger	
Dimensions	172 mm x 322 mm x 48 mm
3 charging slots	
Bar charge status color indication per battery	0 to 25 %; 25 to 50 %; 50 to 75 %; 75 to 100 %
Battery charging time (per battery)	4 hours max. for 100 % charge
IP40 compliant (IEC 60529)	



5. Eleva workspot

Eleva is a common digital platform and user interface that promotes seamless and efficient workflow across different Philips modalities, letting you perform a range of exams with ease. In combination with PCR integration, image and patient information management tools allow you to freely combine DR and CR imaging applications from Philips systems in a single study. Meanwhile, pre-programmed settings speed up image processing and produce consistent results.



Eleva workspot

Hard disk	500 GB
Image storage	4000 images
RAM storage capacity	8 GB
Interfaces	Wi-Fi (to the detector) Detector interface LAN cable (Ethernet) DICOM interface
Start up time	Less than 3 minutes
Monitor	19" LCD color touch-screen monitor (1280 x 1024 at 60 Hz)
Typical time to preview image	5 seconds
Additional time to full image	7 seconds
Typical cycle time	12 seconds
UNIQUE multi-resolution image processing	Yes

Image data

Data volume	Up to 20 MB/image
Matrix depth	16 bit/pixel

6. Detector sharing

SkyPlate is the first digital detector to offer cassette-sized wireless portable detector sharing across compatible Philips digital radiography systems. As either a main or back-up detector, this helps to maintain continuous uptime in your exam room, potentially lowering your initial investment while delivering added flexibility across your department.

Main benefits at a glance

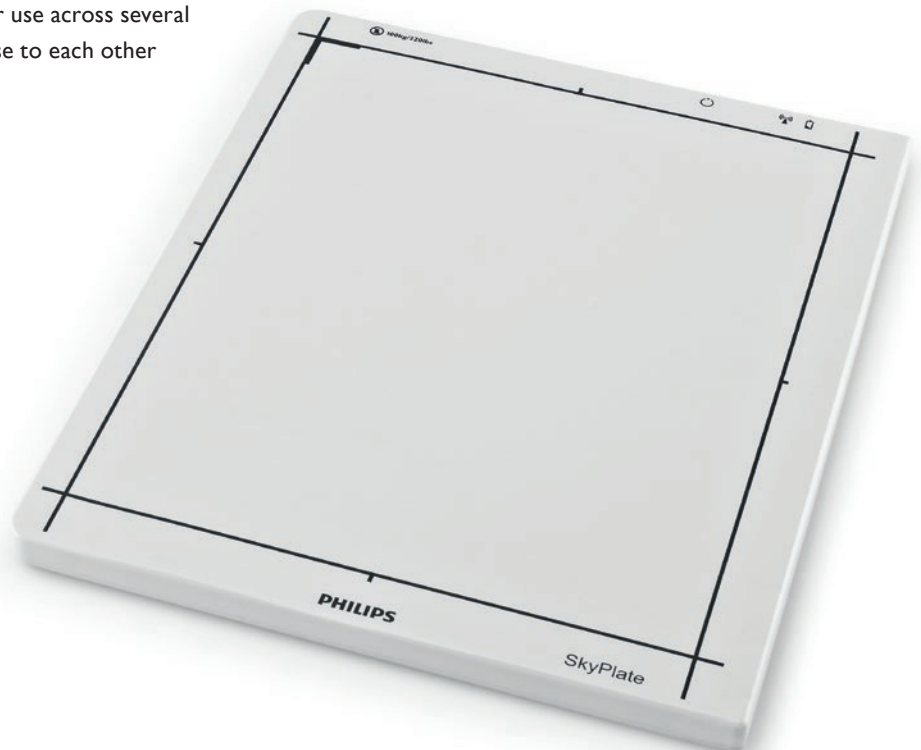
- Low initial investment, highly flexible
- Helps to maintain continuous uptime
- Cost effective to add additional detectors

Cost efficiency

- Helps medical facilities to remain competitive and budget-conscious
- A good solution to financial constraints
- Increases room utilization within a fixed budget

Examples of detector sharing

- As a single detector for all departmental needs
- Occasional wireless portable detector use across several digital radiography rooms located close to each other



7. Wi-Fi access point for detector communication

ProGrade's Wi-Fi access point meets a wide range of security standards and electromagnetic tolerances.

Wi-Fi access point	
Type	HP MSM430 Dual-Radio 802.11n Access Point (WW)
Standards	UL 2043 UL 60950-1 IEC 60950-1 EN 60950-1 CAN/CSA-C22.2 Nr. 60950-1
Electromagnetic compatibility	EN 55022 Class B EN 301 489-1 EN 301 489-17 ICES-003 Class B FCC Part 15, Class B

Energy supply	
Wattage	12.9 W maximum
Temperature	0 to 50 °C
Humidity	5 to 95 % (non-condensing)

Size and weight	
Size (w x d x h)	20.32 cm x 17.15 cm x 6.65 cm (8" x 6.8" x 2.6")
Weight	1.02 kg (2.2 lbs)

8. DICOM and Clinical QC

ProGrade is compatible with the common DICOM medical data transfer standard, so you'll benefit from DICOM services when you upgrade with ProGrade. DICOM's storage, retrieval, print and other features enhances your workflow.

The complete DICOM communication package includes:

- DICOM Media on CD-R
- Dose reporting in DICOM Structured Report format
- DICOM WLM (Work List Management)
- DICOM MPPS (Modality Performed Procedure Step)
- DICOM Print
- DICOM Image Export including Storage Commit

Clinical QC is a powerful image statistics tool that allows the advanced user to analyze operator-rejected images and the reasons for rejection. It also monitors and analyzes general parameters. Clinical QC supports department quality standards and teaching situations.

Optional

Dose documentation per image and examination.

Reasons for rejecting image presets.

Time-period statistics.

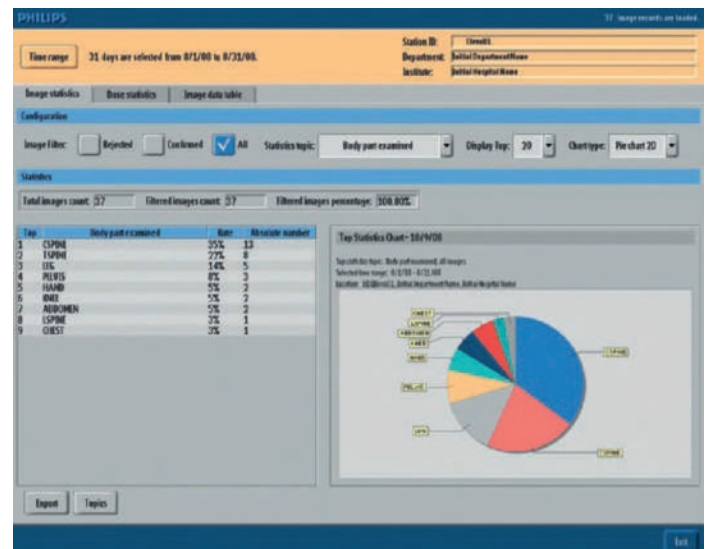
Data filtering for rejected and confirmed examinations.

Data filtering for body area, operators and dates.

Statistics presentation as bar or pie chart at Eleva workspot.

Export results in universal CSV format for use with external spreadsheet software.

Local system data storage, password-protected and accessible by FTP from any computer connected to the hospital network.



Powerful image statistics with Clinical QC

9. Image quality

Excellent image quality is the basis for premium patient care. Philips pioneered the use of multi-resolution image processing in digital radiography with the creation of UNIQUE (UNified Image QQuality Enhancement) image processing software to deliver outstanding images for all anatomical areas.

UNIQUE enhances image consistency for Philips CR and DR systems by automating manual contrast adjustments and image re-processing at the PACS. It harmonizes areas of varying density and contrast in an image, bringing out smaller details. Reproducing consistent, high quality images time after time, UNIQUE equalizes image quality across the department, regardless of anatomic area, detector or modality. Customized user preference settings allow you to personalize the image displayed on screen, benefitting diagnoses and workflow.

UNIQUE 's main benefits at a glance

- Consistently high quality images
- Harmonized contrast
- Enhanced details

Outstanding images for all anatomical areas

Irrespective of data origin, UNIQUE multi-resolution software automatically delivers excellent images for both viewing and printing. It detects the appropriate region of interest and automatically sets brightness, contrast and detail enhancement, enhanced for each anatomical area and view.

The difference is in the details

UNIQUE is especially suited to those applications where high-definition detail is essential.

Designed for flat detector use and more efficient workflow, fully processed images can be viewed after the exposure in a matter of seconds.



Chest



Hip

10. Accessories

SkyPlate grids

Reduce image scatter and enhance image quality and definition with SkyPlate grids, supported by advanced Philips gridline-correction software.

SkyPlate family

Large SkyPlate – landscape	
Orientation	Landscape
Type	Attachable fixed grid 40 lines/cm R = 8:1; fo = 1300 mm (4' 3.2")
Weight	2.0 kg (4.41 lbs)
Automatic gridline-correction algorithm	Yes

The landscape orientation is particularly effective for chest, axial hip and pelvis applications.

Large SkyPlate – portrait	
Orientation	Portrait
Type	Attachable fixed grid 44 lines/cm R = 8:1; fo = 1300 mm (4' 3.2")
Weight	2.0 kg (4.41 lbs)
Automatic gridline-correction algorithm	Yes

The portrait orientation is particularly effective for abdomen and AP spine applications.

Small SkyPlate	
Orientation	Portrait
Type	Attachable fixed grid 40 lines/cm R = 8:1; fo = 1300 mm (4' 3.2")
Weight	≤ 1.5 kg (3.31 lbs)
Automatic gridline-correction algorithm	Yes

The small SkyPlate handles difficult projections and pediatric applications with ease.

SkyPlate detector holders

Procedures are easy, fast and patient-friendly with Philips SkyPlate detector holders. Insightful thinking about workflow and patient comfort helps the technologist to work around the patient, reaching all patient body areas and lessening physical involvement.

Moveable detector holder	
Suitable for wireless portable detector, CR and film cassettes	
Dimensions (l x w x h)	830 mm x 670 mm x 1500 mm (32.7" x 26.4" x 59.1")
Vertical height adjustment	From 680 mm to 1280 mm (11" to 50.4")
Horizontal position	Pivot angle from 0° to 90°; 360° lateral axis rotation
Vertical axis swivel	± 45°
Formats	Landscape and portrait

The moveable wireless portable detector holder enhances workflow and eases patient positioning.



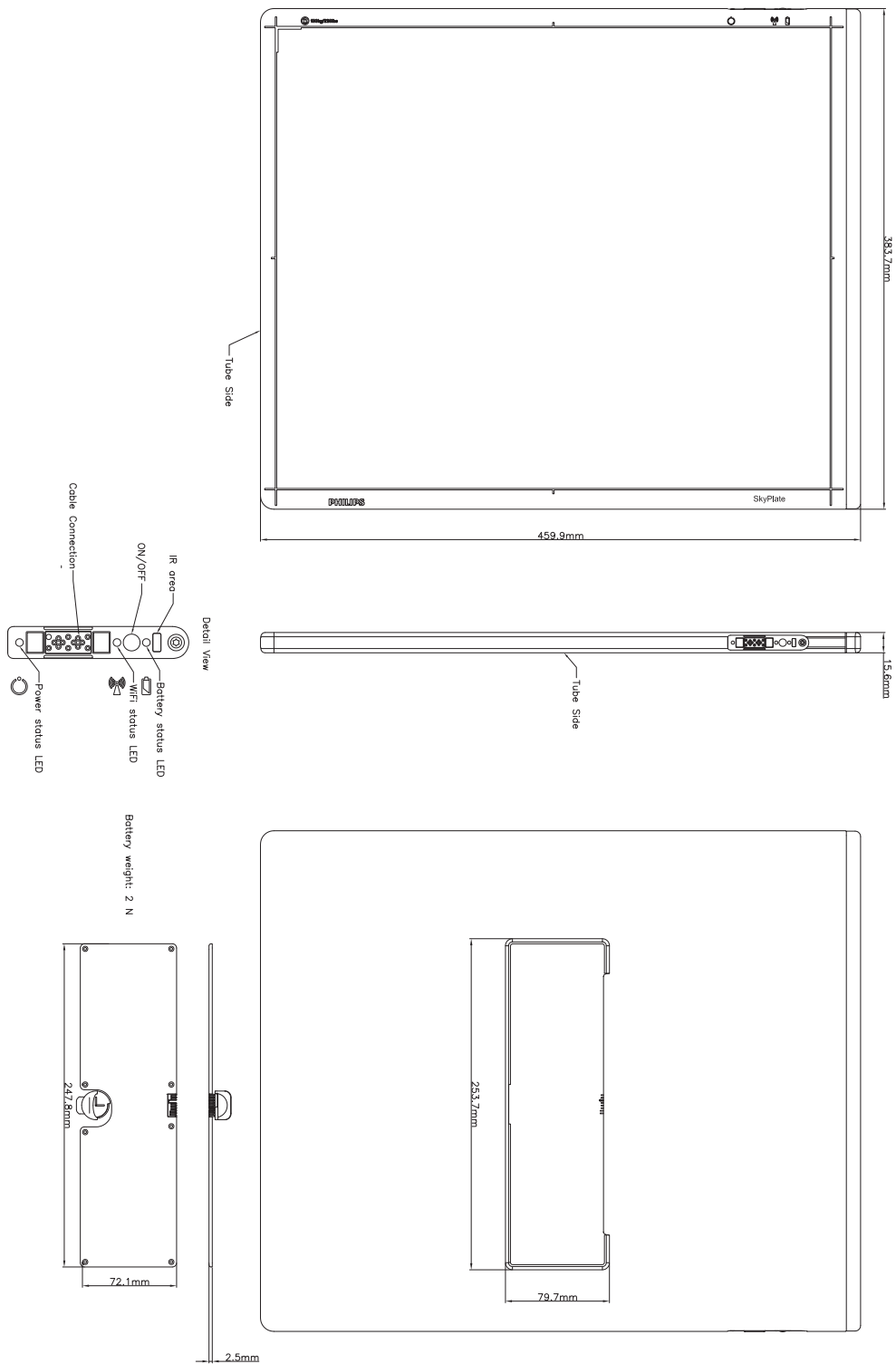
Patient bed detector holder	
Suitable for wireless portable detector, CR and film cassettes	
Dimensions	220 mm x 630 mm (8.7" x 25")
Formats	Landscape and portrait

The patient bed detector holder makes it easy to perform projections without moving the patient.

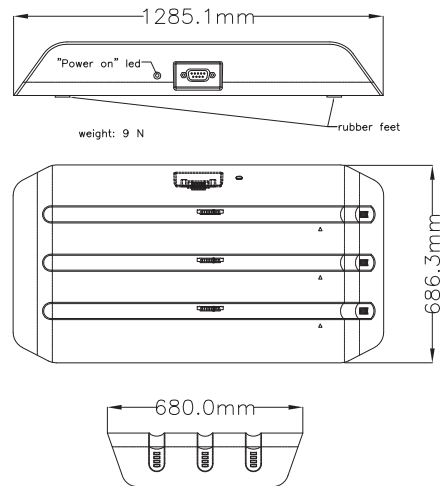


11. Dimensions

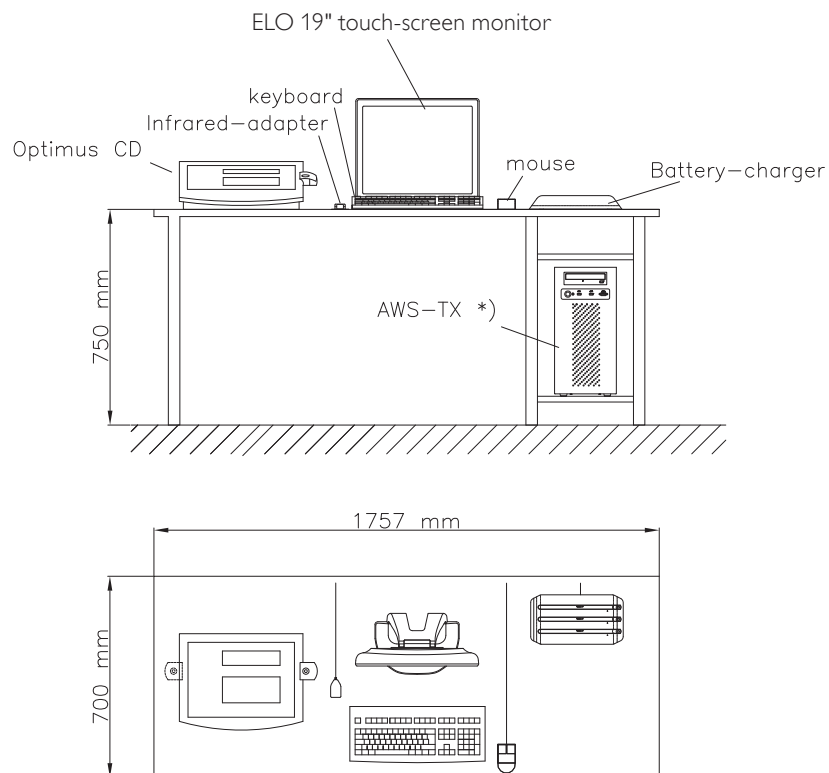
SkyPlate detector



SkyPlate battery charger



Example of work space



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Printed in the Netherlands.
4522 991 04341 * JUN 2014