



# Create a premium DR room like no other

Philips DigitalDiagnost digital radiography solutions  
specifications (Release 3.1)

**PHILIPS**

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## Vertical stand VS

optimized for X-ray departments specializing in thorax examinations.

## Wireless portable detector

is part of the Eleva platform and defines a new dimension of freedom within the radiography room.



# 1 Introduction

The direct digital imaging solution for radiography allows healthcare professionals to customize their room configuration according to their application needs, workflow and budget thanks to the family approach using scalable components.

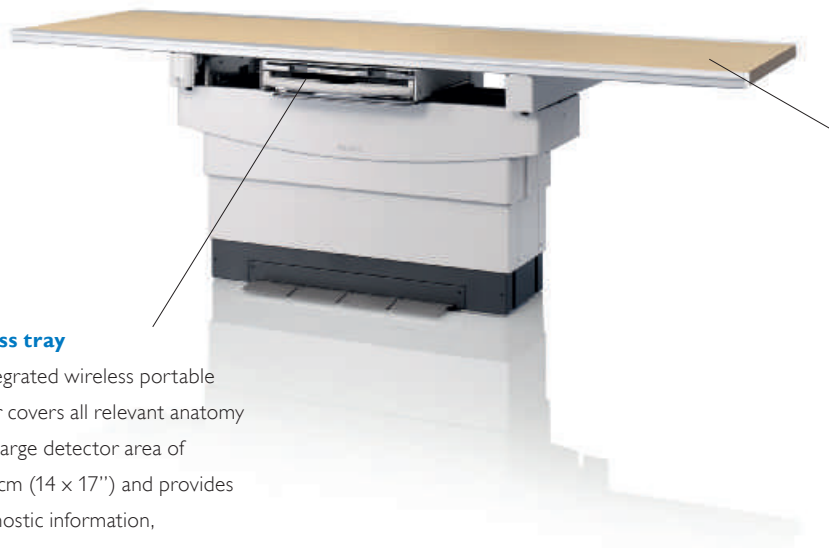


## Ceiling suspension

with an award-winning control handle, the system can be operated with one hand and easily positioned closed to the patient.

## Key advantages

- Align your financial scope and your clinical needs, eg. with the wireless portable detector in a wireless tray
- Optimize exams and have diagnostic confidence with rapid, outstandingly harmonized digital images and network integration
- Experience smooth workflow in the DR room for more patient focus, while patients benefit from excellent X-ray dose efficiency



## Wireless tray

with integrated wireless portable detector covers all relevant anatomy with its large detector area of 35 x 43 cm (14 x 17") and provides full diagnostic information, even with large patients.

## Digital table TH

with high weight capacity has a proven and smart design that makes virtually no compromise on robustness, quality and work efficiency, even with challenging patients. The floating tabletop with wide travel range provides significantly more coverage, allowing quick and effortless positioning.

## 2 Overview of individual room configurations

DigitalDiagnost can be customized to specific customer needs more than ever before. Depending on individual application requirements, room conditions and budget flexibility, DigitalDiagnost can be scaled as a single, dual or even triple detector system, including full wireless DR or CR capabilities.



**High performance room – Alternative 1**  
with moveable vertical stand VM and table TH



**High performance room – Alternative 2**  
with fixed vertical stand VS and table TH



**Flex room**  
with moveable vertical stand VM and table TH-S



The high performance configuration with vertical stand VM and wireless portable detector in the table TH allows for exceptional application variety



**Value room**

with a single wireless portable detector moving between fixed vertical stand VS, table TH, or free exposures



**Emergency room**

with ceiling suspension and wireless portable detector



**Chest room**

with fixed vertical stand VS

# 3 High performance rooms

## 3.1 Alternative 1

The high performance room configuration with the moveable vertical stand VM with fixed 43 cm x 43 cm (17" x 17") detector is especially designed for high patient throughput. The detector of the vertical stand VM is flexible and can be positioned close to the patient. All requested projections can be easily performed with little patient movements. The configuration with the table based wireless tray and wireless portable detector allows for exceptional application variety.

### Main components

Hardware
Moveable multi-purpose stand with swivelling arm and with fixed detector (VM)
Digital Bucky table TH with integrated wireless portable detector or alternatively with fixed detector
Ceiling suspension with X-ray tube assembly, control grip and collimator (CS)
Tracking (X-ray tube) and move-to-position (detector in vertical stand VM)
Eleva workspot
Generator (50 kW, 65 kW or 80 kW)
Software
Eleva application and examination database software
UNIQUE image processing

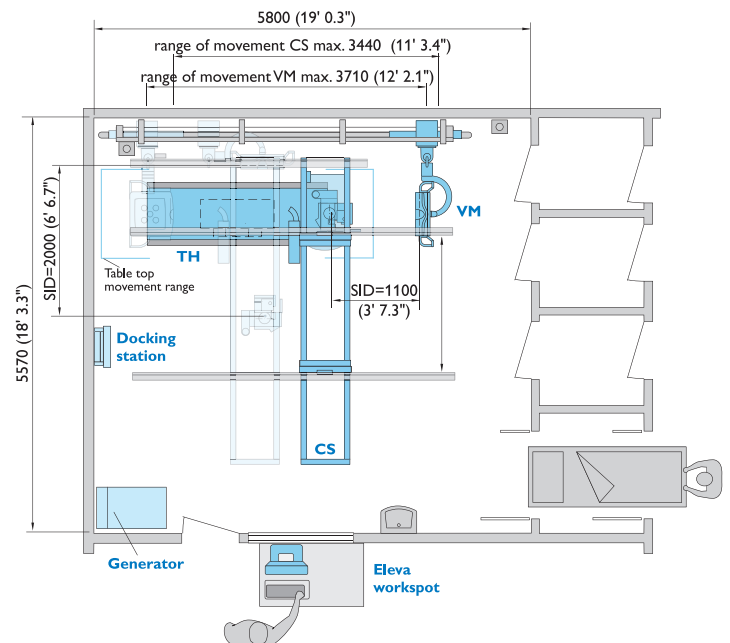
### Optional

Hardware
Wireless portable detector (for configurations with fixed detector in table)
Motorized horizontal movements (VM stand)
Wide table top
Detector alignment in table TH
Vertical stand display
PCR reader integration
Software
Wireless portable detector sharing for systems without wireless portable detector
DICOM media on CD-R
Dose Reporting in DICOM Structured Report format
DICOM communication package
Automatic image stitching
Clinical QC

### Room layouts

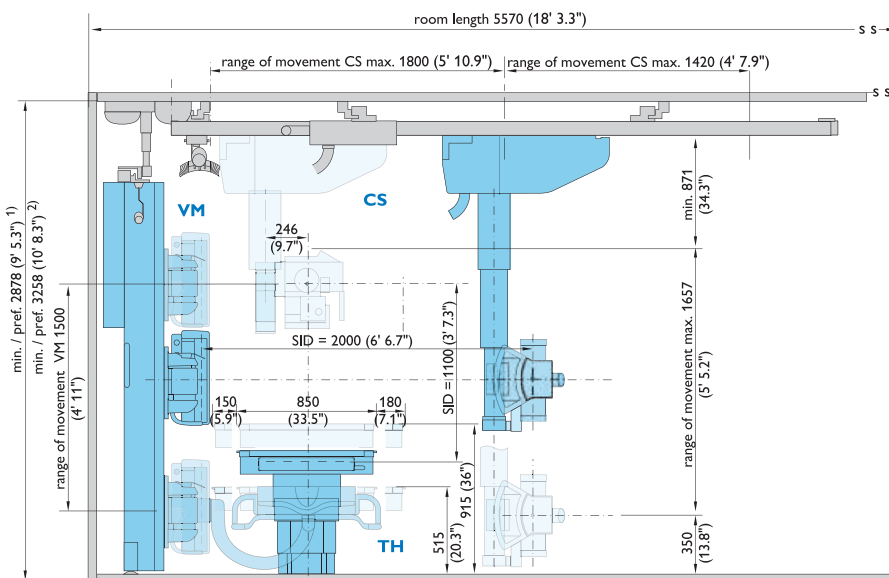
Exemplary room layout based on fixed detector in table TH and moveable vertical stand VM

All dimensions in mm (feet/inches)





Feel the power of the premium DR room with moveable vertical stand



- 1) tubeshield support in upper position
- 2) tubeshield support in lowest position



Perform AP or PA chest exams at the moveable vertical stand VM with sitting patients on the table TH



Philips wireless portable detector can be positioned in portrait or landscape orientations in the table's wireless tray

### 3.2 Alternative 2

The high performance room configuration with the fixed vertical stand VS represents a typical dual detector room configuration. All applications, including automatic image stitching at the vertical stand and/or on the patient table, can be easily and intuitively performed. A configuration with the wireless portable detector allows for exceptional application variety.

#### Main components

Hardware
Digital vertical stand VS with fixed detector
Digital Bucky table TH with integrated wireless portable detector or alternatively with fixed detector
Ceiling suspension with X-ray tube assembly, control grip and collimator (CS)
Tracking (X-ray tube) and move-to-position (detector in vertical stand VS)
Eleva workspot
Generator (50 kW, 65 kW or 80 kW)
Software
Eleva application and examination database software
UNIQUE image processing

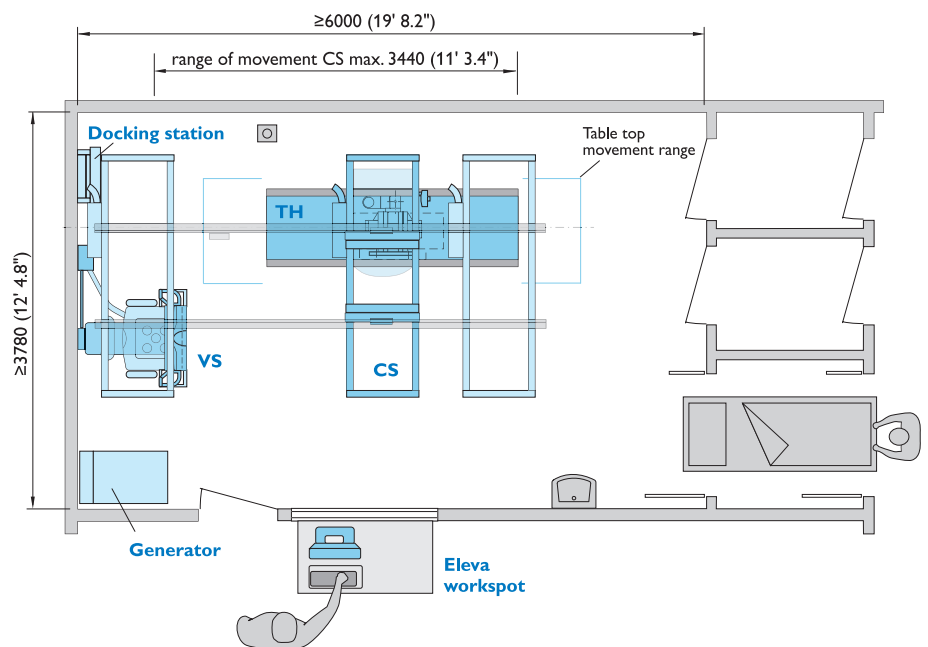
#### Optional

Hardware
Wireless portable detector (for configurations with fixed detector in table)
Motorized tilting for vertical stand
Wide table top
Detector alignment in table TH
Vertical stand display
PCR reader integration
Software
Wireless portable detector sharing for systems without wireless portable detector
DICOM media on CD-R
Dose Reporting in DICOM Structured Report format
DICOM communication package
Automatic image stitching
Clinical QC

#### Room layouts

Exemplary room layout based on fixed detector in table TH and vertical stand VS

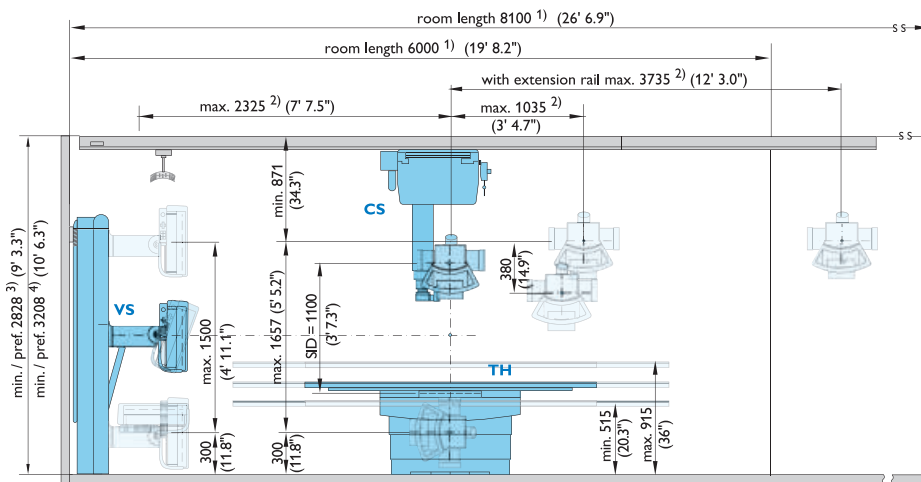
All dimensions in mm (feet/inches)







Feel the power of the premium DR room with the fixed vertical stand



- 1) +300 mm / 11.8" with spacer
- 2) range of movement CS
- 3) tubeshield support in upper position
- 4) tubeshield support in lower position



Perform musculo-skeletal exams at the tilted vertical stand VS



Philips wireless portable detector with back-up cable in wireless tray

# 4 Flex room

The flex room configuration provides a multi-purpose system, which is able of performing all applications of a traditional two detector room set-up with one highly flexible fixed detector. Its unique system geometry allows the detector to be positioned freely around the patient. The optional swivel for the table TH-S allows for better room utilization giving patients in bed or a wheelchair better access to the X-ray tube and detector. The flex room may also be configured with a wireless portable detector as second detector for free projections.

### Main components

Hardware
Moveable multi-purpose stand with swivelling arm and with integrated flat detector (VM)
Ceiling suspension with X-ray tube assembly, control grip and collimator (CS)
Tracking (X-ray tube) and move-to-position (detector in vertical stand VM)
Eleva workspot
Generator (50 kW, 65 kW or 80 kW)
Software
Eleva application and examination database software
UNIQUE image processing

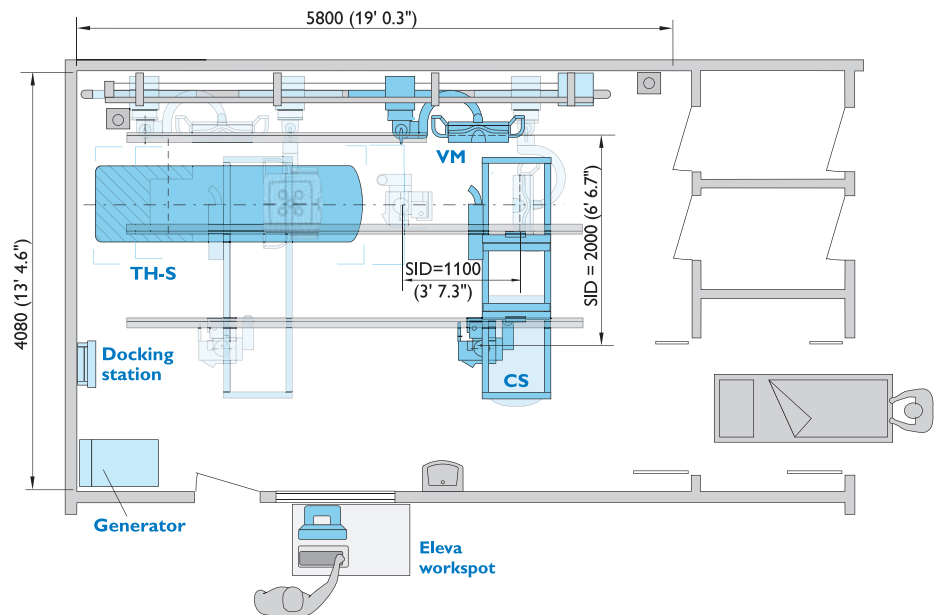
### Optional

Hardware
Additional wireless portable detector
Motorized horizontal movements (VM)
Single side suspended table TH-S or alternatively height adjustable trolley TA-M
Swivel for table TH-S
Vertical stand display
PCR reader integration
Software
Wireless portable detector sharing for systems without wireless portable detector
DICOM media on CD-R
Dose Reporting in DICOM Structured Report format
DICOM communication package
Automatic image stitching
Clinical QC

### Room layouts

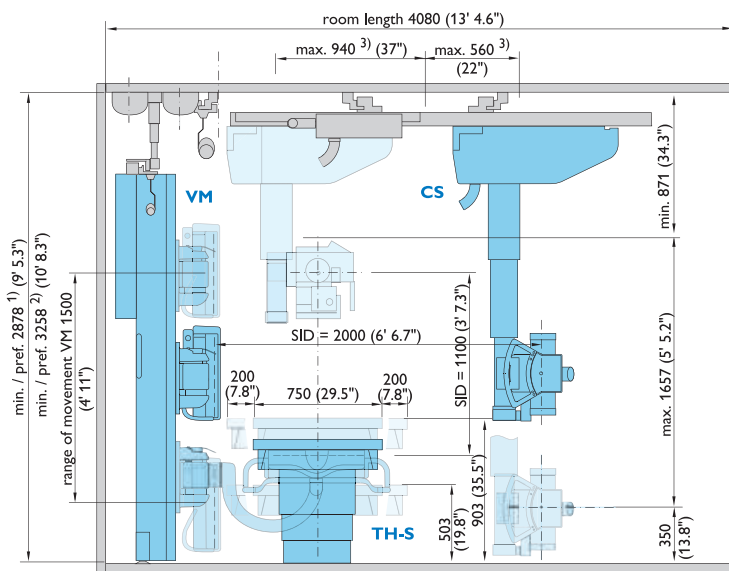
Exemplary room layout based on fixed detector in vertical stand VM and table TH-S

All dimensions in mm (feet/inches)





Maximize flexibility with the premium DR room



- 1) tubeshield support in upper position
- 2) tubeshield support in lowest position
- 3) range of movement CS



Perform stitching exams on the table with the fixed detector in the moveable vertical stand VM



Swiveling table TH-S enables increased system accessibility

# 5 Value room

The value room configuration provides a traditional room set-up, including table and vertical stand, with just one wireless portable detector. The detector can be used in both the table and vertical stand and supports almost all applications of a DR room, including examinations where the use of free positioning is needed.

## Main components

Hardware
Digital vertical stand VS
Digital Bucky table TH
Ceiling suspension with X-ray tube assembly, control grip and collimator (CS)
Integrated wireless portable detector for table TH and vertical stand VS
Tracking (X-ray tube) and move-to-position with integrated wireless portable detector
Eleva workspot
Generator (50 kW, 65 kW or 80 kW)
Software
Eleva application and examination database software
UNIQUE image processing

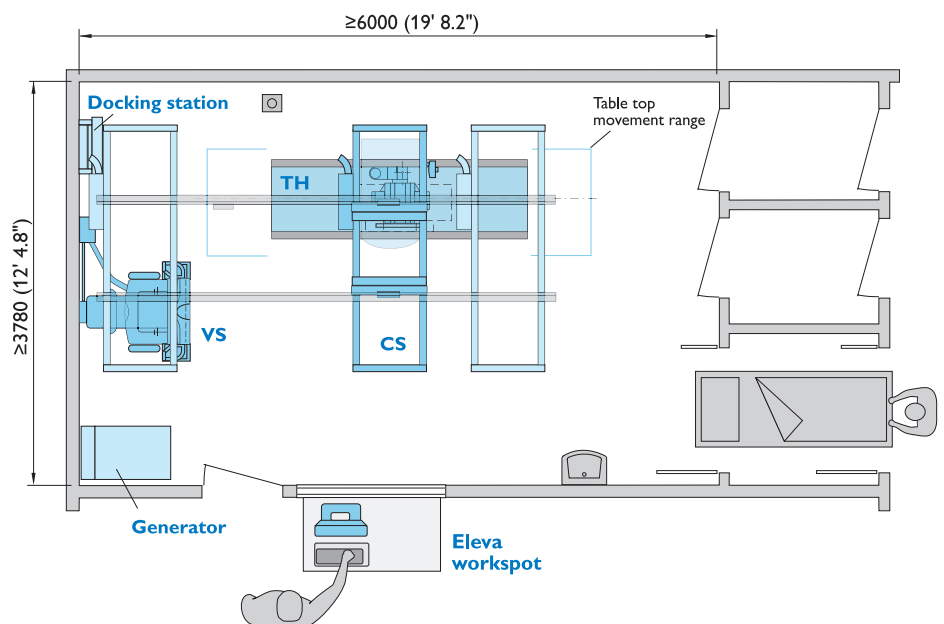
## Optional

Hardware
Detector alignment in table TH
Vertical stand display
PCR reader integration
Software
Wireless portable detector sharing for systems without wireless portable detector
DICOM media on CD-R
Dose Reporting in DICOM Structured Report format
DICOM communication package
Clinical QC

## Room layouts

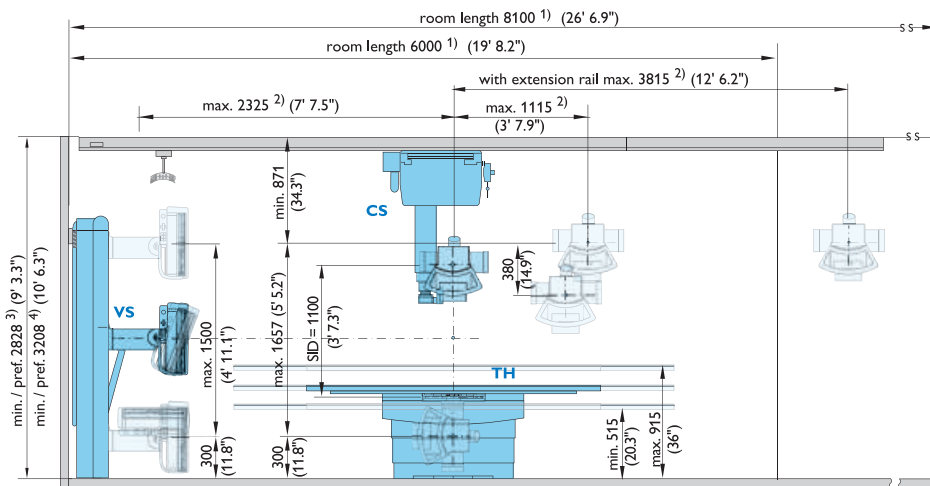
Exemplary room layout with an integrated wireless portable detector in table TH and vertical stand VS

All dimensions in mm (feet/inches)





Optimize value with the premium DR room



- 1) +300 mm / 11.8" with spacer
- 2) range of movement CS
- 3) tubeshield support in upper position
- 4) tubeshield support in lower position



Perform free exposures with the wireless portable detector and the mobile detector holder



Philips wireless portable detector can be positioned in portrait or landscape orientation in the wireless tray

# 6 Emergency room

The emergency room configuration is specifically optimized for critical work. By eliminating the traditional radiography table, X-ray tube floor stand and portable detector cables, the floor space is reserved for more emergency equipment, staff and space around the patient. Its slim design is optimized for critical environments and lessens the risk of interfering with life support equipment.

## Main components

Hardware
Ceiling suspension with X-ray tube assembly, control grip and collimator (CS)
Wireless portable detector
Eleva workspot
Generator (50 kW, 65 kW or 80 kW)
Software
Eleva application and examination database software
UNIQUE image processing

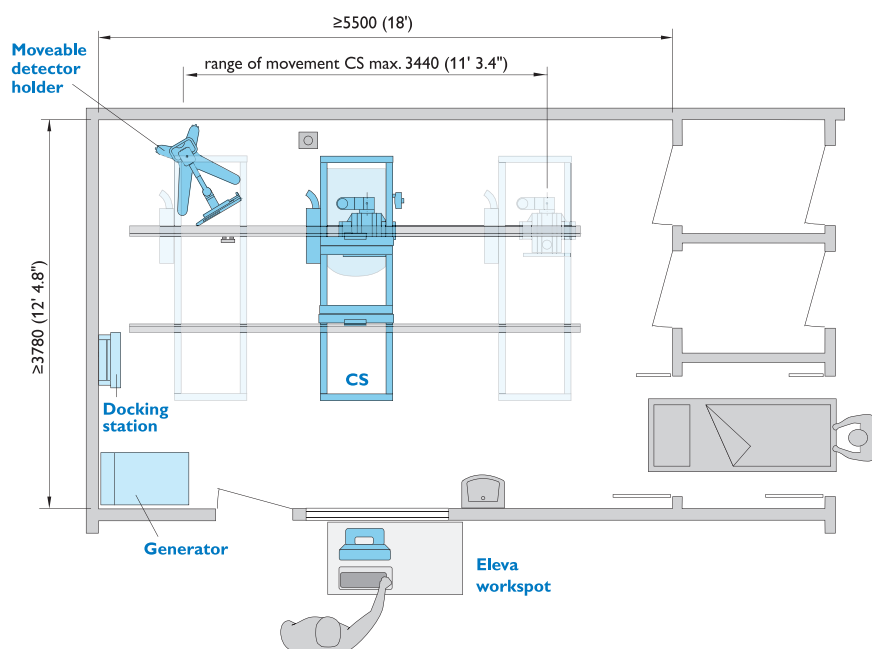
## Optional

Hardware
Vertical stand VS with wireless tray
Moveable wireless portable detector holder and bed holder
PCR reader integration
Height adjustable trolley TA-M
Software
Wireless portable detector sharing for systems without wireless portable detector
DICOM media on CD-R
Dose Reporting in DICOM Structured Report format
DICOM communication package
Clinical QC

## Room layouts

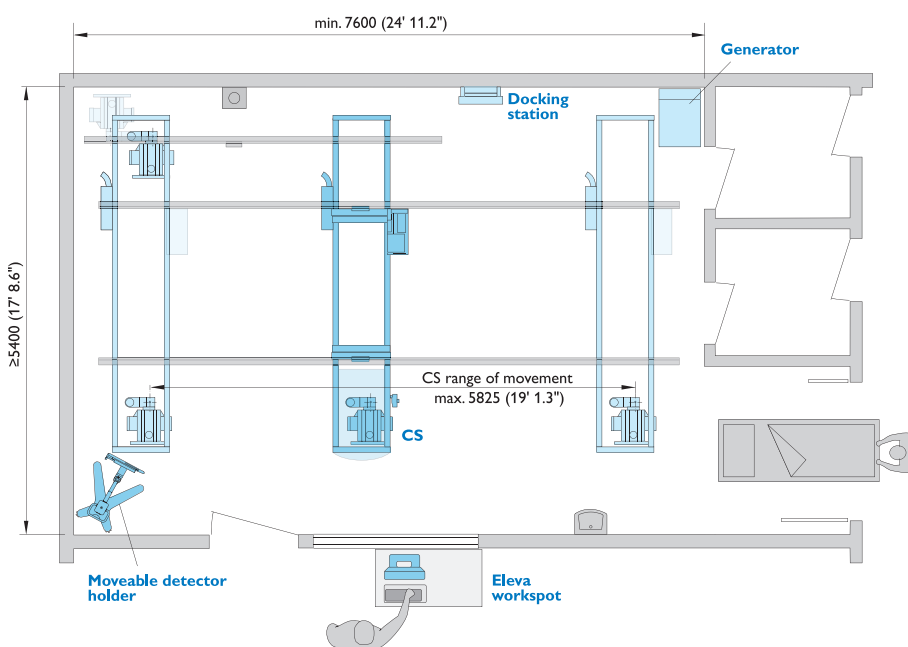
Exemplary room layout with ceiling suspension CS

All dimensions in mm (feet/inches)





The premium DR room for emergency care



Operate freely and deliver fast care for critical patients



Perform free exposures such as a AP chest exam with the wireless portable detector

# 7 Chest room

The chest room configuration allows for dedicated high throughput chest examinations with unmatched image quality. It benefits from Philips' long-lasting experience with digital imaging and supports all common examinations using a vertical stand, including automatic image stitching. The optional wireless portable detector allows free exposures, for example, chest examinations in a wheelchair or patient bed.

## Main components

Hardware
Digital vertical stand VS with fixed detector or alternatively integrated wireless portable detector
Ceiling suspension with X-ray tube assembly, control grip and collimator (CS)
Tracking (X-ray tube) and move-to-position (detector in vertical stand VS)
Eleva workspot
Generator (50 kW, 65 kW or 80 kW)
Software
Eleva application and examination database software
UNIQUE image processing

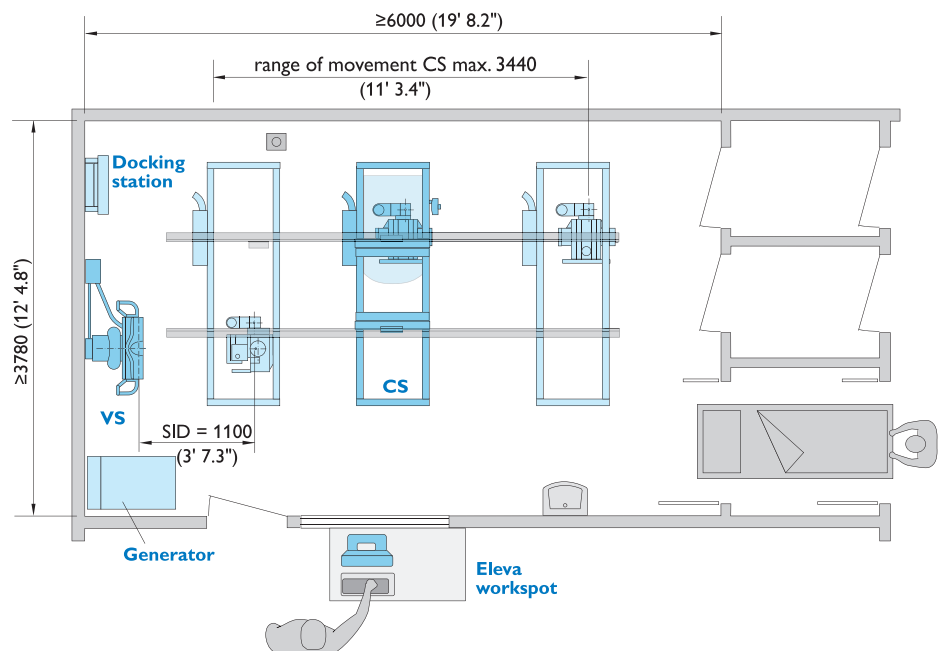
## Optional

Hardware
Additional wireless portable detector
Motorized tilting for vertical stand
Height adjustable trolley TA-M
Vertical stand display
PCR reader integration
Software
Wireless portable detector sharing for systems without wireless portable detector
DICOM media on CD-R
Dose Reporting in DICOM Structured Report format
DICOM communication package
Automatic image stitching
Clinical QC

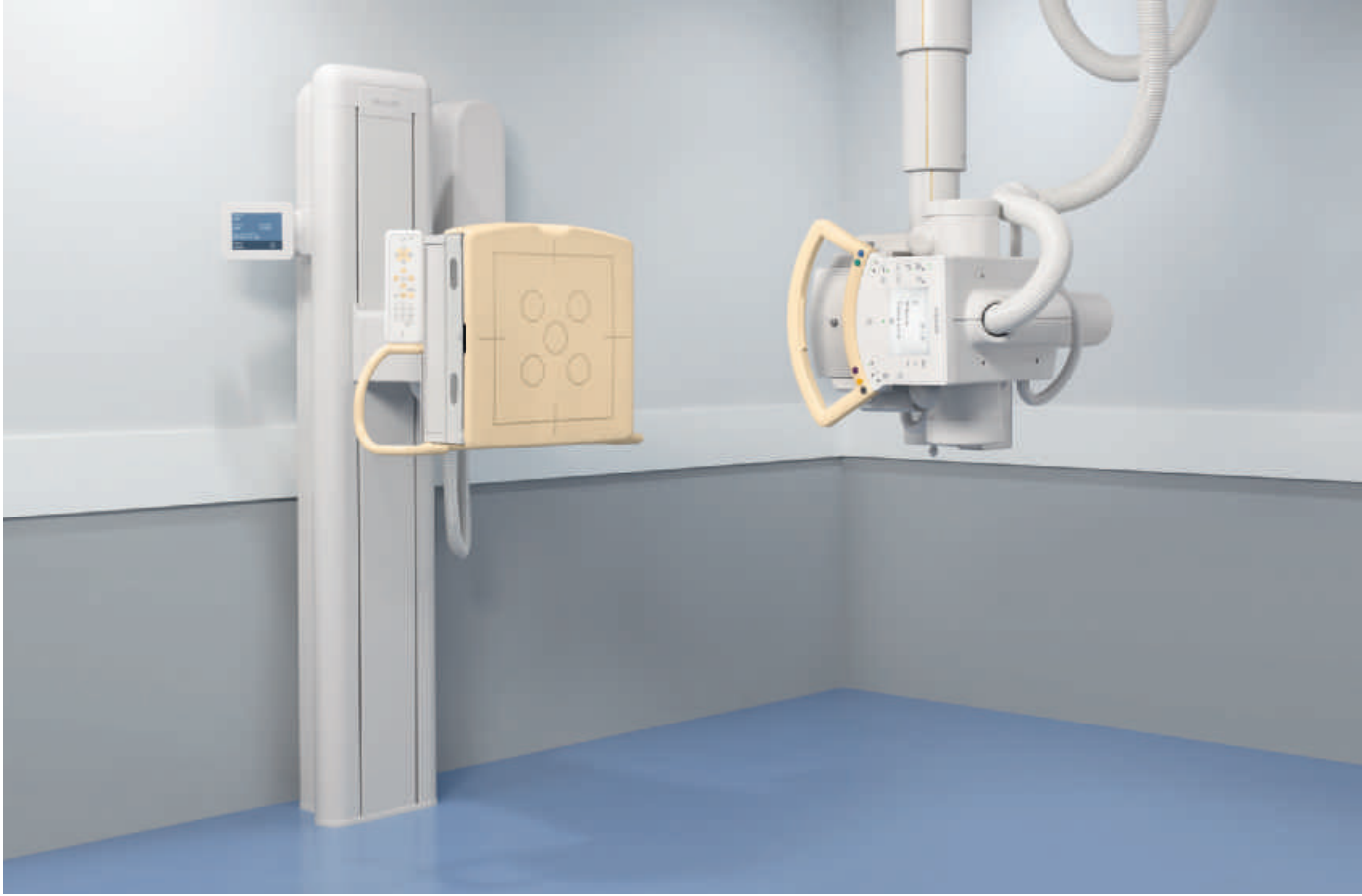
## Room layouts

Exemplary room layout with fixed detector in vertical stand VS

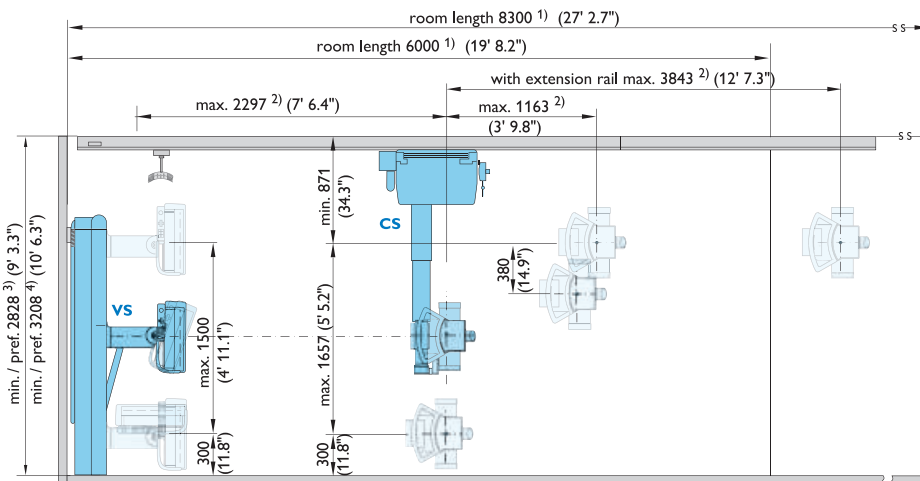
All dimensions in mm (feet/inches)







The premium DR room dedicated for chest



- 1) +300 mm / 11.8" with spacer
- 2) range of movement CS
- 3) tubeshield support in upper position
- 4) tubeshield support in lower position



High work efficiency at the fixed vertical stand VS due to its smart and ergonomic design



Tube Tracking at the fixed vertical stand VS

# 8 Eleva workspot

The unique Eleva workspot of DigitalDiagnost lets you experience simplicity like never before. Designed with input from customers, it provides a clear and intuitive touch screen user interface. It is easy to learn and use, and is highly configurable to adapt to particular needs and specific workflows, resulting in high efficiency.

Eleva workspot computer		
Processor	Intel® Core™ i5-2400 Processor (6M Cache, up to 3.40 GHz) or better	
Hard disk	250 GB SATA (12 GB used for application software and operating system)	
Image storage	200 GB used for typically 4,000 images	
RAM storage capacity	8 GB	
Interfaces	<ul style="list-style-type: none"> <li>• Ethernet 10/100/1000 Base-T Gigabit</li> <li>• Geometry interface</li> <li>• Detector interface</li> <li>• Memory stick support for quality control</li> </ul>	
CD drive	48x CD/DVD reader/writer	
Monitor	<ul style="list-style-type: none"> <li>• 19" LCD color touch screen monitor with resolution 1,280 x 1,024 qualified for 2nd reading</li> <li>• Display according to DICOM Grayscale Standard Display Function (GSDF)</li> <li>• Contrast 500:1 max.</li> <li>• Brightness &gt; 200cd/m<sup>2</sup></li> </ul>	
Keyboard with mouse and function buttons	For entering administrative patient data and for operating the screen menus	
Integrated generator control	EPx programmed	
Image display times	Fixed detector	Wireless portable detector
Typical time to preview image	4 seconds	5 seconds
Additional time to full image	2 seconds	7 seconds
Typical image cycle time	6 seconds	12 seconds



Advanced Eleva touch exam control

Image data	
Data volume	Up to 18 MB/image
Matrix depth	16 bit/pixel

### Optional

Barcode reader	
Error free input of patient data and patient selection	

DICOM	
DICOM media on CD-R	
Dose Reporting in DICOM Structured Report format	
DICOM communication package	
The complete DICOM package includes:	
<ul style="list-style-type: none"> <li>• DICOM WLM (Work List Management) and Classic RIS</li> <li>• DICOM MPPS (Modality Performed Procedure Step)</li> <li>• DICOM Print</li> <li>• DICOM Image Export incl. Storage Commit</li> </ul>	

# 9 X-ray generation

Philips' dual-focus rotating anode X-ray tubes provide excellent performance over a long lifetime. Philips range of generators are designed with high performance components that can be customized to meet user's needs.

Generator	50 kW	65 kW	80 kW
High-voltage generator	The converter generator generates high voltage equivalent to DC voltage		
Mains voltage	400 V / 480 V (±10%); 50 Hz or 60 Hz, 3-phase		
Max. mains resistance at 400 V	0.3 Ohm	0.2 Ohm	0.2 Ohm
Max. mains current at 400 V	112 A	134 A	160 A
Nominal power (IEC)	50 kW	65 kW	80 kW
Max. tube voltage	150 kV	150 kV	150 kV
Max. tube current (at 80 kV)	625 mA	812 mA	1000 mA
Tube support	RO / SRO see tube section		
mAs product	0.5 mAs to 850 mAs		
Exposure times	1 ms to 4 s		
Compatible with VarioFocus	yes	yes	yes
Safety	Tube overload protection		

Tube	50 kW X-ray tube (RO 1750)	High power X-ray tube (SRO 33100)
Two focal spots	0.6 and 1.2	0.6 and 1.2
Maximum power		
with focal spot 0.6	17 kW	33 kW
with focal spot 1.2	50 kW	100 kW
Anode angle	13°	13°
Maximum tube voltage	150 kV	150 kV
Anode heat storage capacity	220 kJ (300 kHU)	220 kJ (300 kHU)
Assembly heat capacity	1.247 kJ (1.700 kHU)	1.247 kJ (1.700 kHU)
Minimum anode speed	2.600 to 3.100 revolutions/minute	8.000 to 10.000 revolutions/minute
Build in filter	2 mm Al (5/64")	2 mm Al (5/64")
Total filtration minimum	2.6 mm Al (105/1024")	2.6 mm Al (105/1024")
Compatible with VarioFocus	yes	yes
Double tube overload protection	yes	yes
Total weight	23 kg	23 kg



Advanced Eleva touch screen with integrated generator control



50 kW X-ray tube



High power X-ray tube

# 10 Detectors

Philips digital fixed and wireless portable detectors feature outstanding image quality at a low X-ray dose with high DQE and excellent MTF. The robust design promotes high availability and system uptime. Philips wireless portable detector always contains the wireless portable detector sharing software license.

## 10.1 Fixed detector

Type	Digital CsI (Cesium Iodide) flat detector	
Detector size	43 cm x 43 cm (17" x 17")	
Active area	42 cm x 42.5 cm (16.5" x 16.7")	
Image matrix size	2,840 pixel x 2,874 pixel	
Detector pixels	8.2 Megapixel	
Pixel size	148 $\mu\text{m}$	
Image resolution	up to 3.4 Lp/mm	
DQE and MTF values at 1 $\mu\text{Gy}$	DQE (%)	MTF (%)
0.05 Lp/mm	65	98,5
1.0 Lp/mm	51	64
2.0 Lp/mm	42	32
3.0 Lp/mm	25	17



Table TH with fixed detector

## Grids

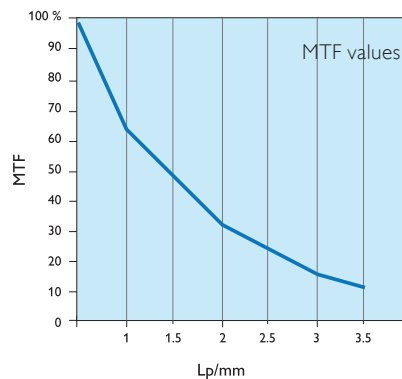
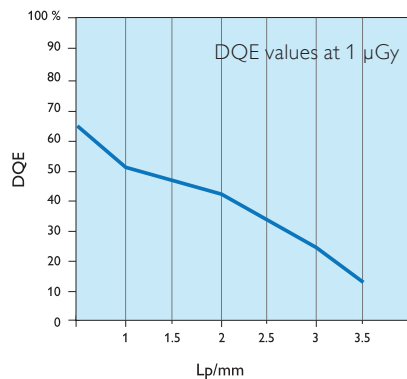
Type *	Removable carbon fiber grids for fixed detector and for wireless tray, 40 lines/cm (100 lines/inch)
Weight	1.7 kg (3.7 lbs)

## Specification

Color Code	Ratio (r)	SID (fo)	SID range
Purple	8	110 cm (44")	90 to 142 cm (35 to 56")
Yellow	8	140 cm (55")	109 to 197 cm (43 to 77")
Dark Blue	8	180 cm (71")	131 to 286 cm (52 to 112")
Red	12	110 cm (44")	96 to 130 cm (38 to 51")
Light Blue	12	140 cm (55")	118 to 173 cm (46 to 68")
Green	12	180 cm (71")	144 to 239 cm (57 to 94")

\* oscillating with fixed detectors

## Typical DQE and MTF of Pixium 4343RC RQA 5 – according to IEC62220-1-1



## 10.2 Wireless portable detector

Type	Digital CsI (Cesium Iodide) flat detector	
Housing material	Magnesium	
Sensor protection material	Carbon fiber	
Detector size	35 cm x 43 cm (14" x 17")	
Active area	34.1 cm x 43.2 cm (13.4" x 17")	
Image matrix size	3,000 pixel x 2,372 pixel	
Detector pixels	7.1 Megapixel	
Pixel size	144 $\mu$ m	
Image resolution	up to 3.47 Lp/mm	
DQE and MTF values at 2 $\mu$ Gy	DQE (%)	MTF (%)
0.05 Lp/mm	66	~96
1.0 Lp/mm	51	60
2.0 Lp/mm	39	30
3.0 Lp/mm	23	15
Energy range (kVp)	40 – 150	
A/D Conversion (bits)	16	
Weight	typ. 4.8 kg (10.6 lbs) incl. battery	
Max. patient weight	<ul style="list-style-type: none"> <li>• 100 kg (200 lbs) for weight bearing examinations</li> <li>• 135 kg (298 lbs) for distributed load, eg. for chest examination in bed</li> </ul>	
WLAN network standard	WLAN standard IEE802.11 a or g (configurable)	
Encryption	Default WPA2 encryption according to IEE 802.11i	

## Grids

Type *	Click-on carbon fiber grids for portable use, 40 lines/cm (100 lines/inch)
Weight	1.8 kg (3.9 lbs)

## Specification

Orientation	Ratio (r)	SID (fo) (51")	SID range (40 to 71")
Landscape	8	130 cm (51")	102 to 181 cm (40 to 71")
Portrait	8	130 cm (51")	97 to 198 cm (38 to 78")

\* For use in wireless tray please refer grids listed on page 20.

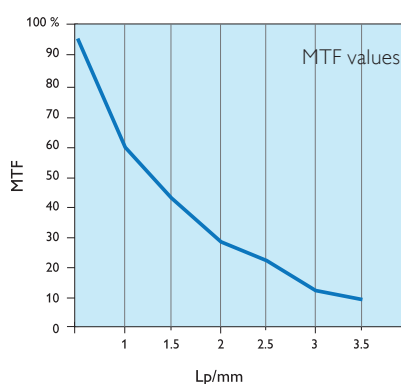
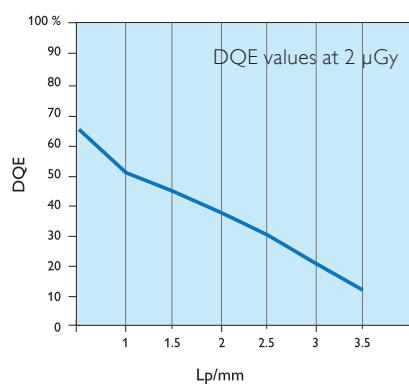
## Battery

Technology	Internal lithium ion battery
Size	43 mm x 50 mm x 14.5 mm (1.7" x 2" x 0.5")
Weight	400 g
Expected lifetime	1 year (500 charge / discharge cycles)
Battery charging time empty to full	3.5 h for 100 % charge 1.5 h for 80 % charge
Battery operating time	2 hours typ. at 100 images/hour

## Optional

- Wireless portable detector sharing
- Accident Protection

Typical DQE and MTF of Pixium 3543pR  
RQA 5 – according to IEC62220-1-1



Wireless portable detector

# 11 Tables

Philips height adjustable digital tables have a proven and smart design that makes virtually no compromise on robustness, quality and work efficiency, even with challenging patients. The single-side suspended table TH-S opens up new perspectives for single-detector rooms like never before.

## 11.1 Digital table TH

Table base		
Height adjustment	<ul style="list-style-type: none"> <li>• 51.5 cm to 91.5 cm (20.3" to 36") above floor, motorized adjustment</li> <li>• Preferred height 75 cm (29.5")</li> <li>• Electronic physical protection system with motor shutdown for downward movement; upward movement is possible at any time</li> </ul>	
Table weight	335 kg (738 lbs)	
Patient weight		
Static load center	375 kg (820 lbs)	
Dynamic load center	318 kg (700 lbs)	
Dynamic load off center	210 kg (460 lbs)	
Table top		
Type	Floating table top of sandwich design with Getalit overlay	
Dimension (l x w)	240 cm x 75 cm (7' 10.5" x 29.5")	
Table top travel		
longitudinal	±60 cm (±23.6")	
transverse	±13 cm (±5.1"), electromagnetic brakes	
Attenuation equivalent	≤0.75 mm Al equivalent at 100 kV	
Table-edge section	Flat locking rails for attaching Philips accessories, e.g. infusion bottle holder	
Patient coverage	Longitudinal	Transversal (standard tabletop / wide tabletop)
With fixed detector	200 cm (78.8")	60 cm (23.6") / 70 cm (27.6")
With wireless portable detector		
in portrait orientation (patient view)	200 cm (78.8")	60 cm (23.6") / 70 cm (27.6")
in landscape orientation (patient view)	194 cm (76.4")	60 cm (23.6") / 70 cm (27.6")
Footswitches		
Functions	<ul style="list-style-type: none"> <li>• Table height adjustment down / up</li> <li>• Disengage table top brakes in longitudinal and transverse directions</li> <li>• Switch on cross light in the collimator (all footswitches)</li> <li>• Footswitch interlock</li> </ul>	
Detectors		
Fixed detector 43 cm x 43 cm (17" x 17") or removable wireless portable detector 35 cm x 43 cm (14" x 17")		

### Optional

Wide table top		Second table control	
Dimension (l x w)	240 cm x 85 cm (7' 10.5" x 33.5")	Hand switch	Replicates footswitch functions for operation at the backside of the table
Table top travel			
longitudinal	±60 cm (±23.6")		
transverse	±18 cm (±7.1")		
Brakes	electromagnetic		



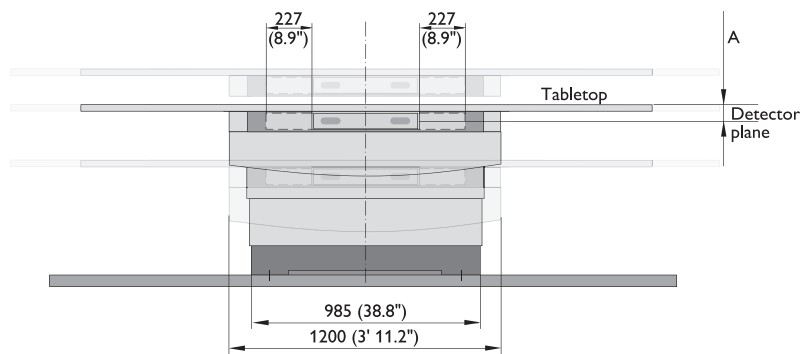
Digital TH table with removable wireless portable detector



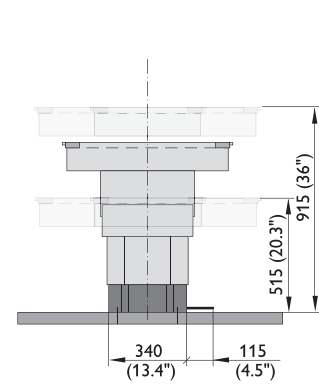
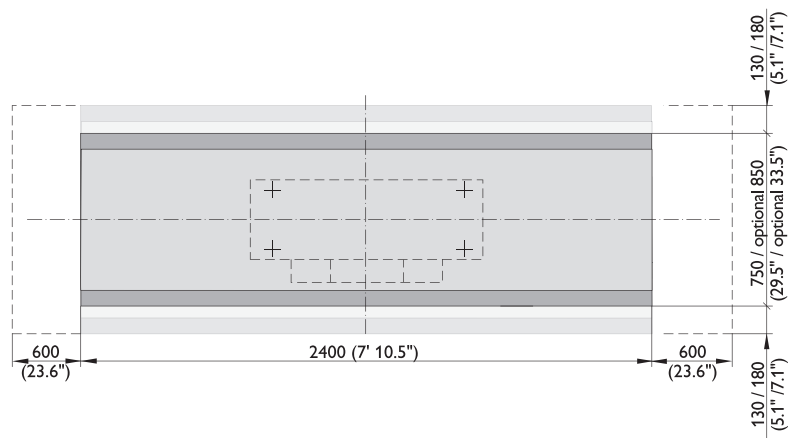
Alternatively with fixed detector

### Dimensions

All dimensions in mm (feet/inches)



	<b>A</b> Tabletop-detector plane distance
Fixed detector-standard tabletop	69 (2.7")
Fixed detector-wide tabletop	80 (3.2")
Wireless portable detector-standard tabletop	65 (2.6")
Wireless portable detector-wide tabletop	75 (2.9")



## 11.2 Single side suspended table TH-S

Table base		
Height adjustment	<ul style="list-style-type: none"> <li>• 50.3 cm to 90.3 cm (19.8" to 35.6 ") motorized adjustment</li> <li>• Electronic physical protection system with motor shutdown for downward movement</li> </ul>	
Table weight	214 kg (471 lbs)	
Maximum patient weight	225 kg (496 lbs)	
Table top		
Type	Floating tabletop of sandwich design with Kevlar overlay, flat top	
Dimension (l x w)	260 cm x 75 cm (8' 6.4" x 29.5")	
Thickness of table top	4.7 cm (1.9")	
Length X-ray transparent area	2.08 m (6' 9.9")	
Table top travel		
longitudinal	±20 cm (±7.9"), hydraulic brakes	
transverse	±20 cm (±7.9"), hydraulic brakes	
Attenuation equivalent	≤1.4 mm (0.06") Al equivalent at 100 kV	
Patient coverage	Longitudinal	Transversal
With fixed detector	208 cm (6' 9.9")	83 cm (32.7")
Footswitches		
Functions	<ul style="list-style-type: none"> <li>• Table height adjustment down / up</li> <li>• Disengage table top brakes in longitudinal and transverse directions</li> <li>• Switch on cross light in the collimator (all footswitches)</li> <li>• Footswitch interlock</li> </ul>	

### Optional

#### Table swivel

- Maximum rotation movement 0° to 90° around vertical table base
- 2 lock positions to be configured at 0° and -90° or +90°
- Rotation configured at installation to be either clockwise or counter clockwise
- Installation: into the floor or in a double floor before system installation
- Available as pre-delivery material



The swivel unit allows to rotate the TH-S table 90° around the vertical axis of its base

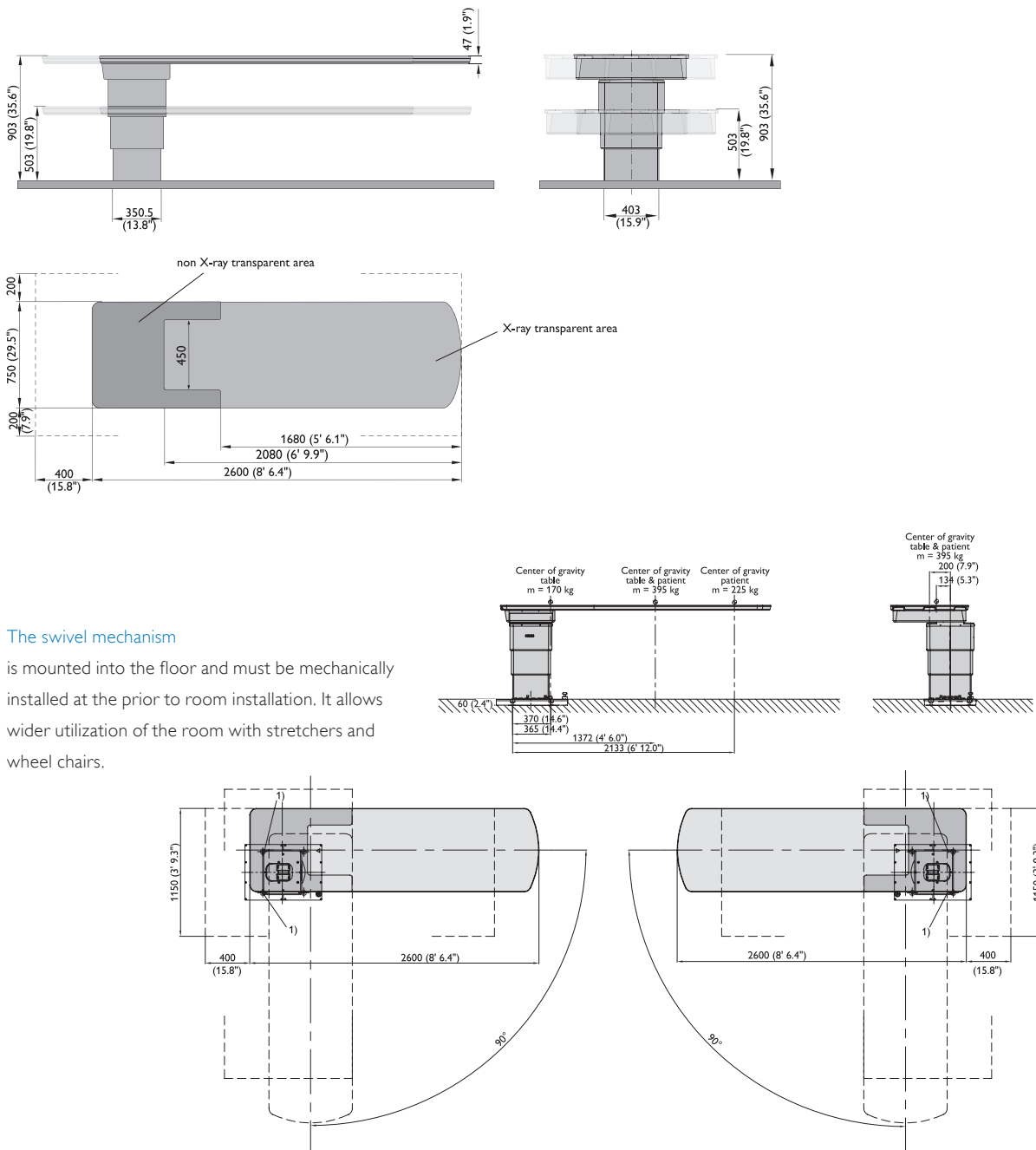




Single side suspended table TH-S

### Dimensions

All dimensions in mm (feet/inches)



### The swivel mechanism

is mounted into the floor and must be mechanically installed at the prior to room installation. It allows wider utilization of the room with stretchers and wheel chairs.

### 11.3 Height adjustable trolley TA-M

<b>Trolley</b>	
Height adjustment	60 cm to 86.5 cm (23.6" to 34") hydraulic adjustment
Dimensions with accessories, max.	227 cm x 90 cm (7' 5.4" x 35.5")
Total weight	130 kg (286 lbs)
Maximum patient weight	225 kg (496 lbs)
Accessories	All accessories for the table TH-S can be used with this trolley as well
Brakes	At each side
<b>Bariatric table top</b>	
Type	Floating tabletop of sandwich design with carbon fiber overlay, flat top side
Dimension (l x w)	220 cm x 67 cm (7' 2.6" x 26.4")
Thickness of table top	5.4 cm (2.1")
Length X-ray transparent area	1.73 m (5' 8.1")
<b>Table top travel</b>	
longitudinal	floating by fixing the vertical axes of the wheels
transverse	±10 cm (±4.3")
Attenuation equivalent	≤1.4 mm (0.06") Al equivalent at 100 kV



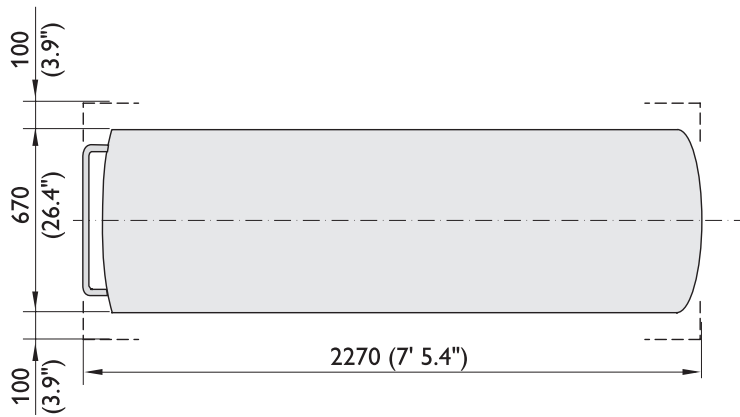
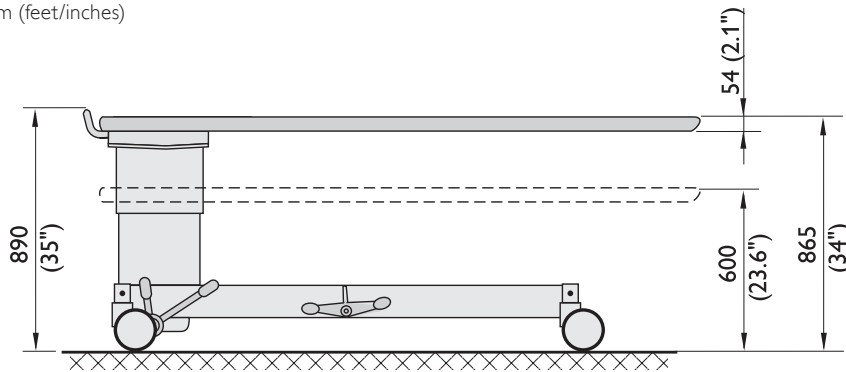
Enhanced room usage with fixed digital vertical stand and trolley



Height adjustable trolley TA-M

**Dimensions**

All dimensions in mm (feet/inches)



# 12 Vertical stands

With the vertical stands, Philips redefines the benchmark for radiography rooms with highly flexible configurations. The outstanding concept of the moveable multi-purpose stand VM features excellent ergonomics even with challenging patients.

## 12.1 Moveable multi-purpose stand VM

<b>Stand</b>		
Hardware	Counterbalanced rugged column for motorized vertical movement of the detector unit	
Vertical travel	35 cm to 185 cm (13.8" to 6' 08"), measured at center of detector	1
Horizontal travel		2
motorized	3.475 m (11' 4.8")	
non-motorized	3.71 m (12' 2.1")	
with extension rails, motorized	5.5 m (18' 0.5")	
with extension rails, non-motorized	5.5 m (18' 0.5")	
Installation	Floor attachment in combination with wall or ceiling attachment	
<b>Multi-purpose arm</b>		
Swiveling range	0° to 90° (right or left orientated execution)	3
Lock-in positions	manual or every 15°	
<b>Detector unit</b>		
Dimension (w x h)	59.6 cm x 57.5 cm (23.5" x 22.6")	
Tilt angle, horizontal axis	-20° to +90°, motorized tilting	4
Tilt angle, vertical axis	+45° to -23°, manual tilting	5
Automatic exposure control (AEC)	5 AEC measuring fields	
Operating	2 user interfaces (left & right) and wireless remote control	
Grid storage	For up to 2 grids within the detector unit	
Grips	Patient grips arranged on the left and the right of the detector unit	
Brakes	All movements are locked when system is switched off.	
<b>Fixed detector</b>		
43 cm x 43 cm (17" x 17")		

### Optional

<b>Vertical stand LCD display</b>	
Type	16.5 cm (6.5") adjustable LCD information display
Data displayed	<ul style="list-style-type: none"> <li>• Patient first and last name</li> <li>• Date of birth</li> <li>• ID/Accession number</li> <li>• Examination name</li> <li>• Grid inserted yes/no</li> </ul>
Compatibility	with VS and VM vertical stands

<b>Patient stretch grip</b>	
Patient stretch grip	<ul style="list-style-type: none"> <li>• Arranged on the top left or right of the detector unit</li> <li>• Rotatable</li> </ul>



Optional vertical stand LCD display

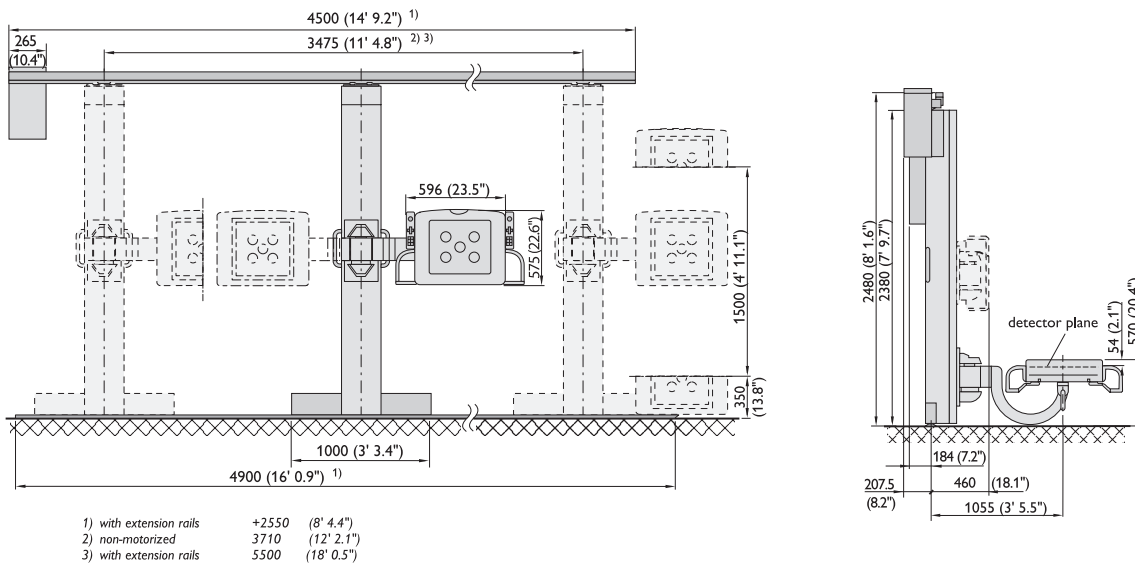
### The moveable multi-purpose stand VM consists of

- Stand
- Multi-purpose arm
- Detector unit
- 2 user interfaces (left & right)
- 2 patient grips (left & right)
- Floor rail with wall or ceiling rail
- Wireless remote control
- Vertical stand LCD display (option)

The vertical stand VM can be positioned for table exams, cross table laterals or standing chest work

### Dimensions

All dimensions in mm (feet/inches)



## 12.2 Fixed vertical stand VS

Stand	
Hardware	Counterbalanced rugged column for motorized and manual vertical movement of the detector
Vertical travel	30 cm to 180 cm (11.8" to 5' 11"), measured at center of detector <b>1</b>
Installation	Floor and wall attachment or floor only (optional)
Detector unit	
Dimension (w x h)	59.6 cm x 57.5 cm (23.5" x 22.6")
Automatic exposure control (AEC)	5 AEC measuring fields
Operating	2 user interfaces (left & right) and wireless remote control
Grid storage	For up to 2 grids within the detector unit
Grips	Patient grips arranged on the left and the right of the detector unit
Brakes	All movements are locked when system is switched off

### Detectors

#### Fixed detector

43 cm x 43 cm (17" x 17")

or

#### Removable wireless portable detector

35 cm x 43 cm (14" x 17") \*

### Optional

#### Motorized tilting

Tilt angle, horizontal axis **2**  
-20° to +90°

#### Vertical stand LCD display

Type	16.5cm (6.5") adjustable LCD information display
Data displayed	<ul style="list-style-type: none"> <li>• Patient first and last name</li> <li>• Date of birth</li> <li>• ID/Accession number</li> <li>• Examination name</li> <li>• Grid inserted yes/no</li> </ul>
Compatibility	with VS and VM vertical stands

#### Patient stretch grip

Patient stretch grip

- Arranged on the top left or right of the detector unit
- Rotatable



Grid storage for up to two grids within the detector unit

\* System may be configured at installation with either right or left loading of the wireless portable detector.

Fixed stand VS with removable wireless portable detector



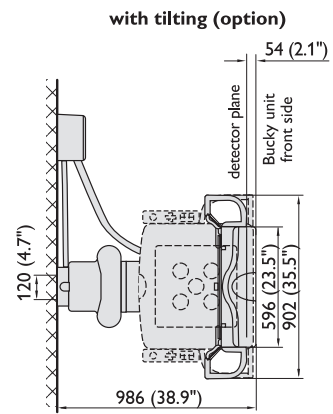
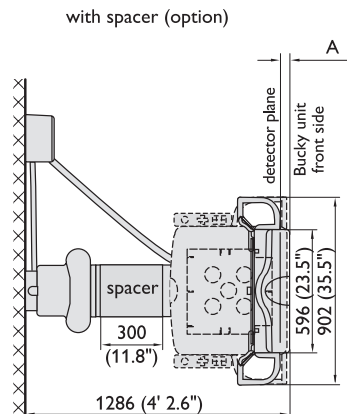
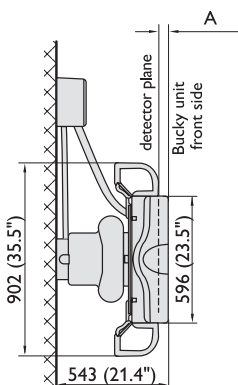
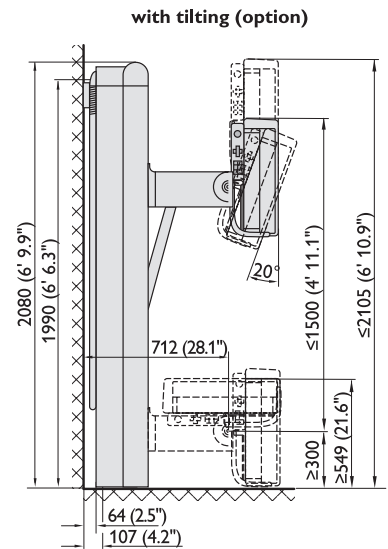
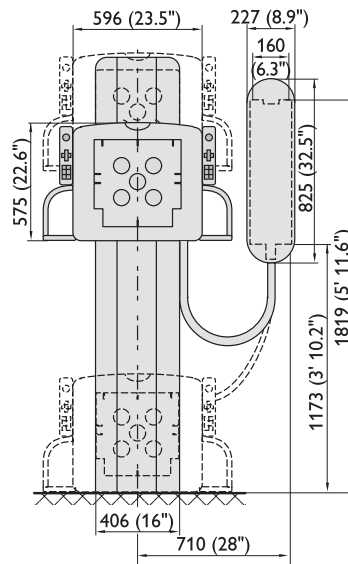
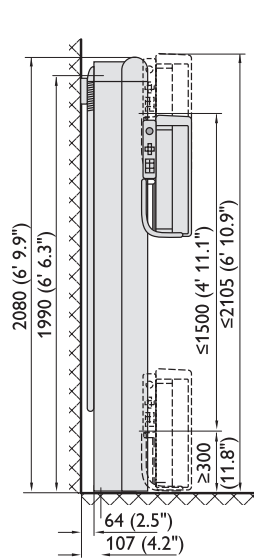
Alternatively with fixed detector

**The digital vertical stand VS consists of**

- Stand
- Detector unit
- Grid
- 2 user interfaces (left & right)
- 2 patient grips (left & right)
- Wireless remote control
- Vertical stand LCD display (option)

**Dimensions**

All dimensions in mm (feet/inches)



	A
Wireless portable detector	49.4 (1.9'')
Fixed detector	53.7 (2.11'')

# 13 Ceiling suspension CS

The ceiling suspension carrying the X-ray tube allows the freedom for a wide range of longitudinal and transverse movements in the room. It supports all table and vertical stand examinations, as well as lateral projections and free exposures using the wireless portable detector or PCR cassettes. Thanks to a four-part telescopic column and an award-winning control handle, the system can be operated with only one hand and easily positioned close to the patient. The long vertical travel range allows for lower extremity exposures.

Column	
Type	Four-part aluminium telescopic column with spring counter balanced holder for X-ray tube assembly; adaptable to individual room heights
Ceiling height at source image distance 110 cm (44")	2.83 m to 3.21 m (8' 8.3" to 10' 5.9")
Movements	
Longitudinal travel	3.44 m (11' 3.4")
Transverse travel	
short	1.50 m (4' 11")
long	3.22 m (10' 6.77")
Vertical travel	1.66 m (5' 5.2")
Tube assembly	
Minimum ceiling source distance	87.1 cm (34.3")
Possible room height adjustment	38 cm (15")
Lowest tube position	30 cm (11.8") measured from center of beam to the floor
Tube assembly rotation	
around vertical axis	360° (±180°) with lock position every 45°
around horizontal axis	±125°, lock positions 0° and ±90°

Collimator	
Type	<ul style="list-style-type: none"> <li>• Motorized automatic collimation</li> <li>• manual override possible</li> <li>• with light field indicator</li> </ul>
Angle of aperture and rotation	2 x 15°, ±45°, depending on the collimator (see type number plate)
Timer switch	up to 30 s
Inherent filter value	<0.3 mm at 100 kV, depending on the collimator
Added filters	<ul style="list-style-type: none"> <li>• 2 mm Al or</li> <li>• 1 mm Al + 0.1 mm Cu or</li> <li>• 1 mm Al + 0.2 mm Cu</li> </ul>
Source-image distance measurement tape	

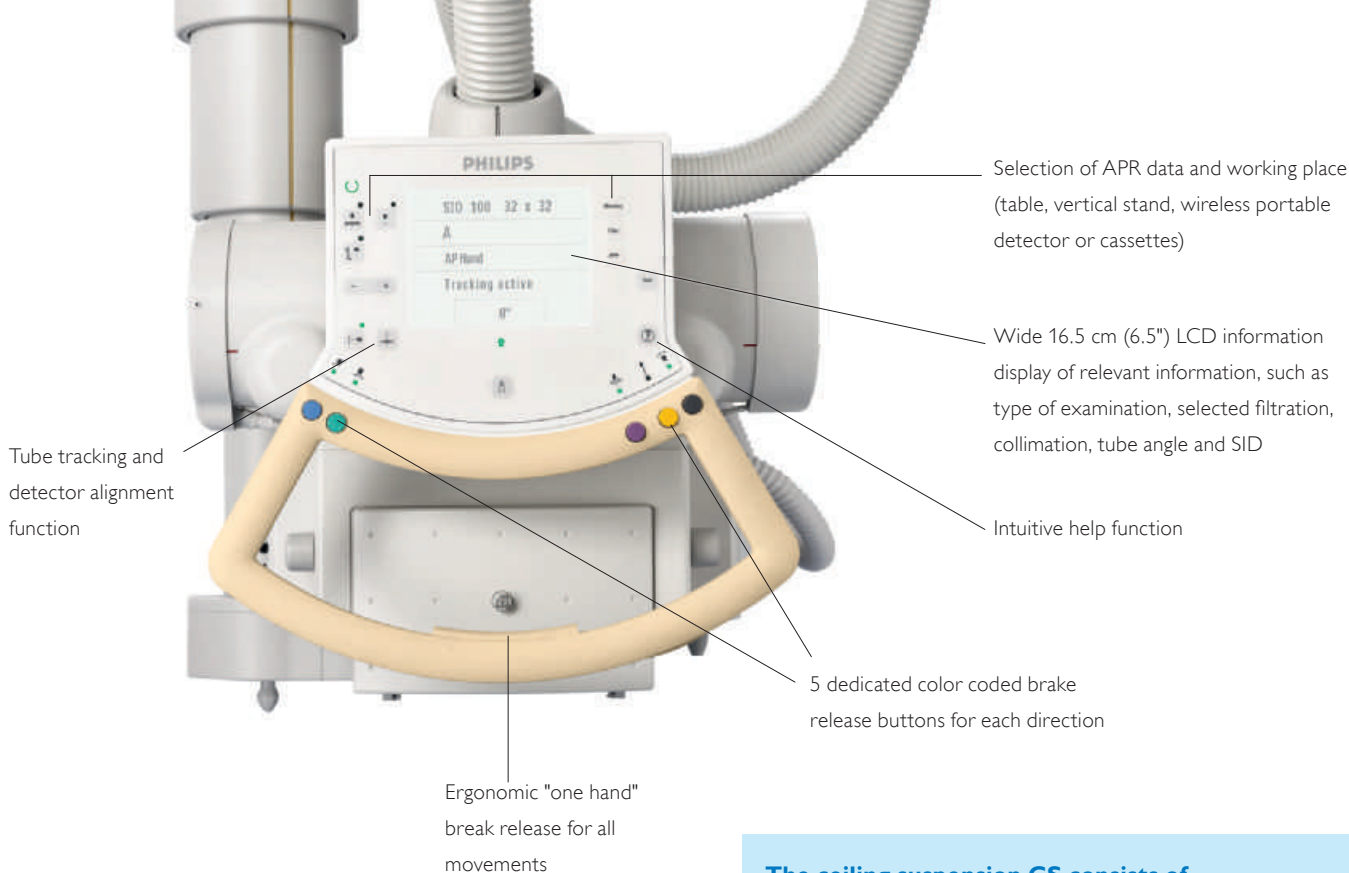
Rail system	
Hardware	Ceiling rail system made of anodized aluminium for long service life
Length of rails	4.3 m (14' 1.3")

## Optional

Rails extension CS	
Extension size	2.7 m (8' 10.3")
Longitudinal travel	6.14 m (20' 1.7")

Second laser	
Second laser for fixed source-image distance	

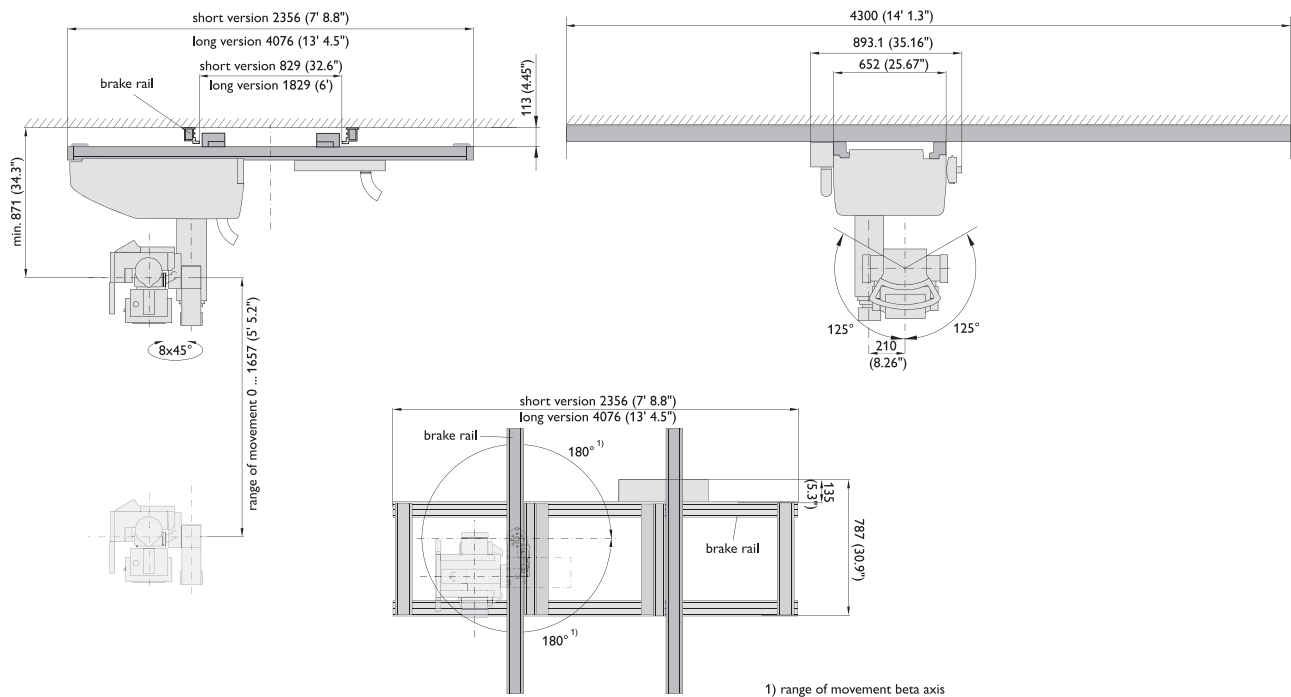




- The ceiling suspension CS consists of**
- Four-part telescopic column
  - X-ray tube assembly with collimator
  - Control handle with buttons and LCD screen
  - Rail system
  - Installation cables and high voltage cables
  - Set of marker for preferred source-image distance

**Dimensions**

All dimensions in mm (feet/inches)



# 14 Wireless portable detector sharing

Philips wireless portable detector sharing enables hospitals to share the Philips wireless portable detector between Philips DigitalDiagnost DR rooms, Philips EasyDiagnost Eleva DRF rooms and Philips MobileDiagnost wDR systems. There are plenty of options available that help to increase room and detector utilization. The wireless portable detector can be used for free exams or inserted in a wireless tray in tables or vertical stands in several rooms providing more cost efficiency and flexibility at the same time. The wireless portable detector always contains the wireless portable detector sharing software license.

## Main benefits at a glance

- Low initial investment while assuring a high level of flexibility
- Back-up solution to provide continuous uptime
- Smart starting point for upgrades, i. e. adding additional detectors in the future

## Cost efficiency as the driver

- In today's medical world facilities have to be mindful of the budget while maintaining their power to compete
- Wireless portable detector sharing is a convincing answer to financial constraints
- With a fixed expenditure the room utilization can be raised to an even higher degree

## Possible scenarios for wireless portable detector sharing

- If there are times during the day when one wireless portable detector would be enough to cover the workload
- If the hospital is equipped with several digital radiography and fluoroscopy rooms in close proximity which only occasionally need a wireless portable detector
- If the medical facility only needs mobile radiography units at certain times during the day



High level of flexibility with reduced initial investment



The wireless portable detector can be used for free exams or inserted in a wireless tray in tables or vertical stands

# 15 Automatic image stitching

The automatic image stitching software is a dedicated orthopedic feature to acquire long-length imaging fully automatically. Image acquisition is possible in both projections, horizontally on the patient tables, as well as vertically in front of the vertical stands. A set of smart accessories provides exceptional patient comfort and outstanding image quality.

## Main benefits at a glance

- Possibility to do stitching procedures with vertical stand and also on the table
- Simple to use for the technologist by only defining the collimation on the patient
- System automatically acquires the number of necessary images based on the defined collimation
- Automatic tube and detector movements during acquisition
- Acquisition of two or three images depending on collimation
- Automatic software stitching of acquired images into one composite image
- Optional patient stand for streamlined patient positioning
- Single-focus tube rotation to minimize image distortions
- Dedicated orthopedic measurements included

## Optional accessories

- Patient support
- Spine stitching filters
- Pair of adjustable positioners
- Additional lead ruler for patient support or table
- Parking frame for accessories

## Specifications

Patient coverage up to 120 cm (47") with minimum source-image distance of 260 cm (102")

Number of acquired images up to 3

Overlap area between images 4.5 cm (1.8")

Stitching software algorithm based on anatomical structures and lead ruler

Orthopedic examinations are facilitated by the use of the orthopedic patient support for patient positioning. After the automatic acquisition of the image set (two to three images according to examination), a composite image is instantly created on the DigitalDiagnost Eleva workspot. The algorithm is fully automatic, manual interaction becomes unnecessary although any manual adjustments can be made. Furthermore, this package also provides Cobb's angle and femoral head difference measurements.

When combined with PCR integration and DigitalDiagnost, this software also allows performing automatic image stitching with long view PCR cassettes.



Image acquisition with patient support at vertical stand VM

# 16 PCR integration

PCR integration supports consistently high image quality across examination types. The CR and DR images are integrated into one single examination to facilitate smooth interfacing with PACS. All images are part of one single examination and provide a harmonized image impression thanks to UNIQUE image processing.



PCR integration with PCR S Plus reader

## Main benefits at a glance

- 100% integrated: the PCR S Plus reader is completely integrated into the DigitalDiagnost workflow
- Patient scheduling, image verification and post-processing of the CR examinations are done on DigitalDiagnost Eleva Workspot
- PCR cassettes are X-rayed directly in the room with the DigitalDiagnost tube
- DR and CR images in a single patient folder, with the same image processing for comparable image impression
- Usable with all standard PCR S Plus compatible cassettes and imaging plates
- Together with DigitalDiagnost automatic image stitching option, long view PCR cassettes can be used and images are automatically stitched

## Specifications

Reader throughput up to 97 cassettes per hour (depending on cassette size)  
Ethernet connection to the DigitalDiagnost workspot

## Options

- 50  $\mu$ m reading mode
- 50  $\mu$ m cassettes and plates
- Automatic Image Stitching

# 17 VarioFocus

Philips unique VarioFocus option is a generator technology that provides outstanding image resolution by simultaneously using both the small and large tube filament. This provides the high resolution of the small focus and the higher power of the large focus and may result in longer tube life.

## Main benefits at a glance

- Optimal image quality through mixed focus spot adapted to each examination
- Optimal resolution at the needed power
- Minimum exposure time
- Minimum motion artifacts
- Minimum geometrical blur
- Fully automatic

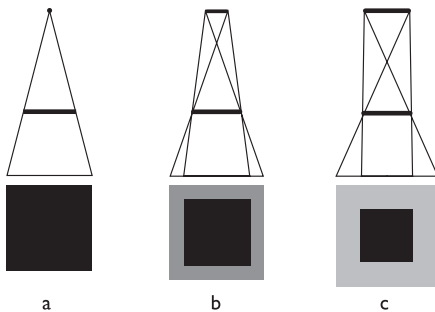
By using both focus spots simultaneously to define a variable focus spot, Philips VarioFocus automatically balances the power on both focus spots in a defined ratio, providing excellent image resolution at any required power. In addition, tube filaments are preserved through power balancing on both focus spots and reduced power load on each of them, which may result in longer tube life.



Principle of the "mixed" focus spot, here with a diagram



Cathode head with two filaments of a double focus tube



## Increase in geometrical blur with different sizes of focus spot and constant object size

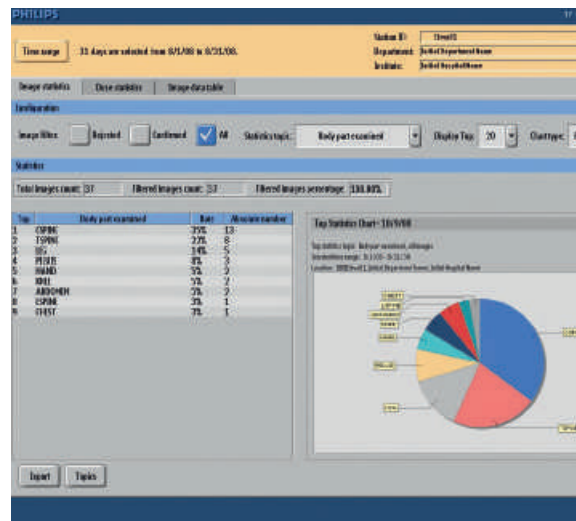
- a) Ideal focus spot with no geometrical blur
- b) Medium-sized focus spot generates minimal geometrical blur
- c) Large focus spot generates pronounced geometrical blur

# 18 Clinical QC

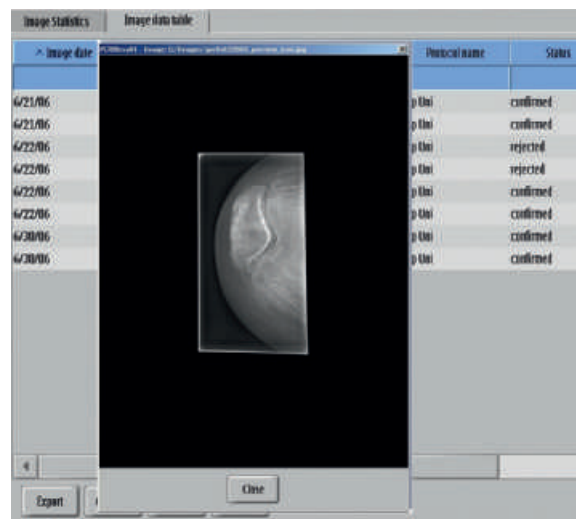
This powerful image statistic tool provides the advanced user with functionality to analyze operator rejected images and reasons for rejection. It also serves to monitor and analyze general parameters. The data files can be downloaded in standard format for further usage or archiving on a PC. It perfectly supports the quality standards of the department and teaching situations.

## Main benefits at a glance

- Easy and convenient monitoring of departmental quality standards
- Dose documentation per image and examination
- Presets of image rejecting reasons
- Define time period statistics
- Data filtering on rejected and confirmed examinations
- Data filtering on body area, operators and dates
- Statistic presentation as bar or pie chart at Eleva workspot
- Export results in universal csv-format for use with external spreadsheet software



Convenient image statistics with Clinical QC



Clinical QC reject analysis

# 19 Ambient Experience

Philips Ambient Experience can help patients feel more comfortable and relaxed and provides a unique approach to the radiology environment. Knowledge of how people feel, work and interact with each other and with technology are reflected in a purposefully created environment that combines design strategies and enabling technologies. Its site-specific design enhances the clinical area in terms of workflow and ambient atmosphere to make patients feel relaxed, staff more comfortable and hospitals nicer places to be.

## Main benefits at a glance

- Greater involvement in own treatment when the patient can personalize the examination room
- Relaxed and comfortable environment thanks to the positive distraction
- Enhanced patient privacy through opaque privacy glass (optional)

The control system integrates video projection, dynamic lighting and audio elements can provide both positive distraction for the patient and an opportunity to personalize an otherwise intimidating environment. All Ambient Experience functionality is accessed with a wireless touch screen interface. On/off, volume control, color and video theme selection are selected on touch screen tablet.

## Main components (depending on individual project realization)

### Wall projection

Patient selectable audio, video & lighting themes  
Palette of individual colors for LED-created "wall wash"  
Specialized ceiling-mounted projector

### Dynamic ambient cove lighting

Cove lighting from 5-50 meters (or 15-150 feet) depending on the room size  
Selectable colors at present walls aligned with video animation

Dynamic colored lighting selectable also without video projection

### Touch screen tablet

Wired/wireless 12" touch screen for system control and theme selection

Docking station for touch screen



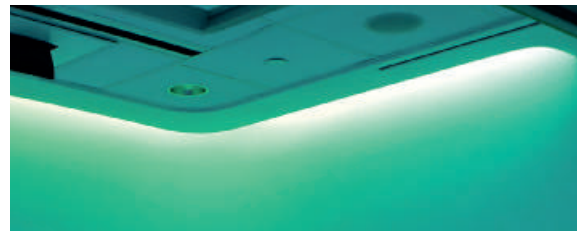
## Wall mounted patient touch screen

A variety of themes can be selected by the patient to transform the room with projected images, dynamic colored lighting and sound, designed to relax and soothe.



## Side wall projection

Themes can be chosen by patients to personalize their experience.



## Cove lighting

Dynamic cove lighting corresponds to the chosen theme. Walls are washed by soft and warm hues of red, green, yellow and blue transforming the room into a patient and staff friendly environment.

## Conformity

The DigitalDiagnost X-ray system by Philips Healthcare complies with the provisions of the Medical Device Directive 93/42 EEC (CE label) and satisfies the IEC standards. It fulfills the requirements for approvals for North America, Japan (PAL) and other regions.

Ambient conditions	
Temperature	
Operation	+18 °C to +30 °C
Storage	-10 °C to +55 °C
Rel. humidity	
Operation	20% to 75%
Storage	10% to 95%
Air pressure	
Operation and storage	700 hPa to 1060 hPa up to 3.000 m (9.843 ft) above mean sea level (AMSL)

DigitalDiagnost (Release 3.1) is commercially not available in Greater China.

Please visit [www.philips.com/digital\\_radiography](http://www.philips.com/digital_radiography)



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Printed in The Netherlands  
4522 962 89461 \* NOV 2012