ARCOMA

Intuition

Designed for Patient Centric Care

Light weighted versatile system with auto-tracking. Unique combination of proven technology and Scandinavian design creating an elite, yet cost-effective, DR/CR/Film solution.

Features supporting high work flow

- **Predefined anatomical programs**
  With one touch exposure parameters and collimation (option) is defined.
- **Light weight OTC**
  Allows easy and smooth fine-tuning of the tube position.
- **Auto tracking Wall stand**
  The tube tracks the vertical movements of the detector.
- **Auto tracking Table**
  When the table top height is adjusted up/down the tube will automatically move in order to keep the SID constant.
  SID = Source image distance, tube focus to detector surface.
- **Automatic stitching**
  Scoliosis and long legs examinations are performed fast and easy by automatic stitching functionality.
- **OTC Display information**
  Patient information and information about the selected examination is shown on the tube display. Exposure parameters as for example patient size or selected AEC chamber can be changed from the tube display.

Dose awareness

- **Detector with high DQE**
  Detector with high DQE (Detective Quantum Efficiency) is used securing good images to low patient dose.
- **Automatic Exposure Control (AEC)**
  AEC can be used for examinations performed at the Table and Wall stand. The use of AEC secures that the correct amount of dose is used in order to create a diagnostic image.
- **DAP (option)**
  Monitoring of the patient dose; Dose Area Product Meter.
- **Exposure Index**
  Exposure index indicates if the correct amount of dose were used or not. This value is shown together with the image.

X-ray Generator

Generator name/type number	High Frequency Generator
Nominal kW output of generator	50 kW Option: 65 kW, 80kW
System Cabinet (L x W x H) mm	750 x 600 x 1125 mm

Electrical characteristics

Mains voltage for the systm	380 V 3~ 400 V 3N 400 V 3~ 480 V 3~ Long-time (positioning) 2A 50/60 Hz- Momentary (exposure): 150 A, 50/60 Hz (Short term peak value), (recommended fuse 63 A thermal breaker) Class 1, Type B
Heat dissipation	1713 BTU/H

Generator Series and Mains Voltage	Generator Momentary Line Current	Apparent Mains Resistance	Minimum Recommended			
			Mains Disconnected to Generator (15 ft/5m max)	Generator Service Rating	Distribution Transformer Rating	Ground Wire Size
50 kW 400 VAC, 3p.	100 A	0.17 Ω	13.3 mm^2	100 A	65 kVa	13.3 mm^2
65 kW 400 VAC, 3p.	125 A	0.13 Ω	13.3 mm^2	100 A	85 kVa	13.3 mm^2
80 kW 400 VAC, 3p.	155 A	0.10 Ω	13.3 mm^2	100 A	105 kVa	13.3 mm^2

Overhead Tube Crane

General

Rotation range ceiling (beta)	-180° (±5°) ~ +163° (±10°)
Rotation range tube arm (alpha)	+180° (±5°) ~ +163° (±10°)
Column (Z stroke)	1 750 mm, 1 450 mm
Longitidunal movement (X)	3 352 mm (X-rail 4 000 mm)
Transverse movement (Y)	4 113 mm (Y-rail 5 000 mm), Special Resus solutions with up to ~24m available.

Electrical Characteristics

Mains voltage	230 VAC, 50/60 Hz center tapped single phase 4A

Classification

Class	Class Ib equipment. All dead metal parts of the equipment are electrical connected to protective earth.
Applied part	Type B
Protection against ingress of water	IPXO
Mode of operation	Intermittens operation: 20%, maximum 1 min. ON/4 min. OFF
Use of anaesthetic mixtures	The equipment is not suitable for use in the presence of flammable anasthetic mixtrues with air or with oxigen of with nitrous oxide.

Speed
Low speed – Maximum speed

Z movement	40 mm/s – 150 mm/s

OTC Display

Information:	Patient name, ID, Birth date, age, gender Beta and alpha angle. SID or height above table. Active mode; Table – Wall stand – Free or Stitching modes.
Information and changeable parameters:	Technique, X-ray tube voltage, X-ray tube current, radiography time, density, AEC (Automatic Exposure Control), beam hardening filter, patients size setting selection etc.

X-ray Tube Unit

Max kVp rating	150kV
Min kVp rating	40 kV
mA range:	: 0.1 to 630 mAs (50 kW), : 0.1 to 800 mAs (65 kW) (option) : 0.1 to 1 000 mAs (80 kW) (option)
mAs range:	0.4 – 1 000 mAs
Exposure time:	0.0001 - 6.3 sec

Focal spot input power	40/100kW
Focal spot sizes	0.6/1.2mm
Anode heat storage	400 kHU, 600 kHu (option)
Housing heat storage	1 300 kHU (50 kW) or 2 000 kHU (65 kW, 80kW)
Anode angle	12°

Collimation (standard)

Filtration	0.1 mm Al + (0.1 mm Cu, 0.2 mm Cu, 2 mm Al) Manual selection
Shape of the radiation field	Rectangular
Lamp:	LED
Rotation angle:	±45°
Center marker:	Center if the radiation field is indicated by a cross.
Bucky light:	Radiation field center is indicated by a laser beam for positioning.
Beam limiting method:	Manual (adjusted by the user)

Wall stand

General

Vertical stroke (tilt option)	~1400 mm (+40 mm/ -10 mm)
Vertical stroke (non-tilt option)	1470 mm (+40 mm/ -10 mm)
Brake:	Electromagnetic
Rotation range of imaigng unit	-20° - +90°

Configuration

Operating method:	Manual and Motorized (option)
Balancing mechanism:	Counterweight

Table (standard – closed)

General

Movement	6-Way
Operating method:	Motorized
Brake:	Electromagnetic
Patient load (Dynamic load center):	295 kg

Table top height

Lowest table top position (from floor to table top surface)	540 mm (+20 mm / -10 mm)
Vertical stroke	310 mm (+40 mm / -20 mm)

Specifications subject to change without notice

Table top

Al eqv.	0,9 mm
Table top dimension	2424 mm x 808 mm
Table top transparent area	2360 mm x 601 mm
Table top thickness	21 mm
Length of stroke, X direction	± 500 mm
Length of stroke, Y direction	± 150 mm

Table (option – Two-column)

General

Movement	6-Way
Operating method:	Motorized and vertical
Patient load (Dynamic load center):	300 kg

Table top height

Lowest table top position (from floor to table top surface)	550 mm
Vertical stroke	380 mm

Table top

Al eqv.	0,9 mm
Table top dimension	2424 mm x 850 mm
Table top transparent area	2400 mm x 613 mm
Table top thickness	21,5 mm
Length of stroke, X direction	± 600 mm
Length of stroke, Y direction	± 150 mm
Movement ragne of the imaging unit	>650 mm

Electrical Characteristics

Maximum power without external electronics	500 W

External Electrical Characteristics

The external electronics must be approved according to IEC60601-1. If any external electronics is installed the end product must be tested according to IEC60601-1.

Power output to external	110-240 VAC 50-60 Hz Single phase 10A
Power output external 24 VDC	24 VDC 3A

X-ray grids

Interspace material	Al
Cover material:	Al or Carbon
Grid density	TBD (decided by detector specification)
Grid ratio:	8:1, 10:1, 12:1 available (To be discussed)

Focusing distance:	110, 115, 140, 150, 180 available (To be discussed)
	Stationary
	Detachable
Portable W/Holder with grid	Light weight detector holder with integrated grid. Grid specification: Carbon fiber cover + fiber interspaced Focal distance: 110 cm.

X-ray transparent stretcher

General

Movement	Four pivoting wheels. Fixed table top.
Operating method:	Mobile
Patient load (Dynamic load center):	180 kg

Table top

Al eqv.	0.9 mm Al
Table top dimension	1990 x 680 mm
Table top transparent area	TBD
Table top thickness	70 mm

Flat Panel Detector

Wireless detectors	
Scintillator	CsI
Fluid Resistance	IPX7
On-board image storage	Up to 99 images
Pixel size:	125 µm
Resolution:	4.0 lp/mm
Preview Image time:	1 sec.
Cycle Time:	7 sec.
Wireless channel/band	2.4 GHz, 5 GHz (W52, W53*, W56*, W58) *) W53, W56 supports only in Module receiver mode
Local storage	Able to store 99 images
Load	
CXDI-710C Wireless	
Size	35.0x42.6 cm
Weight	2.3 kg
CXDI-810C	
Size	35.0x27.4 cm
Weight	1.8 kg
CXDI-410C	
Size	42.6x41.5 cm
Weight	2.8 kg
CXDI-701C Wireless	

Size	38.4x46.0 cm
Weight	3.3 kg
Fix Detectors	
CXDI-401C Compact	
Scintillator	CsI
Effective Imaging area:	415x426 mm
Resolution:	4.0 lp/mm
Gray scale:	4096 gray scale
Pixel size:	125 x 125 µm
Image matrix size:	3320x 3408 pixels
Attenuation of the detector front panel:	Max 0.37 mmAl
Environmental requirements Operation Temperature: Humidity: Atmospheric pressure:	+5°C to +35°C 30 to 85% RH (without condensation) 700 to 1060 hPa
Operation Temperature: Humidity: Atmospheric pressure:	-305°C to +50°C 10 to 95% RH (without condensation) 700 to 1060 hPa
Dimensions	Approx. 460 (W) x 490 (H) x 15 (D) mm
Weight:	Approx. 7 kg (including cable)

Workstation / Control Software

Control Software	Provide a steady and efficient workflow in the field of digital radiography when linked to an RIS/HIS network. Connect Flat panel detectors. Automatically processing of captured images to achieve diagnostic image quality. Advanced image processing features.
DICOM Conformance Statement Overview	The Control software implements necessary DICOM services to download work lists from an information system, save acquired DX images, CR images and associated Presentation States to a network storage device or Storage Medium, print to a networked hardcopy device and inform the information system about the work actually done. Media Storage Application Profile supported by the Control software: Compact Disk −Recordable, General Purpose CD-R **SOP classes (SCU − Yes, SCP − No)** <u>Transfer</u> Digital X-Ray Image Storage − For Presentation Computed Radiography Image Storage
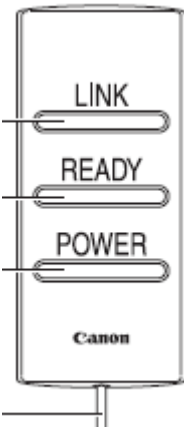
	Grayscale Softcopy Presentation State X-Ray Radiation Dose SR Workflow Management Modality Worklist Storage Commitment Push Model Modality Performed Procedure Step Print Management Basic Grayscale Print Management Presentation LUT
Digital Image Processing	Basic Processing: Rotation, Flip, Inversion, Panning, Zoom, Brightness/Contrast, L/R marking, Region of Interest, Crop Mask, Reset/Undo, Annotations Advanced Image processing Anatomic Part (Category and Anatomical Part, Direction) LUT adjustments Enhancement Dynamic Range Adjustment Noise Reduction Grid Suppression Sharpness Adjustment Peripheral Mask Scatter Correction (option) Advanced Edge Enhancement (option)
PC Specification	CPU: Intel Core i3, 3M Cache, 3.50 GHz, 2 cores RAM: 8 GB HDD: 500 GB, 7200 RPM When review monitor option selected (option): CPU: Intel Xenon 8.25M Cache, 2.90 GHz, 4 cores RAM: 8 GB HDD: 500 GB, 7200 RPM
Monitor	2MP, Monitor size: 23 " Monitor resolution: 1920 x 1080 Brightness: 260 cd/m2 Review monitor, 2nd monitor (option): 2MP, Monitor size: 21,3" Monitor resolution: 1200 x 1600 Brightness: 800 cd/m2
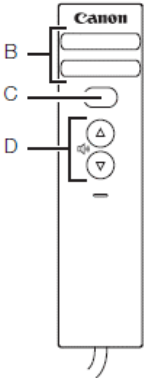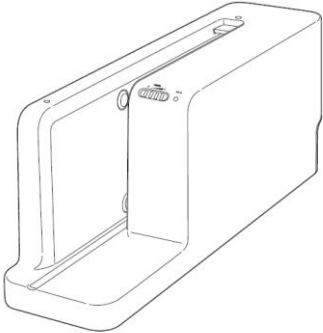
Detector configuration

Free: CXDI-810 W   CXDI-710C W   CXDI-410C W   CXDI-401C Compact
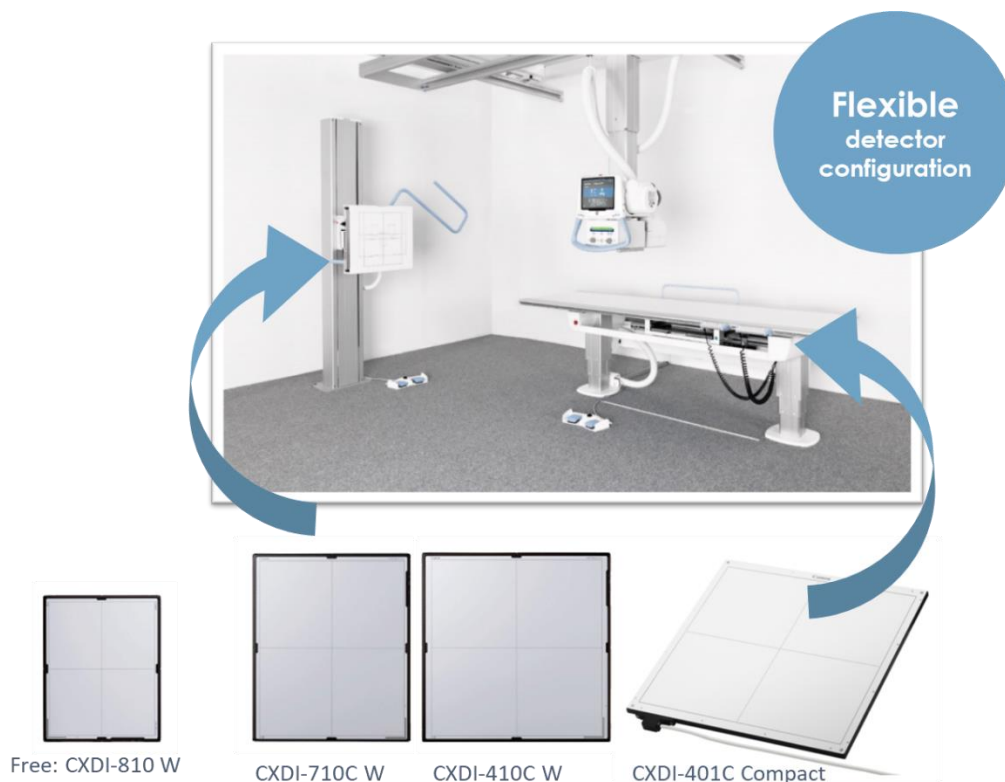
The Wall stand and the Table can hold either the CXI-710W, CXDI-401W or the CXDI-401C Compact. For the CXDI-710 W and CXDI-410 W automatic charging of battery and image transfer can be performed when the detector is placed in the detector holder.

	Wall stand	Table	Free	
CXDI-410C	●	●	●	Wireless 42.6x41.5 cm 2.8 kg
	□ Status indicator	□ Status indicator		
	□ Charging in the holder	□ Charging in the holder		
CXDI-710C	●	●	●	Wireless 35.0x42.6 cm 2.3 kg
	□ Status indicator	□ Status indicator		
	□ Charging in the holder	□ Charging in the holder		
CXDI-810C	N/A	N/A	●	Wireless 35.0x27.4 cm 1.8 kg
CXDI-401C Compact	●	●	N/A	Fix 46 x 49 cm
Other Options:	Left/Right hand loading of grid and Wireless detector	N/A	N/A	

	Status Indicator *Option when CXDI-710C Wireless or CXI-410C Wireless selected.* When the detector is set in the Wall stand or Table detector the LED lamps on the detector are no longer visible. The status indicator can be used to display the power and ready status indicated on the detector´s LED lamps. You can turn on the detector on and off by pressing the POWER switch on the status indicator, or switch the detector to ready status by pressing and holding the READY switch on the status indicator. The status indicator can be in a place where it can be easily checked during examination.	**Option**
	Status Indicator *CXDI-401C Compact (included when Compact detector is selected)*	**Included for fix detector**

	Ready Indicator	Accessories
	(B) The LED status indicator lights up or flashes to indicate detector status, detector registration and connection status. C) IR data port, communication port for the detector link. D) Sound level up/down. Sound signals indicating when the X-rays are received by the detector.	
	FPD Docking station	**Accessories**
	Battery Charger	**Accessories**
	Battery Pack	**Accessories**

FEATURES		
Scatter correction Option (Software)	Option	
Edge Enhancement (Software)	Option	
Automatic Stitching for Wall stand	Option	
Integrated DAP	Option	

X-RAY GRID

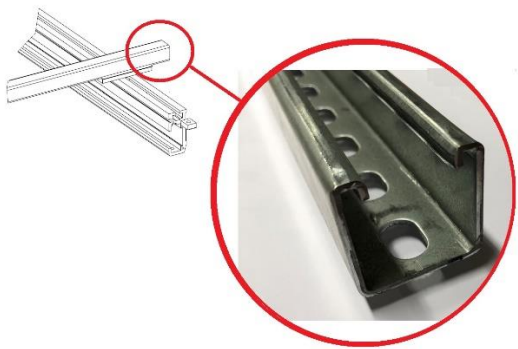| Interspace material	Al	
Cover material:	Al or Carbon	
Grid density	**40 lp/cm or 52 lp/cm *)** *) required for CXI-401C Compact*	
Grid ratio:	10:1	
Focusing distance:	110, 115, 140, 150, 180	
	Stationary	
	Detachable	
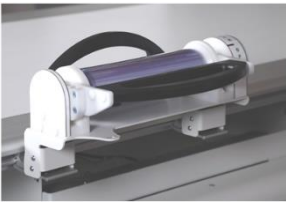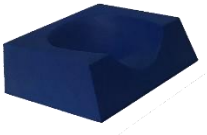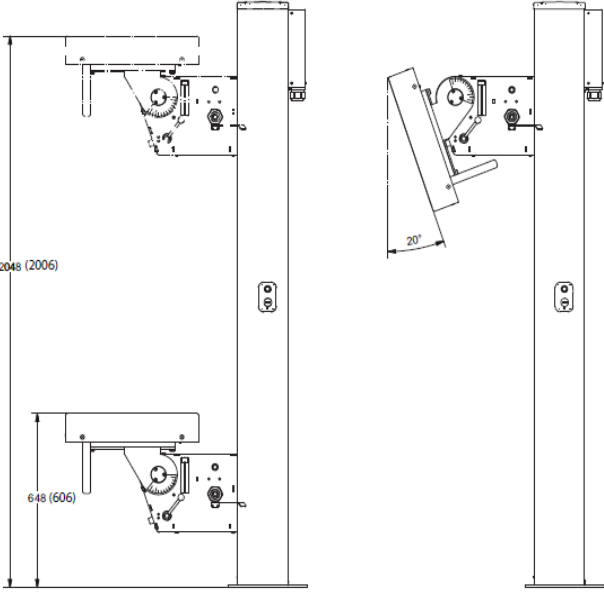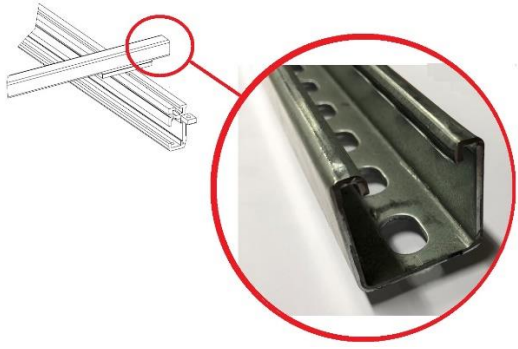
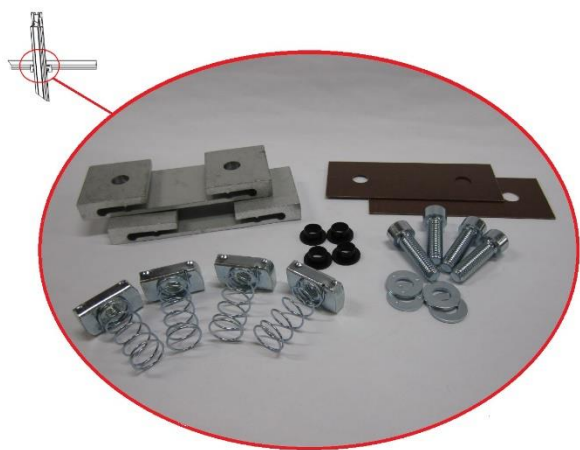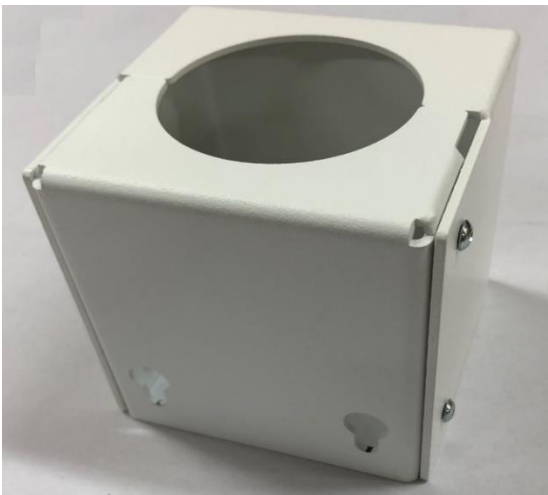|	Light weight detector holder with integrated grid. Carbon fiber cover + fiber interspaced 52 lines/cm, ratio 8:1 Focal distance: 110 cm 401/410 701/710 801/810 Focal distance: 140 cm 401/410	

TABLE (TWO-COLUMN)		
FLEXIBILITY - USER INTERFACES		
	Vertical collision protection	**Option**
	Hand control for automatic collimator (1 pcs)	
	Foot Hand control for automatic collimator (1 pcs)control strip type X/Y	

	Foot control X/Y/Z *(pedals, colour: blue)*	**Accessories**
PATIENT COMFORT		
	Mattress, Basic	**Accessories**
	Mattress, Comfort	**Accessories**
	Patient handgridp *(colour: blue)*	**Accessories**

WORKFLOW		
	Lateral cassette holder	**Accessories**
DOSE REDUCTION & IMAGE IMPROVEMENT		
	Compression belt cost effective	**Accessories**
	Compression belt high-end	**Accessories**
	Form pad large – **head** (25x24.5x9 cm)	**Accessories**
	Form pad medium – **wedge** (50x28x10/1 cm)	**Accessories**
	Form pad small - rectangle (25x24.5x9 cm)	**Accessories**

WALL STAND		
	Foot control Release of brake for manual vertical movement and control of motorized vertical movement	**Accessories**
	Patient Lateral Armrest	**Option**
	Wall stand tilt -20°, 0°, 90°	**Option**

Installation related options		
x 5	**Unistrut rails,** *for 4 x 4 meter installation* **0512-099-001** **Used for rail attachment to ceiling. Needed if no other attachment possibility is present in the room where the installation is carried out.**	**Option**
x 7	**Unistrut rails,** *for 4 x 5 installation* **0512-099-002** **Used for rail attachment to ceiling. Needed if no other attachment possibility is present in the room where the installation is carried out.**	**Option**
	Mounting kit for Unistruts rails 4 x 4 *0512-099-003* *Bolts, nuts and washers to prepare Unistrut rails for a 4x4 meter rail installation*	**Option**
	Mounting kit for Unistruts rails 4 x 5 *0512-099-004* *Bolts, nuts and washers to prepare Unistrut rails for a 4x5 meter rail installation*	**Option**

	Transverse Y kit *0170-810-020* Kit for attaching Y-rails to Unistrut rails in ceiling. 10 kits are included in a standard delivery (4x4 m). If more attachment points are needed, this is the kit to buy! 1 kit = 2 attachment points.	**Option**
	Cable outlet for 0170 CS *0170-099-002* For attachment of Wallstands cable hose to hospitals wall (for cable routing above inner ceiling and/or cable ducts on wall).	**Option**

Rail (Y) and Traverse (X) lengths
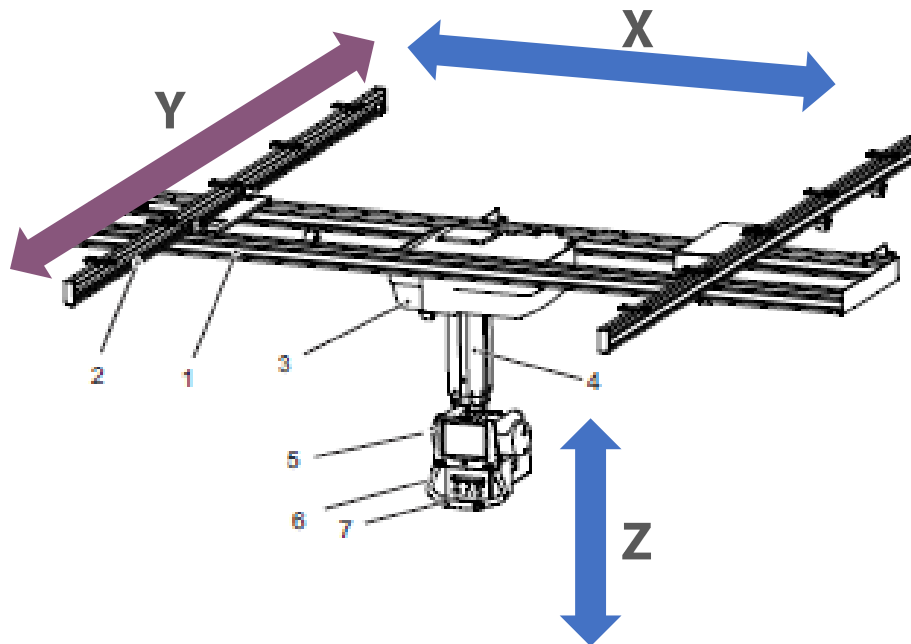
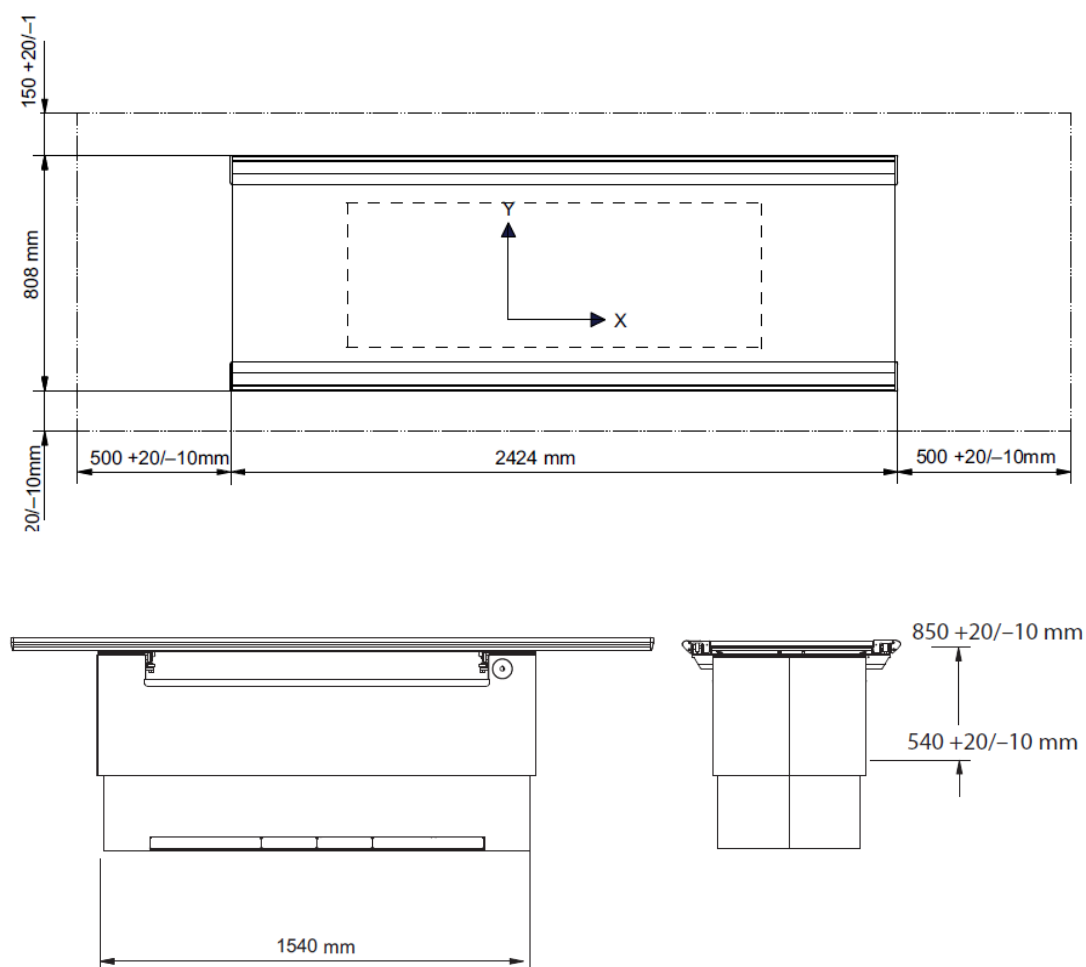|	Ceiling height	Vertical column stroke	Rails
0170-925-032			3x4m
0170-925-033			4x4m
0540-925-025	2.7 to 2.85m	1450mm	3x5m
0540-925-026			4x5m
0170-925-034			Special order: X(<4m)= 0 Y(<4m)= 0
---------------			3x4m
0170-925-030			4x4m
0540-925-023	Over 2.85m	1700mm	3x5m
0540-925-024			4x5m
0170-925-031			Special order: X(<4m)= 0 Y(<4m)= 0
0170-925-003	> 2.5 - 2.8m	1450mm	Installation cube low ceiling 3x4m
0170-925-016	> 2.8 m	1700mm	Installation cube low ceiling 3x4m

Configuration 1   Configuration 2   Configuration 3

Table *0181* (standard) :

Specifications subject to change without notice
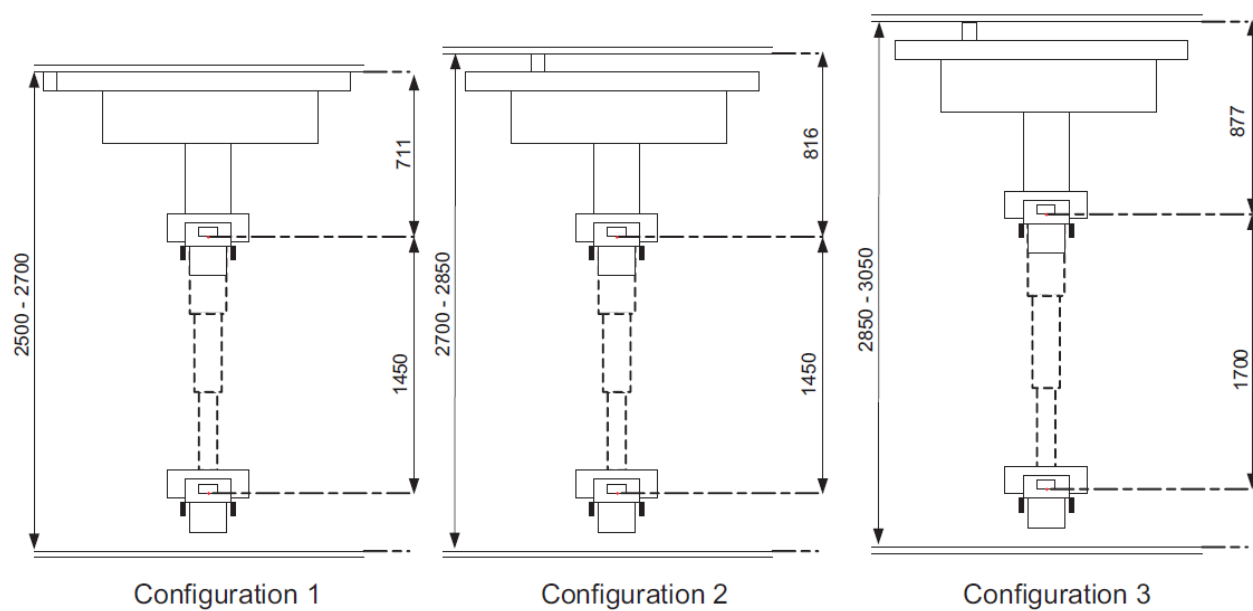
Table *0055* (optional) :

Figure 4-6

Specifications subject to change without notice
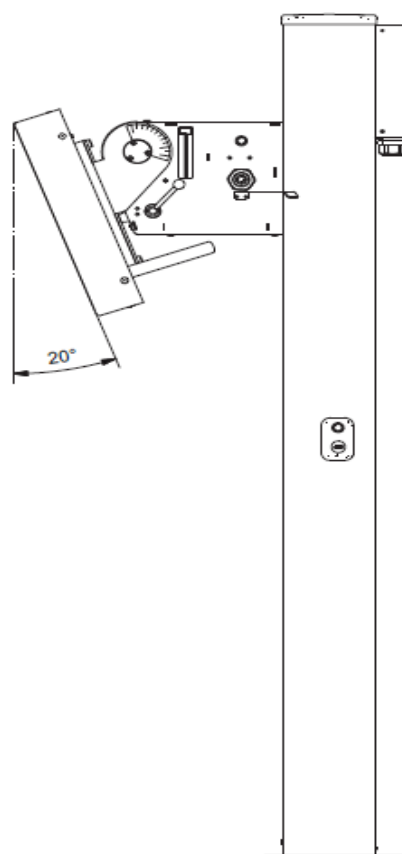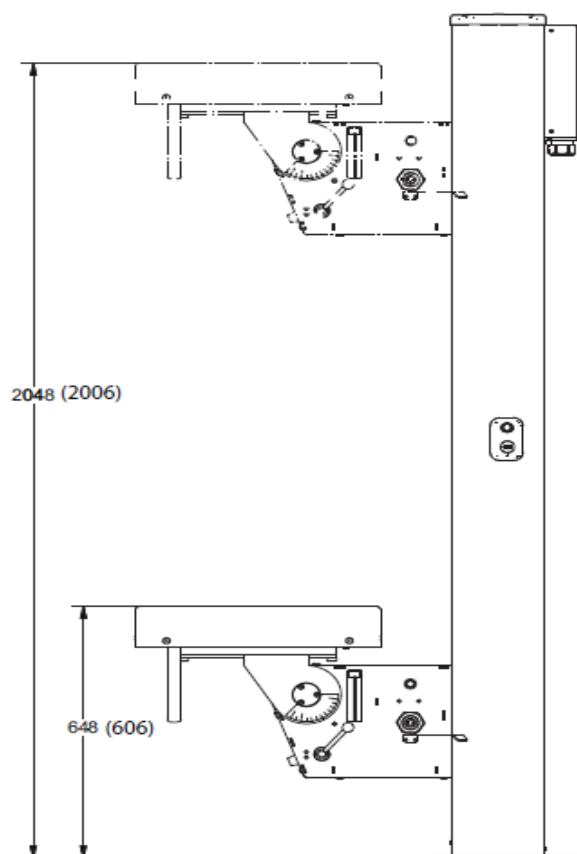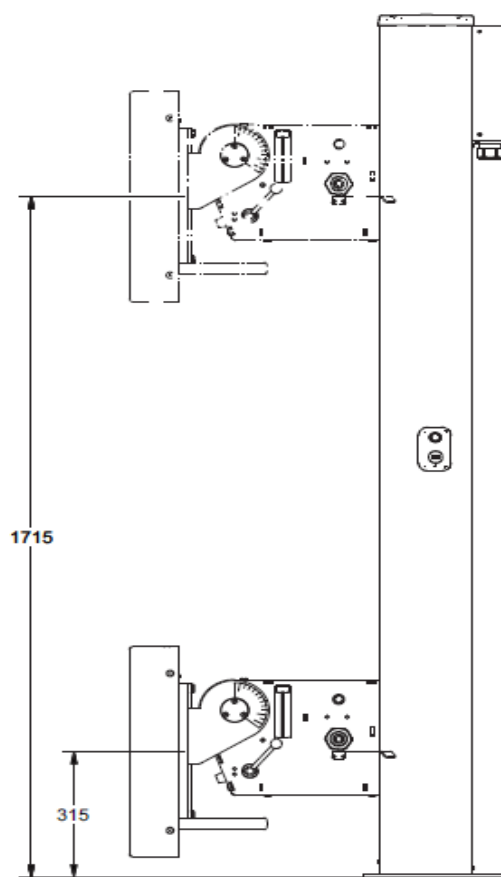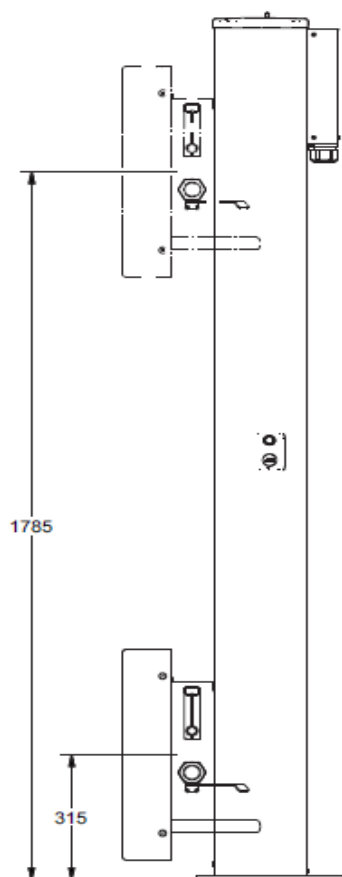
1785

315

1715

315

2048 (2006)

648 (606)

20°

ARCOMA
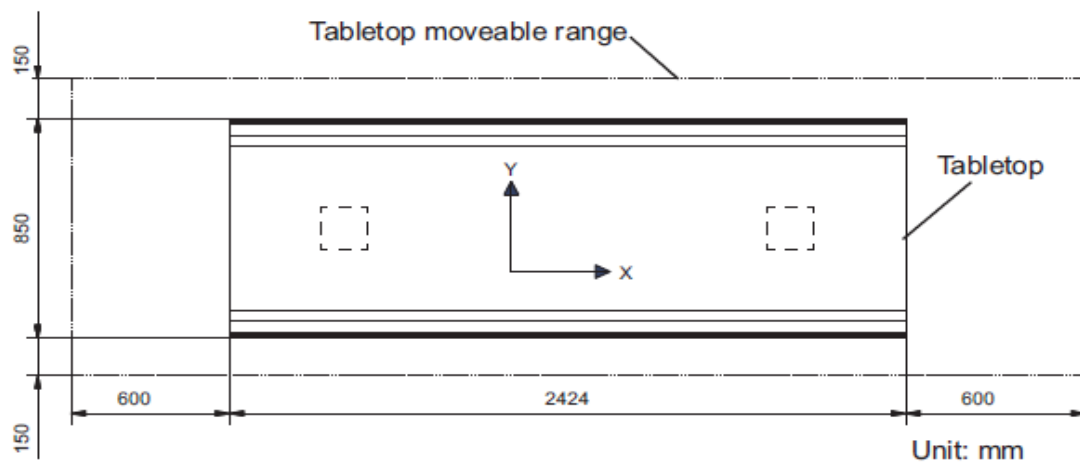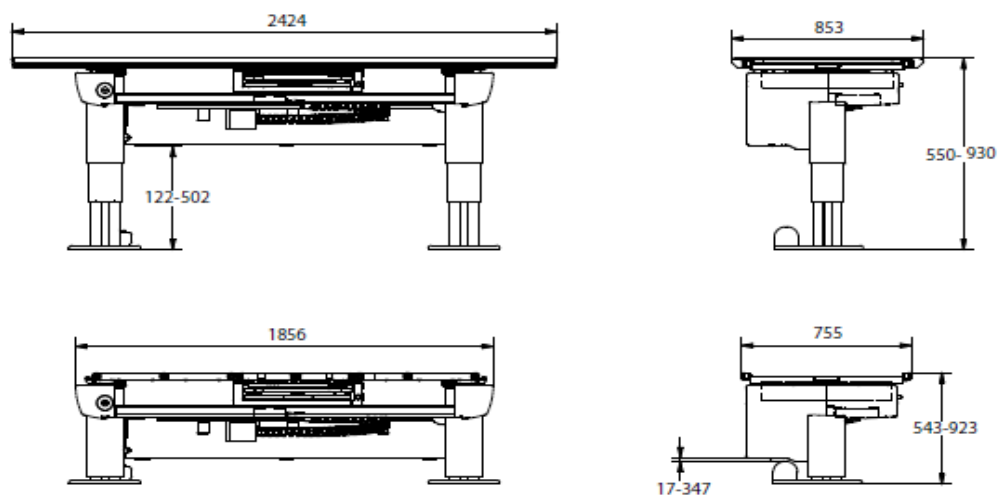
Appendix: Order guidances

Detector options selection guide

Specifications subject to change without notice