



Create a premium DR room like no other

Philips DigitalDiagnost

Digital radiography solutions specifications (Release 4.1)

PHILIPS

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1 Introduction

Looking for a versatile single detector system or a multi-detector solution? All our motorized premium DR rooms match your investment strategy to your clinical environment. SkyPlates, Philips lightweight wireless portable detectors, and SkyFlow, the grid-like portable chest image contrast technology, allow you to enhance your economic value. By sharing the SkyPlates between compatible Philips DR systems you can push cost efficiency one step further.

Key advantages

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

Ceiling suspension CSM

with full 5-axes motorization, the tube can automatically be positioned close to the patient.

Vertical stand VS

optimized for X-ray departments specializing in thorax examinations.

SkyPlate tray

with integrated SkyPlate 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.

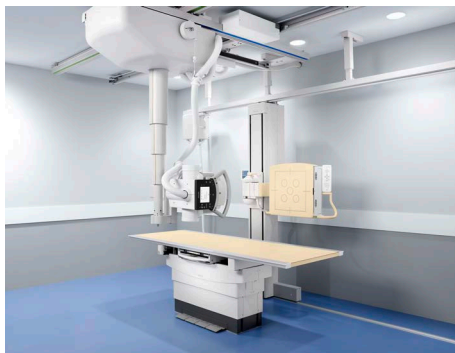
Digital table TH

with a high weight-bearing capacity, has a proven and smart design that doesn't compromise on robustness, quality and work efficiency, even with challenging patients. The floating tabletop with its wide travel range provides significantly more coverage, allowing quick and effortless positioning.



2 Overview of individual room configurations

Experience premium digital radiography productivity, with high performance rooms and flexible rooms right through to an emergency set-up. DigitalDiagnost (Release 4.1) is based on your feedback from more than 6,500 installed DigitalDiagnost systems. Choose the configuration suited to your application needs, workflow and budget.



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

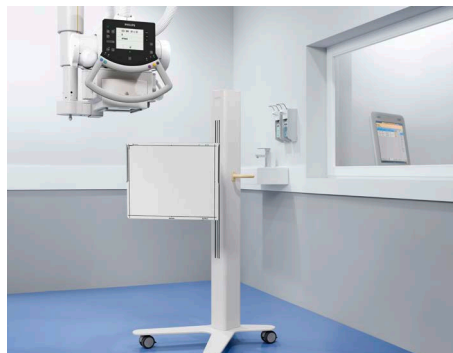


The high performance configuration with vertical stand VM and SkyPlate in the TH table allows for an exceptional variety of applications



Value room

with a single SkyPlate moving between fixed vertical stand VS, table TH, or free exposures



Emergency room

with ceiling suspension CSM and SkyPlate



Chest room

with fixed vertical stand VS

3 High performance rooms

3.1 Alternative 1

The high performance room configuration with fully motorized ceiling suspension and moveable vertical stand including a fixed 43 cm x 43 cm (17" x 17") detector is especially designed for high patient throughput. You can easily position the detector and tube close to the patient to perform all requested projections without relocating the patient. The configuration with the table-based SkyPlate tray together with the large SkyPlate allows for an exceptional variety of applications.

Main components

Hardware
Moveable multi-purpose vertical stand (VM) with swivelling arm and integrated flat detector
Digital Bucky table (TH) with integrated SkyPlate or alternatively with fixed detector
Motorized ceiling suspension (CSM) with X-ray tube assembly, control grip and collimator
Comfort Track
Eleva workspot
Generator (65 kW or 80 kW)
Software
Eleva application and examination database software
UNIQUE image processing

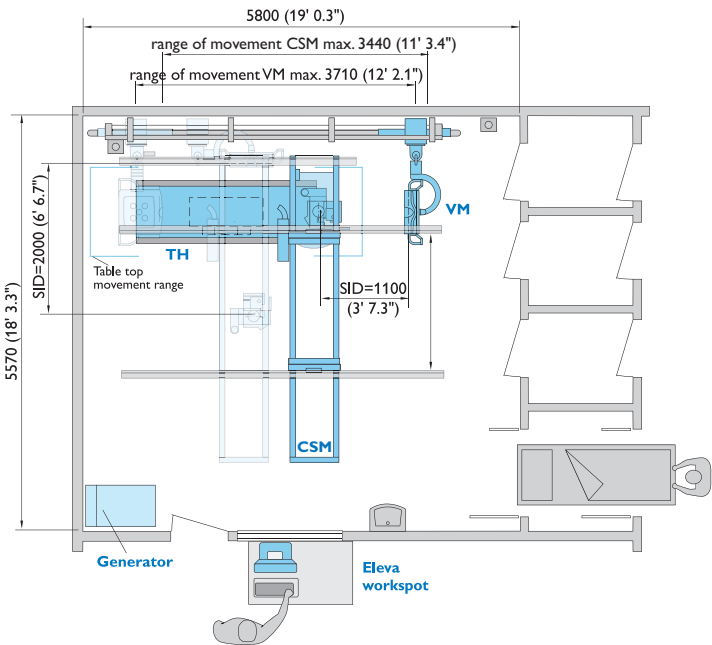
Optional

Hardware
SkyPlate (for configurations with fixed detector in table)
Comfort Move
Comfort Position
Wide table top
Vertical stand display
PCR reader integration
Software
SkyPlate sharing for systems without SkyPlate
SkyFlow
Dose Reporting in DICOM Structured Report format
DICOM package plus
DICOM Query/ Retrieve
Automatic image stitching
Clinical QC

Room layouts

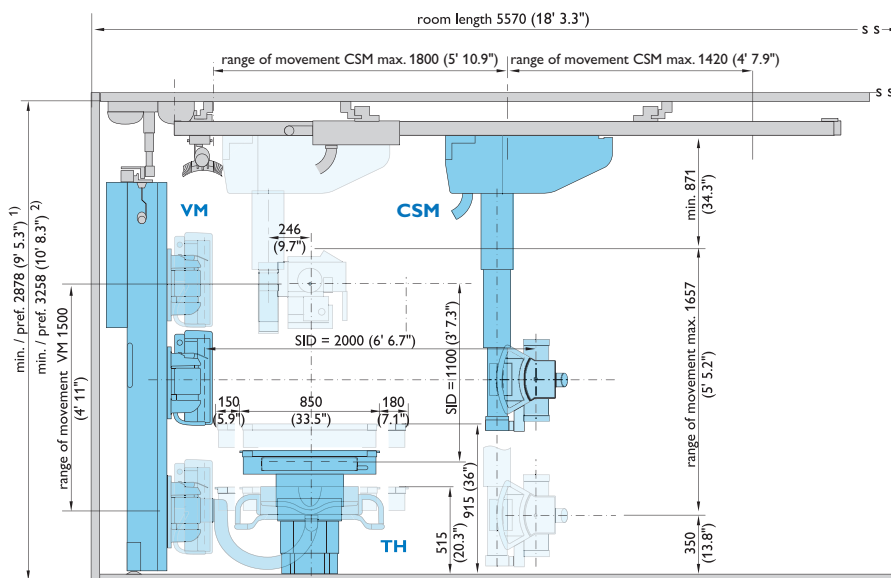
Example room layout based on fixed detector in table TH and moveable vertical stand VM

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 patients seated on the table TH



Philips SkyPlate can be positioned in portrait or landscape orientation in the table's SkyPlate tray

3.2 Alternative 2

The high performance room configuration with the fixed vertical stand represents a typical dual detector room configuration. With complete room motorization you can easily and intuitively perform all applications, including automatic image stitching at the vertical stand and on the patient table. A configuration with SkyPlates allows for exceptional application variety.

Main components

Hardware
Digital vertical stand (VS) with fixed detector
Digital Bucky table (TH) with integrated SkyPlate or alternatively with fixed detector
Motorized ceiling suspension (CSM) with X-ray tube assembly, control grip and collimator
Comfort Track
Eleva workspot
Generator (65 kW or 80 kW)
Software
Eleva application and examination database software
UNIQUE image processing

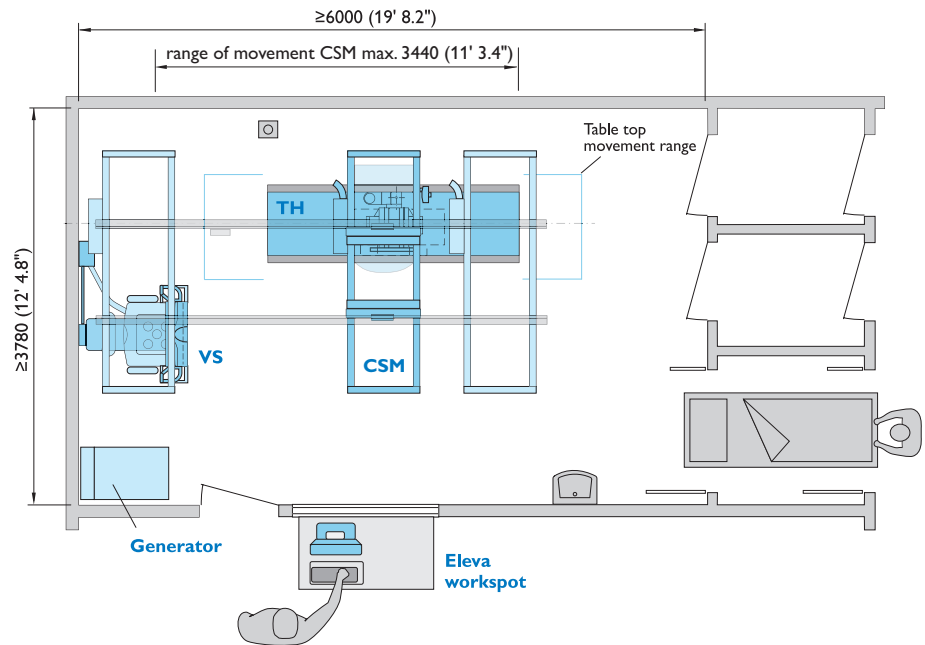
Optional

Hardware
SkyPlate (for configurations with fixed detector in table)
Comfort Move
Comfort Position
Wide table top
Vertical stand display
PCR reader integration
Software
SkyPlate sharing for systems without SkyPlate
SkyFlow
Dose Reporting in DICOM Structured Report format
DICOM package plus
DICOM Query/ Retrieve
Automatic image stitching
Clinical QC

Room layouts

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

All dimensions in mm (feet/inches)



4 Flex room

The flex room is able to perform all the applications of a traditional two-detector room set-up with one highly flexible fixed detector. You can comfortably position the detector around the patient thanks to the moveable vertical stand. Total room motorization including automated ceiling suspension and the optional swivel table make bedside or wheelchair exams easy. You may also configure the flex room with a SkyPlate for convenient free projections.

Main components

Hardware
Moveable multi-purpose vertical stand (VM) with swivelling arm and integrated flat detector
Motorized ceiling suspension (CSM) with X-ray tube assembly, control grip and collimator
Comfort Track
Eleva workspot
Generator (65 kW or 80 kW)
Software
Eleva application and examination database software
UNIQUE image processing

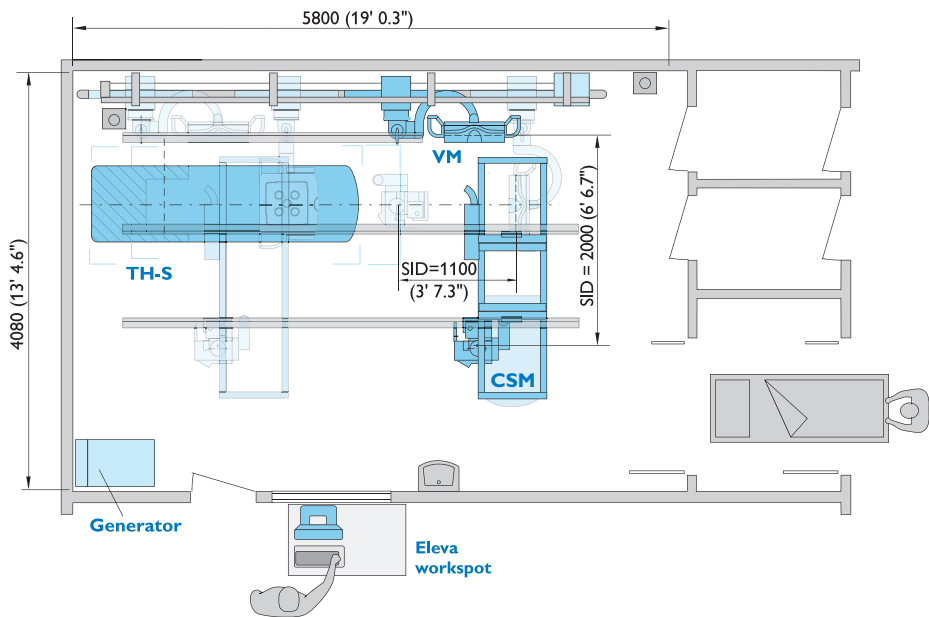
Optional

Hardware
Additional SkyPlate
Comfort Move
Comfort Position
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
SkyPlate sharing for systems without SkyPlate
SkyFlow
Dose Reporting in DICOM Structured Report format
DICOM package plus
DICOM Query/ Retrieve
Automatic image stitching
Clinical QC

Room layouts

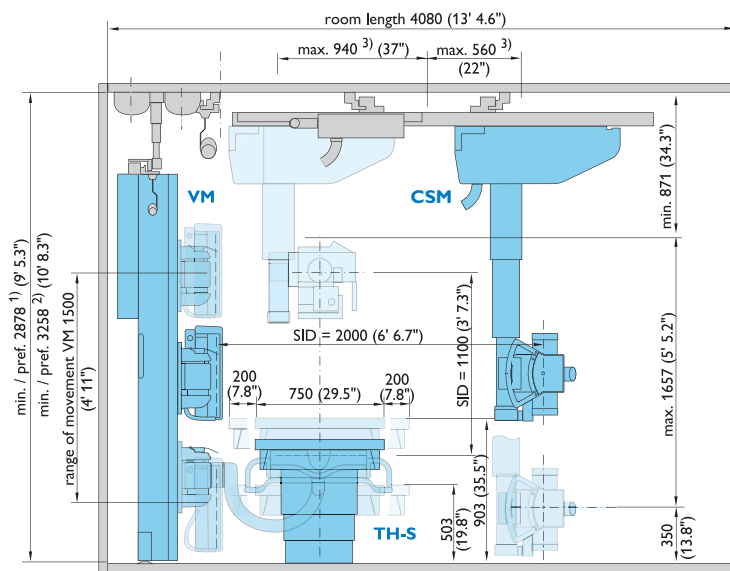
Example room layout based on fixed detector in vertical stand VM and table TH-S

All dimensions in mm (feet/inches)





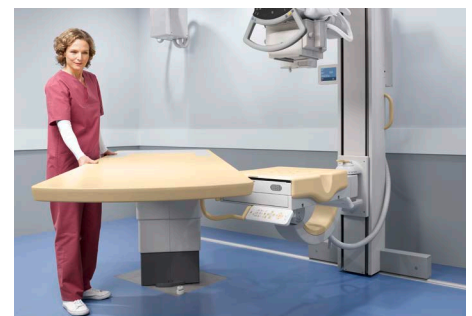
Enhance flexibility with the premium DR room



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



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 completely motorized value room configuration provides a traditional table and vertical stand room set-up, with just one large SkyPlate. You will benefit from excellent economic value because the detector can be used in both the table and vertical stand and supports all DR room applications including automatic image stitching exams. Plus, cost-efficient SkyPlate sharing allows you to use the SkyPlate with other compatible Philips DR systems.

Main components

Hardware

Digital vertical stand (VS) with SkyPlate tray
 Digital Bucky table (TH) with SkyPlate tray
 Motorized ceiling suspension (CSM) with X-ray tube assembly, control grip and collimator
 Integrated SkyPlate for table (TH) and vertical stand (VS)
 Comfort Track
 Eleva workspot
 Generator (65 kW or 80 kW)

Software

Eleva application and examination database software
 UNIQUE image processing

Optional

Hardware

Comfort Move
 Comfort Position
 Vertical stand display
 PCR reader integration

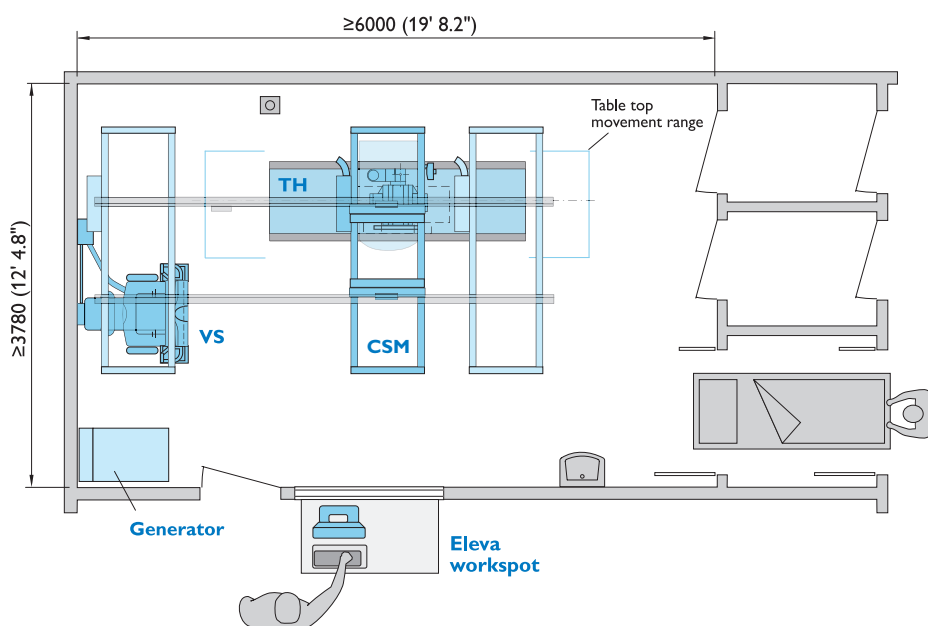
Software

SkyPlate sharing for systems without SkyPlate
 SkyFlow
 Dose Reporting in DICOM Structured Report format
 DICOM package plus
 DICOM Query/ Retrieve
 Clinical QC

Room layouts

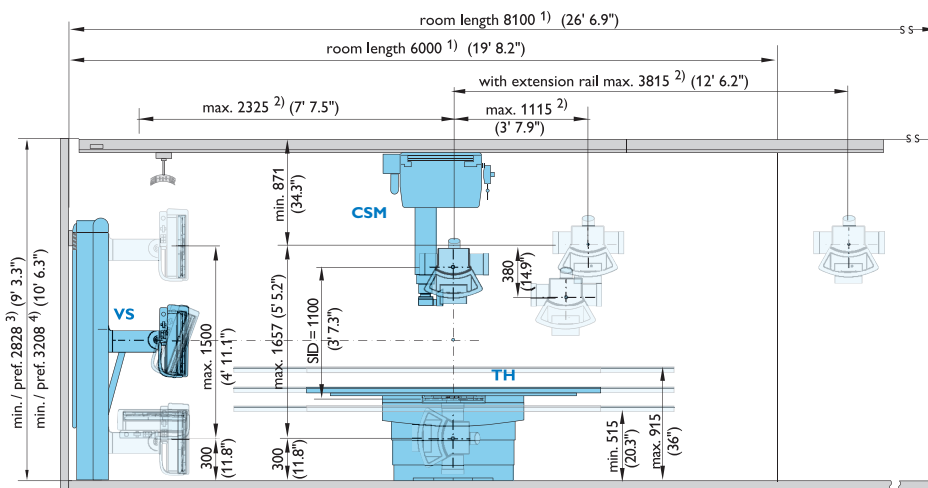
Example room layout with an integrated SkyPlate in table TH and vertical stand VS

All dimensions in mm (feet/inches)

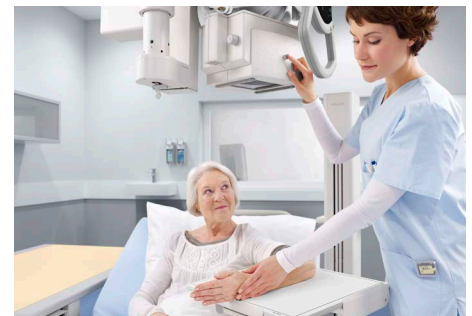




Extend value with the premium DR room



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



Perform free exposures with the SkyPlate and the mobile detector holder



Philips SkyPlate can be positioned in portrait or landscape orientation in the SkyPlate tray

6 Emergency room

The emergency room configuration is especially suited to critical work. The slim design of the SkyPlate reduces interference with life support equipment such as tubes and catheters and may result in per-patient time saving. With just a ceiling suspension and the large SkyPlate, there is more room for emergency equipment and staff, and more space around the patient – for example when performing bedside chest exams with the grid-like image contrast software SkyFlow.

Main components

Hardware
Motorized ceiling suspension (CSM) with X-ray tube assembly, control grip and collimator
Comfort Track
SkyPlate
Eleva workspot
Generator (65 kW or 80 kW)
Software
Eleva application and examination database software
UNIQUE image processing

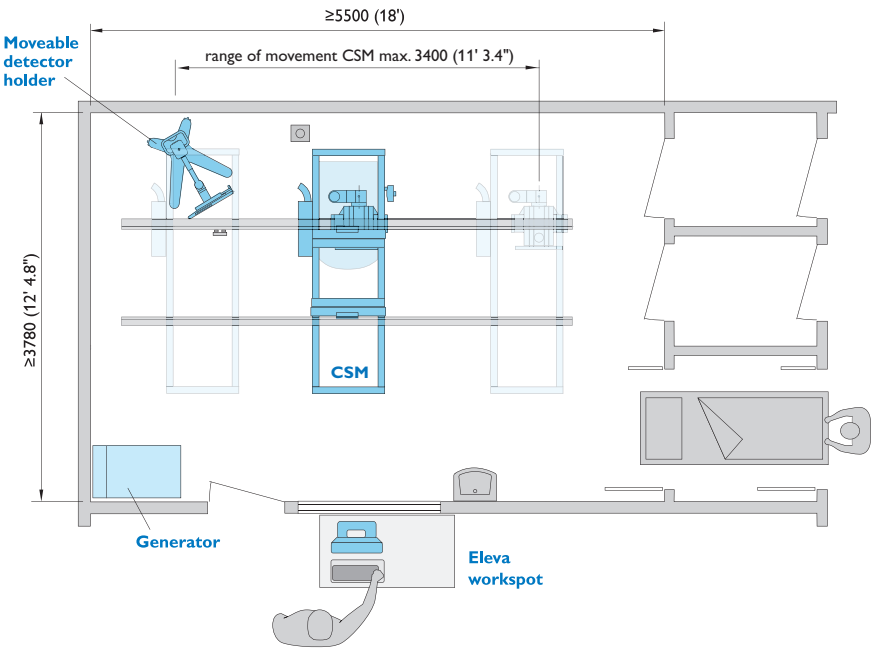
Optional

Hardware
Vertical stand (VS) with SkyPlate tray
Comfort Move
Moveable SkyPlate holder and bed holder
PCR reader integration
Height adjustable trolley (TA-M)
Software
SkyPlate sharing for systems without SkyPlate
SkyFlow
Dose Reporting in DICOM Structured Report format
DICOM package plus
DICOM Query/ Retrieve
Automatic image stitching
Clinical QC

Room layouts

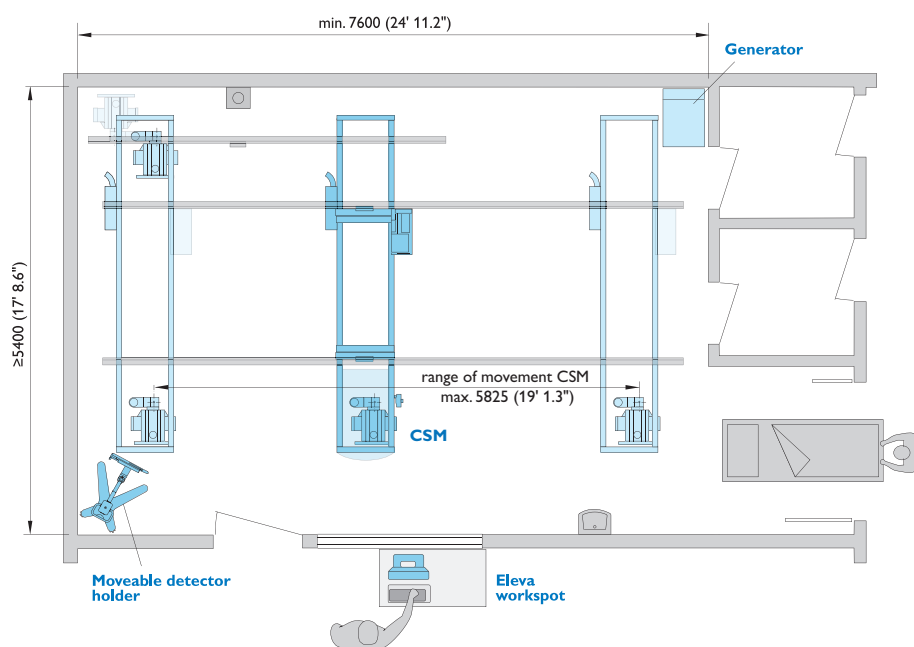
Example room layout with ceiling suspension CSM

All dimensions in mm (feet/inches)

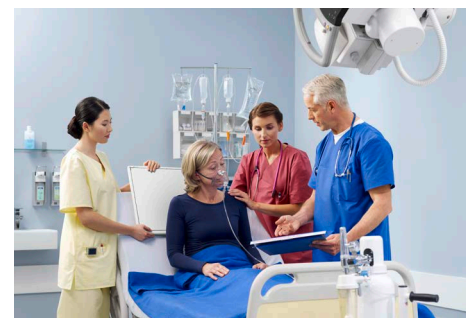




The premium DR room for emergency care



Operate freely and deliver fast care to critical patients



Perform free exposures such as a AP chest exam with the SkyPlate

7 Chest room

The chest room allows for high throughput chest exams with excellent image quality. It supports all common exams, including automatic image stitching, using a vertical stand and a motorized ceiling suspension. The optional SkyPlate provides free exposures, for example chest exams in a wheelchair or patient bed with SkyFlow processing which produces grid-like image contrast.

Main components

Hardware

Digital vertical stand (VS) with fixed detector or alternatively integrated SkyPlate
Motorized ceiling suspension (CSM) with X-ray tube assembly, control grip and collimator
Comfort Track
Eleva workspot
Generator (65 kW or 80 kW)

Software

Eleva application and examination database software
UNIQUE image processing

Optional

Hardware

Additional SkyPlate
Comfort Move
Height adjustable trolley (TA-M)
Vertical stand display
PCR reader integration

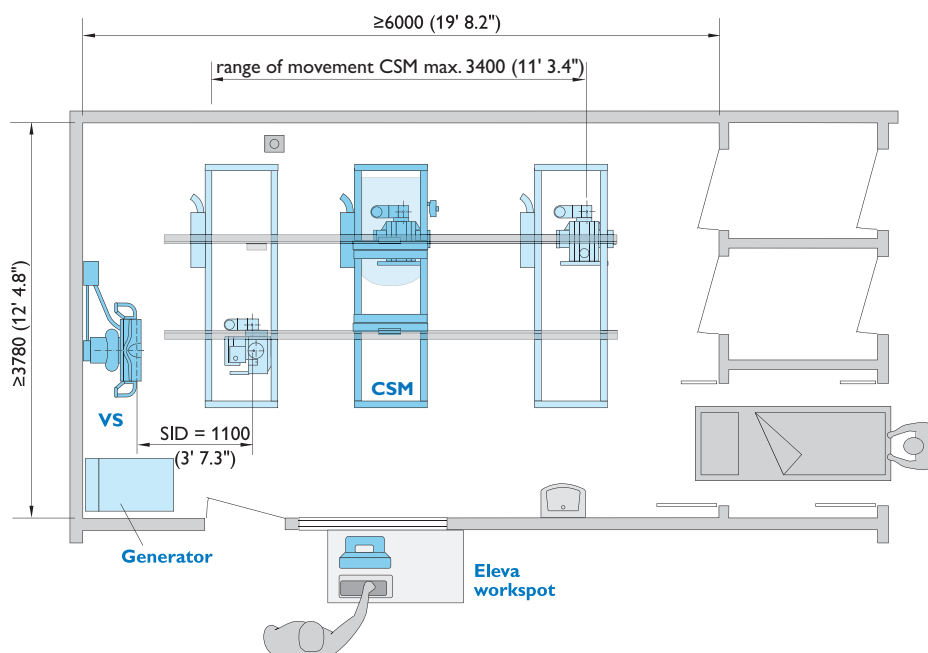
Software

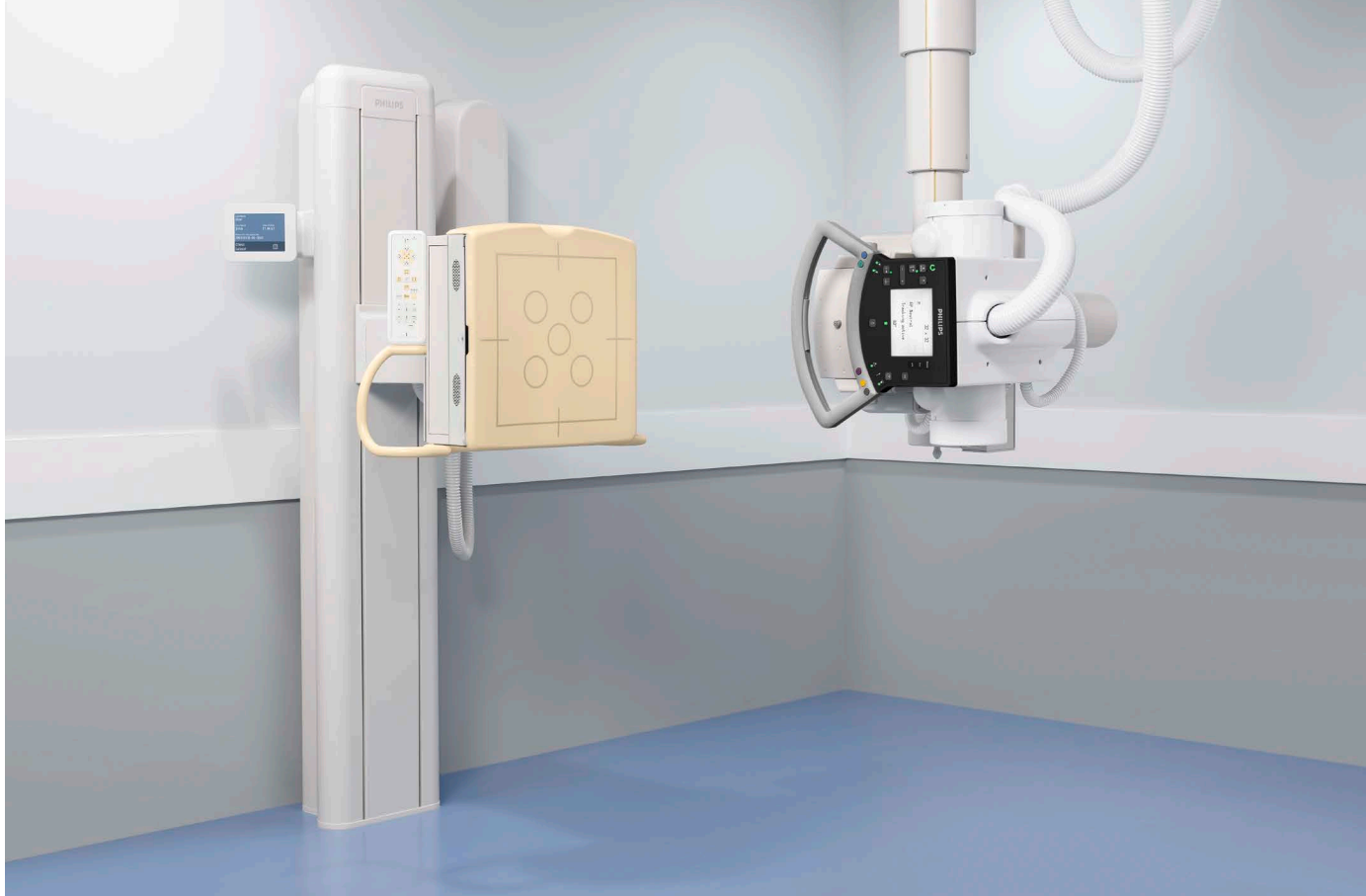
SkyPlate sharing for systems without SkyPlate
SkyFlow
Dose Reporting in DICOM Structured Report format
DICOM package plus
DICOM Query/ Retrieve
Automatic image stitching
Clinical QC

Room layouts

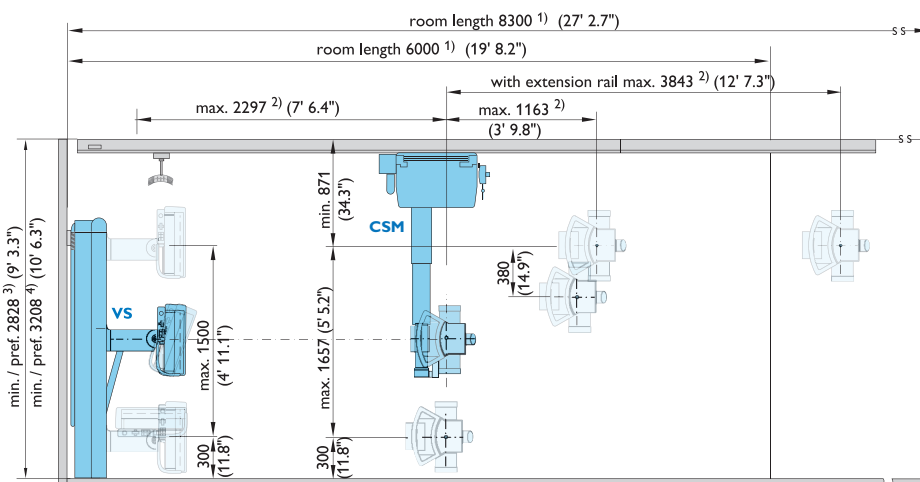
Example room layout with fixed detector in vertical stand VS

All dimensions in mm (feet/inches)





The premium DR room dedicated to chest



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



High degree of 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

Eleva is the easy-to-learn common platform for various Philips DR solutions that makes workflow continuity and network communication simple. It provides a clear and intuitive touch screen and includes the Eleva Workflow Plus and Eleva Review Plus packages – smart tools designed to streamline your daily routine.

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 typically used for 4,000 images	
RAM storage capacity	min. 8 GB	
Interfaces	<ul style="list-style-type: none"> • 10/100/1000 Base-T Gigabit Ethernet • Geometry interface • Detector interface • Memory stick support for quality control 	
CD drive	48x CD/DVD reader/writer	
Monitor	<ul style="list-style-type: none"> • 19" LCD color touch screen monitor with 1,280 x 1,024 resolution qualified for 2nd reading • Display according to DICOM Grayscale Standard Display Function (GSDF) • Contrast 500:1 max. • Brightness > 200cd/m² 	
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	SkyPlate
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

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

Dose Reporting in DICOM Structured Report format
DICOM package plus

The complete DICOM package plus includes:

- DICOM WLM (Work List Management) and Classic RIS
- DICOM MPPS (Modality Performed Procedure Step)
- DICOM Print
- DICOM Image Export incl. Storage Commit
- DICOM media on CD-R
- DICOM Query/ Retrieve



Premium Eleva touch exam control

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 users' needs.

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

Tube	High power X-ray tube (SRO 33100)
Two focal spots	0.6 and 1.2
Maximum power	
with focal spot 0.6	33 kW
with focal spot 1.2	100 kW
Anode angle	13°
Maximum tube voltage	150 kV
Anode heat storage capacity	220 kJ (300 kHU)
Assembly heat capacity	1.700 kJ (2.315 kHU)
Continuous anode input power	190 W
Minimum anode speed	8,000 to 10,000 revolutions/minute
Build in filter	2 mm Al (5/64")
Total filtration minimum	2.6 mm Al (105/1024")
Compatible with VarioFocus	yes
Double tube overload protection	yes
Total weight	23 kg



Premium Eleva touch screen with integrated generator control



High power X-ray tube

10 Detectors

Philips digital fixed detectors and the SkyPlates feature superb image quality at a low X-ray dose with high DQE and excellent MTF. You can benefit from extended configuration and budget flexibility thanks to table and vertical stand trays for the large SkyPlate and the option to share both SkyPlate sizes across compatible Philips DR systems.

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 µm	
Image resolution	up to 3.4 Lp/mm	
DQE and MTF values	DQE (%)	MTF (%)
at 1 µGy		
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

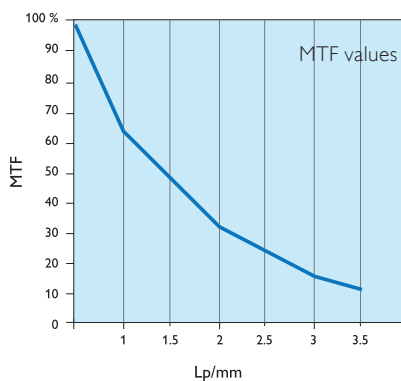
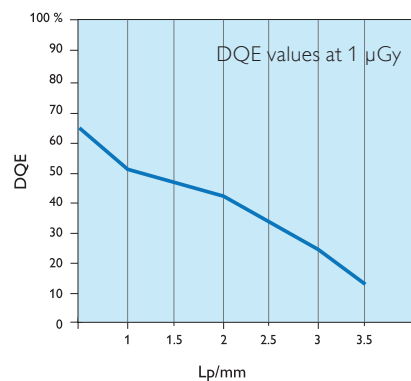
Type	Removable carbon fiber grids for fixed detector and for SkyPlate tray, 40 lines/cm (100 lines/inch)
Weight	1.7 kg (3.7 lbs)

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")

Typical DQE and MTF of Pixium 4343RC

RQA 5 – according to IEC62220-1-1

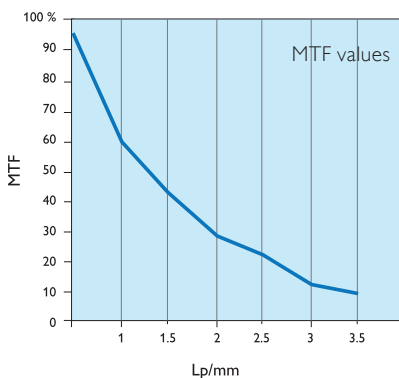
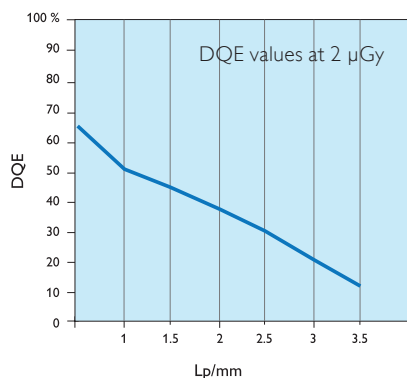


10.2 SkyPlate detector family

	Small	Large
Type	Digital CsI (Cesium Iodide) flat detector	Digital CsI (Cesium Iodide) flat detector
Housing material	Carbon fiber	Carbon fiber
Sensor protection material	Carbon fiber	Carbon fiber
Detector size	24 cm x 30 cm (approx. 10" x 12")	35 cm x 43 cm (14" x 17")
Active area	22.2 cm x 28.4 cm (8.7" x 11.2")	34.48 cm x 42.12 cm (13.6" x 16.6")
Image matrix size	1500 x 1920 pixel	2330 x 2846 pixel
Dimensions according to ISO 4090		
Min	266.5 mm x 326.5 mm (10.5" x 12.9")	382.5 mm x 458.5 mm (15.1" x 18.1")
Target	267.5 mm x 327.5 mm (10.5" x 12.9")	383.5 mm x 459.5 mm (15.1" x 18.1")
Max	268.5 mm x 328.5 mm (10.5" x 12.9")	384.5 mm x 460.5 mm (15.1" x 18.1")
Thickness	15 mm (0.59")	15 mm (0.59")
Thickness Tolerance	+1 mm/ -2 mm (+0.04"/ -0.08")	+1 mm/ -2 mm (+0.04"/ -0.08")
Detector pixels	2.9 Megapixel	6.6 Megapixel
Pixel size	148 µm	148 µm
Image resolution	up to 3.38 Lp/mm	up to 3.38 Lp/mm
DQE and MTF values at 2 µGy	DQE (%) MTF (%)	DQE (%) MTF (%)
0.05 Lp/mm	66 98,5	66 98,5
1.0 Lp/mm	50 61	50 61
2.0 Lp/mm	40 30	40 30
3.0 Lp/mm	24 15	24 15
Energy range (kVp)	40 – 150	40 – 150
A/D Conversion (bits)	16	16
Weight (incl battery)	1.6 kg (3.5 lbs)	2.8 kg (6.2 lbs)
Max. patient weight	100 kg (220 lbs) on 4 cm disk for weight bearing examinations 135 kg (298 lbs) for distributed load, e. g. chest examinations in bed	
WLAN network standard	WiFi standard IEEE 802.11 a, b, g or n (configurable)	
Encryption	Default WPA2 encryption according to IEE 802.11i	

Typical DQE and MTF of SkyPlates

RQA 5 - according to IEC62220-1-1



General environmental conditions

Temperature range	18C to 35C
Relative humidity range	20% to 75%
Ambient pressure range	700 hPA to 1060 hPA

Environmental conditions for incubator use

Maximum temperature	40C
Relative humidity	Max 80%
Oxygen enrichment O2	20-100%

Battery

Technology	Exchangeable lithium ion battery
Size	64 mm x 248 mm x 71 mm (2.5" x 9.8" x 2.8")
Battery charging time	4 hours max. for 100% charge
Bar charge status color indication per battery	0-25%; 25-50%; 50-75%, 75-100
Autonomy operation mode	3.5 hours/525 images; one image every 20 seconds
Autonomy listen mode	6 hours without image acquisition
Charging slots	3
User-replaceable battery	(no tools required)

Click-on carbon fiber grids for portable use

Type*/Orientation	Ratio (r)	SID (fo)	SID range	Weight	Dimensions	Comments
Large SkyPlate portrait, 44 lines/cm (112 lines/inch)	8	130 cm (51 inch)	96 to 203 (38 to 80 inch)	1.9 kg (4.2 lbs)	46.8 x 47.6 x 2.5 cm (18.4 x 18.8 x 1 inch)	Includes a handle
Large SkyPlate landscape, 40 lines/cm (100 lines/inch)	8	130 cm (51 inch)	100 to 185 (39 to 73 inch)	1.9 kg (4.2 lbs)	46.8 x 47.6 x 2.5 cm (18.4 x 18.8 x 1 inch)	Includes a handle
Small SkyPlate portrait, 40 lines/cm (100 lines/inch)	8	130 cm (51 inch)	84 to 291 (33 to 115 inch)	0.95 kg (2.1 lbs)	35.4 x 28 x 2.5 cm (13.9 x 11 x 1 inch)	No handle

* For use in SkyPlate tray please refer to grids listed on page 20

Optional

- SkyPlate sharing for systems without SkyPlate
- SkyPlate cable 7m (23') and holder
- Handle frame for large SkyPlate – Weight 1 kg (2.2 lbs)
- SkyPlate protector
- Movable and bed holder
- Detector and grid storage
- Add. batteries
- Add. battery charger
- Accident protection program



SkyPlates



11 Tables

Philips height adjustable digital tables are an integral part of Philips total room motorization approach. The automated movements, along with those of the ceiling suspended tube, provide comfortable positioning even for challenging patients. The single-side suspended table opens up flexible perspectives for single-detector rooms, for example allowing you to perform trolley and wheelchair exams.

11.1 Digital table TH

Table base		
Height adjustment	<ul style="list-style-type: none">• 51.5 cm to 91.5 cm (20.3" to 36") above floor, motorized adjustment• Preferred height 75 cm (29.5")• Electronic physical protection system with motor shutdown for downward movement; upward movement is possible at any time	
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 SkyPlate		
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">• Table height adjustment down / up• Disengage table top brakes in longitudinal and transverse directions• Switch on cross light in the collimator (all footswitches)• Footswitch interlock	
Detectors		
Fixed detector 43 cm x 43 cm (17" x 17") or removable SkyPlate 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		



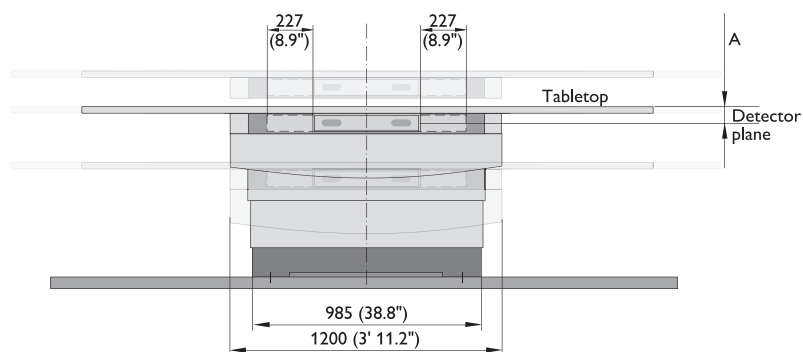
Digital TH table with removable SkyPlate



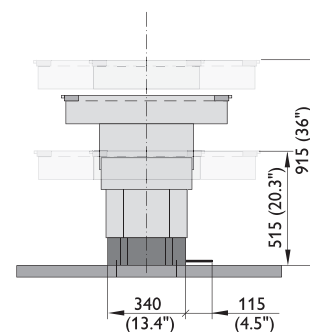
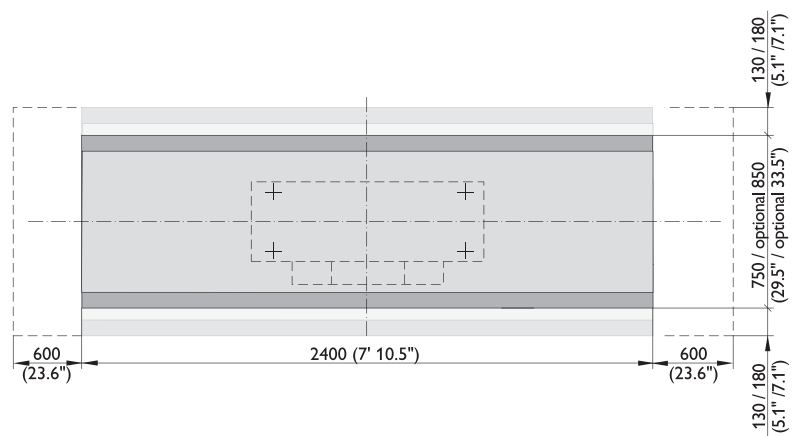
Alternatively with fixed detector

Dimensions

All dimensions in mm (feet/inches)



	A Tabletop-detector plane distance
Fixed detector- standard tabletop	69 (2.7")
Fixed detector- wide tabletop	80 (3.2")
SkyPlate-standard tabletop	65 (2.6")
SkyPlate-wide tabletop	75 (2.9")

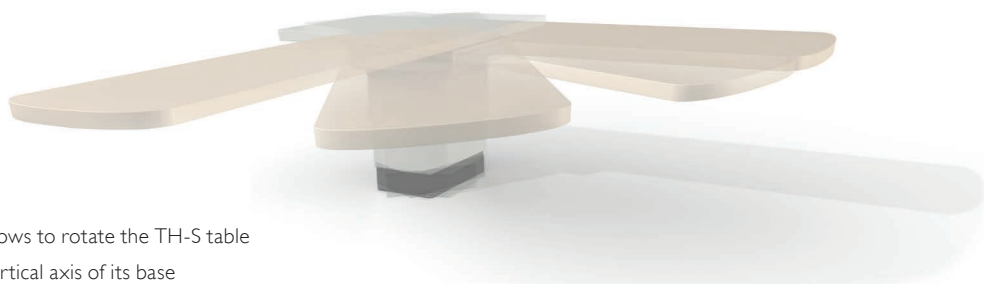


11.2 Single side suspended table TH-S

Table base		
Height adjustment	<ul style="list-style-type: none">• 50.3 cm to 90.3 cm (19.8" to 35.6 ") motorized adjustment• Electronic physical protection system with motor shutdown for downward movement	
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">• Table height adjustment down / up• Disengage table top brakes in longitudinal and transverse directions• Switch on cross light in the collimator (all footswitches)• Footswitch interlock	

Optional

Table swivel
<ul style="list-style-type: none"> • 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



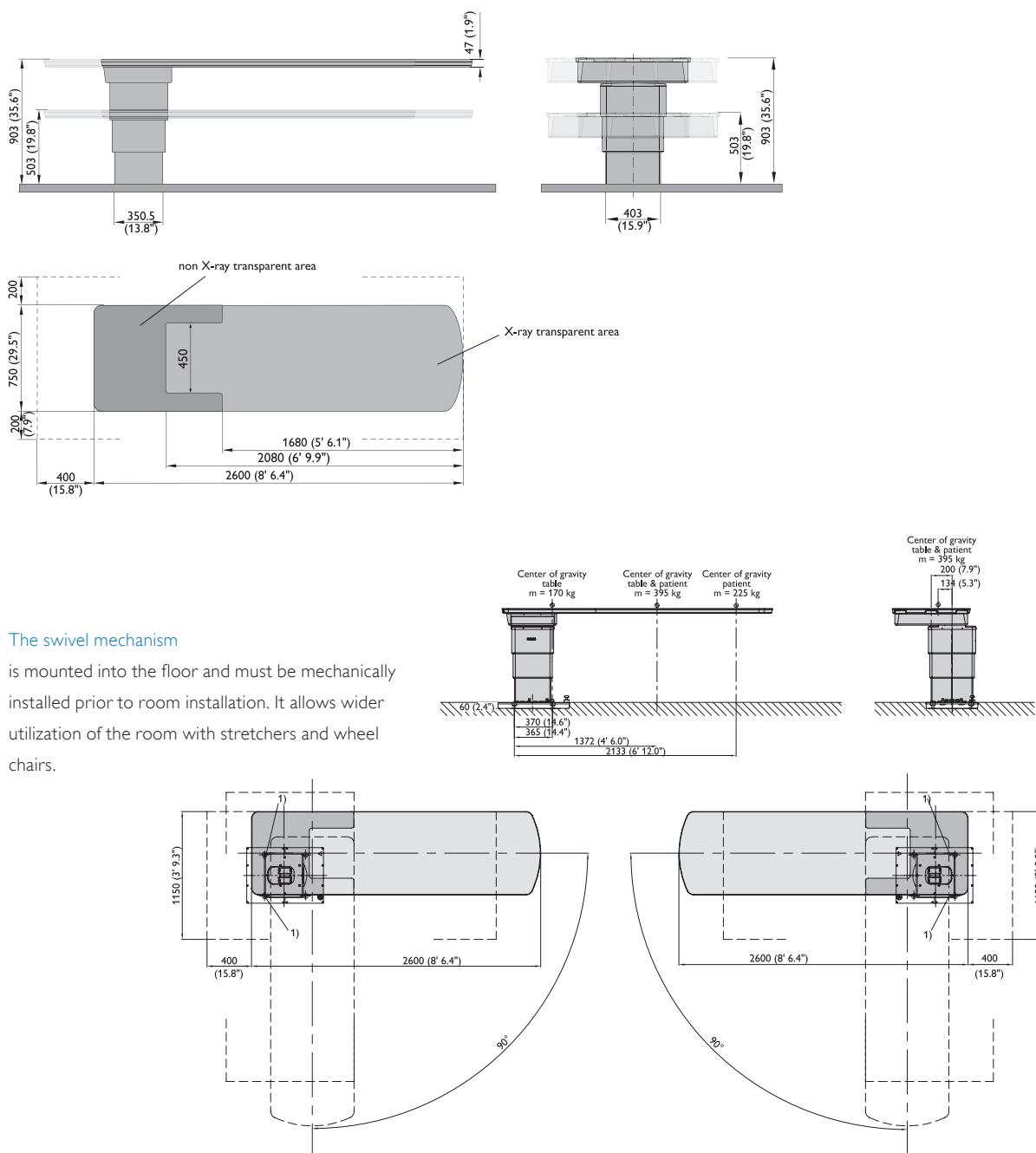
The swivel unit allows to rotate the TH-S table 90° around the vertical axis of its base



Single side suspended table TH-S

Dimensions

All dimensions in mm (feet/inches)



11.3 Height adjustable trolley TA-M

Trolley	
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 also be used with this trolley
Brakes	Both sides
Bariatric table top	
Type	Floating sandwich design tabletop 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")
Table top travel	
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



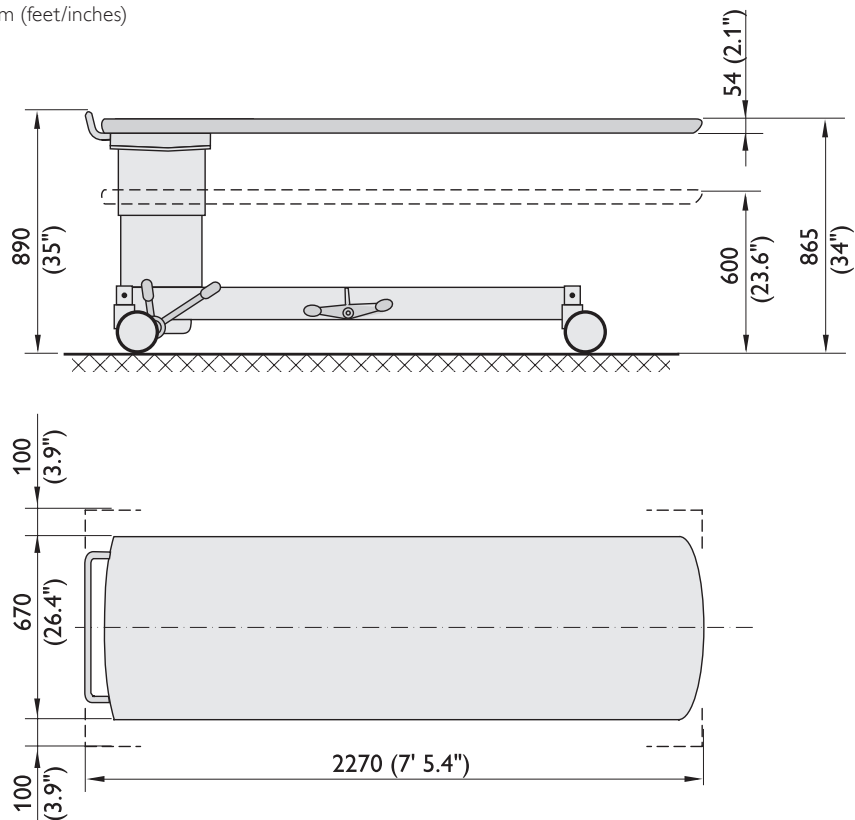
Enhanced room usage with fixed digital vertical stand and trolley



Height adjustable trolley TA-M

Dimensions

All dimensions in mm (feet/inches)



12 Vertical stands

Carry out exams on different patient types comfortably, either with the fixed vertical stand or with the versatile moveable vertical stand. The smart concept behind the moveable vertical stand allows for efficient upright, cross-lateral and under-the-table exams. Virtually unlimited synchronized detector and tube pre-positions, made possible by full motorization, facilitate a smooth workflow.

12.1 Moveable multi-purpose stand VM

Stand		
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	
Multi-purpose arm		
Swiveling range	0° to 90° (right or left orientated execution)	3
Lock-in positions	manual or every 15°	
Detector unit		
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.	
Fixed detector		
43 cm x 43 cm (17" x 17")		

Optional

Vertical stand LCD display		Patient stretch grip	
Type	16.5 cm (6.5") adjustable LCD information display	Patient stretch grip	<ul style="list-style-type: none"> • Arranged on the top left or right of the detector unit • Rotatable
Data displayed	<ul style="list-style-type: none"> • Patient first and last name • Date of birth • ID/Accession number • Examination name • Grid inserted yes/no 		
Compatibility	with VS and VM vertical stands		



Optional vertical stand LCD display

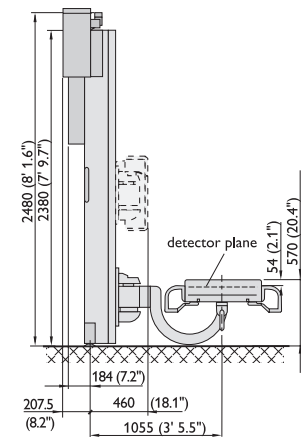
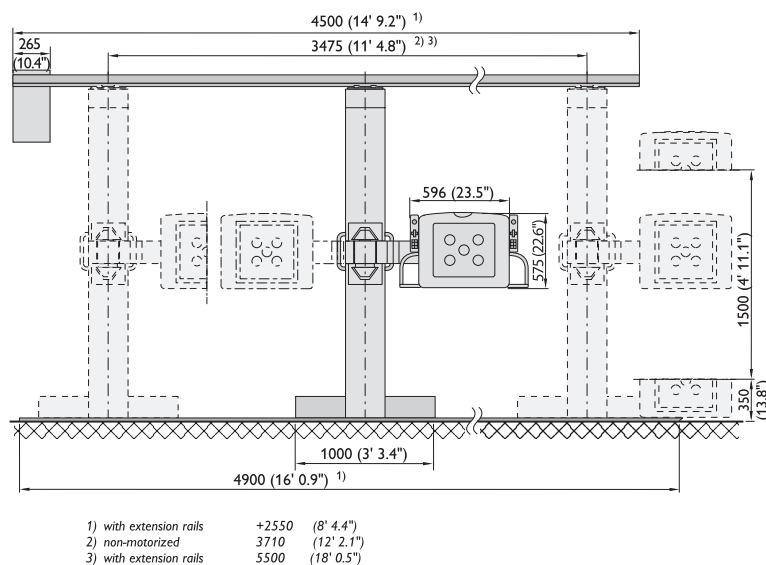
The moveable multi-purpose stand VM consists of

- 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 (optional)

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 1
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 SkyPlate 35 cm x 43 cm (14" x 17") *

Optional

Motorized tilting

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

Vertical stand LCD display

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

Patient stretch grip

Patient stretch grip	<ul style="list-style-type: none"> • 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 SkyPlate.

Fixed stand VS with removable SkyPlate



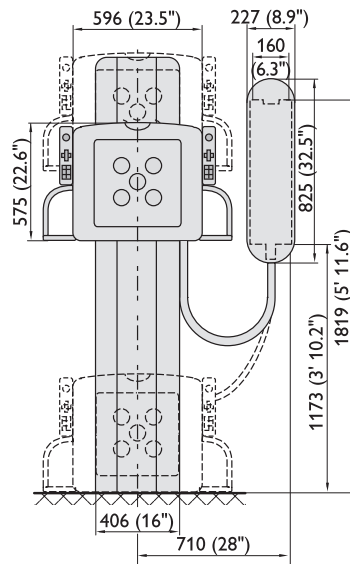
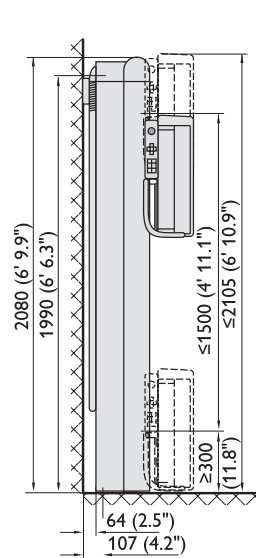
Alternatively with fixed detector

The digital vertical stand VS consists of

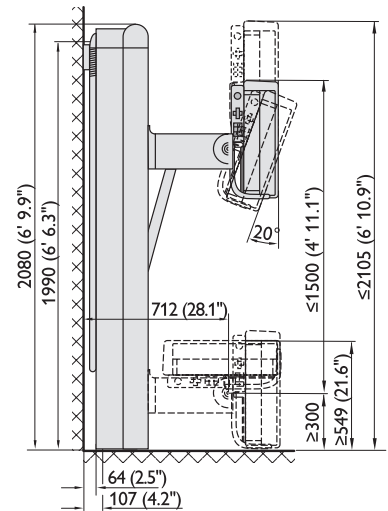
- Stand
- Detector unit
- Grid
- 2 user interfaces (left & right)
- 2 patient grips (left & right)
- Wireless remote control
- Vertical stand LCD display (option)

Dimensions

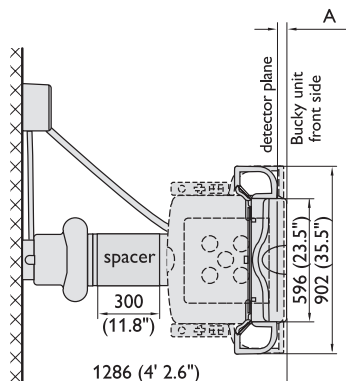
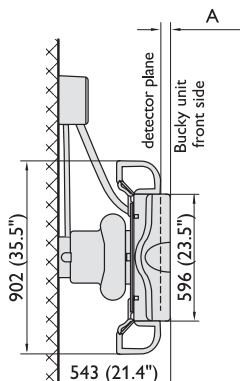
All dimensions in mm (feet/inches)



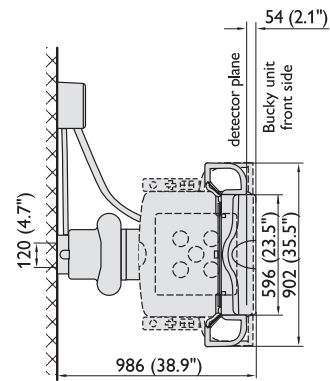
with tilting (option)



with spacer (option)



with tilting (option)



	A
SkyPlate	49.4 (1.9'')
Fixed detector	53.7 (2.11'')

13 Ceiling suspension CSM

The ceiling suspended tube automatically moves horizontally along the two ceiling rails, vertically up and down the telescopic column, while two further directions are available directly at the tube. This optional 5-axes motion and rotation flexibility supports all your DR exams. Tube tracking, auto-collimation of the tube and alignment of tube and detector allow you to give patients center stage.

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 with Comfort Track and Comfort Move	3.44 m (11' 3.4")
Longitudinal travel with Comfort Position	3.28 m (10' 9.1")
Transverse travel	
short	1.50 m (4' 11")
long	3.22 m (10' 6.7")
Vertical travel	1.65 m (5' 5.2")
Tube assembly	
Minimum ceiling source distance	87.1 cm (34.3")
Possible room height adjustment	37.5 cm (14.8")
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°

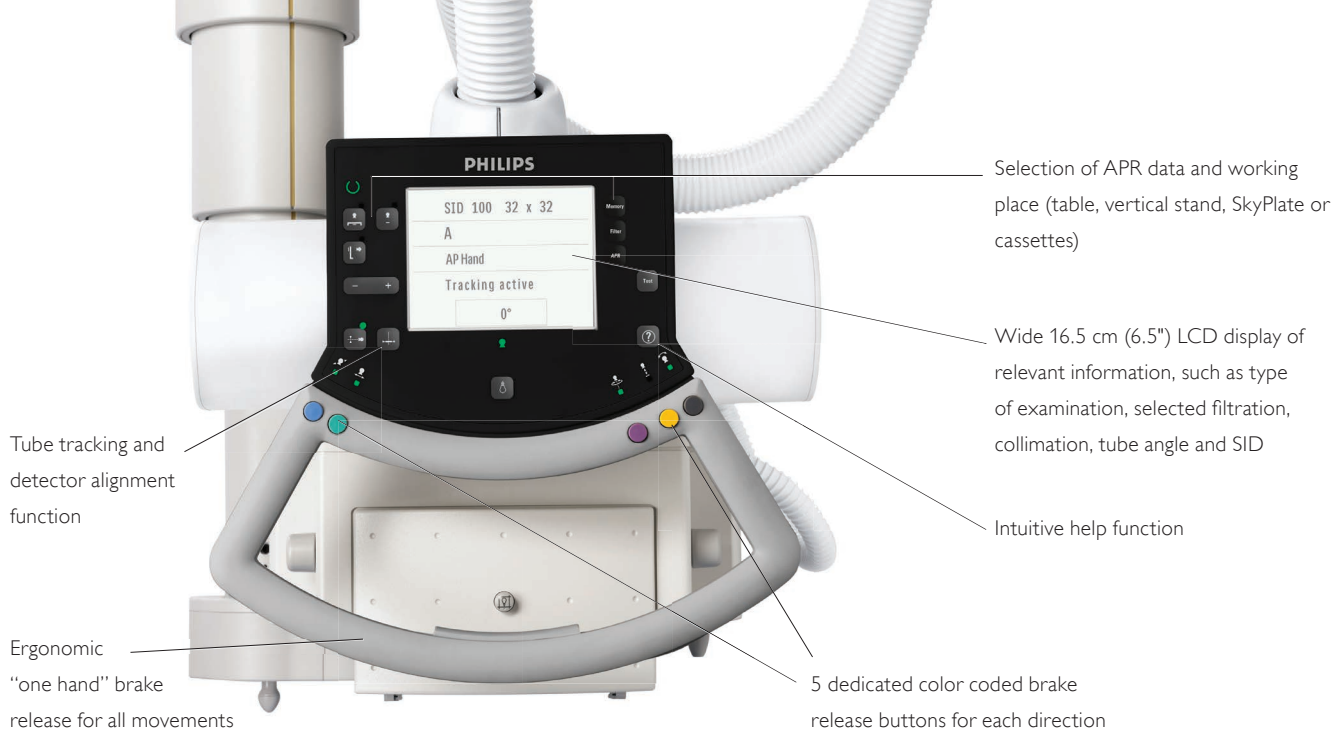
Collimator	
Type	<ul style="list-style-type: none"> • Motorized automatic collimation • manual overrule possible • with light field indicator
Angle of aperture and rotation	2 × 15°, ±45°, depending on the collimator (see type number plate)
Timer switch	up to 30 s
Inherent filter value	<0.3 mm at 100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

Extended longitudinal travel	
Longitudinal travel with Comfort Track and Comfort Move	6.14 m (20' 1.7")
Longitudinal travel with Comfort Position	5.98 m (19' 7.4")

Second laser	
Second laser for fixed source-image distance	



Choose your level of room motorization

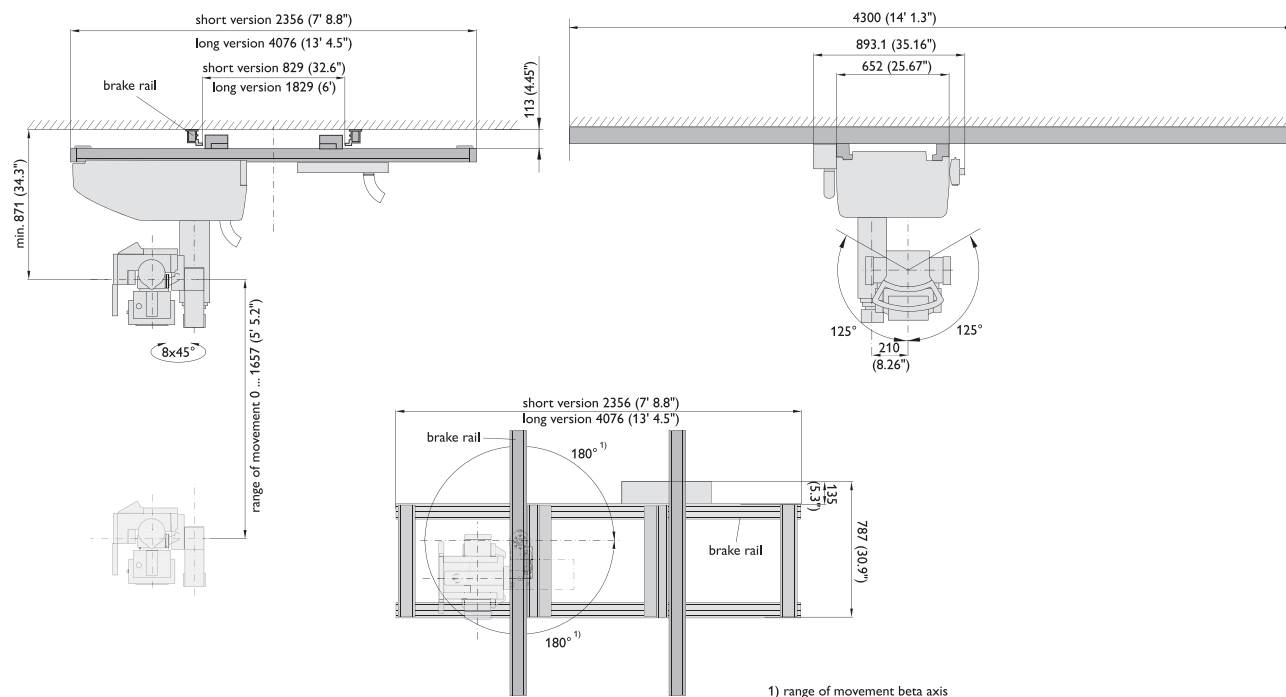
- **Comfort Track:** Elaborated vertical stand, table and ceiling suspended tube motorization level including tube tracking
- **Comfort Move:** Advanced room motorization level including move-to-position
- **Comfort Position:** Total room motorization including 5-axes automation of the ceiling suspended tube

The ceiling suspension CSM 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 markers for preferred source-image distance

Dimensions

All dimensions in mm (feet/inches)



14 SkyFlow

Naturally, the decision is always yours whether or not to use a grid. When working without a grid, SkyFlow – the industry's first scatter correction technology for portable thorax X-rays – provides you with grid-like image contrast. Applied in combination with the large SkyPlate, you can work quickly and conveniently by avoiding the time and effort of attaching and detaching a grid.

Uncompromising procedures

Gridless exams mean you don't have to carry, position and align an anti-scatter grid. Nevertheless, with SkyFlow you can achieve grid-like contrast. You and your patients can benefit from enhanced workflow compared to working with a grid. Potential retakes due to grid cut-off or misalignment are avoided – simply because there is no grid.

Uncompromising image quality

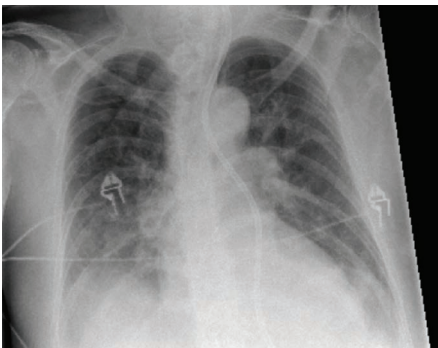
If you are used to working without a grid you will appreciate the enhanced SkyFlow image contrast which does not influence your workflow and dose level. More specifically, SkyFlow requires no technologist input since it automatically adjusts contrast enhancement based on the amount of scatter. You do not have to change your chest exam routine and no extra training is necessary.

All patient types

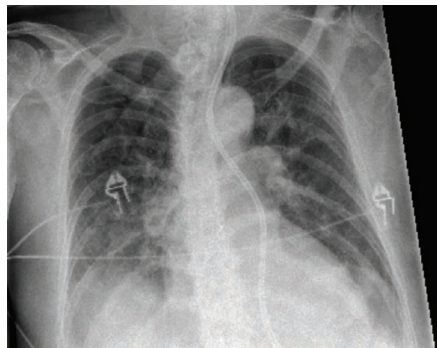
SkyFlow automatically adjusts contrast enhancement based on the amount of scatter for each individual patient type. Therefore, it is suitable for a wide range of patient types, and particularly beneficial for bariatric patients. Short exam times also contribute to high patient comfort.

Main benefits at a glance

- Save time with gridless workflow and benefit from automatic image contrast enhancement
- Achieve excellent image quality with grid-like contrast for all patient types, including bariatric
- Focus fully on the patient with automatic operation, short exam times, and comfortable positioning



Reference image acquired without grid



Same exposure, but processed with SkyFlow

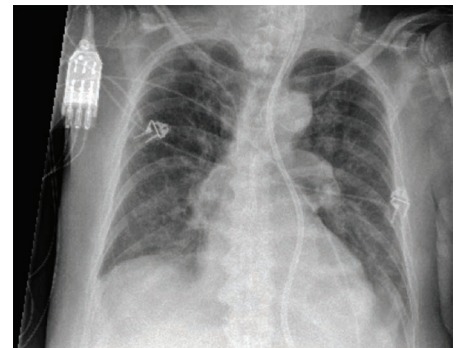


Image of same patient acquired on a different day. A grid was used, and X-ray dose was increased by a factor of 1.6

15 SkyPlate detector sharing

SkyPlate sharing allows you to utilize your budget and customize your SkyPlate disposition. The small SkyPlate is particularly useful for sharing because its specialized application range creates opportunities to apply it in different DR rooms as well as with a mobile DR unit. Similarly, you can use the large SkyPlate for free exams in different areas and additionally insert it in vertical stands or table trays.

Cost efficiency as the driver

- In today's medical world facilities have to be mindful of the budget while maintaining their competitive edge
- SkyPlate sharing is a convincing answer to financial constraints
- With a fixed expenditure, room utilization can be increased even more



High level of flexibility with reduced initial investment

Possible scenarios for SkyPlate sharing

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

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 expansion, i.e. adding more SkyPlates to your department in the future



Each SkyPlate contains the SkyPlate sharing software license

16 Automatic image stitching

The automatic image stitching software is a dedicated orthopedic feature to automatically acquire long-length images. Image acquisition is possible in both projections, horizontally on a patient table, or vertically in front of a vertical stand. A set of smart accessories provides excellent patient comfort and superb image quality.

Main benefits at a glance

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

Optional accessories

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

Specifications with fixed detector	
Number of acquired images	up to 3
Patient coverage	up to 120 cm (47")
with minimum source-image distance	260 cm (102")
Patient coverage on TH table	up to 90 cm (35.4")
Overlap area between images	4.5 cm (1.8")

Specifications with large SkyPlate	
Number of acquired images	up to 3
Patient coverage at vertical stand	
Portrait orientation	117.3 cm (46.2")
Landscape orientation	94.5 cm (37.2")
Patient coverage at the table in portrait and landscape orientation	90 cm (35.5")
Overlap area between images	4.5 cm (1.8")

Orthopedic exams 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 depending on the exam), a composite image is instantly created on the DigitalDiagnost Eleva workspot. The algorithm is fully automatic, manual interaction becomes unnecessary although manual adjustments can be made. Furthermore, this package also provides Cobb's angle and femoral head difference measurements.

When combined with PCR integration, this software also allows automatic image stitching to be performed with long view PCR cassettes.



Image acquisition with patient support at vertical stand VM

18 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 greater power of the large focus and may result in longer tube life.

Main benefits at a glance

- Outstanding image quality through mixed focus spots adapted to each examination
- Outstanding resolution at the power level required
- Reduced exposure time
- Reduced motion artifacts
- Reduced geometrical blur
- Fully automatic

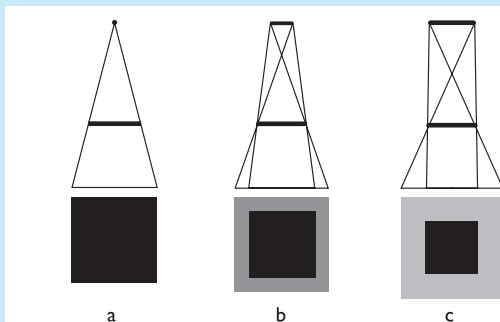
By using both focus spots simultaneously to define a variable focus spot, Philips VarioFocus automatically balances the power on both focus spots in a defined ratio, providing excellent image resolution at any required power. In addition, tube filaments are preserved through power balancing on both focus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



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



Cathode head with two filaments of a double focus tube



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

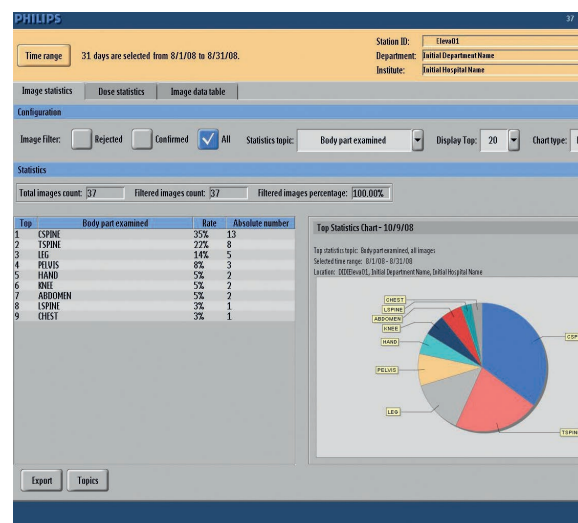
- Ideal focus spot with no geometrical blur
- Medium-sized focus spot generates minimal geometrical blur
- Large focus spot generates pronounced geometrical blur

19 Clinical QC

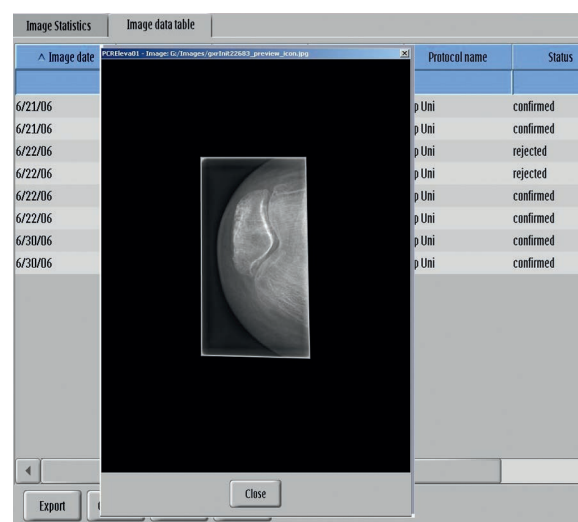
Analyze operator-rejected images and reasons for rejection with this powerful image statistic tool. It also serves to monitor and analyze general parameters. Download the data files in standard format for further usage or archive them on a PC. Clinical QC provides valuable support for your department quality standards and for teaching situations.

Main benefits at a glance

- Easy and convenient monitoring of departmental quality standards
- Dose documentation per image and examination
- Presets of reasons for image rejection
- 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

20 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.

Main benefits at a glance

- Patients are more involved in their own treatment when they can personalize the exam room
- Relaxed and comfortable environment thanks to positive distractions
- Enhanced patient privacy through opaque privacy glass (optional)

The control system integrates video projection, dynamic lighting and audio elements which 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 a touchscreen tablet.

Main components (depending on individual project realization)

Wall projection

Patient selectable audio, video & lighting themes

Palette of individual colors for LED “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 on side walls aligned with video animation

Dynamic colored lighting can also be selected without video projection

Touch screen tablet

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

Docking station for touch screen



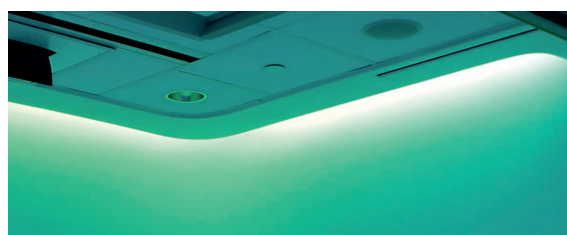
Wall mounted patient touch screen

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.

21 Standard scope of delivery

The difference is in the details. The standard DigitalDiagnost scope of delivery contains a huge number of tools and features which enhance your workflow in different phases of your digital radiography exams. Experience intuitive and seamless procedures with the system geometry, with the premium Eleva user interface and while using UNIQUE image processing.

System geometry benefits

Comfort Track room motorization

- Motorized X-ray table TH or TH-S to accommodate the desired working height and to limit user and patient physical involvement
- Motorized vertical stand VS or VM to set the appropriate detector height according to patient height
- Motorized ceiling suspension column to keep the source-to-image distance (SID) constant while adjusting the proper working height of the table or working height at the vertical stand (tube tracking)
- Auto collimation and collimation light for improved workflow

Color coded directions to operate the ceiling suspension

For improved ergonomics and better workflow

One hand grip to release all directions/axis of the ceiling suspension

Allows for fast and easy tube positioning

Memory button at tube head

To easily switch between the last manual collimation and the automatic preset

Test button

Initiates test run prior to automatic image stitching examinations for improved patient safety

“?” button at tube head

Simple support to position the geometry correctly

Foldable foot pedals at TH table

For increased hygienic management

“Stop all table movement” function

Blocks table movements such as operating the floating table top or table height adjustments for improved patient safety

Accessory rails at TH table

Allows the use of dedicated accessories directly at the patient table

User Interface at both sides of vertical stand VS and VM

For improved ergonomics and better workflow

Upper & lower beam alignment feature

Allows for fast and precise decentered collimation e.g. for upright chest examinations

Portrait/Landscape collimation flip feature

Provides improved user convenience and faster workflow

5 AEC chambers for vertical stand VS and VM

Allows for flexible patient positioning and optimal dose management

Adequate grid usage depending on detector type and application

- Oscillating, low frequency grids for all detectors in the table or vertical stands
- Fixed, low frequency grids plus grid removal software for the SkyPlate (free exposures only)
- Allows for superb dose reductions while retaining high image quality, plus wide range of required SIDs

Storage area for grids behind the detector

Provides improved user convenience and faster workflow

Premium Eleva benefits

Eleva touch screen

Designed for DR working environments for high ergonomics and fast DR workflow

Eleva user interface

Easy to learn, efficient user interface across X-ray modalities, designed with end-users for use in DR working environments

Individual operator login and user profiles

To meet high IT security demands with improved efficiency by automatically filling in dedicated input fields

Built in help feature based on function

Provides improved user convenience and faster workflow

Eleva Review Plus

Provides dedicated review environment and tools for image review at the Eleva workstation

Eleva Workflow Plus

Provides smart tools for an improved and fast workflow such as automatic image markers or the intuitive RIS code learning feature for on-the-fly configuration of new or changed RIS codes

User-configurable and operator-depending user interface

For improved ergonomics and individualized workflow

Move tool

Allows for fast & easy corrections in case of operator error

Auto ranger function

Automatic selection of the optimal anatomically relevant image area for image processing

ROI pointer function

Manual selection of a dedicated, anatomically relevant image area for image processing

Window width/ Window level (WW/WL) function

For fast and precise image gray level adjustments

One-button dose adaption

Sets the desired dose level for the next exposure for improved dose management

Full screen viewing mode

For improved clinical review and quality management of images

High quality display including DICOM display standard

Provides optimal image quality at the Eleva user interface display

User accessible DICOM verify function

For easy access to the availability status of all connected, external DICOM nodes (e.g. PACS, RIS)

Image rotation tool

Precise manual image rotation (by 0.5°) and semi-automatic rotation for fast image correction and review

7 patient types function (automatically and manually)

Optimal adaptation of critical examination parameters for improved dose management and image quality ranging from babies (newborn patients) to extra large adult patients

Advanced Eleva Dose reporting

Individual patient dose and cumulative daily dose reports can be printed for easy dose management

UNIQUE image processing benefits

4 different user modes

Automatic, manual basic, manual advanced and manual expert to meet individualized image processing requirements

Virtually unlimited number of processing presets

To cover even the most specialized views and application procedures

Interactive & real time image processing

Provides instant visual feedback on manual processing parameter changes for fast and intuitive re-processing.

View dependant VOILUT selection

VOILUT can be selected for dedicated views only or for all views to meet individual user demands

Intuitive, easy to handle UNIQUE user interface

Medical-oriented processing features and feature names to allow for fast and intuitive use





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