

**GENERAL NOTES:**

NOTE: This room is minimal in size. The equipment in this room will function properly. However, the space around the system must be considered (i.e. space for additional equipment such as millwork, storage cabinets, stretchers, utility carts, injector cart, anesthesia cart, and etc.). The customer must review the layout and determine if enough space is available for their needs.

NOTE: The purpose of this layout drawing is primarily to illustrate the location(s) of the Siemens-supplied equipment. All non-Siemens and/or future and/or existing equipment (e.g. millwork, furniture, carts, etc.) is shown for representational purposes and may not accurately represent the actual on-site configurations. It is the responsibility of the customer/contractor that all related codes, policies (e.g. hospital requirements, building codes) and clearances to the Siemens equipment are followed when locating these ancillary items.

NOTE: All construction room upgrades (such as: new walls, doors, windows, millwork, plumbing, furniture, medical equip., and etc.) are shown for proposal purposes only. The customer is to provide these room upgrades. In the case of a turnkey, these room upgrades will be detailed in the contractor's quote. The contractor's quote takes precedence over the room layout drawings.

NOTE: This layout is preliminary only. Siemens reserves the right to make changes as dictated by new technical developments.

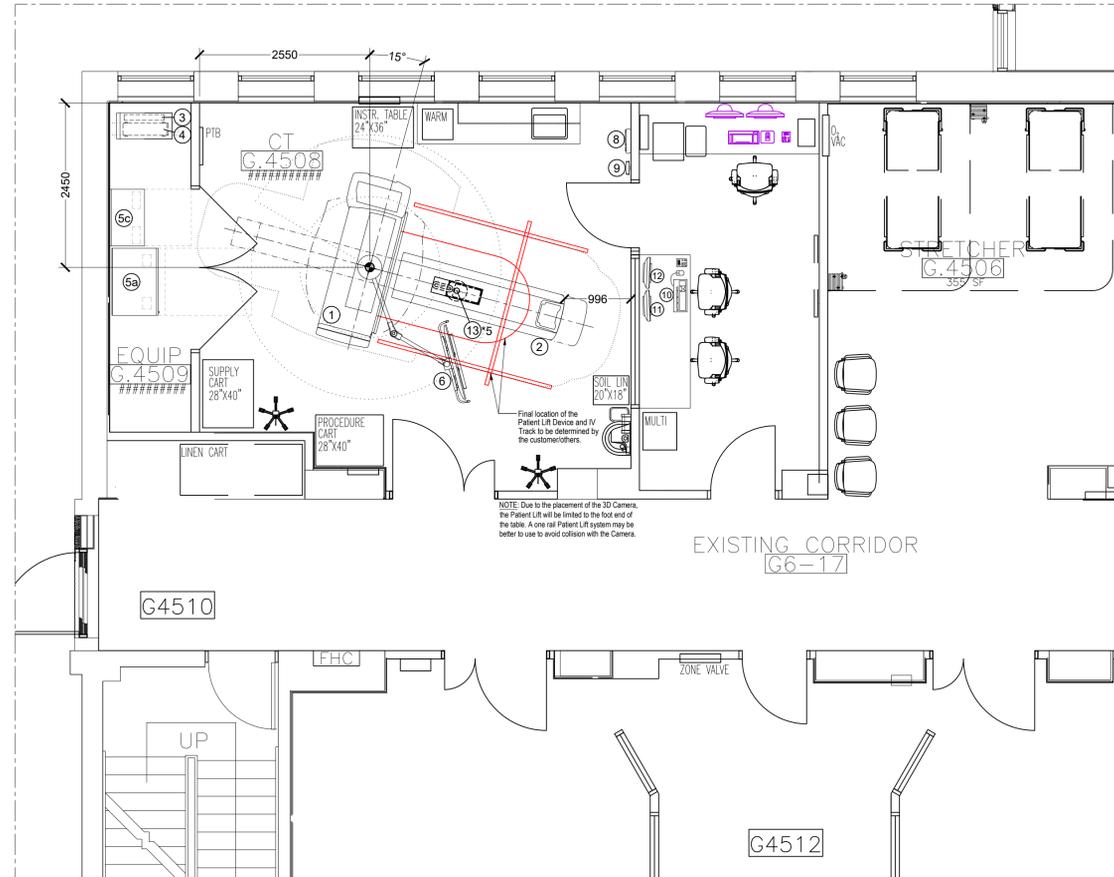
NOTE: The customer is responsible to have the transport route for Siemens equipment verified by the Structural Engineer (from point of delivery to final location).

NOTE: Additional anchoring may be required if the site is deemed as 'Seismic Zone' by local codes. The customer must verify the local code requirements and advise the Siemens Project Manager.

NOTE: Siemens is not an Architectural or Engineering firm. Drawings supplied by Siemens are not construction drawings. Therefore, these drawings are to be used only for information to complement actual construction drawings available from a customer-appointed Architectural representative or a Customer's Engineering design group. The Customer's Architect and General Contractor shall be ultimately responsible for compliance with all applicable codes and professional design requirements.

NOTE: Additional accessories that typically accompany the system will require storage space.

**PROPOSED LAYOUT**



1 : 50

**EQUIPMENT LEGEND - Somatom X.Cite**

No	DESIGNATION	HEAT (kW)	WEIGHT (kg)
1	SOMATOM X.cite Gantry (water cooled)	1.00	2060
2	Patient Table (PHS Vario 2 - scan range 2000mm)	0.30	354
3	UPS (in a rack with IRS)	0.35	32
4	IRSxp1 Tower Cabinet (in a rack with UPS)	1.00	25
5a	Cooling System Indoor Unit	1.00	410
5b	Cooling System Outdoor Unit	30	186
5c	Cooling system Flow Heater	0.50	127
6	MCS Pro (32" ceiling monitor)	0.00	52
7	-----	--	--
8	Docking Station for wireless controls	--	3
9	Wireless Access Point	--	3
10	Syngo Aquisition WP Keyboard & Control Box	--	--
11	Syngo Aquisition WP Monitor (23" Flat Panel)	0.10	9
12	Syngo Aquisition WP Monitor (23" Flat Panel)	0.10	9
13	3D Camera (incl. ceiling plate, flange pipe, canopy)	--	14

SOME EQUIPMENT SHOWN ON THIS DRAWING IS OPTIONAL. PLEASE REFER TO QUOTATIONS FOR ACTUAL EQUIPMENT TO BE DELIVERED

NOTE: These drawings reflect the installation requirements for all equipment provided by Siemens. Installation information from the manufacturer, and all resulting design requirements, are the responsibility of the customer/contractor should the customer purchase non-Siemens products or equipment by other means.

NOTE: This set of final installation drawings reflects the latest sales configuration (OCF). Any changes to the sales configuration may require a revision to these project drawings. Siemens will produce a revised set of drawings to reflect the change(s), but Siemens will not be responsible for any construction costs associated with the change(s) that occur from this plan modification.

- \*1 Average heat dissipation to water = 12.0 kW (to air = 1.0 kW).
- \*2 Mounting height >2000 mm AFF. Minimum distance to gantry isocentre: 2500 mm.
- \*3 Dock must be installed minimum 1500 mm from the patient table to ensure it is possible to touch the contact of the USB plug and the patient at the same time.

**ROOM HEIGHT**

System Component:	Minimum room height:
Basic system	2250 absolute minimum; 2300 mm recommended
With the CARE Vision CT ceiling mounted option:	2402-2802 mm (200 mm column)
	2802-3402 mm (600 mm column)

\*5 For the required height of the 3D Camera, see Camera Detail.

**ENVIRONMENTAL CONDITIONS**

System (during operation)

Ambient Temperature	Relative Humidity (without condensation)	Air Pressure
+18°C ... +30°C	20% ... 75%	800 hPa ... 1060 hPa

System (during transport)

Ambient Temperature	Relative Humidity (without condensation)	Air Pressure
-20°C ... +50°C	5% ... 95%	700 hPa ... 1060 hPa

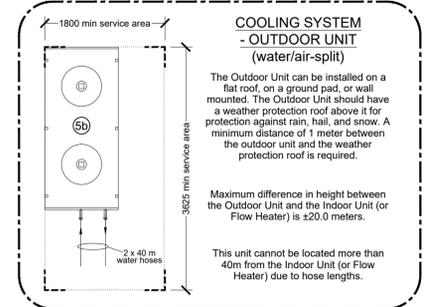
Maximum storage time: 2 months

**MAGNETIC FIELD PRECAUTIONS**

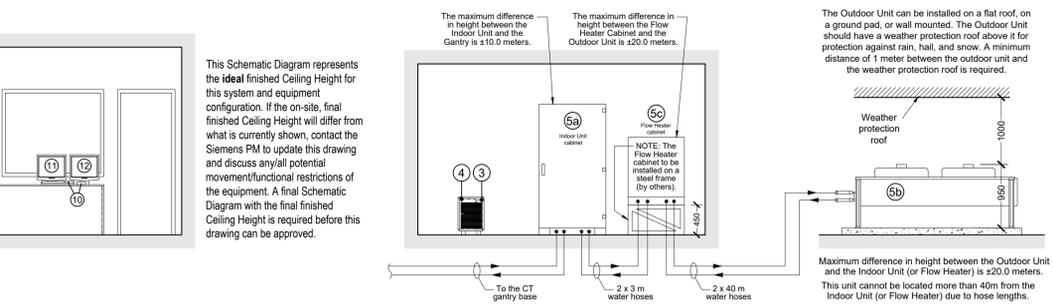
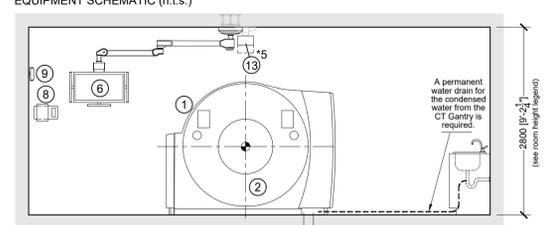
The presence of magnetic fields in the vicinity of equipment may have an adverse effect. It is the Customer's responsibility to verify that the following values are not exceeded.

Maximum Allowable Magnetic Field	Devices
1.0mT (10 Gauss)	Computers, magnetic disk drives, oscilloscopes, processors
0.5mT (5 Gauss)	X-Ray tubes, b/w monitors, magnetic data carriers, data storage devices
0.2mT (2 Gauss)	Siemens CT Scanners
0.15mT (1.5 Gauss)	Colour monitors, Siemens Linear Accelerators
0.05mT (0.5 Gauss)	X-Ray image intensifiers, gamma cameras, PET/Cyclotron, other linear accelerators

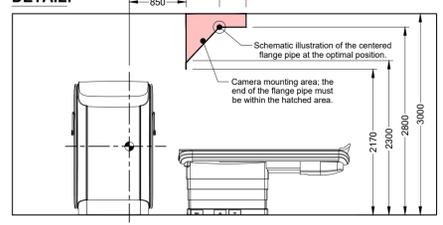
Magnetic fields should be measured prior to delivery of Siemens equipment.



**EQUIPMENT SCHEMATIC (n.t.s.)**



**CAMERA DETAIL:**



Side View: Mounting area of the 3D camera



Submitted for:  Approval  Your use  Your records  Installation

APPROVED: \_\_\_\_\_

Siemens Healthcare Limited  
Planning Department

NOTE: ALL DIMENSIONS SHOWN MUST BE VERIFIED ON THE SITE. THIS DRAWING IS NOT TO BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION.

CUSTOMER: THE SCARBOROUGH HOSPITAL (BIRCHMOUNT)  
SCARBOROUGH, ONTARIO  
GENERAL LAYOUT

EQUIPMENT: SOMATOM X.CITE

DWG#: 386-018-01  
DESCRIPTION: GENERAL ROOM LAYOUT

DRAWN BY: KISHAN B. AS NOTED  
DATE: 10 JUN 2024

PROJECT #: 386  
REVISION #: 018

NOTE: Contractor to site verify locations of all existing walls. The locations of existing walls may be different than as shown in this layout proposal.

THIS DRAWING MUST BE READ IN CONJUNCTION WITH THE FOLLOWING SIEMENS DOCUMENTATION:

DWG#	DESCRIPTION
386-018-01	GENERAL ROOM LAYOUT
386-018-02	STRUCTURAL REQUIREMENTS
386-018-03	MECHANICAL REQUIREMENTS
386-018-04	ELECTRICAL REQUIREMENTS (PROJECT)
386-018-05	ELECTRICAL REQUIREMENTS (GENERAL)

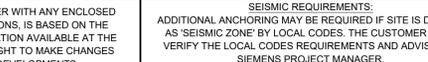
SEISMIC REQUIREMENTS: ADDITIONAL ANCHORING MAY BE REQUIRED IF SITE IS DEEMED AS 'SEISMIC ZONE' BY LOCAL CODES. THE CUSTOMER MUST VERIFY THE LOCAL CODES REQUIREMENTS AND ADVISE THE SIEMENS PROJECT MANAGER.

IN ORDER TO AVOID DELAY IN INSTALLATION, SIEMENS CANADA LTD. PLANNING DEPT. SHOULD BE CONSULTED PRIOR TO INSTALLATION. FINAL ARCHITECTURAL DWGS SHOULD BE MADE AVAILABLE TO SIEMENS AT THIS TIME TO VERIFY THAT ALL REQUIREMENTS HAVE BEEN ADHERED TO.

THIS DRAWING DOES NOT PROVIDE RADIATION PROTECTION SPECIFICATIONS. IT IS SUGGESTED THAT A LICENSED RADIATION PHYSICIST BE CONSULTED.

SOME EQUIPMENT SHOWN ON THIS DRAWING IS OPTIONAL. PLEASE REFER TO QUOTATIONS FOR ACTUAL EQUIPMENT TO BE DELIVERED. ALL ITEMS NOT SPECIFIED IN THE EQUIPMENT LEGEND (EG. COUNTERS) ARE TO BE SUPPLIED AND INSTALLED BY THE CUSTOMER/CONTRACTOR, ON APPROVAL BY THE CUSTOMER.

METRIC TO IMPERIAL CONVERSIONS:  
1000mm = 39.37" 1'-0" = 304.8mm 1kg = 2.205lbs.



ALL DIMENSIONS SHOWN ARE IN MILLIMETERS, UNLESS OTHERWISE SPECIFIED.  
ALL DIMENSIONS SHOWN ARE FROM FINISHED SURFACES.

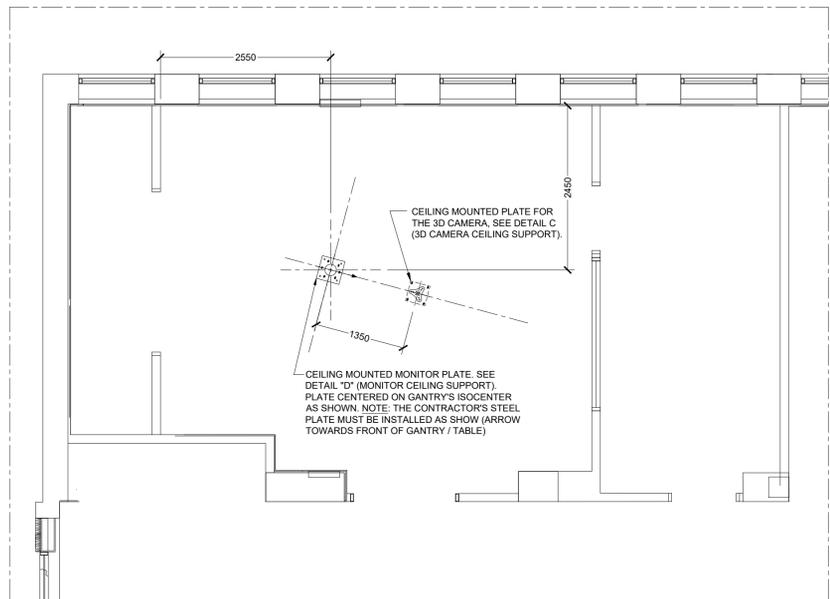
THIS PLANNING PROPOSAL, TOGETHER WITH ANY ENCLOSED DOCUMENTATION AND SPECIFICATIONS, IS BASED ON THE MOST CURRENT TECHNICAL INFORMATION AVAILABLE AT THE TIME OF ISSUE. WE RESERVE THE RIGHT TO MAKE CHANGES AS DICTATED BY TECHNICAL DEVELOPMENTS.

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01 B

CEILING STRUCTURAL LAYOUT

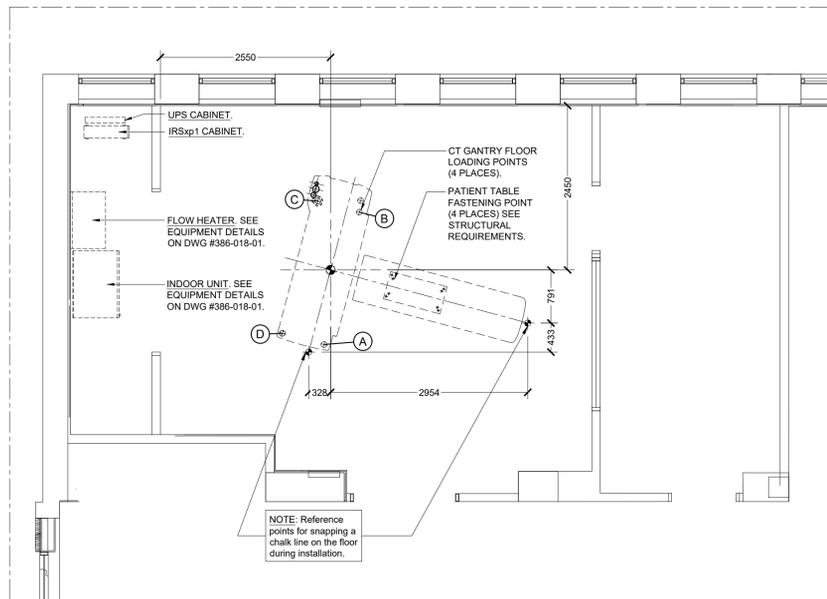
1 : 50



All Siemens electrical and structural systems shown on the STRUCTURAL CEILING LAYOUT have been coordinated with the Siemens equipment locations as shown on the EQUIPMENT LAYOUT PLAN (see DWG 386-018-01). Any changes to the Siemens equipment configuration as shown, due to placement of OEM/non-Siemens lighting, structural, electrical and mechanical systems must be approved, in writing, by the Siemens Project Manager prior to the completion of construction documents.

FLOOR/WALL STRUCTURAL LAYOUT

1 : 50

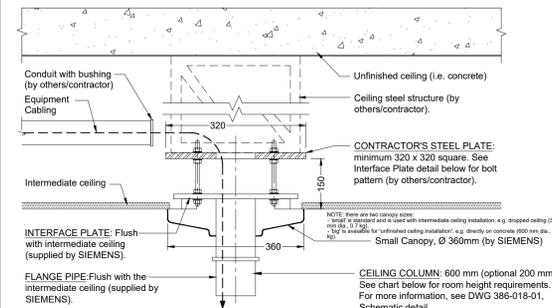


STRUCTURAL NOTES:

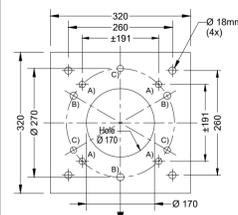
- All slab coring and drilling for final equipment mounting are provided by the Contractor/Customer. These areas shall be scanned using acceptable industry methods.
- When installation does not conform with drawing submitted, the SIEMENS Project Manager must be contacted before any design changes may be made.
- All dimensions shown are from finished surfaces.
- All pre-installed base plates are to be mounted by the Contractor/Customer. Installation must be coordinated with, and under the supervision of, the SIEMENS Project Manager.
- All structural support details shown are sample details based upon typical and standard building practices and are not intended as actual construction details. All construction details and support calculations shall be prepared by a professional Structural Engineer at the Customer's expense. In the event an existing support system is to be used, it will be the Customer's responsibility to verify the integrity of that system.

DETAIL D (n.t.s.)

CAREVISION CT CEILING SUPPORT (ONDAL from 2018)



CONTRACTOR'S STEEL PLATE (n.t.s.)



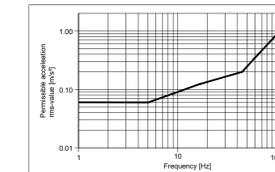
Recommended Room Height:	Column:
2402 - 2802 mm	200 mm (short)
2802 - 3402 mm	600 mm (long)

GENERAL NOTES:

- The load-bearing capacity of the ceiling must be checked by a Structural Engineer prior to installation. Required concrete class: C20/25 or better.
- All install materials required, to be supplied and installed by Contractor unless otherwise specified.
- The supporting structure shown is a proposal only. SIEMENS will not assume responsibility for the structure.

FLOOR AND BUILDING VIBRATIONS:

Permissible Continuous Floor Vibrations



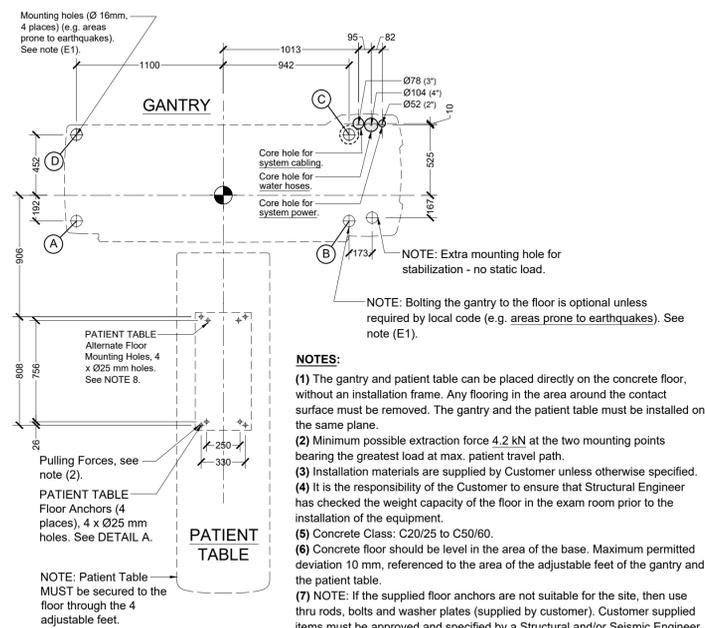
External vibrations or shocks transmitted by the wall or floors of a building may affect the clarity and degrade image quality! Sources that produce vibrations are (e.g. railroad routes, subways, roads, road work and construction sites, hospital power plants, mines, open-cast mines, quarries (explosions), ferry moorings. A CT is not sensitive to common vibrations.

NOTES:

- The threshold is defined as acceleration rms value (root mean square) in m/s² of an FFT spectrum derived with a frequency resolution of 1 Hz and using a Hanning window.
- The threshold is valid for vibrations at the installation location with a CT in position.
- Measurements are usually taken at the site before the installation of the computed tomography system (Gantry and Patient Handling System PHS) must not exceed the thresholds as shown in the diagram "Continuous vibrations". Any transient vibrations have to be less than 0.5 m/s² peak-to-peak in the time domain. The vibrations have to be measured with a sampling rate of 1000 Hz and using an anti-aliasing filter with a limit frequency of 250 Hz.
- It is the customer's responsibility to contract a qualified specialist. The specialist must implement site modifications to meet the specific limits and to design structural solutions in case of deviations.

GANTRY OUTLINE & FLOOR LOADING (n.t.s.)

X.Cite with PHS Vario 2

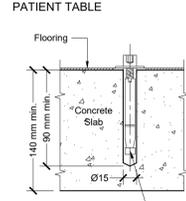


NOTES:

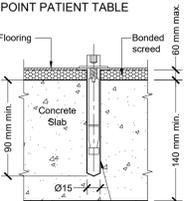
- The gantry and patient table can be placed directly on the concrete floor, without an installation frame. Any flooring in the area around the contact surface must be removed. The gantry and the patient table must be installed on the same plane.
- Minimum possible extraction force 4.2 kN at the two mounting points bearing the greatest load at max. patient travel path.
- Installation materials are supplied by Customer unless otherwise specified.
- It is the responsibility of the Customer to ensure that Structural Engineer has checked the weight capacity of the floor in the exam room prior to the installation of the equipment.
- Concrete Class: C20/25 to C50/60.
- Concrete floor should be level in the area of the base. Maximum permitted deviation 10 mm, referenced to the area of the adjustable feet of the gantry and the patient table.
- NOTE: If the supplied floor anchors are not suitable for the site, then use thru rods, bolts and washer plates (supplied by customer). Customer supplied items must be approved and specified by a Structural and/or Seismic Engineer.
- NOTE: It is not permitted to re-use existing drill holes and the existing anchors of former PHS installations; in this case, the alternate floor mounting holes must be used.

DETAIL A (n.t.s.)

TYPICAL FASTENING POINT PATIENT TABLE



ALTERNATE FASTENING POINT PATIENT TABLE



GANTRY FLOOR LOADING

SEE GANTRY OUTLINE & FLOOR LOADING - SOMATOM X.Cite

Total weight of gantry:	Total static load, resulting in the centre of gravity of the 2080 kg			
Adjustable Point	(A)	(B)	(C)	(D)
Load (Static) [kN] (±10%)	4.6	6.5	6.2	4.6
Amplitude (Dynamic) [kN] (during gantry rotation)	± 0.50	± 0.50	± 0.50	± 0.50

Floor contact area gantry foot = 50.27 cm². Outer diameter gantry foot = Ø90 mm. During gantry installation and leveling, the maximum possible load on one gantry foot is 16 kN (with the gantry standing on two diagonal feet).

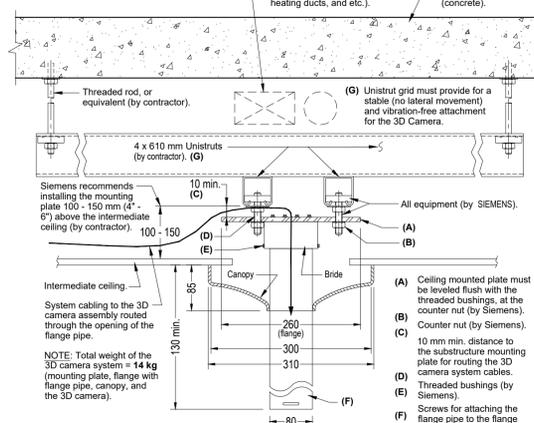
- The values indicated for floor load are valid only if the gantry is level (even level adjustable feet).
- The static loading is due to the gantry's own weight. The dynamic loading occurs during gantry rotation.
- Anchoring the gantry through the feet is not possible.
- The gantry with patient table and on-site mounting frames must be installed so as to be free of vibration.
- The gantry and patient table cannot be installed on existing mounting frames of older CT systems.

EARTHQUAKE ZONE REQUIREMENTS:

(E1) CT GANTRY: Bolt the gantry to the floor using anchors at the specified locations. Installation materials to be supplied by others.

DETAIL C (n.t.s.)

3D CAMERA CEILING SUPPORT



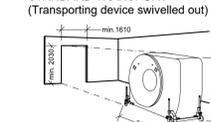
GENERAL NOTES:

- The 3D camera support requires a ceiling concrete class of at least C20/25 or higher.
- The ceiling mounting plate and on-site substructure must be installed level. Compensation is possible by adjusting the threaded bushings.
- At each ceiling mounting point: 1 kN minimum.
- Mounting point force values in countries prone to earthquakes (see values below):
  - 6.1 kN min. with a flange pipe length of: > 1300 mm.
  - 4.2 kN min. with a flange pipe length of: 800 - 1300 mm.
  - 1.9 kN min. with a flange pipe length of: < 800 mm.
- Installation of the safety cable must have an extraction force: > 3.0 kN.
- The 3D camera system powered by the PDC of the CT system: - Line Voltage = 230 VAC.

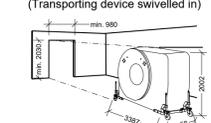
Alternative mounting holes for ceiling mount (not to be used in countries that are prone to earthquakes).

TRANSPORT REQUIREMENTS (n.t.s.)

STANDARD TRANSPORT (Transporting device swivelled out)



NARROW PASSAGE TRANSPORT (Transporting device swivelled in)



NOTE: The customer is responsible to have the transport route for Siemens equipment verified by the Structural Engineer (from point of delivery to final location).

ENVIRONMENTAL CONDITIONS (transport & storage)

Ambient Temperature	-20°C ... +50°C
Temperature Gradient	6 K/h
Relative Humidity	5% ... 95% without condensation
Barometric Pressure	700 to 1060 hPa
max. Storage Time	2 months

TRANSPORT CONDITIONS

When transporting the gantry, individual points may receive higher loads than others (i.e. 3 points may carry the load when the floor is not level). The transport weight = 2310kg ±30kg. The maximum possible floor load (two-point load) per roller during gantry transport is 16 kN. NOTE: If required, cover the transport routes with metal sheets for load distribution.

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386-018-03	MECHANICAL REQUIREMENTS
386-018-04	ELECTRICAL REQUIREMENTS (PROJECT)
386-018-05	ELECTRICAL REQUIREMENTS (GENERAL)

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METRIC to IMPERIAL CONVERSIONS:

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Scale 1:50

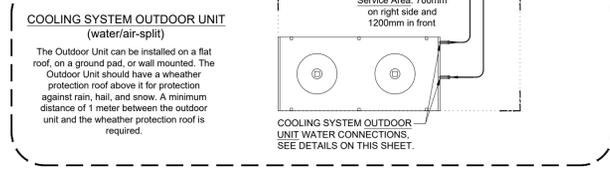
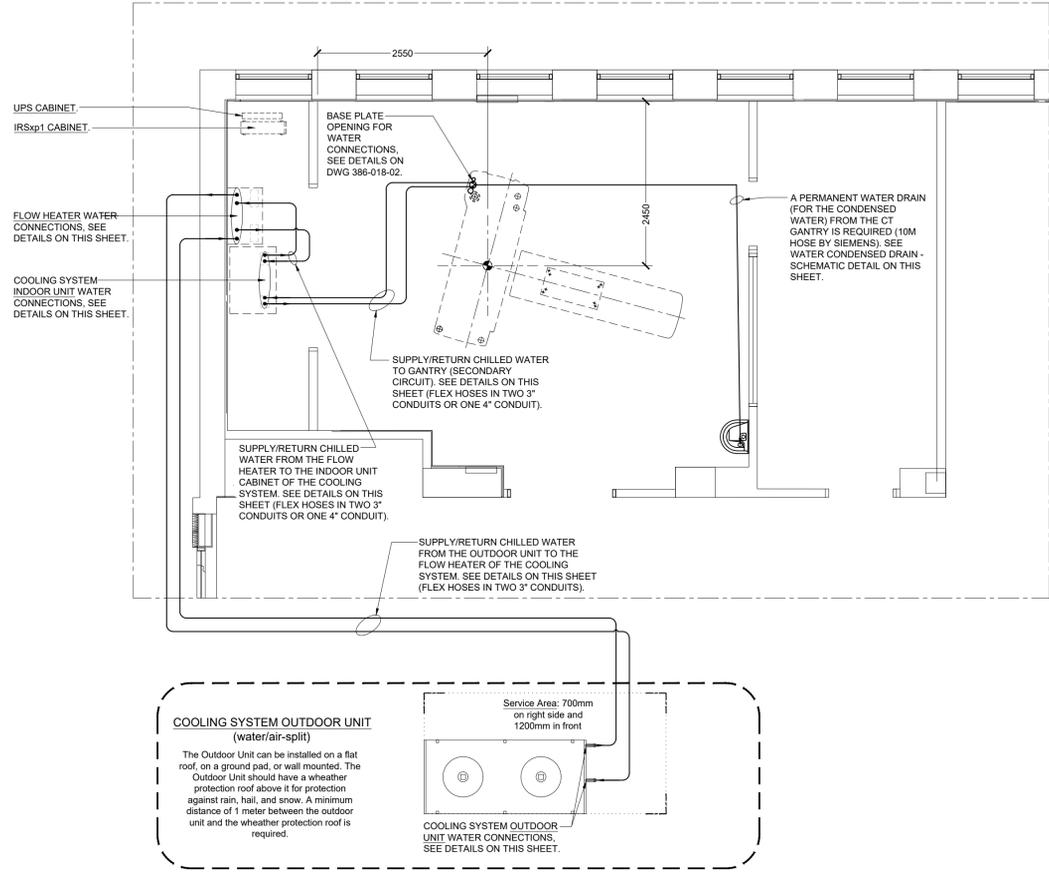
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No	REVISIONS	CHKD
SUBMITTED FOR:		
<input type="checkbox"/>	Approval	
<input type="checkbox"/>	Your use	
<input type="checkbox"/>	Your records	
<input checked="" type="checkbox"/>	Installation	
APPROVED: _____		
S		
Siemens Canada Limited Healthcare Planning Department		
NOTES: ALL DIMENSIONS SHOWN MUST BE VERIFIED ON THE SITE. THIS DRAWING IS NOT TO BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION.		
CUSTOMER:		
THE SCARBOROUGH HOSPITAL (BIRCHMOUNT)		
SCARBOROUGH, ONTARIO		
STRUCTURAL REQUIREMENTS		
EQUIPMENT:		
SOMATOM X.CITE		
DWG#:		
C2-060-891.01.10.02		
DRAWN BY:	SCALE:	
KISHAN B.	AS NOTED	
CHKD BY:	DATE:	
---	06 NOV 2024	
HOSPITAL #	PROJECT #	
386	018	
DRAWING/SKETCH #	REVISION #	
02		

**MECHANICAL LAYOUT**

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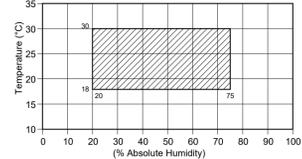
**GENERAL ENVIRONMENT REQUIREMENTS (For the entire CT system - standard components)**

**TEMPERATURE / RELATIVE HUMIDITY**

COMPONENTS	AIR TEMP. (°C)	RELATIVE HUMIDITY (%)	TEMP GRADIENT MAX. (K/h)	AIR PRESS. (hPa)
EXAM ROOM: Gantry and Patient Table	+1 to +18	30 - 75	6	800 - 1060
INDOOR UNIT: with Water/Air-Split system only	+5 to +40	15 - 85 without condensation	6	700 - 1060
OUTDOOR UNIT: with Water/Air-Split system only, with Flow Heater option.	-40 to +50	0 - 100	n/a	
FLOW HEATER: with Water/Air-Split system only.	+5 to +40	10 - 90	10	

\* Maximum 30 g/m<sup>3</sup> (No condensation at any time).

**CLIMATOGRAM - ENTIRE SYSTEM (standard components)**



\*1 The diagram indicates the climatic prerequisites for operating the ENTIRE CT SYSTEM (standard components).

**ON-SITE COOLING REQUIREMENTS**

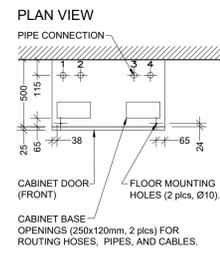
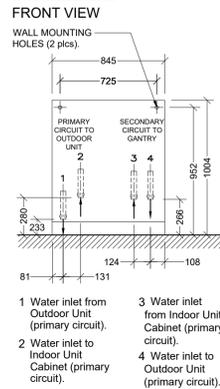
Workload CT-system (%)	100	75	50	25	0
Heat dissipation to cooling water (kW)	12	9	7	5	2
Heat dissipation (gantry and patient table) to ambient air (kW)	1	1	1	1	1
Temperature gradient (cooling water)	max. ± 1 K/min				

Structural room conditions (e.g. windows, large glass areas, building and room thermal insulation, room size and volume...) influences the climatic room conditions for the air-cooled gantry and other air-cooled CT-system components in general. These climatic influences must be taken into account by the Project Manager when dimensioning a new or checking an existing on-site room air condition.

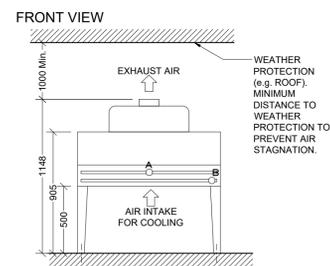
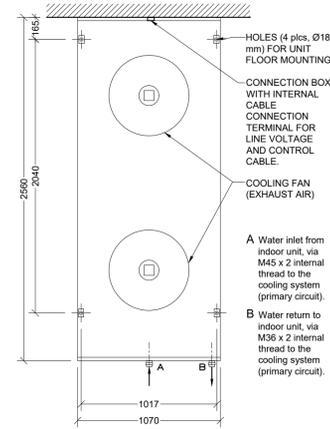
**FLOORING**

Anti-static flooring is recommended for the examination room (ESD flooring is also suitable).

**FLOW HEATER WATER CONNECTIONS (n.t.s.)**

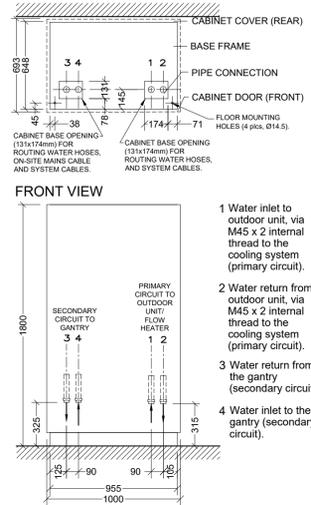


**OUTDOOR UNIT WATER CONNECTIONS (n.t.s.) PLAN VIEW**

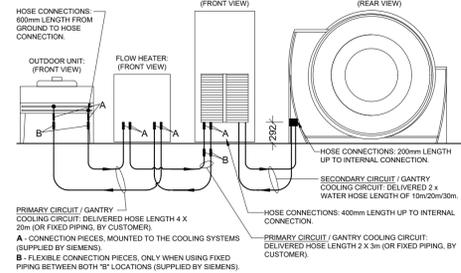


**NOTES:**  
- Unit must always be anchored to the floor. Drill holes are included in the floor stands; anchors to be supplied by customer/contractor.  
- Wall mounting the unit is possible. The customer/contractor is responsible to provide a solid and vibration-free mounting, designed by a Structural Engineer. Total weight to be supported = 180 kg.  
- Unit air flow: 5500 m<sup>3</sup>/h. Maintain minimum clearances for service and air circulation: sides = 700 mm; front = 1200 mm.

**INDOOR UNIT WATER CONNECTIONS (n.t.s.) PLAN VIEW**

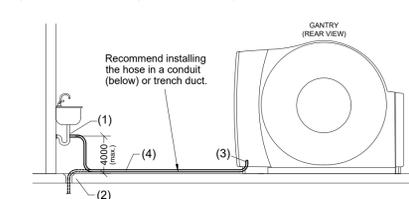


**SCHEMATIC DIAGRAM FOR ON-SITE COOLING CIRCUIT (n.t.s.) (Water/Air-Split)**



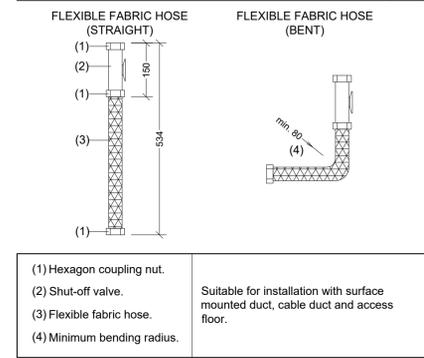
**NOTES:**  
- HEIGHT DIFFERENCE:  
- Between the Indoor unit and the Gantry: maximum ±10 m.  
- Between the Outdoor Unit and the Indoor Unit: maximum ±20 m.  
- Between the Outdoor Unit and the Flow Heater: maximum ±20 m.  
- WATER HOSES:  
- INDOOR UNIT/SECONDARY COOLING CIRCUIT: Supplied by Siemens; maximum length 30 m, outer diameter = 34 mm (without thermal insulation); acceptable bending radius = 150 mm.  
- OUTDOOR UNIT TO FLOW HEATER/PRIMARY COOLING CIRCUIT: Supplied by Siemens; maximum length 40 m, outer diameter = 44 mm; acceptable bending radius = 320 mm. NOTE: thermal insulation must be provided by the customer/contractor.  
- FLOW HEATER TO INDOOR UNIT/PRIMARY COOLING CIRCUIT: Supplied by Siemens; maximum length 3 m, outer diameter = 44 mm; acceptable bending radius = 320 mm. NOTE: thermal insulation must be provided by the customer/contractor. NOTE: Due to the minimum hose bending radius, it is recommended that the unit be installed 300 mm min. above finished floor.  
- HOSE/PIPE CONNECTIONS:  
- GANTRY AND INDOOR UNIT: connected hoses or pipes with inside threads M36 x 2, external Ø34mm (without thermal insulation), compression ring screw connections.  
- INDOOR UNIT AND OUTDOOR UNIT: connected hoses or pipes with inside threads M45 x 2, external Ø44 mm (without thermal insulation), compression ring screw connections.  
- FLOW HEATER: connected hoses or pipes to the cooling systems with inside threads 2 x adapters for M45 x 2 metric to M36 x 2.  
- HOSE EXTENSION:  
- INDOOR UNIT TO GANTRY: Up to maximum 50 m with internal Ø1" hose, or up to 70 m with internal Ø1-1/4" hose.  
- OUTDOOR UNIT TO INDOOR UNIT: Up to maximum 60 m with internal Ø1-1/4" hose, or up to 100 m with internal Ø1-1/2" hose.  
- FIXED PIPING KIT (OPTIONAL, must be requested): Includes the installation material to connect the delivered flexible cooling hoses with on-site fixed piping. - 4 x connection pieces (DNOL DN25 VAL) - 4 x adapters M45x2 metric to G1 inside thread.  
- Acceptable piping material: PVC, copper and high-grade steel (recommended and preferred).  
- For vibration dampening, install a piece of flexible water hose (approx. 500 mm) between the fixed piping and all water connections of the water/air-split cooling system/gantry.

**CONDENSED WATER DRAIN - SCHEMATIC (n.t.s.) (between the Gantry and site drain)**

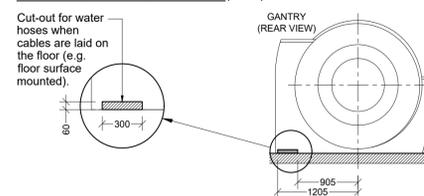


- (1) Sink drain.
- (2) Floor drain.
- (3) Outlet for the condensed water hose at the gantry.
- (4) Condensed water hose (included in delivery)
  - Length: 10 m (can be shortened on site)
  - Outer diameter: 10 mm
  - Acceptable bending radius: 30 mm
  - Max. flow rate: 2 L/hr (at 75% relative hum.)

**WATER CONNECTION PIECES WITH SHUT-OFF VALVE (n.t.s.)**



**GANTRY CABLE/HOSE INLETS (n.t.s.)**



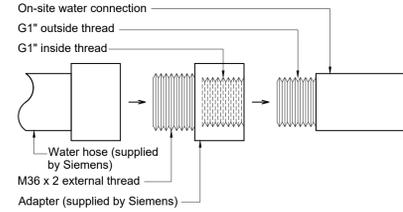
**REQUIREMENTS FOR THE PRIMARY COOLING CIRCUIT (between the Outdoor Unit, Flow Heater and Indoor Unit)**

Designation:	Description:
Output to exhaust air	Outdoor Unit: 35 kW maximum (air flow = 9000 m <sup>3</sup> /h) Flow Heater Unit: 0.50 kW maximum.
Air Intake Temperature Range	Outdoor Unit: -25°C to +50°C, OR -40°C to +50°C with the Flow Heater Option. When installing in an air-conditioned room, room air must be added at lower or higher air intake temperatures (the mixing of air had to be provided on-site).
Water quality	Potable water
Filling pressure (static)	3 bar after filling procedure.
Operating pressure	Nominal: 2 - 5 bar at the pump output.
Anti-freeze	May be added to the primary circuit ONLY. The antifreeze that is part of the delivery volume of the flow heater has to always be ADDED to the cooling circuit of the cooling system water/air-split.
Switching on/off	Outdoor Unit is supplied with power by an on-site voltage cable via the Indoor Unit. A power relay is located in the Indoor Unit that switches the power to the Outdoor Unit when the cooling system is switched on by the CT system itself.  NOTE: Operation without water will destroy the pump in the cooling system!  Flow Heater: switching off is not permitted. Permanent operation is required. The system may be switched OFF for emergency power OFF and service. After a power failure or inadvertent switch OFF, the system requires max. 30 minutes warm-up time.

**REQUIREMENTS FOR THE SECONDARY COOLING CIRCUIT (between the Gantry and Indoor Unit)**

Designation:	Description:
Water quality	Potable water
Filling pressure (static)	2 bar after filling procedure.
Operating pressure	Nominal: 4 - 5 bar at the pump output.
General Requirements	Room planning requirements: - water faucet with 3/8" screw connection, within 10m of the CT. - water drain (for filling procedure), e.g. sink near the gantry.
Switching off	The cooling system is switched off automatically when switching off the entire CT system.

**ON-SITE WATER HOSE CONNECTION (n.t.s.) (for Fixed-Piping Option)**



**SITE READINESS GUIDELINES**

THE FOLLOWING GENERAL CONDITIONS ARE NECESSARY TO HAVE THE STATUS OF "READY SITE":

- 1) Proper power available at Siemens equipment power cabinet location and all power outlets functioning.
- 2) Air conditioning/humidification systems complete, tested, and functioning properly according to Siemens specifications.
- 3) Proper lighting installed and functioning.
- 4) Plumbing complete except for any final connections to Siemens equipment.
- 5) All cable trays/ducts/conduits correctly sized, located, and installed according to the Siemens drawings.
- 6) All reinforcement plates/unistrut installed as required.
- 7) Room for equipment installation and immediate vicinity is dust-free and is to remain so for the duration of the installation.
- 8) A secure area (approximately 10' x 10') is available at equipment delivery for parts and installation tools.
- 9) Customer Supplied cameras and processors installed.
- 10) Customer approval for Siemens remote services (SRS) connection, and customer's I.T. contact information and IP addresses established.
- 11) Walls to be primed and painted, floors to be tied except in areas of the equipment base plates.

If these conditions are not met, the Siemens project manager and the designated Siemens installation supervisor shall reschedule the installation start date. NOTE: Additional cost may be incurred by the customer/contractor and delivery dates may need to be rescheduled, when the Siemens site readiness guidelines are not met.

**THIS DRAWING MUST BE READ IN CONJUNCTION WITH THE FOLLOWING SIEMENS DOCUMENTATION:**

DWG#	DESCRIPTION
386-018-01	GENERAL ROOM LAYOUT
386-018-02	STRUCTURAL REQUIREMENTS
386-018-03	MECHANICAL REQUIREMENTS
386-018-04	ELECTRICAL REQUIREMENTS (PROJECT)
386-018-05	ELECTRICAL REQUIREMENTS (GENERAL)

IN ORDER TO AVOID DELAY IN INSTALLATION, SIEMENS CANADA LTD. PLANNING DEPT. SHOULD BE CONSULTED PRIOR TO INSTALLATION. FINAL ARCHITECTURAL DWGS SHOULD BE MADE AVAILABLE TO SIEMENS AT THIS TIME TO VERIFY THAT ALL REQUIREMENTS HAVE BEEN ADHERED TO.

THIS DRAWING DOES NOT PROVIDE RADIATION PROTECTION SPECIFICATIONS. IT IS SUGGESTED THAT A LICENSED RADIATION PHYSICIST BE CONSULTED.

SOME EQUIPMENT SHOWN ON THIS DRAWING IS OPTIONAL. PLEASE REFER TO QUOTATIONS FOR ACTUAL EQUIPMENT TO BE DELIVERED. ALL ITEMS NOT SPECIFIED IN THE EQUIPMENT LEGEND (e.g. COUNTERS) ARE TO BE SUPPLIED AND INSTALLED BY THE CUSTOMER/CONTRACTOR, ON APPROVAL BY THE CUSTOMER.

**METRIC TO IMPERIAL CONVERSIONS:**  
1000mm = 39.37" 1'-0" = 304.8mm 1kg = 2.205lbs.  
Scale 1:50

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ALL DIMENSIONS SHOWN ARE FROM FINISHED SURFACES.

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**03**

No	REVISIONS	CHKD
SUBMITTED FOR:		
<input type="checkbox"/>	Approval	
<input type="checkbox"/>	Your use	
<input type="checkbox"/>	Your records	
<input checked="" type="checkbox"/>	Installation	
APPROVED: _____		
<b>Siemens Canada Limited</b> Healthcare Planning Department		
NOTES: ALL DIMENSIONS SHOWN MUST BE VERIFIED ON THE SITE. THIS DRAWING IS NOT TO BE REPRODUCED WITHOUT WRITTEN AUTHORIZATION.		
CUSTOMER:		
<b>THE SCARBOROUGH HOSPITAL (BIRCHMOUNT)</b> SCARBOROUGH, ONTARIO MECHANICAL REQUIREMENTS		
EQUIPMENT:		
SOMATOM X.CITE		
DWG#: C2.060-891.01.10.02		
DRAWN BY: KISHAN B.	SCALE: AS NOTED	
CHKD BY: ---	DATE: 06 NOV 2024	
HOSPITAL # 386	PROJECT # 018	
DRAWINGS/SKETCH # 03	REVISION #	

RACEWAY LAYOUT

1 : 50

CONNECTION POINT LAYOUT

1 : 50

RACEWAY SCHEDULE

RUN	DESIGNATION	MOUNTING				SIZE
		FROM POINT (RUN/R)	TO POINT (RUN/R)	CONDUIT	TRAY	
1	OD X1	●	●	●	●	SEE ELECTRICAL NOTE #15 & #16
1a	OD WC3	●	●	●	●	SEE ELECTRICAL NOTE #15
1b	OD FH	●	●	●	●	SEE ELECTRICAL NOTE #15
2a	CR EPO	●	●	●	●	-
2b	X1 EPO	●	●	●	●	-
3	X1 RI	●	●	●	●	Ø1"
4	X1 RI	●	●	●	●	2 @ Ø2"
5	X1 X1	●	●	●	●	Ø1"
6	X1 IRS	●	●	●	●	Ø3"
7	X1 UPS	●	●	●	●	Ø3"
8	X1 WC	●	●	●	●	Ø1½"
9	WC1 FH2	●	●	●	●	Ø1½"
10	WC2 WC2	●	●	●	●	Ø1½"
11	X1 CV	●	●	●	●	Ø2"
12	X1 X1	●	●	●	●	Ø 2"

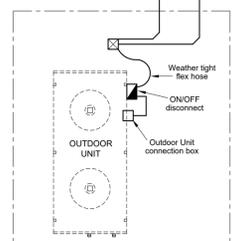
CONNECTION POINT SCHEDULE

POINT	DESIGNATION	MOUNTING				SIZE
		ON/OFF DISCONNECT	EMERGENCY SHUNT TRIP	PULL BOX	ACCESS FLOOR OPENING	
OD	●	●	●	●	W	5"
CR	●	●	●	●	W	5"
EPO	●	●	●	●	W	5"
GR	●	●	●	●	F	5" x 5"
OPC, IRS, UPS	●	●	●	●	W	1'
X1	●	●	●	●	W	6"
WAP	●	●	●	●	W	6"
RI	●	●	●	●	W	-
FH	●	●	●	●	F	-
FH2	●	●	●	●	F	1"
WC,WC1	●	●	●	●	F	1½"
WC3	●	●	●	●	F	-
WC2	●	●	●	●	W	-
3D2, CV	●	●	●	●	W	2"

CONNECTION POINT NOTES

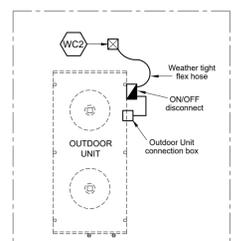
- \*1 Emergency Shunt Trip (EST) is at the customer's discretion, unless required by local electrical code. All EST devices to be equipped with a hinged plastic clear cover to protect against accidental activations (by others). The UPS must also be switched off via the EM switch in case of emergency.
- \*2 Siemens provides low voltage control switch.
- \*3 The ON/OFF disconnect should be located in the control room or near the generator cabinet (supplied and installed by contractor, while providing the User/Service representative, a means to disable power to the system that is easily accessible within the suite).
- \*4 For additional information about Connection Point "3D2", see DETAIL C on DWG 386-018-02.
- \*5 RI - "RADIATION ON" indicator sign, located above the door - to be supplied and installed by contractor. For additional information, see Detail "ELECTRICAL CONNECTIONS/TERMINALS IN PDC ON DWG 386-018-05.
- \*6 It is suggested that electronic thermostats are used to provide better accuracy and operational safety.
- \*7 The specified conduits are only for the cable connections between components. For additional conduit requirements, for the cooling water hoses to the gantry, refer to the Mechanical Installation DWG 386-018-03.
- \*8 For additional information about Connection Point CV, see DETAIL C on DWG 386-018-02.

OUTDOOR UNIT



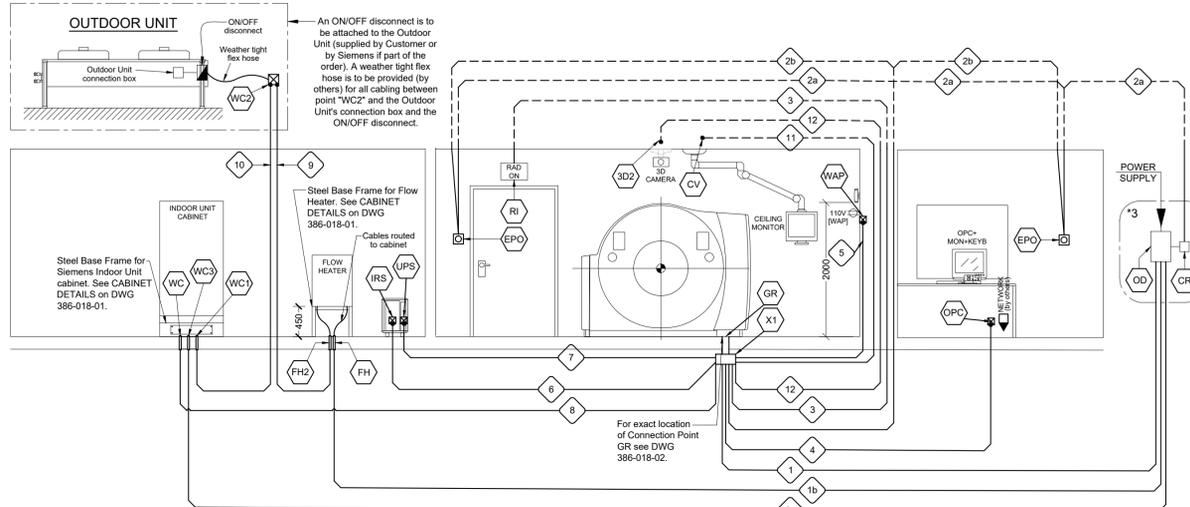
An ON/OFF disconnect is to be attached to the Outdoor Unit (supplied by Customer or by Siemens if part of the order). A weather tight flex hose is to be provided (by others) for all cabling between point "WC2" and the Outdoor Unit's connection box and the ON/OFF disconnect.

OUTDOOR UNIT



An ON/OFF disconnect is to be attached to the Outdoor Unit (supplied by Customer or by Siemens if part of the order). A weather tight flex hose is to be provided (by others) for all cabling between point "WC2" and the Outdoor Unit's connection box and the ON/OFF disconnect.

SCHEMATIC (n.t.s.)



ELECTRICAL NOTES

- 1 - All wires and multi-conductor cables installed by contractor shall be standard, flexible and flame seal type, and are to be left with minimum 6"-0" tail at each termination unless otherwise specified.
- 2 - The electrical contractors shall provide all necessary pull boxes, conduits, raceways, fittings, bushings, cables and other items as per the electrical plan unless otherwise specified.
- 3 - All cable outlets, pull boxes and raceways described in this drawing as being set flush with finished floor are to be of the waterproof type with gasketed metal covers.
- 4 - All conduits which are left empty for the cables supplied by SIEMENS shall be provided with Greenlee Conduit Measuring tape (Cat.# N435 or equivalent).
- 5 - All conduit bends are to have large sweeping radius. Only standard conduit elbows are to be used. Only rigid conduits can be used for the entire conduit run.
- 6 - All cable ducts shown are to be supplied with a removable cover.
- 7 - Each conduit termination indicated on the drawing shall be finished with plastic bushing.
- 8 - Conduits and raceways shown are indicated schematically and are not to be used for actual runs. Contractor is to determine the SHORTEST RUN available prior to installation. Refer to the CABLE SPECIFICATION detail on this sheet.
- 9 - The electrical work in this installation shall be performed in strict compliance with Canadian Electrical Code, or local Codes, whichever is more stringent.
- 10 - When installation does not conform with drawing submitted, the Siemens Project Manager must be contacted before any design changes may be made.
- 11 - All slab coring and drilling for raceway installations and final equipment mountings are provided by the Contractor/Customer. These areas shall be scanned using acceptable industry methods.
- 12 - All dimensions shown are from finished surfaces.
- 13 - If the Line Impedance specification is not met, the maximum generator output (kW) will not be possible.
- 14 - The conduit/duct layout as shown considers the mandatory separation of power and signal cables. Any changes to, or consolidation of, conduits/ducts must be approved by the Siemens Project Manager.
- 15 - ALL FIVE WIRES/CONDUCTORS OF THE POWER SUPPLY MUST BE OF EQUAL SIZE, regardless of local codes, and supplied BY CONTRACTOR. The safety GROUND MUST BE ISOLATED, to protect the system from interference. All materials and equipment not by SIEMENS MUST BE GROUNDED SEPARATELY. The Siemens equipment ground must be continuous, with no breaks or use of conduit, chassis or earth as the sole grounding path.
- 16 - All power supply requirements are to be designed and/or approved by a Electrical Engineer. SIEMENS recommends the incoming power lines be analyzed for transient surges and impulses, sags and overvoltages.
- 17 - Cable trays shown in the access floor space are to be supplied only if required by local Electric Code.

SYMBOL LEGEND

- CONNECTION POINT
- ⊠ Raceway termination
- ⊞ Access floor opening
- Conduit termination
- Underfloor duct and junction box/pull box
- ▨ Ceiling space above junction box/pull box
- On/Off disconnect
- ◇ RACEWAY
- ▬ Raceway duct in ceiling space below/floor space
- ▬ Raceway duct in ceiling space above
- ▬ Vertical raceway
- ◇ Conduit in ceiling space below/floor space
- ◇ Conduit in ceiling space above
- Vertical conduit
- MISCELLANEOUS
- ◀ Dedicated digital phone jack (for service)
- ◀ Network connection point
- POWER SUPPLY
- 1-Ph 110V ±10%, Duplex oil 12" above finished floor.
- 1-Ph 220V +10% 20A, 3-wire Twistlock (hubbles #L6-20).

GENERAL NOTES

NOTE: The information contained in this drawing is based on the most current technical information available at the time this drawing was issued. We reserve the right to make changes as dictated by technical product developments. Connection points that are not dimensioned may be located at the Customer's discretion. The location of these items as shown on this drawing indicate the preferred SIEMENS location only.

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386-018-01	GENERAL ROOM LAYOUT
386-018-02	STRUCTURAL REQUIREMENTS
386-018-03	MECHANICAL REQUIREMENTS
386-018-04	ELECTRICAL REQUIREMENTS (PROJECT)
386-018-05	ELECTRICAL REQUIREMENTS (GENERAL)

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SUBMITTED FOR:  
 Approval  
 Your use  
 Your records  
 Installation

Siemens Canada Limited  
Healthcare  
Planning Department

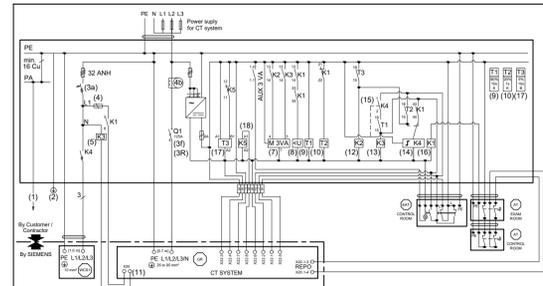
NOTES:  
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CUSTOMER:  
THE SCARBOROUGH HOSPITAL (BIRCHMOUNT)  
SCARBOROUGH, ONTARIO  
ELECTRICAL REQUIREMENTS

EQUIPMENT:  
SOMATOM X.CITE  
FIG#:  
C2.060-891.01.10.02

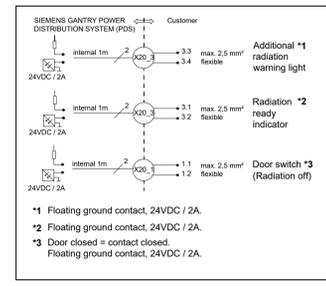
DRAWN BY: KISHAN B. SCALE: AS NOTED  
CHKD BY: --- DATE: 06 NOV 2024  
PROJECT # 386 PROJECT # 018  
DRAWING/SKETCH # 04 REVISION #

POWER DISTRIBUTION DIAGRAM (PROPOSAL / FOR REFERENCE ONLY)



- (1) To external conductive parts. (2) Test jack 4mm pin plug. (3) RCD, type B, Un=380 VAC to 480 VAC, In=35A, residual current=30 mA, according to local and national regulations. (4) Circuit breaker, 100 A, Siemens 3VA1110-4ED46-0AA0. (5) Fuses, according to local and national regulations. (6) Summation current transformer for MCCB-S attached to Siemens circuit breaker 5S8702-2KP. (7) Contactor/power relay, according to the electrical data and the local and national regulations. (8) Auxiliary switch changeover contacts attached to Siemens circuit breaker 3VA9985-GMA12. (9) Side mounted motor attached to circuit breaker, 3 VA 24 V DC 3VA9117-2HB10. (10) Undervoltage release for MCCB attached to Siemens circuit breaker 3VA9905-0BB11. (11) Timing relay, 3RP2505-2AB30. (12) Timing relay, Siemens 3RP2505-2AB30. (13) Connection in PDC (cooling system ON/OFF; connector X20) to floating ground relay switch contact. Load: 230 VAC/2 A or 24 VDC/2 A, on-site cables, only required if using wireless-opti option. (14) Contactor relay, 24 V DC 3RH2131-2BB40. (15) Contactor relay, 24 V DC 3RH2131-2BB40. (16) Remote control switch, Siemens 5TT4417-S. (17) Auxiliary current switch for 5TT4417-S Siemens 5TT4930. (18) Contactor relay, 24 V DC 3RH2131-2BB40. (19) Timing relay, Siemens 3RP2505-2AB30. (20) Output coupler relay coupler, Siemens 3RQ3018-2AM08-0AA0 (CS). (21) Emergency off button with locking mechanism. (22) On-off button with pilot lamp. (23) Gantry.

CONTACTS IN THE GANTRY FOR EXTERNAL CONNECTIONS



- \*1 Floating ground contact, 24VDC / 2A. \*2 Floating ground contact, 24VDC / 2A. \*3 Door closed = contact closed. Floating ground contact, 24VDC / 2A.

POWER SUPPLY SCHEDULE (SOMATOM X.Cite)

MAIN POWER SUPPLY - SOMATOM X.Cite
LINE CONNECTION: 3/N-480V ±10%, 50/60Hz ±10%
MAX. LOOP IMPEDANCE: 145 mΩ (measured from L to PE)
MAX. LINE IMPEDANCE: 280 mΩ
FUSE: 125A auto circuit breaker

SIZE OF CONNECTION TERMINAL FOR PDB:
L1, L2, L3, PE: 25 - 95 mm²
3 to 2/0 AWG

POWER CONSUMPTION (Overall System):

Table with columns: TIME, POWER CONSUMPTION: BASIC SYSTEM. Rows: 4 sec. (138 kVA), 10 sec. (114 kVA), 40 sec. (70 kVA), 100 sec. (37 kVA), 200 sec. (33 kVA).

Recommended length of wire stripping and wire terminal: 35 mm.
NOTE: To ensure trouble-free operation, it is recommended that the main power line run directly from the house transformer to the on-site power distributor. The main power line should be routed directly from the on-site power distributor to the CT. Other consumers, such as x-ray, MR and CT systems, elevator motors, air conditioning or lighting systems, may not be connected to this line.

CONNECTION VALUE = Nominal line voltage x 125A x 1.73
If an on-site system pre-transformer is required for adjusting the line voltage, the transformer must be designed for a minimum of 185 kVA (with water/air-split cooler).
UPS FOR OVERALL SYSTEM: There is no UPS manufacturer recommendation. If a UPS is being used for the overall system, the power calculation is identical to the power calculation of the pre-transformer.

INDOOR UNIT (12 kW) POWER SUPPLY (1a):

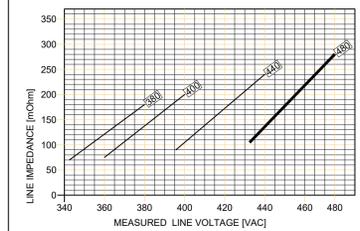
- LINE CONNECTION: 3/PE-480V ±10% (60Hz ±2%)
- ON-SITE FUSE: 25 Amps ("slow blow", class C)
- POWER CONSUMPTION: max. 16.0 kVA
- SIZE OF CONNECTING TERMINAL FOR LINE VOLTAGE CABLE: 10 mm² per phase.

FLOW HEATER POWER SUPPLY (1b):

- LINE CONNECTION: 3/PE-480V ±10% (60Hz ±1%)
- CURRENT CONSUMPTION: 15 Amps.
- ON-SITE FUSE: 20 Amps ("slow blow", class C)
- POWER CONSUMPTION: max. 12.0 kVA

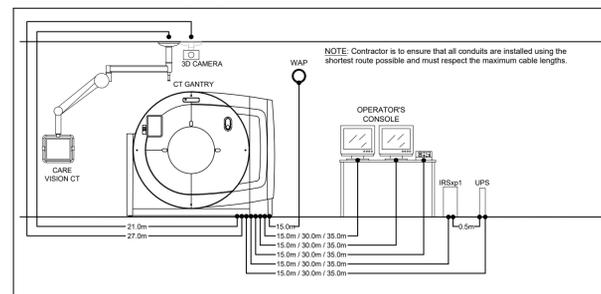
NOTE: The Indoor Unit has a built-in line voltage matching transformer (available for 380V, 400V, 440V, and 480V). Note, Neutral is not required.

LINE IMPEDANCE RELATED TO MEASURED LINE VOLTAGE



USING THE DIAGRAM:
General: The maximum allowed line impedance depends on the actual measured lowest line voltage on site.
Example:
1- The local nominal line voltage is 480 VAC.
- The voltage settings of the main transformers inside the PDB is 480 VAC.
2- The actual measured lowest line voltage value is 473 VAC.
- This means, according to the diagram, the line impedance must not exceed 250 mΩ.

CABLE SPECIFICATIONS (n.t.s.)



NOTE: Contractor is to ensure that all conduits are installed using the shortest route possible and must respect the maximum cable lengths.

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DWG# DESCRIPTION
396-018-01 GENERAL ROOM LAYOUT
396-018-02 STRUCTURAL REQUIREMENTS
396-018-03 MECHANICAL REQUIREMENTS
396-018-04 ELECTRICAL REQUIREMENTS (PROJECT)
396-018-05 ELECTRICAL REQUIREMENTS (GENERAL)

Table with columns: No, REVISIONS, CH/CD. Includes revision history and approval checkboxes.

IN ORDER TO AVOID DELAY IN INSTALLATION, SIEMENS CANADA LTD. PLANNING DEPT. SHOULD BE CONSULTED PRIOR TO INSTALLATION. FINAL ARCHITECTURAL DWGS SHOULD BE MADE AVAILABLE TO SIEMENS AT THIS TIME TO VERIFY THAT ALL REQUIREMENTS HAVE BEEN ADHERED TO.

THIS DRAWING DOES NOT PROVIDE RADIATION PROTECTION SPECIFICATIONS. IT IS SUGGESTED THAT A LICENSED RADIATION PHYSICIST BE CONSULTED.

SOME EQUIPMENT SHOWN ON THIS DRAWING IS OPTIONAL. PLEASE REFER TO QUOTATIONS FOR ACTUAL EQUIPMENT TO BE DELIVERED ALL ITEMS NOT SPECIFIED IN THE EQUIPMENT LEGEND (eg. COUNTERS) ARE TO BE SUPPLIED AND INSTALLED BY THE CUSTOMER/CONTRACTOR, ON APPROVAL BY THE CUSTOMER.

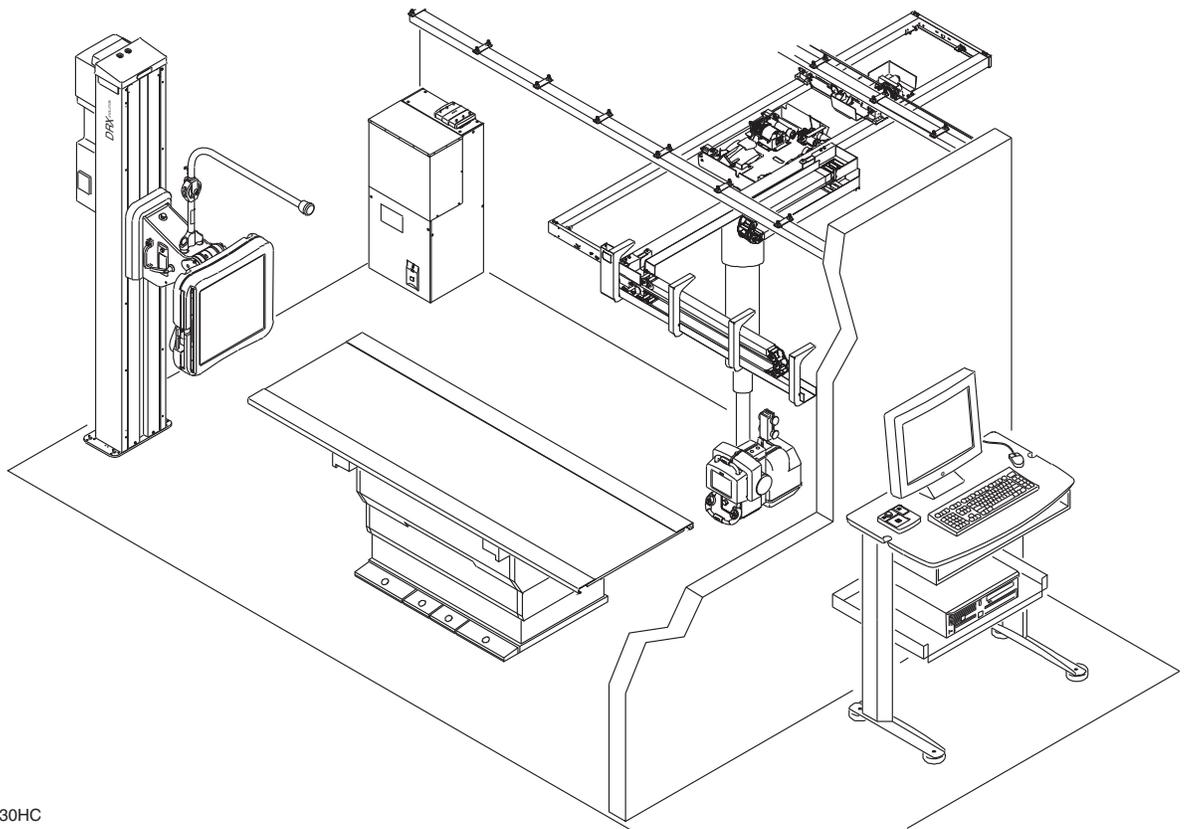
METRIC TO IMPERIAL CONVERSIONS:
1000mm = 39.37" 1'-0" = 304.8mm 1kg = 2.205lbs.
Scale 1:50

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS, UNLESS OTHERWISE SPECIFIED. ALL DIMENSIONS SHOWN ARE FROM FINISHED SURFACES.

THIS PLANNING PROPOSAL, TOGETHER WITH ANY ENCLOSED DOCUMENTATION AND SPECIFICATIONS, IS BASED ON THE MOST CURRENT TECHNICAL INFORMATION AVAILABLE AT THE TIME OF ISSUE. WE RESERVE THE RIGHT TO MAKE CHANGES AS DICTATED BY TECHNICAL DEVELOPMENTS.

DRAWING/SKETCH # 05 REVISION #

# Specifications for the CARESTREAM DRX-Evolution/DRX-Evolution Plus



H230\_0030HC

**PLEASE NOTE** The information contained herein is based on the experience and knowledge relating to the subject matter gained by Carestream Health, Inc. prior to publication.

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This equipment includes parts and assemblies sensitive to damage from electrostatic discharge. Use caution to prevent damage during all service procedures.

## Table of Contents

Description	Page
<a href="#">Safety Information</a> .....	4
<a href="#">Overview</a> .....	4
<a href="#">Indication for Use</a> .....	4
<a href="#">Safety Agency Marks</a> .....	4
<a href="#">Conforming Standards for the CARESTREAM DRX-Evolution—Safety</a> .....	4
<a href="#">System Components</a> .....	4
<a href="#">Field Installation Standards</a> .....	4
<a href="#">Conforming Standards for the CARESTREAM DRX-Evolution—EMC</a> .....	4
<a href="#">Wireless Requirements</a> .....	4
<a href="#">Product Description</a> .....	5
<a href="#">Equipment Specifications</a> .....	6
<a href="#">System Specifications</a> .....	6
<a href="#">Dimensions and Weights for a Standard DRX-Evolution</a> .....	6
<a href="#">PDU, Including the Generator</a> .....	6
<a href="#">Generator and PDU</a> .....	11
<a href="#">Vertical Operating Range of the OTC</a> .....	12
<a href="#">Operating Range of the Table System</a> .....	13
<a href="#">Table Top Float</a> .....	14
<a href="#">Mounting Anchors for the Table (VX3733-TAB)</a> .....	15
<a href="#">Mounting Anchors for the Table (VX3733-TABC)</a> .....	16
<a href="#">Full-Featured Wall Stand</a> .....	17
<a href="#">CARESTREAM Basic and Premium Wall Stand</a> .....	18
<a href="#">Rail Profile</a> .....	19
<a href="#">Stationary Wall Stand Ceiling Mount Interface Dimensions</a> .....	20
<a href="#">Mounting Anchors for the Full-Featured Wall Stand</a> .....	21
<a href="#">Mounting Anchors for the CARESTREAM Wall Stand</a> .....	22
<a href="#">CARESTREAM Basic and Premium Wall Stand with X-Rail</a> .....	23
<a href="#">Full-Featured Wall Stand Rail with X-Rail</a> .....	23
<a href="#">Tomosynthesis and Linear Tomography—OTC Rail Coverage for an Exam</a> .....	24
<a href="#">DRX-1 and DRX Plus System Product Information</a> .....	25
<a href="#">Detectors</a> .....	25
<a href="#">DRX-1 System Battery</a> .....	25
<a href="#">DRX-1 System Battery Charger</a> .....	25
<a href="#">VARIAN 43 x 43 cm Detector</a> .....	26
<a href="#">Other Equipment</a> .....	27
<a href="#">Site Specifications</a> .....	30
.....	30
<a href="#">Preparing a Staging Area</a> .....	30
<a href="#">Transit and Storage</a> .....	30

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<a href="#">Operating Requirements</a> .....	31
<a href="#">Ceiling Height</a> .....	31
<a href="#">CARESTREAM Wall Stand with the X-rail Minimum Ceiling Height</a> .....	32
<a href="#">Ceiling Support</a> .....	32
<a href="#">Floor Structure</a> .....	33
<a href="#">Operator Equipment Viewing Requirement</a> .....	33
<a href="#">Service Access Requirements</a> .....	33
<a href="#">Electrical Requirements</a> .....	34
<a href="#">Main Power Configurations</a> .....	34
<a href="#">Voltage Configurations</a> .....	34
<a href="#">Room Layouts</a> .....	36
<a href="#">Equipment Layout Definition 1–4</a> .....	36
<a href="#">Example 1</a> .....	37
<a href="#">Example 2</a> .....	40
<a href="#">Example 3</a> .....	43
<a href="#">Example 4</a> .....	45
<a href="#">Transbay Equipment Layout</a> .....	47
<a href="#">Layout Dimensions for the Longitudinal Rails</a> .....	48
<a href="#">Cabling for the Basic OTC</a> .....	49
<a href="#">Take-up Rail to the Right</a> .....	49
<a href="#">Take-up Rail to the Left</a> .....	50
<a href="#">Network Configurations</a> .....	51
<a href="#">Network Configuration</a> .....	51
<a href="#">Communication Requirements</a> .....	53
<a href="#">Recommended Network Requirements</a> .....	53
<a href="#">Telephone Line Requirements</a> .....	53
<a href="#">Remote Access Requirements</a> .....	53
<a href="#">DRX-1 System Wireless Network Specifications</a> .....	54
<a href="#">DRX-Evolution Installation Labor Guide</a> .....	56
<a href="#">Seismic Approvals</a> .....	57
<a href="#">Publication History</a> .....	58

## Section 1: Safety Information

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### Overview

Personnel operating and performing maintenance on the equipment should receive training for the CARESTREAM DRX-Evolution and understand all of the phases of operation and maintenance. To provide safety, all users should read this section carefully before using the system. Users should review [Conforming Standards for the CARESTREAM DRX-Evolution—Safety](#).

### Indication for Use

The DRX-Evolution emits radiation when digital radiographic images are created and when the detector array is not in use. Read all safety labels on the equipment.

### Safety Agency Marks

The DRX-Evolution includes the safety agency marks for the USA, Canada, and international sites. The DRX-Evolution also includes a CB certificate and CB report from a CB scheme safety agency. The CB report includes all the national deviations.

### Conforming Standards for the CARESTREAM DRX-Evolution—Safety

For the conforming safety standards for the CARESTREAM DRX-Evolution, see the *CARESTREAM DRX-Evolution/ Evolution Plus Safety and Regulatory Information*.

### System Components

For the agency requirements for the system components for the CARESTREAM DRX-Evolution, see the *CARESTREAM DRX-Evolution/Evolution Plus Safety and Regulatory Information*.

### Field Installation Standards

The field installation must conform to the following standards:

- Germany: VDE0751-1
- Austria: E8751-1:2000
- United Kingdom: MEIGaN

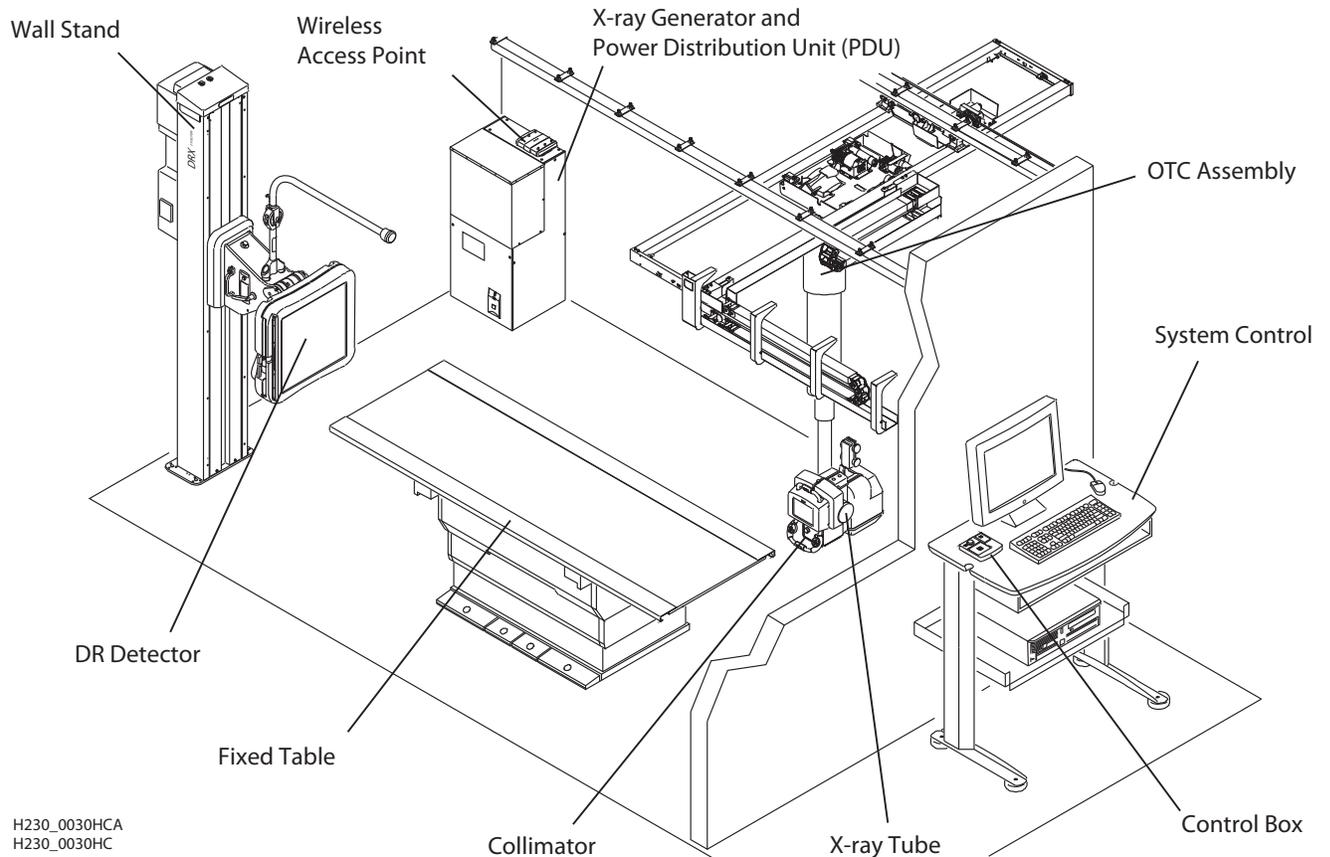
### Conforming Standards for the CARESTREAM DRX-Evolution—EMC

For the conforming EMC standards for the CARESTREAM DRX-Evolution, see the *CARESTREAM DRX-Evolution/ Evolution Plus Safety and Regulatory Information*.

### Wireless Requirements

For the requirements for the radio equipment and the associated components for the CARESTREAM DRX-Evolution, see the *CARESTREAM DRX-1 Safety and Regulatory Information*.

## Section 2: Product Description



The DRX-Evolution is a digital radiographic system that consists of:

- X-ray generator and Power Distribution Unit (PDU)
- Single X-ray tube
- Overhead Tube Crane (OTC)
- Fixed table with digital image receptor
- Wall stand with digital image receptor
- System control, which includes computer and control box
- Wireless access point

This system is designed to be an alternative to the current dedicated film screen or CR imaging systems and provides the ability to directly capture and convert X-ray energy into digital signals.

## Section 3: Equipment Specifications

### System Specifications

**System Acoustic Output**—measured from 1 m from any point in the system

In Use	Standby
≤ 60 dB	≤ 52 dB

**System Energy Consumption—Standby per Hour**

Component	Watts	BTU per Hour	Kilowatt-Hours per Hour
Generator	30	102.42	0.030
OTC	163	555.12	0.1626
Wall Stand	113	384.42	0.1126
Table	77	261.85	0.0767
Console Computer	55	188.45	0.0552
Console Monitor	29	98.35	0.0288
Misc. (PDU, Detector, etc.)	100	341.4	0.10
<b>System Totals</b>			
Wall Stand only	489	1670.13	0.4892
Dual Bucky System	566	1931.98	0.5659

### Dimensions and Weights for a Standard DRX-Evolution

#### PDU, Including the Generator

##### PDU, Including the Generator—Packed

Description	Packed (SN <12000)	(Packed SN >12000)
Length	82.5 cm (32.5 in.)	82.5 cm (32.5 in.)
Width	78.7 cm (31.0 in.)	78.7 cm (31.0 in.)
Height	161.6 cm (63.5 in.)	142.6.6 cm (56.1 in.)
Weight	301.0 kg (662.5 lb)	260.0 kg (573.2 lb)

##### PDU, Including the Generator—Unpacked

Description	Unpacked (SN <12000)	(Unpacked SN >12000)
Depth	57.7 cm (22.7 in.)	57.7 cm (22.7 in.)
Width	64.5 cm (25.4 in.)	64.5 cm (25.4 in.)
Height	139.0 cm (54.7 in.)	120.8 cm (47.6 in.)
Weight	For DRX-1: 272.0 kg (600.0 lb) For TRIKEL: 292.0 kg (644.0 lb)	245.0 kg (540.0 lb)

##### OTC—Packed

Description	Packed
Length	142.3 cm (56.0 in.)
Width	86.4 cm (34.0 in.)
Height	161.3 cm (63.5 in.)
with Tall Room Extension	174.7 cm (68.8 in.)
Weight	414.5 kg (912.0 lb)

**OTC—Unpacked**

Description	Unpacked	Notes
Weight	324.0 kg (714.0 lb)	Complete with X-Ray tube, collimator, and 4 m bridge. Does not include the weight of the longitudinal rails. (Total rail length in meters x 11 kg) + 324 kg = total weight.

**Table (VX3733-TAB)—Packed**

Description	Packed
Length	139.7 cm (55.0 in.)
Width	108.0 cm (45.2 in.)
Height	81.3 cm (32.0 in.)
Weight	Std. Table: 298.2 kg (656.0 lb) Table 320: 308.0 kg (679.0 lb)

**Table Top (VX3733-TAB)—Packed**

Description	Packed
Length	257.8 cm (101.5 in.)
Width	106.7 cm (42.0 in.)
Height	30.5 cm (12.0 in.)
Weight	Std. Table: 72.6 kg (160.0 lb) Table 320: 69.9 kg (154.1 lb)

**Table (VX3733-TAB)—Unpacked**

Description	Unpacked	
	Standard Table	Table 320
Length, table top	240.0 cm (94.5 in.)	216.0 cm (85.0 cm)
Width, table top	83.8 cm (33.0 in.)	83.8 cm (33.0 in.)
Weight, table top	33.3 kg (73.4 lb)	30.6 kg (67.5 lb)
Weight, table with table top	251.0 kg (553.0 lb)	258.1 kg (569.0 lb)

**Table (VX3733-TABC)—Packed**

Description	Packed
Length	141.0 cm (55.5 in.)
Width	101.0 cm (39.8 in.)
Height	77.0 cm (30.3 in.)
Weight	360 kg (793.7 lb)

**Table Top (VX3733-TABC)—Packed**

Description	Packed
Length	268.0 cm (105.5 in.)
Width	98.8 cm (38.9 in.)
Height	33.6 cm (13.2 in.)
Weight	72kg (158.7 lb)

**Table (VX3733-TABC)—Unpacked**

Description	Unpacked
Length, table top	250.6 cm (98.7 in.)
Width, table top	83.7 cm (33.0 in.)

## SPECIFICATIONS

Description	Unpacked
Weight, table top	38.0 kg (83.8 lb)
Weight, table with table top	316.0 kg (696.7 lb)

### Wall Stand—Packed

Description	Packed
Length	256.5 cm (101.0 in.)
Width	116.8 cm (46.0 in.)
Height	114.0 cm (45.0 in.)
Weight	527.3 kg (1163.0 lb)

### Wall Stand—Unpacked

Description	Unpacked	Notes
Weight, full feature wall stand	261.0 kg (575.0 lb)	
Weight, basic CARESTREAM wall stand	200.0 kg (440.0 lb)	Includes the weight of the counterweights 25 kg (55 lb)
Weight, premium CARESTREAM wall stand	201.0 kg (443.0 lb)	Includes the weight of the counterweights 25 kg (55 lb)
Weight, premium CARESTREAM wall stand with TRIXELL bucky.	211.0 kg (465.0 lb)	Includes the weight of the counterweights 25 kg (55 lb)

### Longitudinal and Transverse Rails—Packed

Description	Packed	
	6m x 4m	4.5m x 3.2m
Length	627.4 cm (247.0 in.)	469.9 cm (185.0 in.)
Width	35.6 cm (14.0 in.)	29.5 cm (11.6 in.)
Height	46.6 cm (16.0 in.)	31.9 cm (12.5 in.)
Weight	318.0 kg (700.0 lb)	238.2 kg (524.3 lb)

### Longitudinal and Transverse Rails—Unpacked

Description	Unpacked	
	6 m	4.5 m
Length	6.0 m (236.0 in.)	4.5 m (177.0 in.)
Weight	66.4 kg (146.0 lb)	51.1 kg (112.4 lb)



#### Note

Weight pr/meter = 11 kg

### Floor and Ceiling Rails—Packed

Description	Packed
Length	6.17 m (243.0 in.)
Width	30.5 cm (12.0 in.)
Height	25.4 cm (10.0 in.)
Weight	136.4 kg (300.0 lb)

**Floor and Ceiling Rails—Unpacked**

Description	Unpacked	Notes
Length	6.0 m (236.0 in.)	
Weight	34.0 kg (76.0 lb)	For X-rail total
	5.6 kg (12.4 lb)	pr/meter
	19.5 kg (43.0 lb)	For floor rail total
	3.3 kg (7.2 lb)	pr/meter

**Accessories—Packed**

Description	Packed
Length	256.5 cm (101.0 in.)
Width	116.8 cm (29.0 in.)
Height	114.0 cm (45.0 lb)
Weight	Depends on the accessories ordered

**Console**

Description	Packed	Unpacked
Length	96.5 cm (38.0 in.)	58.4 cm (23.0 in.)
Width	73.66 cm (29.0 in.)	40.0 cm (35.5 in.)
Height	110.5 cm (43.5 in.)	98.1 cm (38.6 in.)
Weight	76.7 kg (169.5 lb)	47.7 kg (105.5 lb)

**Computer**

EF Pro PC	
Description	Unpacked
Length	38.4 cm (15.2 in.)
Width	33.7 cm (13.3 in.)
Height	10.0 cm (3.9 in.)
Weight	6.4 kg (14.2 lb)

Z4 PC	
Description	Unpacked
Length	44.5 cm (17.5 in.)
Width	38.6 cm (15.2 in.)
Height	16.9 cm (6.7 in.)
Weight	11.3 kg (24.9 lb)

**Array—DRX-1—Packed**

Description	Packed
Length	62.0 cm (24.4 in.)
Width	54.0 cm (21.3 in.)
Height	24.0 cm (9.4 in.)
Weight	22.7 kg (50.0 lb)

**Array—DRX-1—Unpacked**

Description	Unpacked	Notes
Length	38.3 cm (15.0 in.)	
Width	46.0 cm (18.0 in.)	
Height	1.6 cm (0.6 in.)	
Weight	3.8 kg (8.3 lb)	With battery

## SPECIFICATIONS

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### Array—TRIXELL—Packed

Description	Packed
Width	91.0 cm (36.0 in.)
Length	86.0 cm (34.0 in.)
Height	64.0 cm (25.0 in.)
Weight	40.8 kg (90.0 lb)

### Array—TRIXELL—Unpacked

Description	Packed
Width	53.5 cm (21.6 in.)
Height	4.55 cm (1.79 in.)
Length	49.0 cm (19.3 in.)
Weight	8.2 kg (18.5 lb)

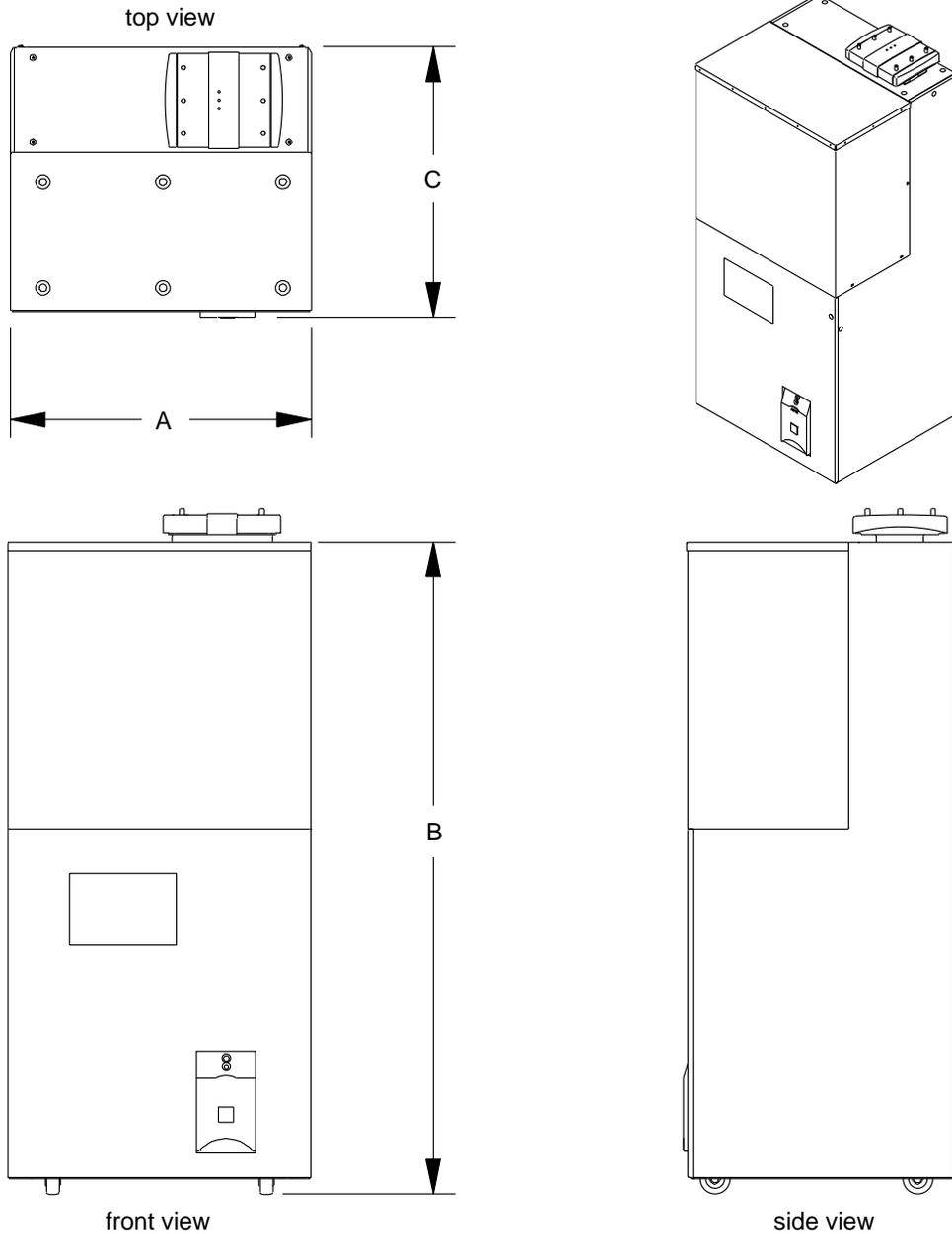
### Array—VARIAN 43 x 43—Packed

Description	Packed
Length	68.58 cm (27.00 in.)
Width	68.58 cm (27.00 in.)
Height	43.18 cm (17.00 in.)
Weight	12.3 kg (26.9 lb)

### Array—VARIAN 43 x 43—Unpacked

Description	Unpacked
Length	46.9 cm (18.5 in.)
Width	46.9 cm (18.5 in.)
Height	3.6 cm (1.4 in.)
Weight	7.5 kg (16.5 lb)

## Generator and PDU

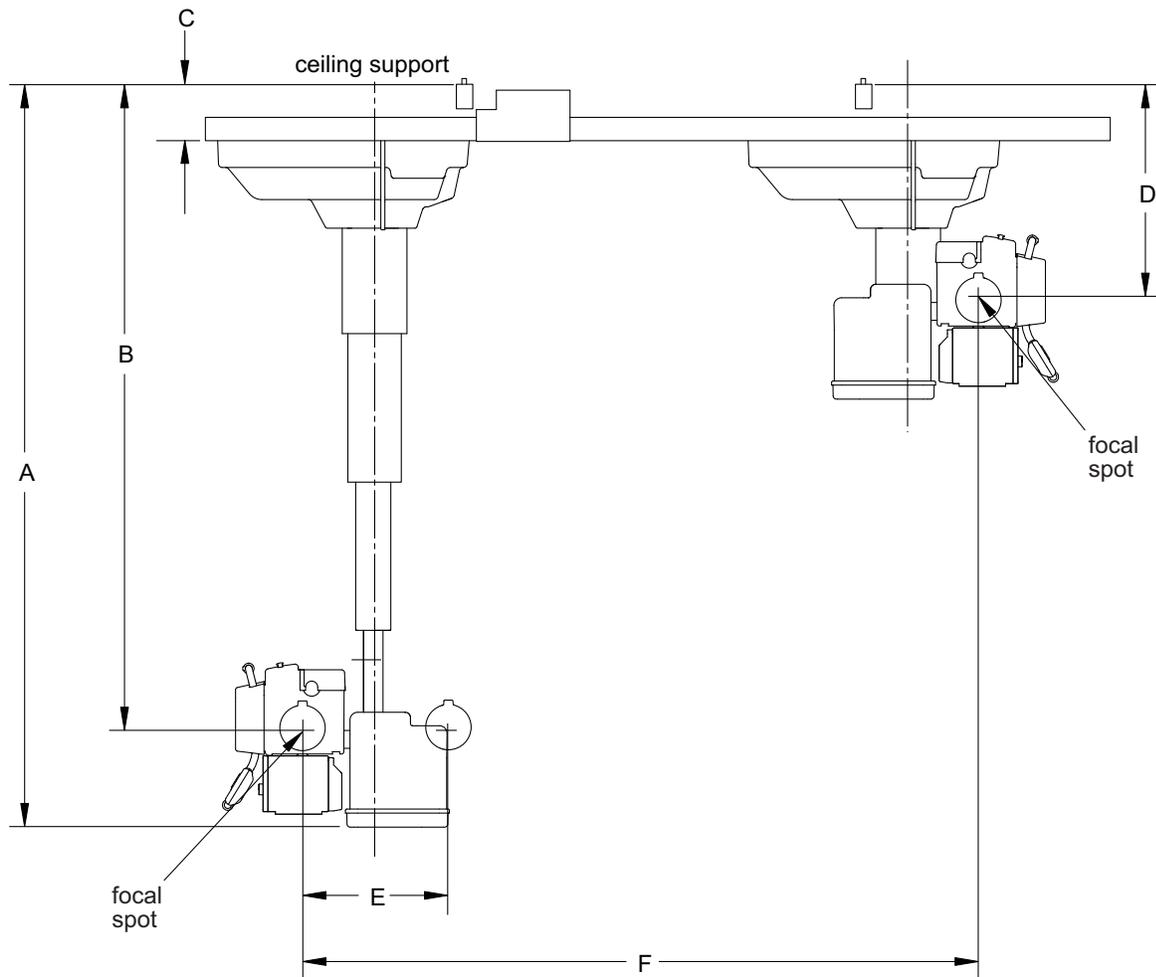


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## Generator and PDU

Item	Description	Unpacked (SN <12000)	Unpacked (SN >12000)
A	Width	64.5 cm (25.4 in.)	64.5 cm (25.4 in.)
B	Height	139.0 cm (54.7 in.)	120.8 cm (47.6 in.)
C	Depth	57.7 cm (22.7 in.)	57.7 cm (22.7 in.)

Vertical Operating Range of the OTC

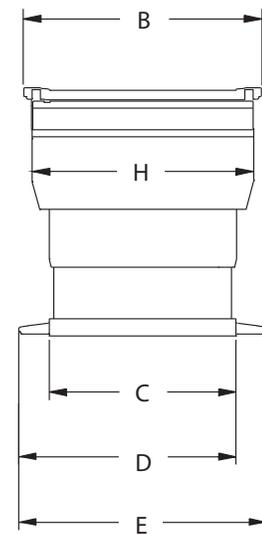
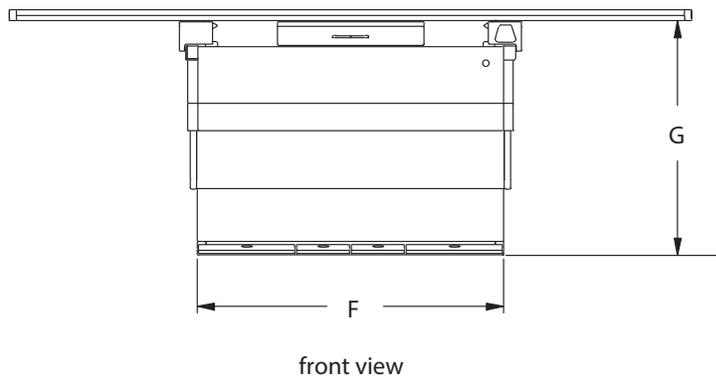
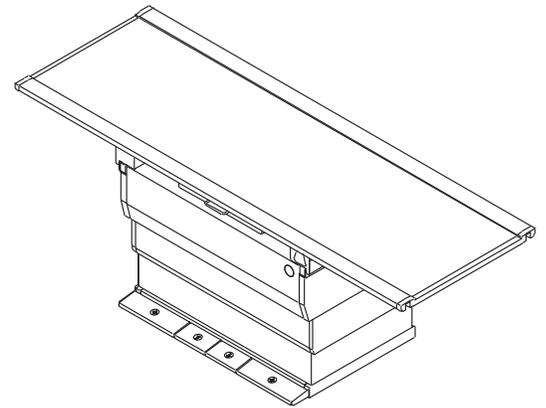
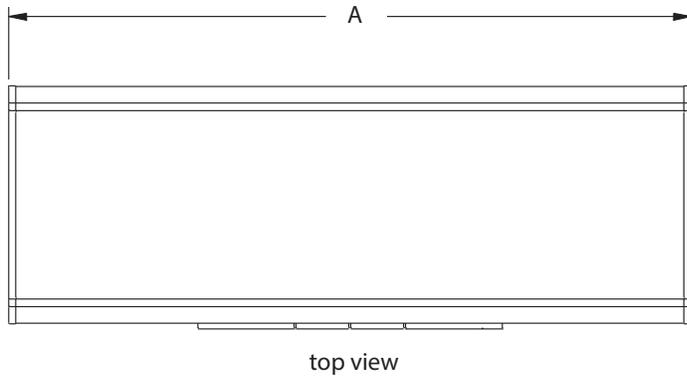


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Vertical Operating Range of the OTC

Item	Description	Array Unpacked	
		Regular Configuration	w/Tall Room Extension
A	Maximum length	282.9 cm (111.4 in.)	298.4 cm (117.5 in.)
B	Maximum focal length	246.2 cm (96.9 in.)	261.7 cm (103.0 in.)
C	Distance between the transfer bridge and the ceiling support	25.4 cm (10.0 in.)	25.4 cm (10.0 in.)
D	Minimum focal length	84.8 cm (33.4 in.)	100.3 cm (39.5 in.)
E	Distance between the focal spot travel and beta	59.2 cm (23.3 in.)	59.2 cm (23.3 in.)
F	Distance between the focal spot travel and beta	353.7 cm (139.2 in.)	353.7 cm (139.2 in.)

## Operating Range of the Table System

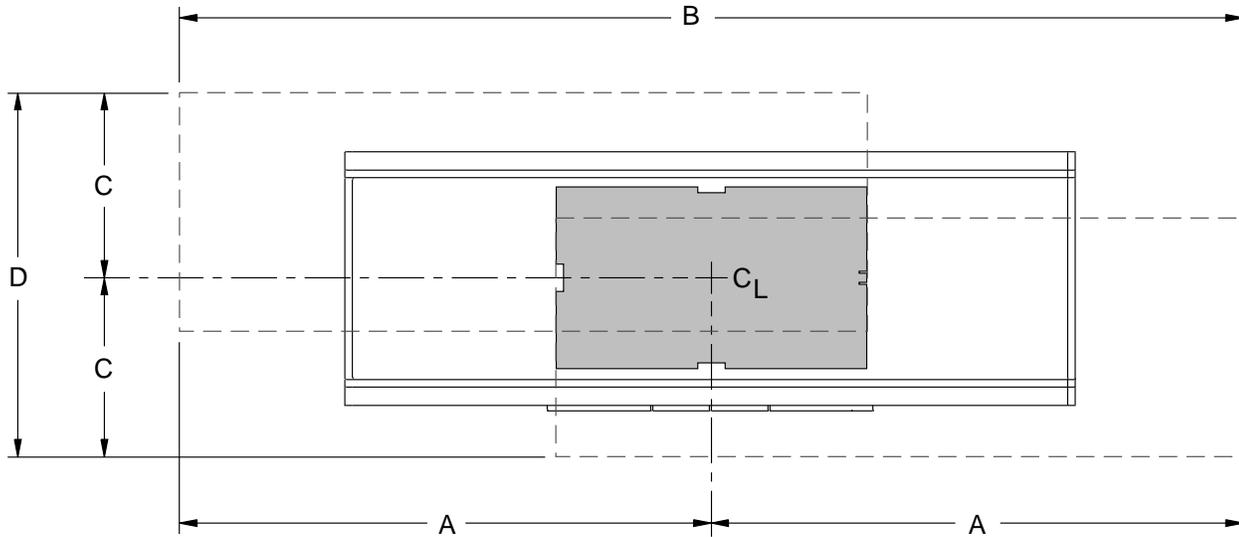


side view

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Item	Description	Array Unpacked	
		Table (VX3733-TAB)	Table (VX3733-TABC)
A	Length, table top	240.0 cm (94.5 in.)	250.6 cm (98.7 in.)
B	Width, table top	83.8 cm (33.0 in.)	83.7 cm (33.0 in.)
C	Width, base	66.0 cm (26.0 in.)	65.8 cm (25.9 in.)
D	Width from the front foot switch to the rear of the base	76.5 cm (30.2 in.)	76.6 cm (30.2 in.)
E	Total width from the front foot switch to the rear foot switch	86.5 cm (34.1 in.)	87.5 cm (34.4 in.)
F	Length of the table base	108.0 cm (42.5 in.)	108.0 cm (42.5 in.)
G	Table height, minimum	53.0 cm (20.8 in.)	51.5 cm (20.3 in.)
	Table height, maximum	86.0 cm (33.9 in.)	91.5 cm (36.0 in.)
H	Width, table base	78.6 cm (30.9 in.)	82.8 cm (32.6 in.)

**Table Top Float**

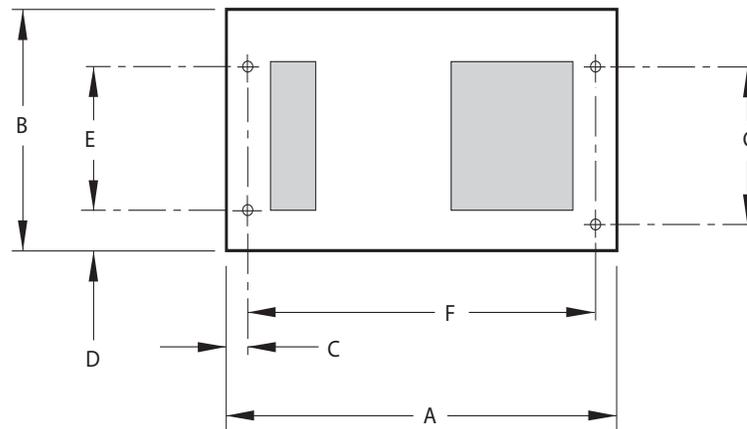


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**Table Float**

Item	Description	Table (VX3733-TAB)	(VX3733-TAB320)	Table (VX3733-TABC)
		Dimension for DRX Plus 4343	Dimension for DRX 320	
A	Tabletop longitudinal float	180.0 cm (70.9 in.)	156.0 cm (61.4 in.)	186.3 cm (73.3 in.)
B	Total tabletop total longitudinal float	360.0 cm (141.7 in.)	312.0 cm (122.8 in.)	372.6 cm (146.7 in.)
C	Tabletop transverse float	54.6 cm (21.5 in.)	54.6 cm (21.5 in.)	54.9 cm (21.6 in.)
D	Total tabletop total transverse float	109.2 cm (43.0 in.)	109.2 cm (43.0 in.)	109.7 cm (43.2 in.)

### Mounting Anchors for the Table (VX3733-TAB)



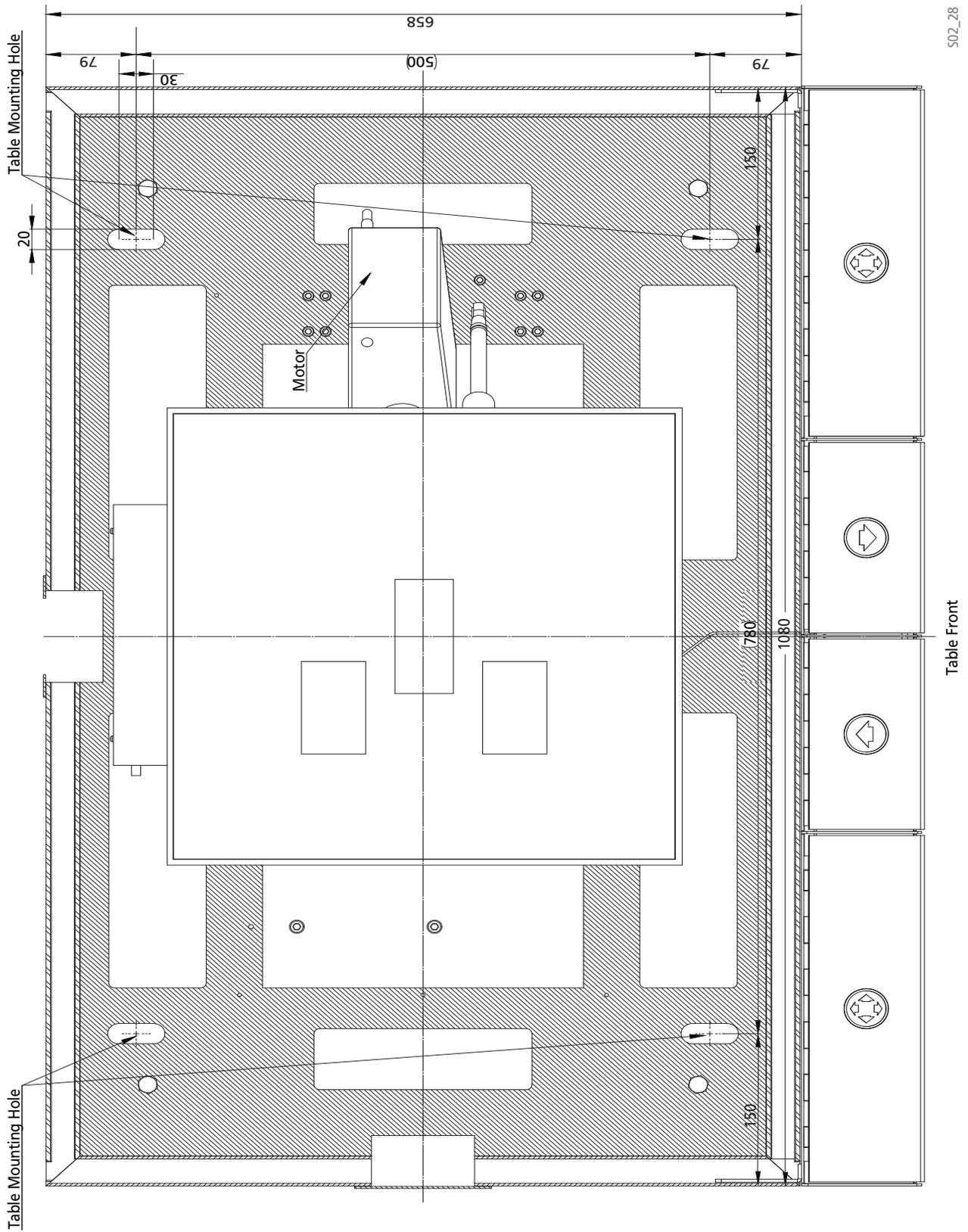
**Table Front**

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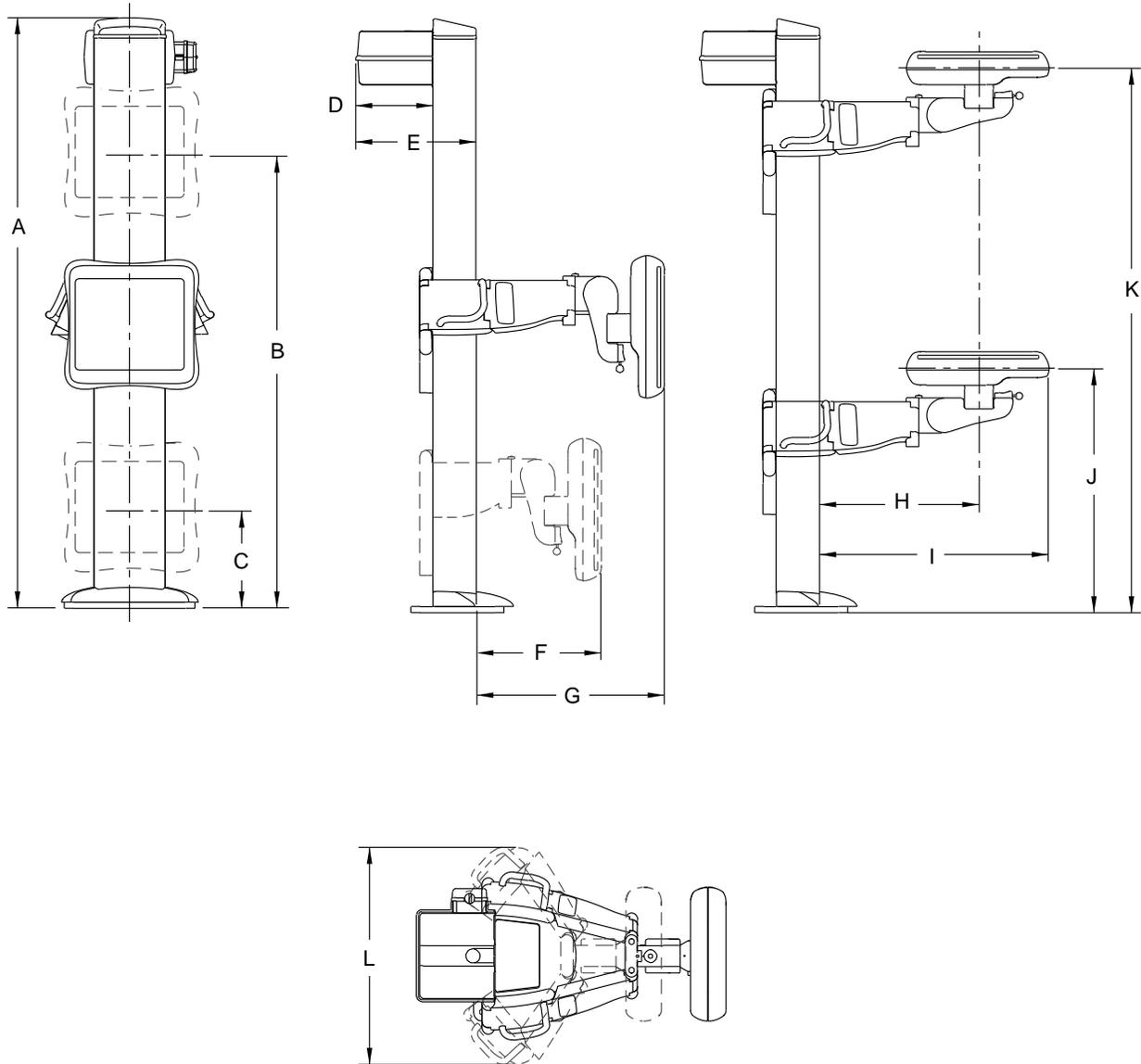
### Mounting Anchors for the Table Base

Item	Description	Dimension
A	Length	108.0 cm (42.5 in.)
B	Width	65.8 cm (25.9 in.)
C	Table base left to the mounting holes CL	6.0 cm (2.3 in.)
D	Table base front to the mounting hole CL	17.9 cm (7.0 in.)
E	Mounting hole CL to CL, front to rear, left	30.0 cm (11.8 in.)
F	Mounting hole CL to CL, left to right	96.0 cm (37.8 in.)
G	Mounting hole CL to CL, front to rear, right	37.0 (14.6 in.)

# Mounting Anchors for the Table (VX3733-TABC)



### Full-Featured Wall Stand

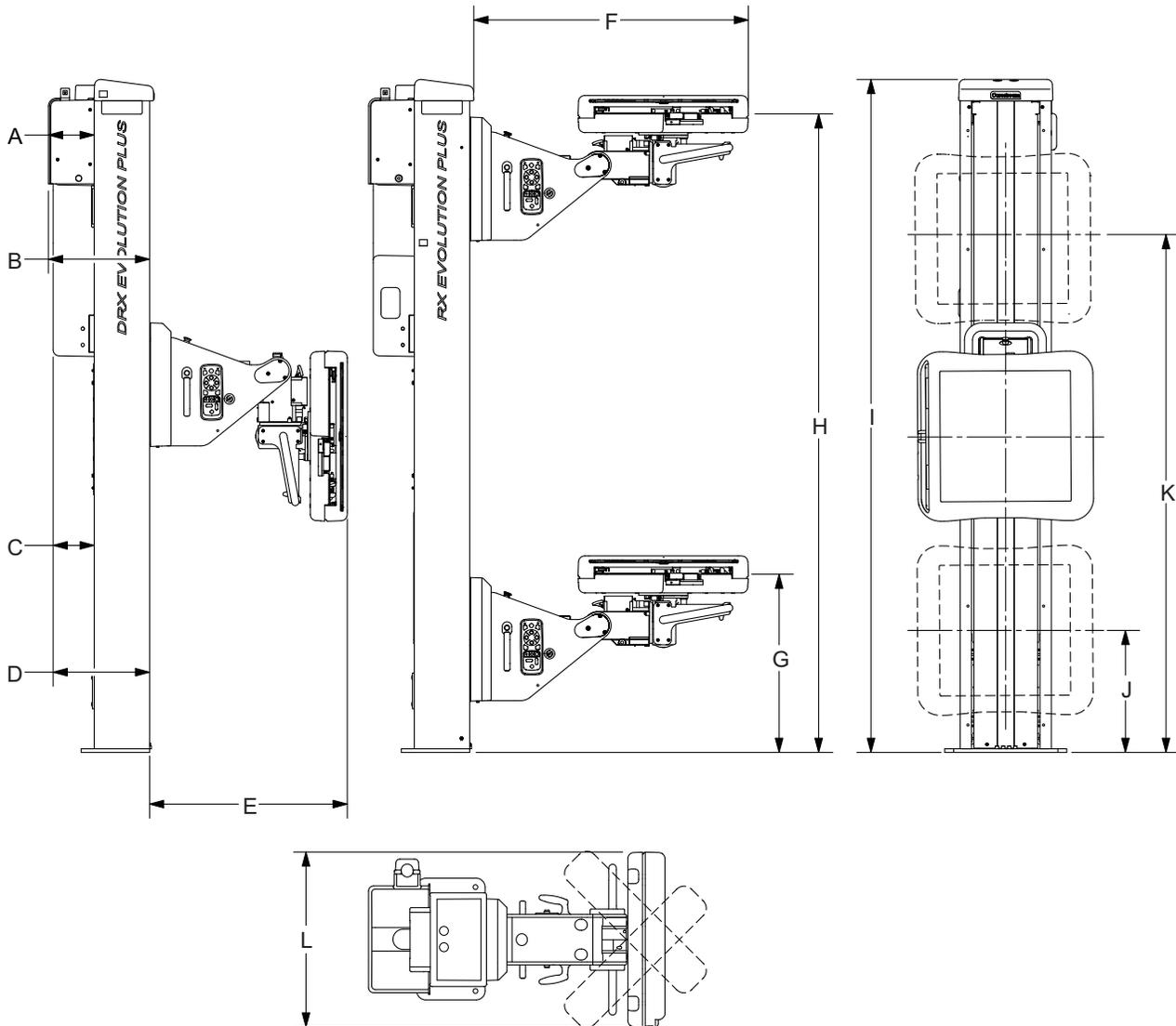


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### Dimensions

Item	Description	Dimension	Notes
A	Total height	232.4 cm (91.5 in.)	With optional rail— 236.2 cm (93.0 in.)
B	Vertical bucky height, maximum CL	179.7 cm (70.7 in.)	
C	Vertical bucky height, minimum CL	29.6 cm (11.6 in.)	
D	Rear facing E-box depth from the wall stand rear	31.0 cm (12.1 in.)	
E	Rear facing E-box depth from the wall stand front	49.0 cm (19.3 in.)	
F	Vertical bucky retracted	49.5 cm (19.5 in.)	
G	Vertical bucky extended	80.4 cm (31.6 in.)	
H	Horizontal bucky CL extended	34.3 cm (13.5 in.)	
I	Horizontal bucky extended	65.2 cm (25.6 in.)	
J	Horizontal bucky height, minimum CL	67.2 cm (26.6 in.)	
K	Horizontal bucky height, maximum CL	232.5 cm (88.0 in.)	
L	Width of wall stand, retracted	90.06 cm (39.0 in.)	

CARESTREAM Basic and Premium Wall Stand

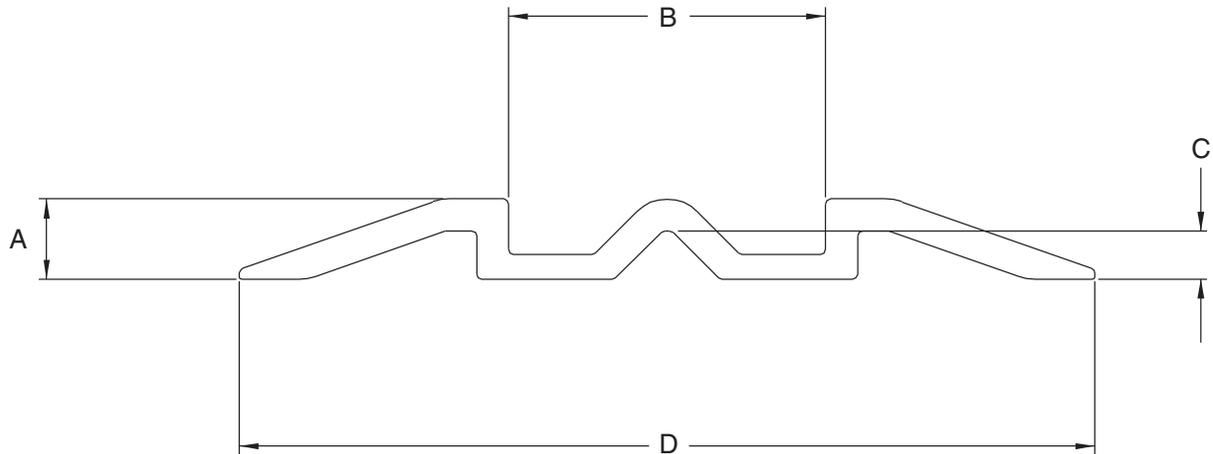


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Dimensions

Item	Description	Dimension	Notes
A	Rear facing E-box depth from the wall stand rear	24.0 cm (9.5 in.)	
B	Rear facing E-box depth from the wall stand front	43.0 cm (16.9 in.)	
C	Front facing E-box depth from the wall stand rear	15.4 cm (6.1 in.)	
D	Front facing E-box depth from the wall stand front	34.4 cm (13.5 in.)	
E	Vertical bucky	60.5 cm (23.8 in.)	
F	Horizontal bucky depth from the wall stand front	94.0 cm (37.0 in.)	
G	Horizontal bucky height, minimum	56.0 cm (22.0 in.)	
H	Horizontal bucky height, maximum	224.7 cm (88.5 in.)	
I	Total height depth from the wall stand front	227.0 cm (89.4 in.)	
J	Vertical bucky height, minimum	29.0 cm (11.4 in.)	
K	Vertical bucky height, maximum	179.0 cm (70.5 in.)	
L	Total width	59.0 cm (23.2 in.)	

## Rail Profile



H230\_0373BC



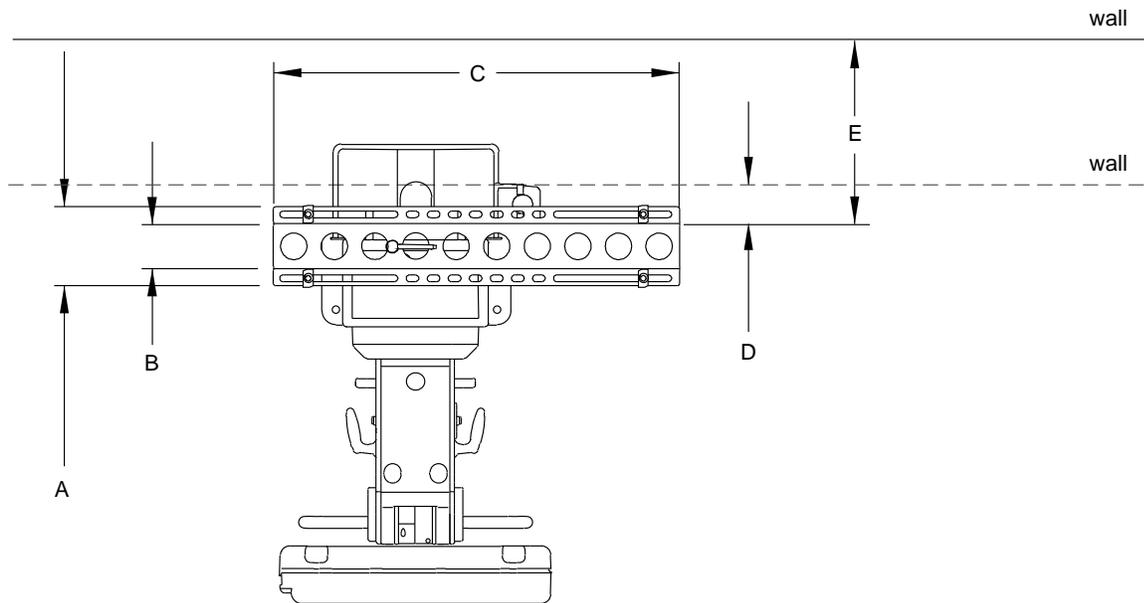
### Important

The stationary wall stand ceiling mount interface dimensions must be used for all stationary wall stand installations.

### Dimensions

Item	Description	Dimension
A	Height of the floor rail	1.8 cm (0.71 in.)
B	Width of the floor rail channel	8.3 cm (3.27 in.)
C	Clearance	0.75 cm (0.30 in.)
D	Width of the floor rail	17.0 cm (6.7 in.)

Stationary Wall Stand Ceiling Mount Interface Dimensions



H230\_0374HC



**Important**

If the patient handle is to be stored facing the wall behind the wall stand, then 15.0 cm (5.9 in.) must be added to the minimum distance to the wall.

**Dimensions**

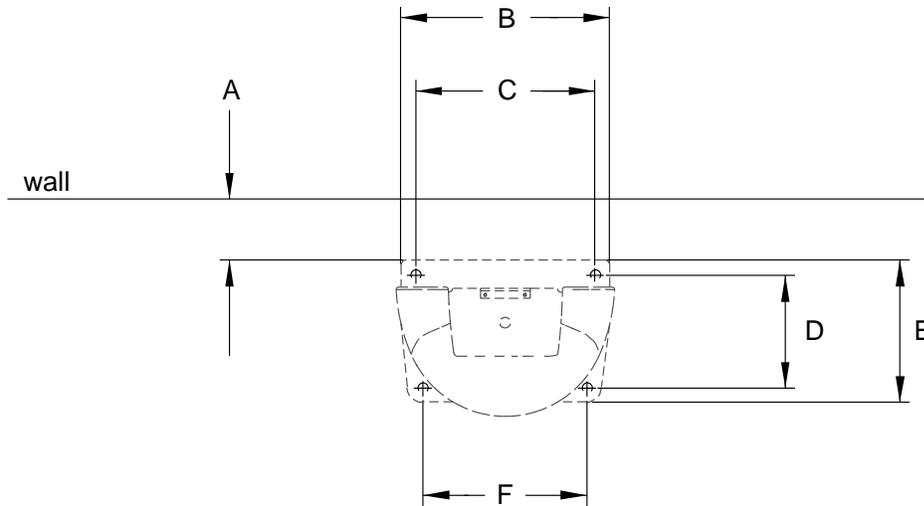
Item	Description	Dimension
A	Total width	16.0 cm (6.3 in.)
B	Channel width	9.0 cm (3.5 in.)
C	Total length	92.0 cm (36.2 in.)
D	Wall to the channel for the front facing electronics box	4.0 cm (1.5 in.)
E	Wall to the channel for the rear facing electronics box	23.6 cm (9.2 in.)

## Mounting Anchors for the Full-Featured Wall Stand



### Important

It is the responsibility of the structural engineer at the customer site to determine the type of mounting anchors needed for the elevating table and wall stand.

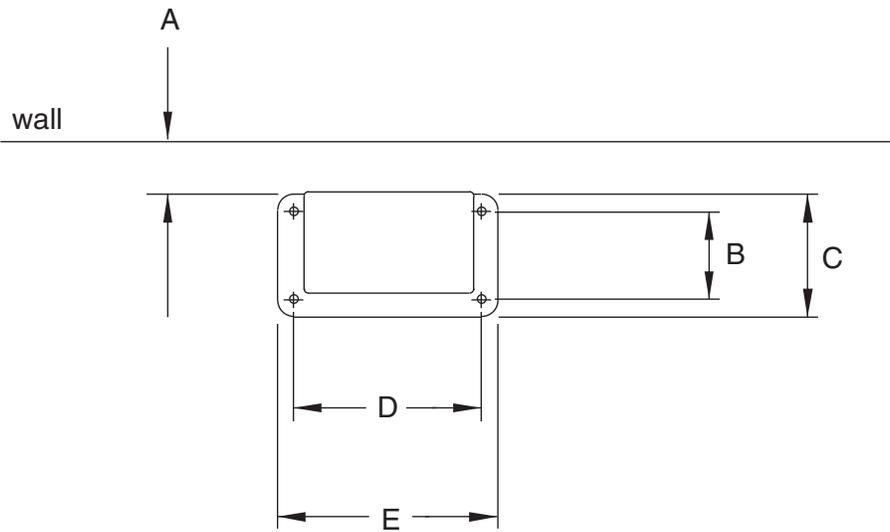


H230\_0375BC

### Dimensions

Item	Description	Dimension
A	Panel to the wall minimum distance	40.0 cm (15.7 in.)
B	Total width	42.0 cm (16.5 in.)
C	Rear mounting holes CL to CL, side to side	35.0 cm (13.7 in.)
D	Mounting hole CL to CL front to rear	16.5 cm (6.5 in.)
E	Total depth	23.0 cm (9.1 in.)
F	Front mounting holes CL to CL, side to side	30.0 cm (11.8 in.)

Mounting Anchors for the CARESTREAM Wall Stand

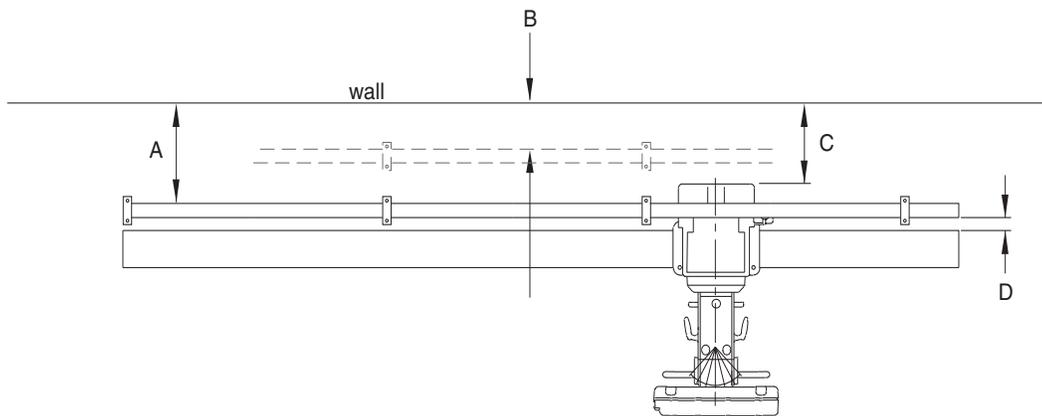


H230\_0376BC

Dimensions

Item	Description	Dimension
A	Minimum distance to the wall	16.2 cm (6.4 in.)
B	Mounting hole CL to CL, front to rear	16.5 cm (6.5 in.)
C	Total depth	23.0 cm (9.0 in.)
D	Mounting hole CL to CL, side to side	35.0 cm (13.8 in.)
E	Total width	41.0 cm (16.5 in.)

## CARESTREAM Basic and Premium Wall Stand with X-Rail



H230\_7007BC

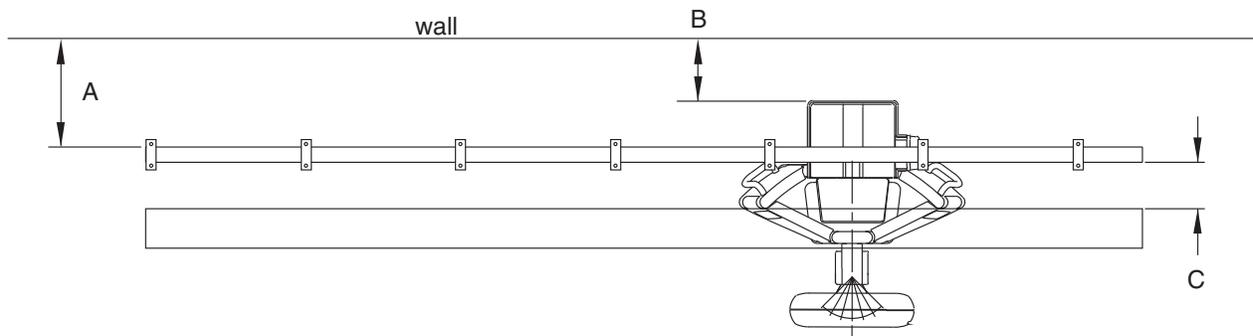
### Dimensions

Item	Description	Dimension
A	Wall to ceiling rail for rear facing E-box	27.00 cm (10.66 in.)
B	Wall to ceiling rail for front facing E-box	19.00 cm (48.26 in.)
C	Wall to rear facing E-box clearance	8.30 cm (3.25 in.)
D	Ceiling rail to floor rail offset	4.8 cm (1.9 in.)

### Note

If the patient handle is to be stored facing the wall behind the wall stand, then 15.0 cm (5.9 in.) must be added to the minimum distance to the wall.

## Full-Featured Wall Stand Rail with X-Rail

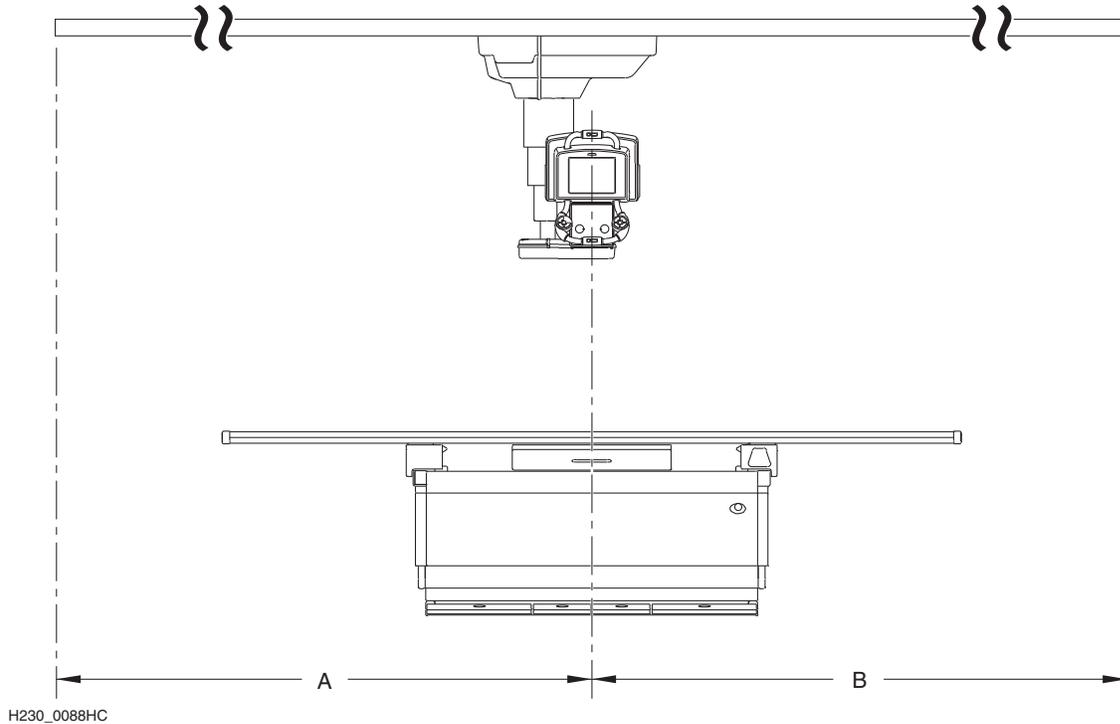


H230\_0200BC

### Dimensions

Item	Description	Dimension
A	Wall to ceiling rail for rear facing E-box	27.00 cm (10.66 in.)
B	Wall to rear facing E-box clearance	8.30 cm (3.25 in.)
C	Ceiling rail to the floor rail offset	7.7 cm (3.0 in.)

Tomosynthesis and Linear Tomography–OTC Rail Coverage for an Exam



H230\_0088HC

Dimensions

Table Layout 2 (beta = 0)					
Tomo Angle	Start from the Right		Start from the Left		Minimum Rail Length (mm)
	A (mm)	B (mm)	A (mm)	B (mm)	
40	1476	1448	1687	1237	2924
30	1377	1350	1589	1138	2727
20	1283	1256	1495	1044	2539
10	1192	1164	1403	953	2356
8	1174	1146	1385	935	2320



**Important**

All Wall Stand layout are supported for Tomography and Tomosynthesis. Only Table layout # 2 is supported for Tomography and Tomosynthesis.

The illustration and table above provide the length of travel to the left (A) or to the right (B) required to achieve the associated tomographic sweep angles, relative to the table's center.

The motion control software determines the optimum starting point and the travel direction.

If at least one of the A and B pairs is achievable (**Start from the Left** or **Start from the Right**), the tomographic sweep angle is also achievable.

To determine the actual OTC travel range relative to the table's center, move the OTC to the end of travel, and measure the distance to the center of the table.

The tube and collimator field light can be used to provide the reference for the extent of the tube travel (alpha = 0, beta = 0).

## DRX-1 and DRX Plus System Product Information

### Detectors

Specifications for DRX-1 detectors are found on the Carestream Service Portal in the DRX-1 System section. Specifications for DRX Plus detectors are found on the Carestream Service Portal in the Detectors section.

### DRX-1 System Battery



H224\_0053AA

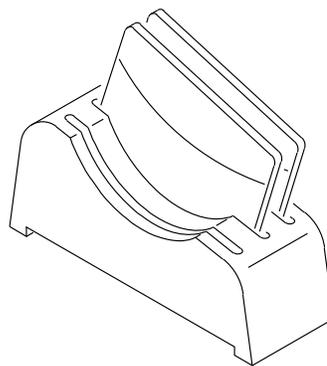
#### Note

For complete information on the care and handling of the DRX-1 System battery, see the *CARESTREAM DRX-1 System Battery User's Guide*.

### DRX-1 System Battery Charger

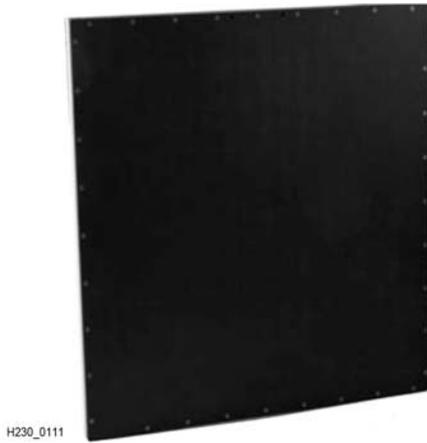
#### Note

For complete information on the CARESTREAM DRX-1 System battery charger, see the *CARESTREAM DRX-1 Battery Charger User's Guide*.



H224\_0088AC

## VARIAN 43 x 43 cm Detector



### Technical Specifications

<b>Receptor Type</b>	Amorphous Silicon with Charge Well PIXEL Technology
<b>Conversion Screen</b>	Direct Deposit CsI, DRZ Plus, or GD <sub>2</sub> O <sub>2</sub> S: Tb (KODAK LANEX screen)
<b>Pixel Area</b> Total Active	42.7 (h) x 42.7 (v) cm (16.8 x 16.8 in.) 42.4 (h) x 42.4 (v) cm (16.7 x 16.7 in.)
<b>Pixel Matrix</b> Total Active	3,072 (h) x 3,072 (v) 3,052 (h) x 3,052 (v)
<b>Pixel Pitch</b>	139 µm
<b>Limiting Resolution</b>	3.6 lp/mm
<b>Energy Range Standard</b>	40–150 kVp
<b>Pixel Fill Factor</b>	100 %
<b>Scan Method</b>	Progressive
<b>A/D Conversion</b>	14 bits
<b>Image Preview</b>	~1 second
<b>Cycle Time (minimum/standard)</b>	6/8 seconds
<b>Data Output</b>	Gigabit Ethernet
<b>Workstation Interface</b>	Ethernet port
<b>Exposure Control</b>	Inputs: Expose Request Outputs: Expose OK

### Environmental

<b>Shock</b>	High shock tolerance
<b>Temperature Range</b>	Operating at back cover, +10 to +35 °C (+50 to +95 °F) maximum Ambient-Storage, – 20 to +70 °C (– 4 to +158 °F)
<b>Humidity</b>	Operating (non-condensing), 10–90 % Storage (non-condensing), 10–90 %

### Mechanical

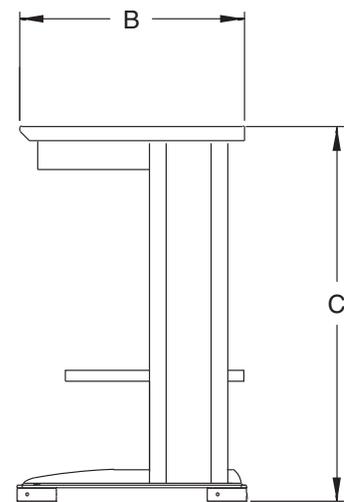
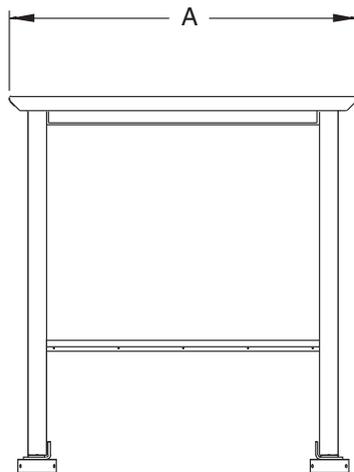
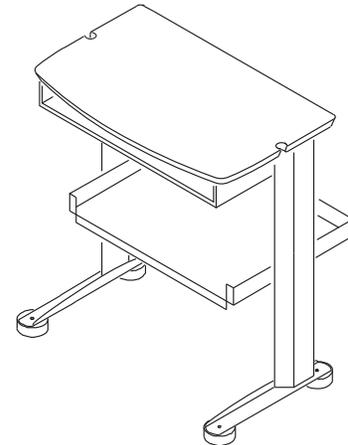
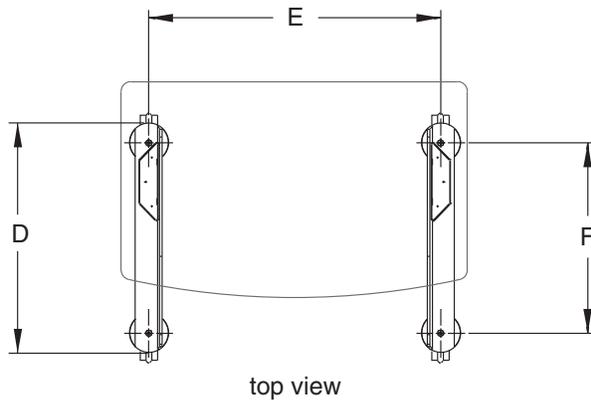
<b>Size</b>	46.9 x 46.9 x 3.6 cm (18.5 x 18.5 x 1.4 in.)
<b>Weight</b>	7.5 kg (16.5 lb)

**Mechanical**

<b>Housing Material</b>	Aluminum
<b>Sensor Protection Material</b>	Carbon fiber and aluminum plate

**Other Equipment**

**Operator Console—Optional**



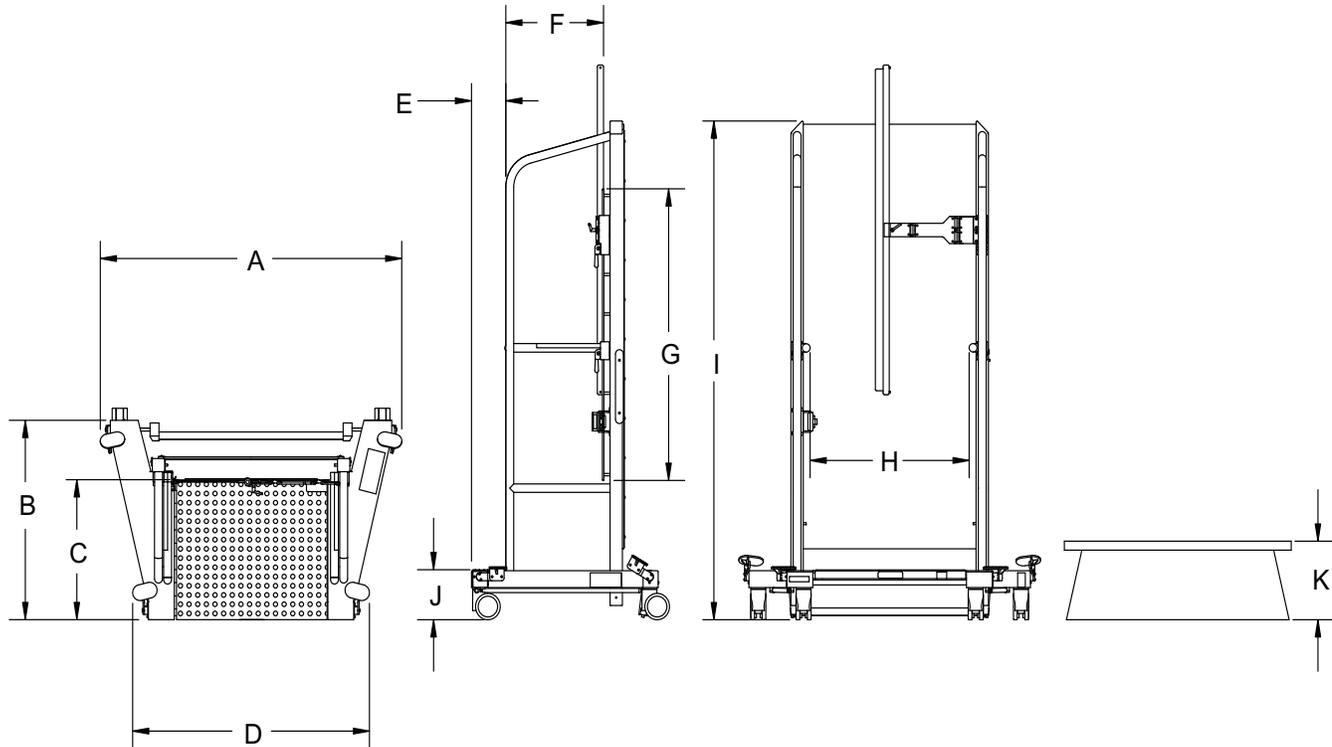
H230\_0377DC

**Dimensions**

Item	Description	Dimension
A	Console top width	90.0 cm (35.5 in.)
B	Console top depth	54.4 cm (23.0 in.)
C	Console height	98.1 cm (38.6 in.)
D	Console base depth	80.0 cm (29.9 in.)
E	Console base mounting hole CL width	76.0 cm (23.8 in.)
F	Console base mounting hole CL depth	50.0 cm (19.5 in.)

## SPECIFICATIONS

### Long Length Imaging (LLI) Stand

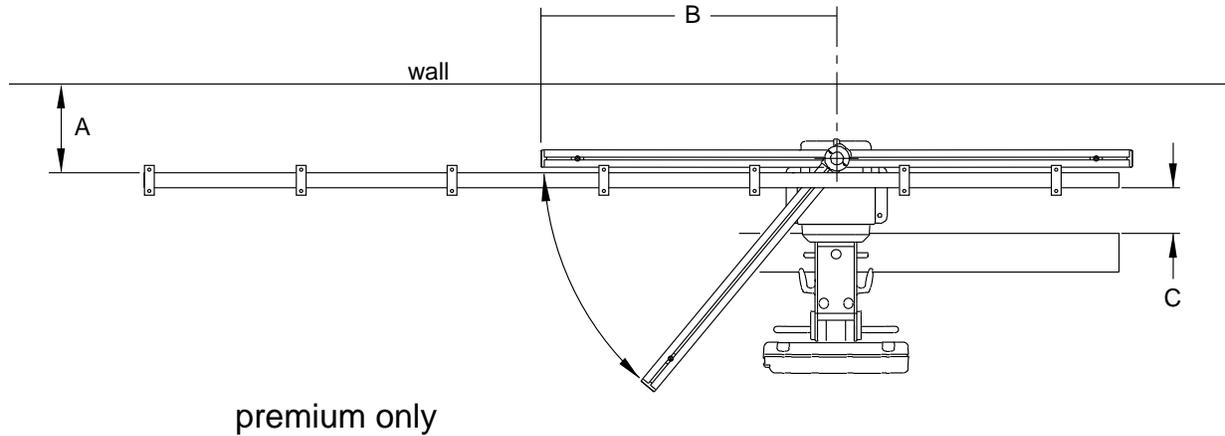


H230\_0378

### LLI Stand

Item	Description	Dimension
A	Total outside width, rear	120.0 cm (47.2 in.)
B	Total depth	76.0 cm (29.9 in.)
C	Total platform depth	60.0 cm (23.6 in.)
D	Total outside width, front	95.0 cm (37.4 in.)
E	Distance from the front of LLI stand to the upright bar	14.0 cm (5.5 in.)
F	Depth of LLI stand	47.0 cm (18.5 in.)
G	Length of platform handle rail	110.0 cm (18.5 in.)
H	Total inside width	64.0 cm (26.2 in.)
I	Total height	189.0 cm (74.4 in.)
J	Height from floor to top of patient stand	189.0 mm (7.4 in.)
K	Height from floor to top of the stool mat	189.0 mm (7.4 in.)

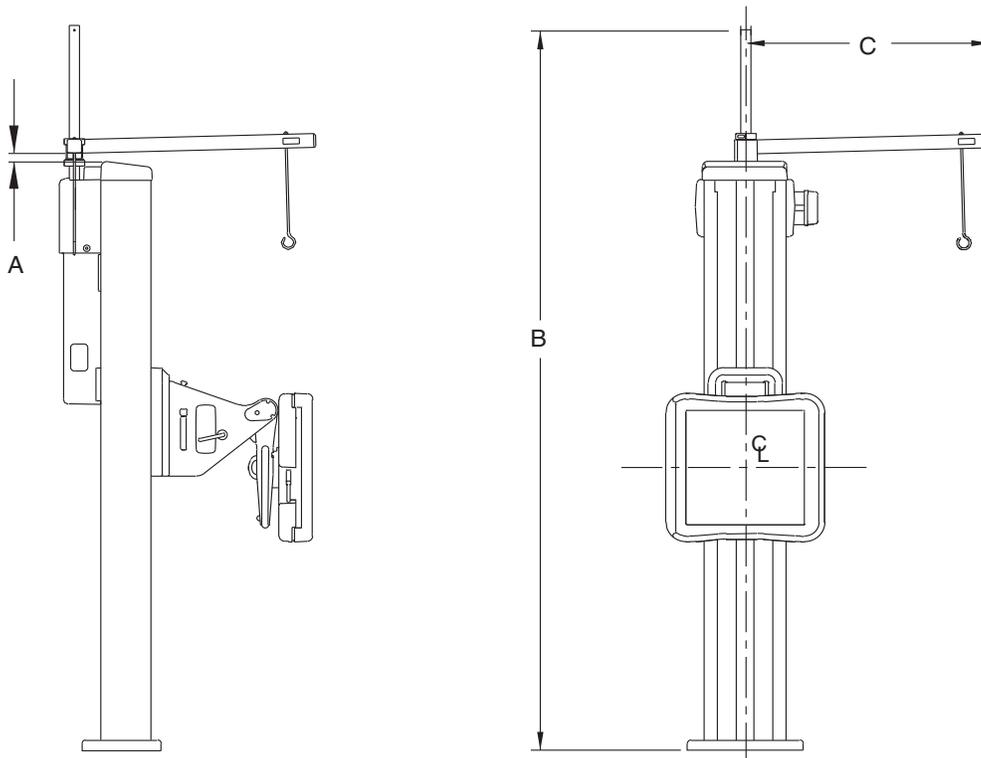
**CARESTREAM Wall Stand Rail Dimensions with the BABIX**



H230\_0379BC

**BABIX**

Item	Description	Dimension
A	Wall to ceiling rail for a rear facing E-box	29.0 cm (10.7 in.)
B	Total BABIX arm length	111.2 cm (44.0 in.)
C	Ceiling rail to floor rail offset	4.8 cm (1.9 in.)



H230\_0380HC

**BABIX**

Item	Description	Dimension
A	BABIX arm to wall stand top cover clearance	2.0 cm (0.8 in.)
B	Total height with tube mount	243.1 cm (95.7 in.)
C	Total BABIX arm length	111.2 cm (40.0 in.)

## Section 4: Site Specifications



### Important

Site specifications for smart workflow feature is not included in this section. It can be found in section 2 of the *Smart Workflow Features Service Manual for DRX-Evolution Plus System, AL0109*.

### Preparing a Staging Area

If the equipment must be stored before installation, the customer should:

- Provide a staging area for a Carestream Health authorized service provider to unpack and prepare the system components for installation. The area should be large enough to hold and unpack all of the shipping crates.
- Check that the path between the storage and the staging areas can hold the width of the crates. See [Dimensions and Weights for a Standard DRX-Evolution on Page 6](#).
- Provide a place to discard the shipping crates and the packing materials.



### Important

- The customer must prepare the site before the installation of the DRX-Evolution.
- The equipment is not delivered until the site is ready. Carestream Health orders the shipment of the DRX-Evolution to the installation site by the carrier. The first shipment has 8 shipping crates, which hold the following:
  - Generator and PDU
  - OTC
  - Fixed table
  - Tabletop
  - System control
  - Detector array, X-ray tube, and accessories
  - Longitudinal and transverse rails
  - Wall stand
- The storage and staging areas can be in the same or separate sites, which is determined by space requirements, operation requirements, and traffic flow.
- If the path from the receiving area to the storage and staging area is too narrow to hold the shipping crates, call your Carestream Health authorized service provider in advance. A specialist unpacks the crates at the site.

### Transit and Storage



### Important

The receiving and storage area(s) must be dry and able to provide the correct humidity and temperature control required for the equipment.

<b>Temperature</b>	-20 to 55 °C (-4 to 131 °F), provided the detector array is shipped in a Carestream Health-approved insulated shipping container
<b>Relative Humidity</b>	10–86 % (allow condensation dry time before installing)
<b>Atmospheric Pressure</b>	644–1016 hPa (483–763 mm Hg)
<b>Altitude</b>	-31 to 3,658 m (-102 to 12,000 ft)

## Operating Requirements

<b>Temperature</b>	18–30 °C (64–86 °F)
<b>Relative Humidity</b>	30–65 % (allow condensation dry time before installing)
<b>Maximum Gradient</b>	5 °C (9 °F), temperature must remain constant and stable

## Ceiling Height



### Important

Low ceiling height can:

- Restrict the maximum SID above the table and to the bucky in the wall stand.
- Create an interference between entry doors and the longitudinal IGUS chain supports.

The ceiling height is the measured height from the floor to the point where the DRX-Evolution is attached to the structural support. If the structural support is below the finished ceiling, measure to the height of the structural support. Do **not** measure to the finished ceiling.

The recommended ceiling height range for the OTC to touch the floor is 270.0–283.0 cm (106.3–111.5 in.). With the optional OTC Tall Room Extension, the recommended range is 284.0–298.0 cm (111.6–117.4 in.).



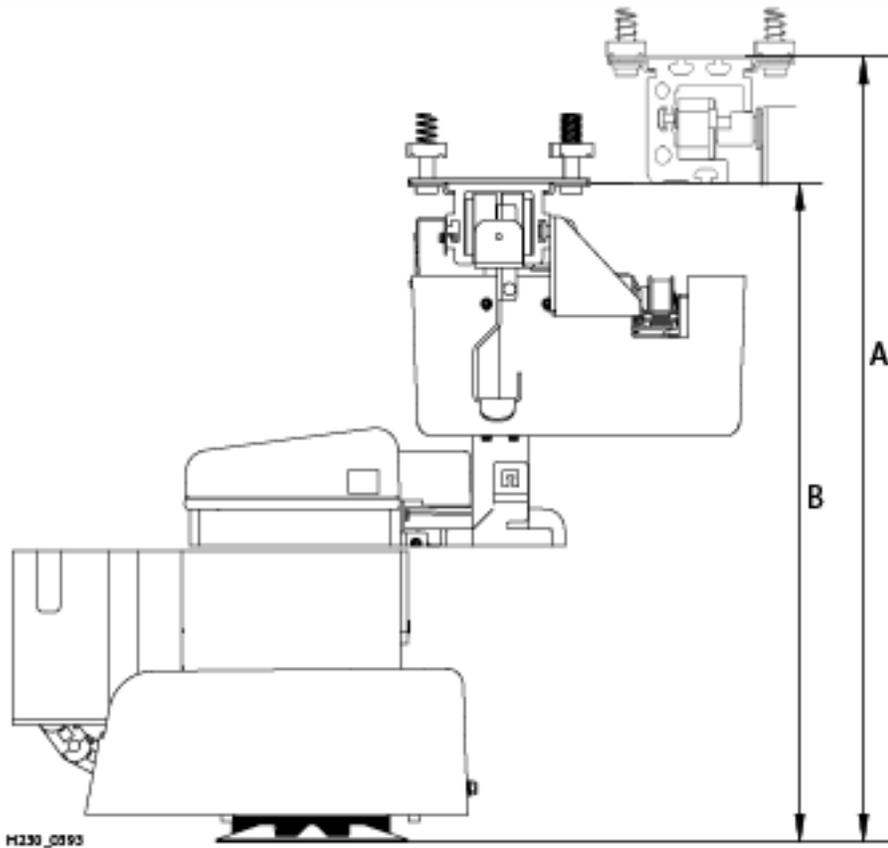
### Important

Does not provide revisions for optional accessory like the BABIX.

With a ceiling height of 2.8 m (109.0 in.) and the operating height of the table set to 80.0 cm (31.5 in.), the maximum table SID is 122.2 cm (48.1 in.).

**CARESTREAM Wall Stand with the X-rail Minimum Ceiling Height**

Side View



**Wall Stand**

Item	Description	Dimension
A	Ceiling height with the X-rail mounted to the OTC longitudinal rail, minimum	261.50 cm (102.95 in.)
B	Ceiling height with the X-rail mounted to the ceiling, minimum	251.50 cm (99.01 in.)

**Ceiling Support**



**WARNING**

- The facility structure supporting all equipment loads must be verified by the customer’s structural engineer of record. This includes loads for wall, ceiling, and floor.
- The support structure must be level within 1.000 mm (0.039 in.) over the length of the longitudinal rail.
- The support structure must be planar to within 1.000 mm (0.039 in.).
- The maximum load to any one fixed point, worst case, is 162.0 kg (357.1 lb).

To hold the ceiling-mounted equipment, the UNISTRUT P1000 or the equivalent is required and is to be supplied by the customer. The DRX-Evolution is shipped with mounting hardware that is compatible with UNISTRUT support structures. If the customer does not provide a support structure with specifications that are consistent with the UNISTRUT P1000 series, the customer is responsible for obtaining mounting hardware that allows the system to mount to the customer’s support structure.

A minimum safety factor of 2 times is the requirement for support structures. Safety factors greater than 2 times may be required by national, state, or local codes. See your governing authorities for your building requirements.

Equipment is designed to meet a 4 to 8 times safety factor. Use maximum weights and worst-loading conditions when calculating the safety factor. The maximum deflection of the complete structure is 1.50 mm (0.06 in.).

It is the responsibility of the structural engineer at the customer site to determine the type of mounting anchors needed for the elevating table and wall stand.

## Floor Structure

<b>Asbestos</b>	Flooring must be free of asbestos.
<b>Surface</b>	Stain and chemical resistant.
<b>Level</b>	<ul style="list-style-type: none"> <li>Flat and level within 3.175 mm (0.125 in.) in both directions over the entire equipment area.</li> <li>For systems with the optional wall stand rail, the floor must be level and parallel to the ceiling support structure to within 5.0 mm (0.2 in.) over the length of the rail, 6.0 m (19.7 ft).</li> </ul>
<b>Load Bearing</b>	<p>Capable of supporting the operating weight of the equipment. See <a href="#">Dimensions and Weights for a Standard DRX-Evolution on Page 6</a>.</p> <p>For stationary wall installations:</p> <ul style="list-style-type: none"> <li>The recommended floor construction is 20,684.27 kPa (3,000.00 psi) concrete.</li> <li>The floor must not yield to a 226.8 kg (500.0 lb) load per mounting bolt.</li> </ul>

### Note

If 6.0 m (19.7 ft) rails are used, the delivery path to the exam room must meet a requirement of 6.0 m (19.7 ft).

### Other Dimensions

Area	Size
Room access opening	214 x 120 cm (84 x 47in.)
Hallway	152 cm (60 in.)
Elevator—crated system	Dimensions for crated equipment:
<ul style="list-style-type: none"> <li>Minimum door opening</li> <li>Minimum elevator depth</li> <li>Minimum elevator width</li> </ul>	<ul style="list-style-type: none"> <li>111 cm (44 in.)</li> <li>234 cm (96 in.)</li> <li>152 cm (60 in.)</li> </ul>

## Operator Equipment Viewing Requirement

When the equipment is installed, the operator must be able to see and control the interaction between the equipment and the patient, or between the equipment and other people, to avoid patient injury.

## Service Access Requirements

For access to the OTC, the customer must provide 2 ceiling access panels, 60.9 x 60.9 cm (24.0 x 24.0 in.).

## Electrical Requirements



### Important

The following amperage and kilowatt values assume an equipment load under normal conditions. The values do not reflect requirements for total electrical service needed.

All electrical connections should conform to the National Electrical Code and to state and local regulations for the country or locality in which the equipment is installed.

### Main Power Configurations



#### WARNING

- A Wye configuration is required.
- The size of the wire cannot exceed 2/Ø AWG from the disconnect to the PDU.
- A 110/240 V (ac) outlet is required for the detector battery charger. Location by customer.

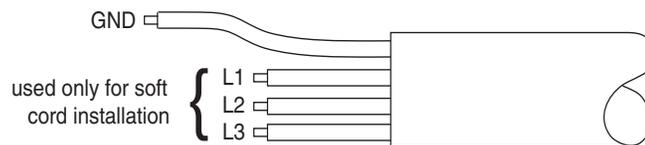
### Voltage Configurations

	Output Power	80 kW	65 kW
<b>Voltage</b>	Power Requirements	380/400/480 V (ac), 3-Phase Wye	
	Frequency Range	50/60 Hz	
	Maximum Line Voltage Variation	±10 %	
	Maximum Phase Imbalance	±2 %	
<b>Current</b>	Maximum Intermittent	166 A at 380 V (ac)	140 A at 380 V (ac)
		158 A at 400 V (ac)	135 A at 400 V (ac)
		143 A at 480 V (ac)	115 A at 480 V (ac)
	Maximum Continuous	5A	
<b>Line Impedance</b>	Maximum	0.11 Ohms at 380 V (ac)	0.14 Ohms at 380 V (ac)
		0.13 Ohms at 400 V (ac)	0.15 Ohms at 400 V (ac)
		0.17 Ohms at 480 V (ac)	0.21 Ohms at 480 V (ac)
<b>Recommended Distribution Power</b>	Incoming Apparent Power	105 kVA	85 kVA
<b>Wiring and Fuses</b>	Lockable Circuit Disconnect and Fuses	100 A at 380 V (ac)	80 A at 480 V (ac)
		100 A at 400 V (ac)	80 A at 480 V (ac)
		80 A at 480 V (ac)	80 A at 480 V (ac)
<b>Wire</b>	Maximum	Sized per code (maximum 2/Ø AWG)	

### Installation Where Mains Connection Is Made with a Soft Cord

All electrical connections should conform to the National Electrical Code and to the state and local regulation for the country or locality in which the equipment is installed.

Conductors of the power supply cord must be arranged so that if the cord anchorage fails, the Protective Earth Conductor is not subject to strain as long as the phase conductors are in contact with their terminals.



H230\_0050AC

### Operational

The cables for the system are not plenum-rated.

### Power Conditioning

Conditioning is necessary because the quality of AC power changes with the site. Power conditioning equipment attenuates line noise, makes the line voltage stable, and isolates the load from the power source.

X-ray generation equipment will require conditioned power if the 380/400/480 V (ac) input power is not within a line voltage variation of  $\pm 10\%$ , the frequency is not within  $\pm 5\%$ , or the phase imbalance is not within  $\pm 2\%$ .

If power conditioning is not available on site, the customer must provide and install power conditioning equipment.

### Circuit Protection

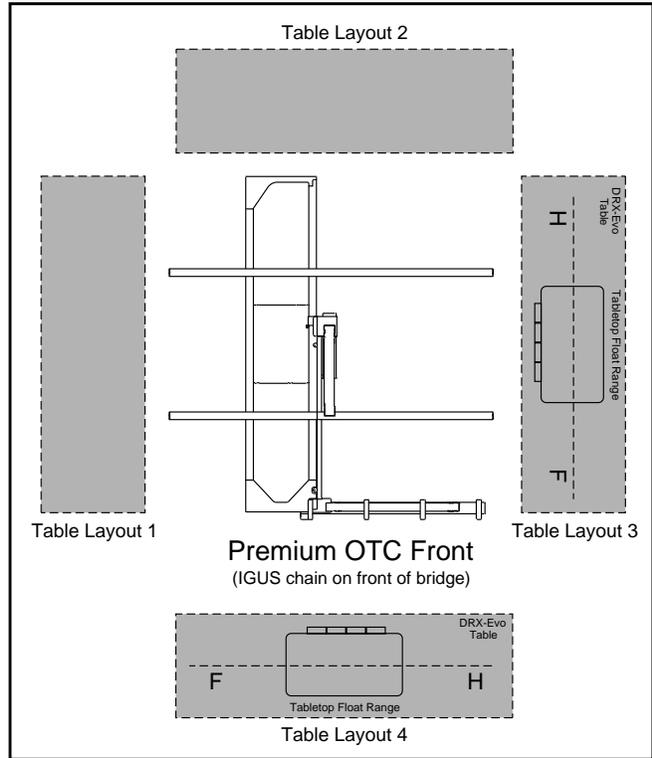
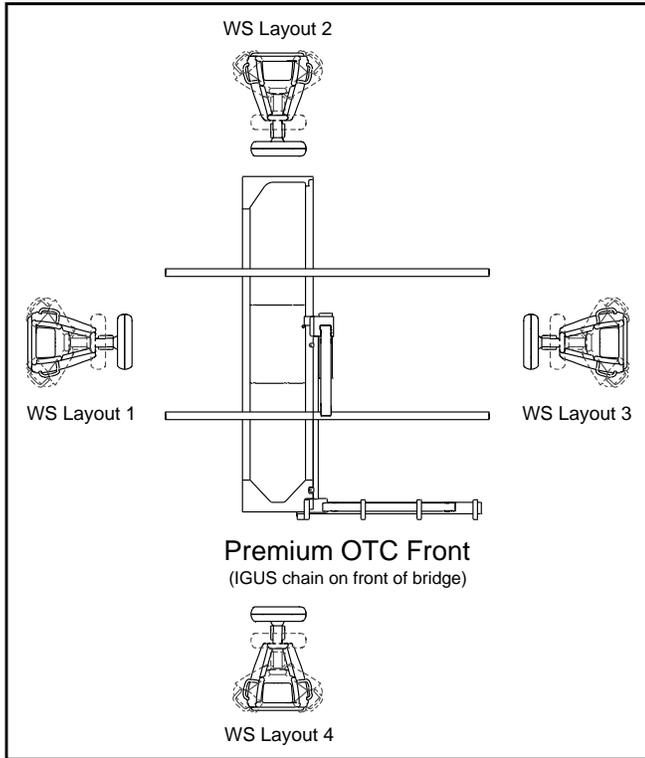


#### WARNING

A fuse-protected main disconnect between the power supply and the equipment is recommended. The disconnect should feature a knife-type switch with a lockout safety feature to prevent accidental restoring of electrical power. The term lockout indicates the use of a padlock that prevents energizing the power.

# Room Layouts

## Equipment Layout Definition 1–4



H230\_7005HC

**Example 1**

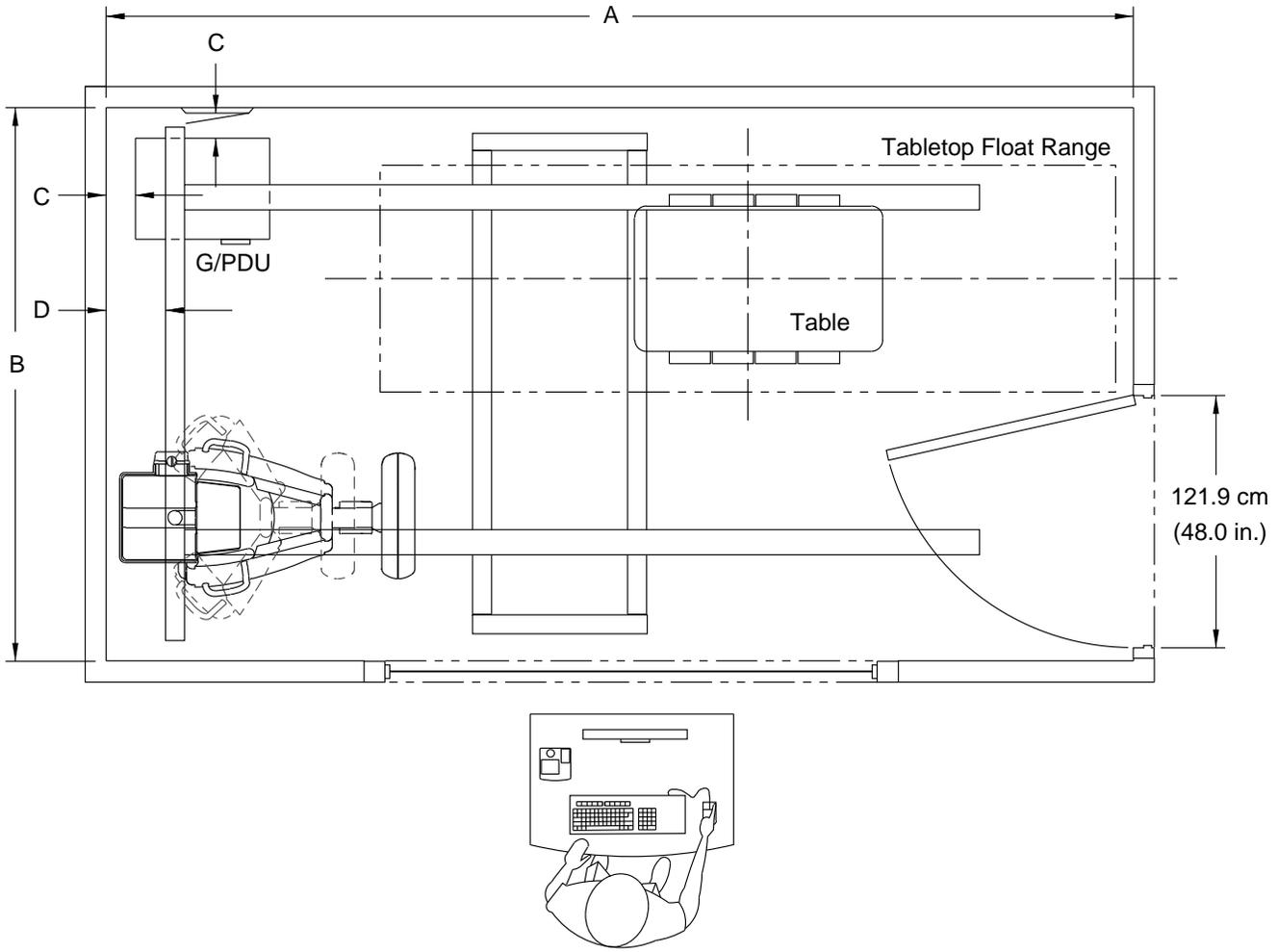
Example 1 represents the minimum room size for full functionality with the wall stand positioned to the left of the OTC. To achieve the minimum room size:

- The transverse bridge is cut to the minimum length of 2.34 m (92.10 in.).
- The longitudinal rails are cut to the minimum length of 4.0 m (157.5 in.) to achieve a 2.0 m (78.8 in.) SID.
- The wall stand is shown with the movable X-rail option, but the X-rail can be fixed mounted.
- The table and wall stand are positioned as shown to eliminate the possibility of the tabletop touching the wall stand at the maximum table float.
- If you use the X-rail and fully extend the bucky, the table float might allow the tabletop to touch the bucky.
- The operator area is outside of the room.
- The room is a simple rectangular shape with no obstacles or obstructions, such as columns, soffits, cabinets, plumbing, or surface-mounted equipment.

For a larger SID, use longer longitudinal rails and calculate the new minimum room size.

For Example 1 with only a wall stand, see [“Example 1—Wall Stand Layout 1 Only” on Page 39](#).

Example 1—Wall Stand Layout 1 and Table Layout 2



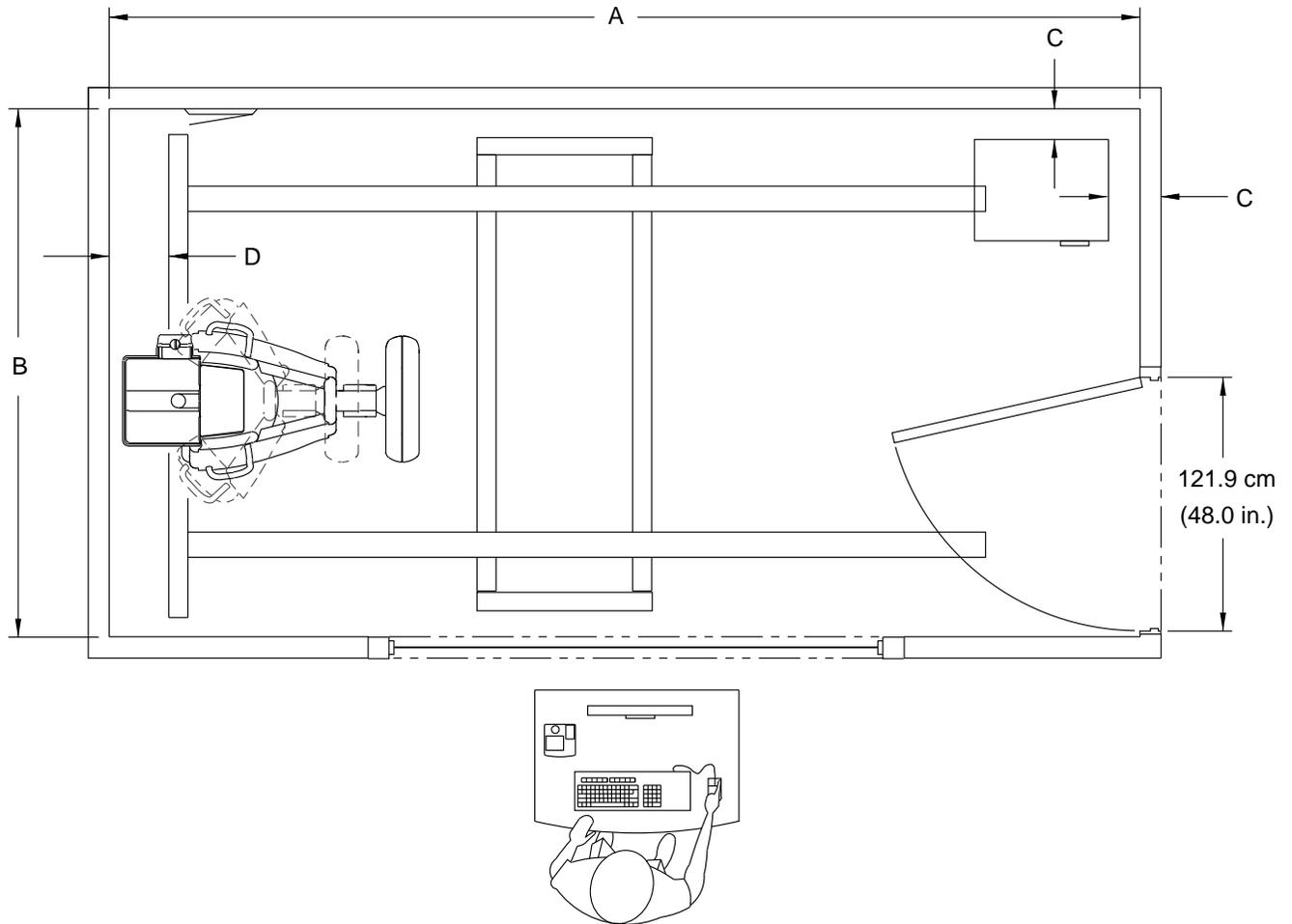
H230\_0208DC

**Note**

For a CARESTREAM wall stand with a stationary ceiling mount, see [“Stationary Wall Stand Ceiling Mount Interface Dimensions” on Page 20](#) for the minimum D dimensions.

Transverse Rail Length	Longitudinal Rail Length	Minimum Room Length A	Minimum Room Width B	Minimum C	Minimum D
2.34 m (92.10 in.)	4.0 m (157.5 in.)	5.0 m (197.0 in.)	2.7 m (106.3 in.)	9.0 cm (3.5 in.)	27.0 cm (10.6 in.)

Example 1—Wall Stand Layout 1 Only



H230\_0209DC

**Note**

For a CARESTREAM wall stand with a stationary ceiling mount, see [“Stationary Wall Stand Ceiling Mount Interface Dimensions” on Page 20](#) for the minimum D dimensions.

Transverse Rail Length	Longitudinal Rail Length	Minimum Room Length A	Minimum Room Width B	Minimum C	Minimum D
2.34 m (92.10 in.)	4.0 m (157.5 in.)	4.79 m (188.60 in.)	2.7 m (106.3 in.)	9.0 cm (3.5 in.)	27.0 cm (10.6 in.)

### Example 2

Example 2 represents the minimum room size for full functionality with the wall stand positioned to the rear of the OTC. In Room Layout 2, the transverse rails have been cut to the minimum length that still allows:

- Ability to cover the wall stand bucky in the horizontal position with the operator interface of the OTC facing away from the column of the wall stand.
- A 2.0 m (72.0 in.) SID to the wall stand bucky in the retracted position.

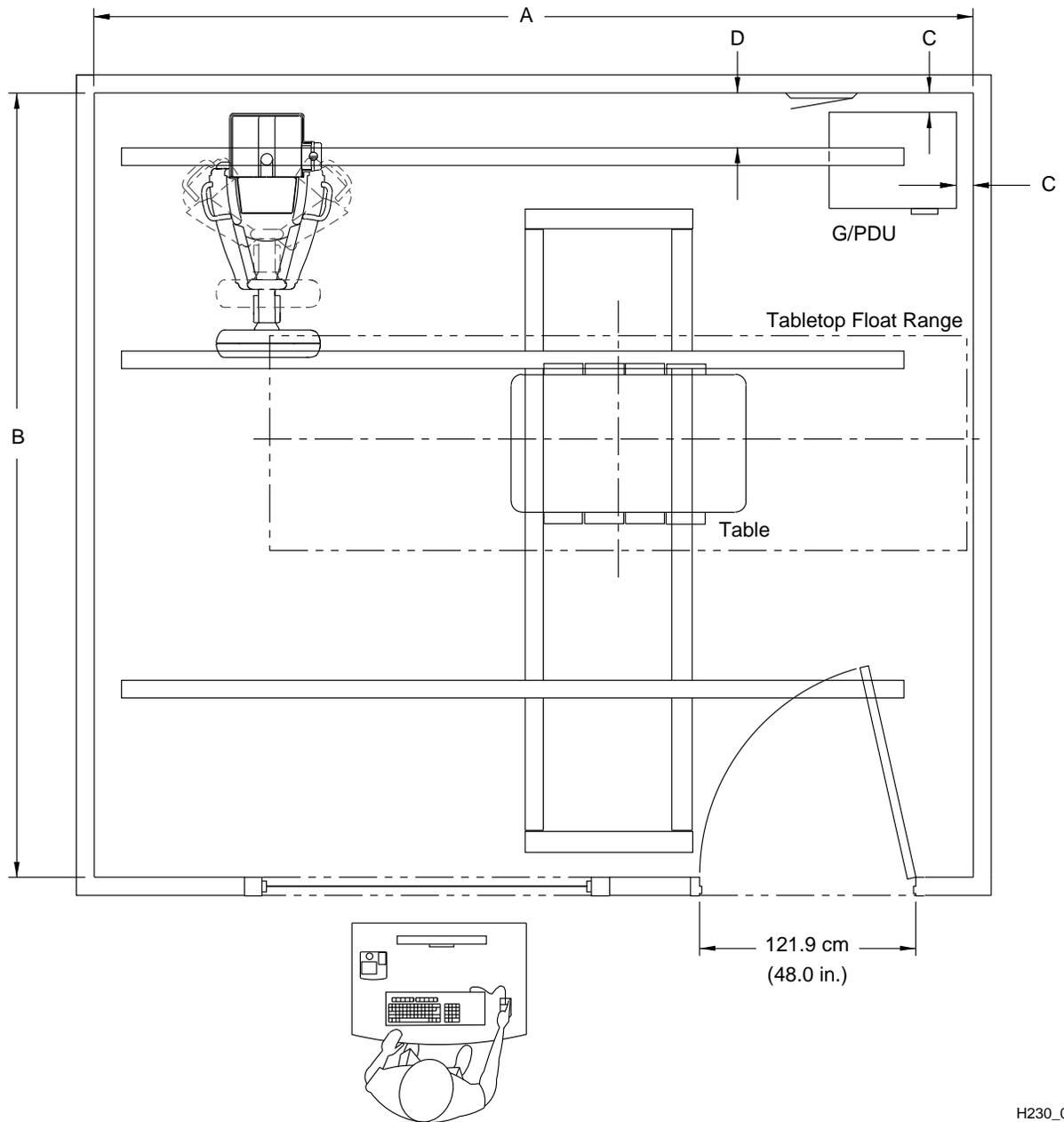
To achieve the minimum room size:

- The transverse bridge is cut to the minimum length of 3.2 m (126.0 in.).
- The longitudinal rails are cut to the minimum length of 4.0 m (158.0 in.) to ensure that the table and wall stand buckies can be covered by the X-ray tube.
- The bridge must pass over the top and overlap the wall stand by a minimum of 7.0 mm (0.3 in.) to achieve a SID of 2.0 m (78.8 in.).
- The wall stand is shown with the X-rail option, but the X-rail can be fixed mounted.
- The operator area is outside of the room.
- The room is a simple rectangular shape with no obstacles or obstructions, such as columns, soffits, cabinets, plumbing, or surface-mounted equipment.

For a larger SID, use longer longitudinal rails and calculate the new minimum room size.

For Example 2 with only a wall stand, see [“Example 2—Wall Stand Layout 2 Only” on Page 42](#).

Example 2—Wall Stand Layout 2 and Table Layout 2



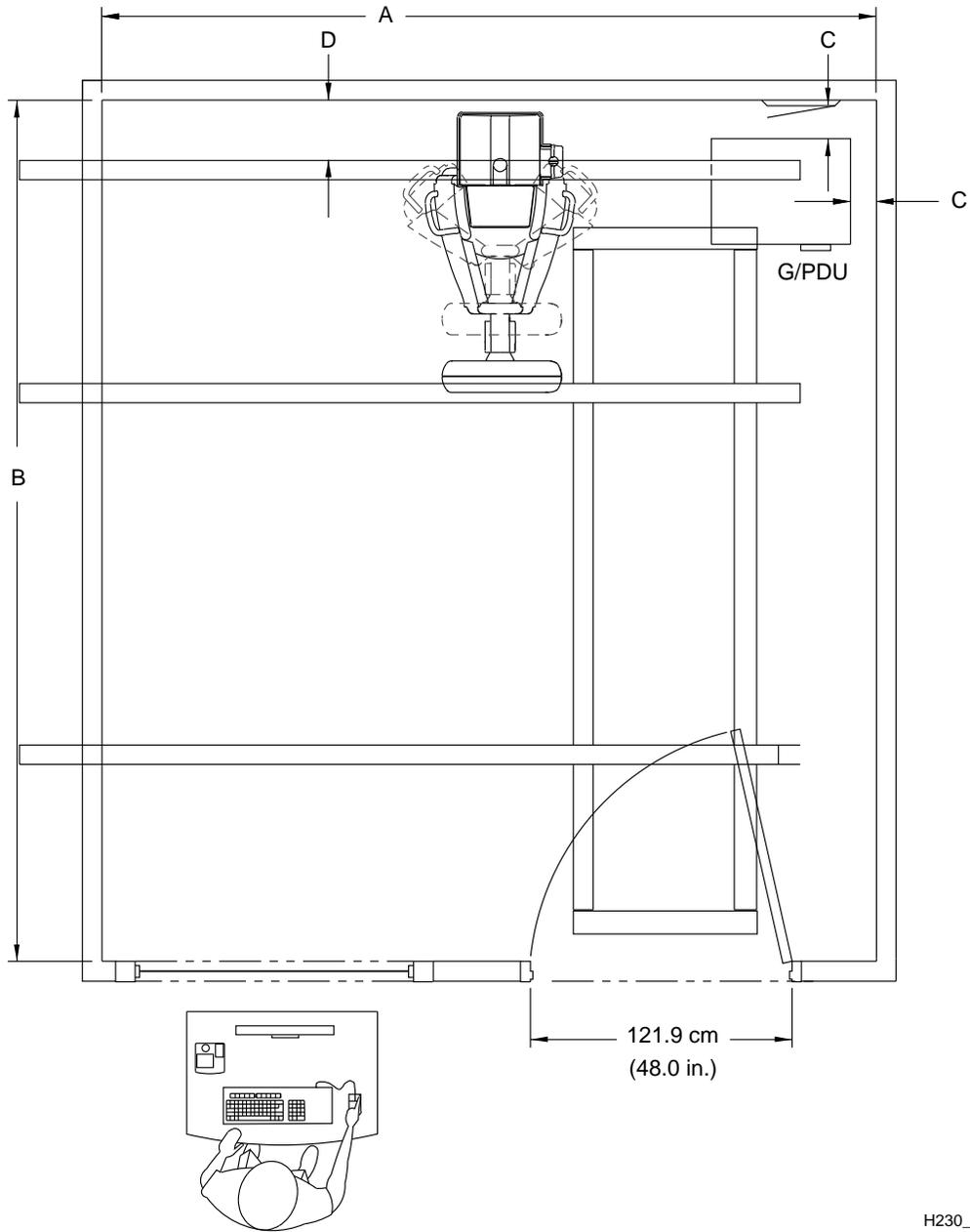
H230\_0210DC

**Note**

For a CARESTREAM wall stand with a stationary ceiling mount, see [“Stationary Wall Stand Ceiling Mount Interface Dimensions” on Page 20](#) for the minimum **D** dimensions.

Transverse Rail Length	Longitudinal Rail Length	Minimum Room Length A	Minimum Room Width B	Minimum C	Minimum D
3.2 m (126.0 in.)	4.0 m (158.0 in.)	4.5 m (177.8 in.)	4.0 m (158.0 in.)	9.0 cm (3.5 in.)	27.0 cm (10.6 in.)

Example 2—Wall Stand Layout 2 Only



H230\_0211DC



**Note**

For a CARESTREAM wall stand with a stationary ceiling mount, see [“Stationary Wall Stand Ceiling Mount Interface Dimensions” on Page 20](#) for the minimum D dimensions.

Transverse Rail Length	Longitudinal Rail Length	Minimum Room Length A	Minimum Room Width B	Minimum C	Minimum D
3.2 m (92.2 in.)	3.0 m (118.2 in.)	3.6 m (141.8 in.)	4.0 m (157.5 in.)	9.0 cm (3.5 in.)	27.0 cm (10.6 in.)

**Example 3**

Example 3 represents the minimum room size for full functionality with the wall stand positioned to the right of the OTC. To achieve the minimum room size:

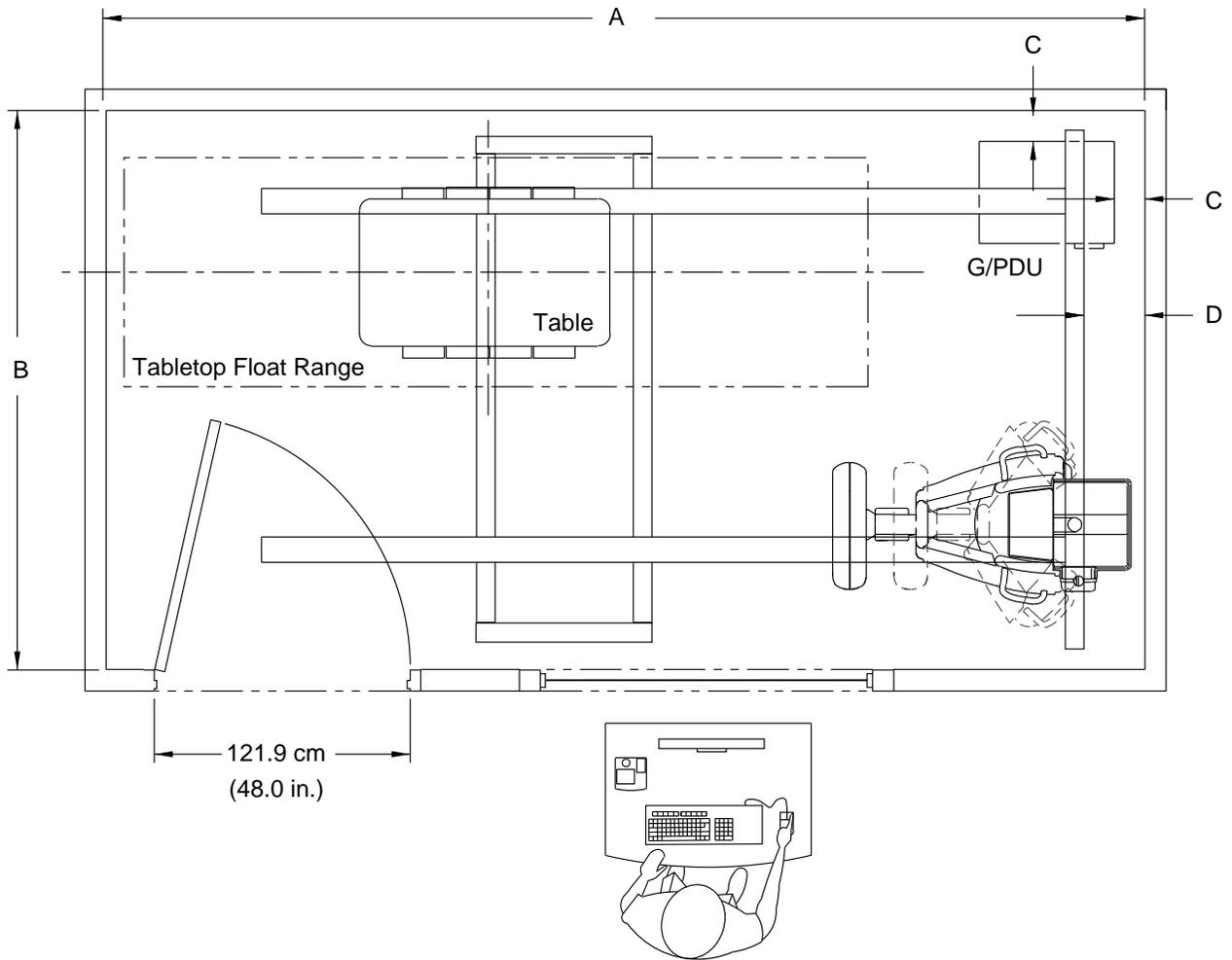
- The transverse bridge is cut to the minimum length of 2.34 m (92.20 in.).
- The longitudinal rails are cut to the minimum length of 4.0 m (157.5 in.) to achieve a 2.0 m (78.8 in.) SID to the wall stand bucky in the retracted position.
- The table and wall stand are positioned as shown to eliminate the possibility of the tabletop hitting the wall stand at the maximum table float.
- If you use the X-rail and fully extend the bucky, the table float might allow the tabletop to hit the bucky.
- The operator area is outside of the room.
- The room is a simple rectangular shape with no obstacles or obstructions such as columns, soffits, cabinets, plumbing, or surface mounted equipment.

For a larger SID, use longer longitudinal rails and calculate the new minimum room size.

**Limitations of Example 3 with the Premium OTC**

- The wall stand-only version is not recommended unless you are only doing upright exams.
- When the X-ray tube is positioned over the horizontal wall stand bucky, the beta angle remains at 0 degrees when the auto-centering function is requested.
- It is not possible to have the operator control of the wall stand face away from the wall stand when imaging over the horizontal wall stand. This does not allow angled exposures along the long axis of a stretcher that may be placed over the horizontal wall stand bucky.

Example 3—Wall Stand Layout 3 and Table Layout 2



H230\_0212DC

**Note**

For a CARESTREAM wall stand with a stationary ceiling mount, see [“Stationary Wall Stand Ceiling Mount Interface Dimensions” on Page 20](#) for the minimum D dimensions.

Transverse Rail Length	Longitudinal Rail Length	Minimum Room Length A	Minimum Room Width B	Minimum C	Minimum D
2.34 m (92.10 in.)	4.0 m (157.5 in.)	5.0 m (197.0 in.)	2.7 m (106.3 in.)	9.0 cm (3.5 in.)	27.0 cm (10.6 in.)

**Example 4**

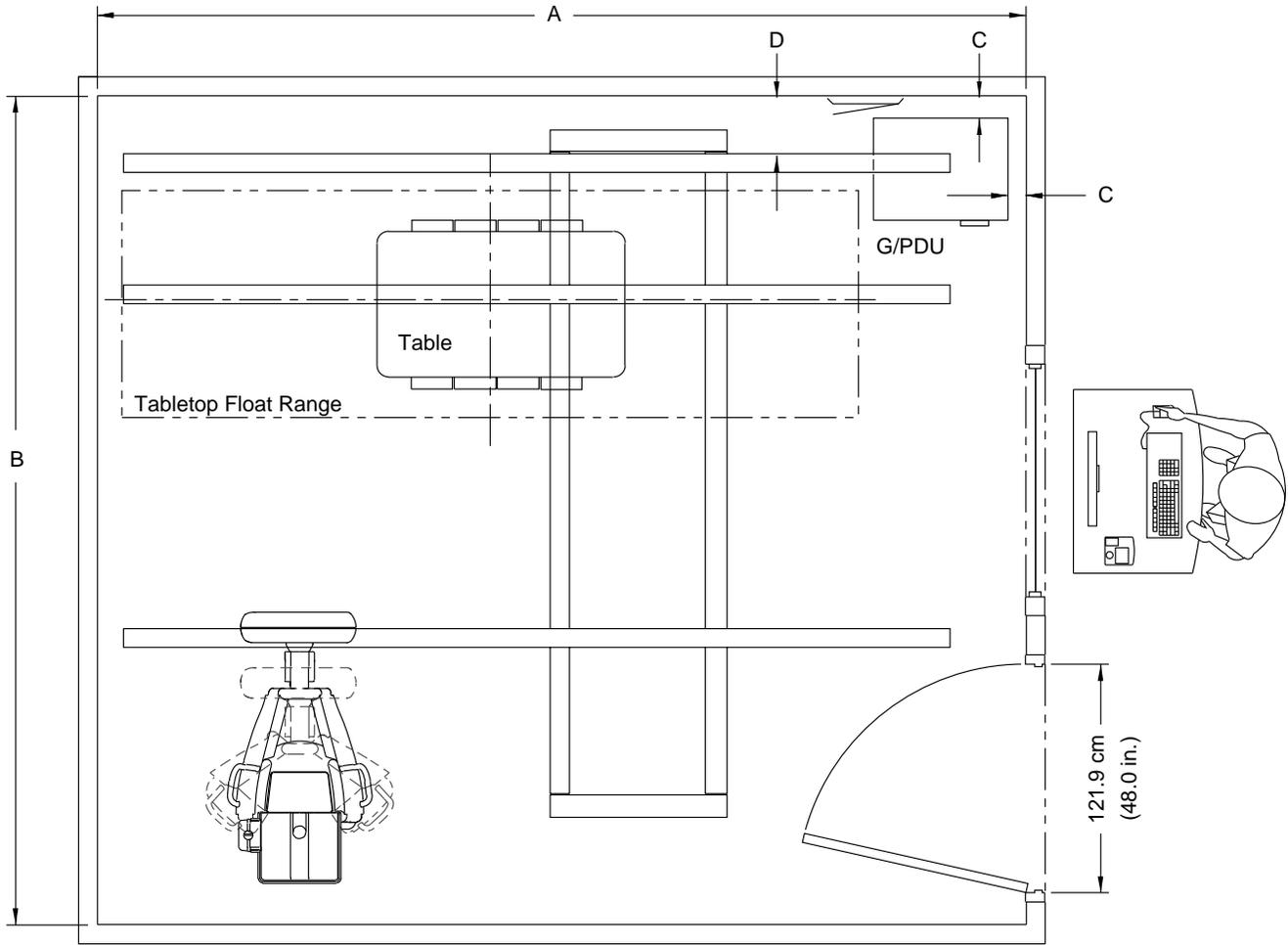
Example 4 represents the minimum room size for full functionality with the wall stand positioned to the right of the OTC. To achieve the minimum room size:

- The transverse bridge is cut to the minimum length of 2.34 m (92.20 in.).
- The longitudinal rails are cut to the minimum length of 4.0 m (157.5 in.) to achieve a 2.0 m (78.8 in.) SID to the wall stand bucky in the retracted position.
- The table and wall stand are positioned as shown to eliminate the possibility of the tabletop hitting the wall stand at the maximum table float.
- If you use the X-rail and fully extend the bucky, the table float might allow the tabletop to hit the bucky.
- The operator area is outside of the room.
- The room is a simple rectangular shape with no obstacles or obstructions such as columns, soffits, cabinets, plumbing, or surface-mounted equipment.

For a larger SID, use longer longitudinal rails and calculate the new minimum room size.

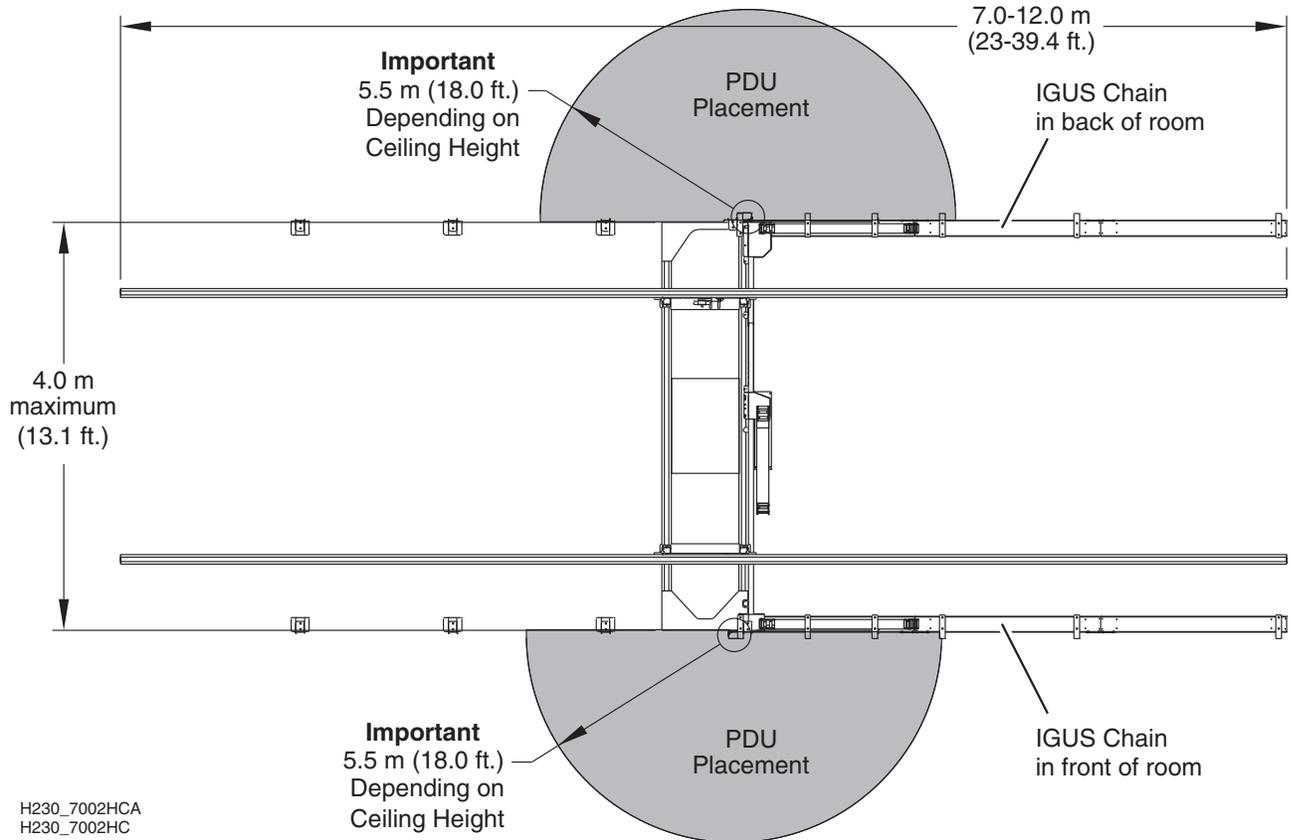
**Limitations of Example 4:** Due to the design of the OTC, example 4 does not allow imaging to the horizontal wall stand bucky. Example 4 allows only for imaging to the vertical wall stand bucky with both the basic and premium OTC.

**Example 4—Wall Stand Layout 4 and Table Layout 2**



Transverse Rail Length	Longitudinal Rail Length	Minimum Room Length A	Minimum Room Width B	Minimum C	Minimum D
2.34 m (92.10 in.)	4.0 m (157.5 in.)	5.0 m (197.0 in.)	2.7 m (106.3 in.)	9.0 cm (3.5 in.)	27.0 cm (10.6 in.)

## Transbay Equipment Layout

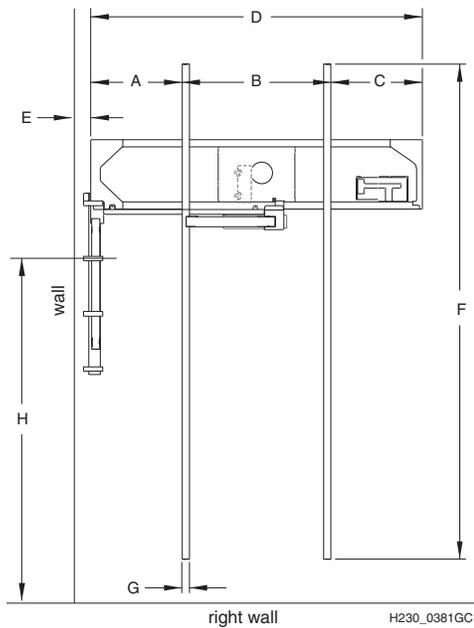


### Important

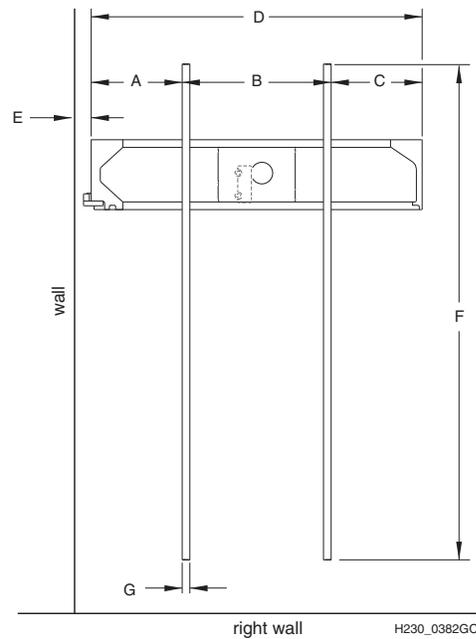
The transbay system is a non-motorized OTC with longitudinal rails extending to a maximum of 12.0 m (39.4 ft). The transbay system does not include a wall stand or table. The IGUS chain is an extended length, and can be installed in either the front or the back of the room. The PDU can be placed 5.5 m (18.0 ft) from the chimney, depending on the height of the ceiling.

## Layout Dimensions for the Longitudinal Rails

### Premium OTC Rail Spacing



### Basic OTC Rail Spacing



Bridge Length (D)	A	B	C
<b>Premium</b>	Minimum 36.0 cm (14.2 in.)	<b>Premium</b>	Minimum 43.0 cm (16.9 in.)
Minimum 1.5 m (59.0 in.)	Ideal 60.0 cm (23.6 in.)	Minimum 114.0 cm (44.9 in.)	Ideal 60.0 cm (23.6 in.)
Maximum 4.0 m (157.5 in.)	Maximum 90.0 cm (35.4 in.)	Maximum 321.0 cm (126.4 in.)	Maximum 100.5 cm (36.6 in.)
<b>Basic</b>		<b>Basic</b>	
Minimum 2.3 m (92.1 in.)		Minimum 71.0 m (28.0 in.)	
Maximum 4.0 m (157.5 in.)		Maximum 321.0 cm (126.4 in.)	
		*See Note below.	

### Note

- Longitudinal rail spacing (outside to outside)  $B = D - (A + C)$ 
  - Premium B (ideal minimum) =  $2340 - (600 + 600) = 1140$  mm
  - Premium B (ideal maximum) =  $4000 - 600 + 600 = 2800$  mm
  - Premium B (absolute maximum) =  $4000 - (360 + 430) = 3210$  mm
  - Basic B (minimum) =  $1500 - (360 + 430) = 710$  mm
  - Basic B (Ideal maximum) =  $4000 - (600 + 600) = 2800$  mm
  - Basic B (absolute maximum) =  $4000 - (360 + 430) = 3210$  mm
- Rail spacing is determined by the bridge length and may need to be altered due to obstructions. For example: sprinklers, lights, sensors

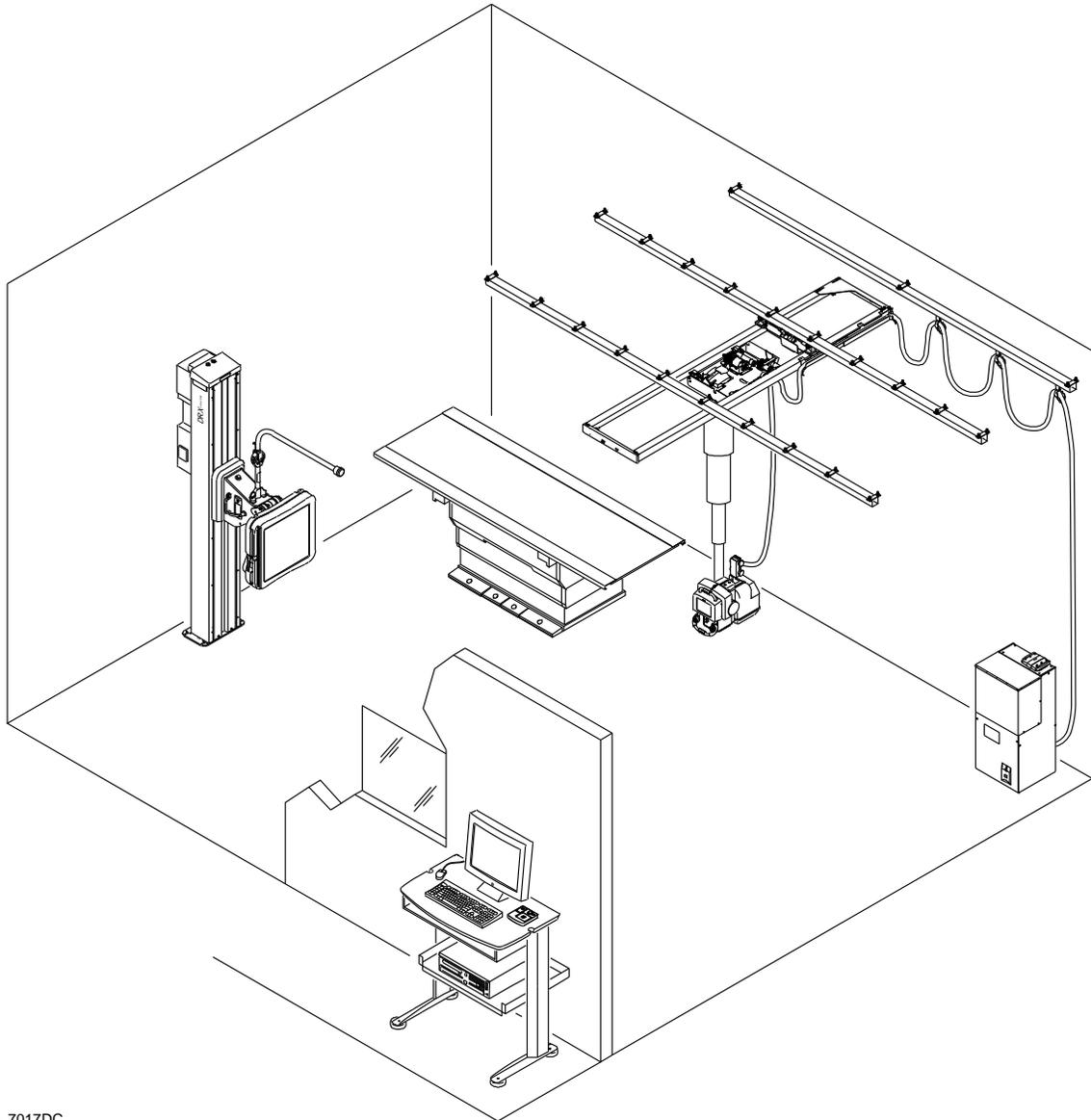
### Additional Dimensions

Item	Description	Dimension Premium	Dimension Basic
E	Bridge, distance to the wall	10.0 cm (3.9 in.)	10.0 cm (3.9 in.)
F	Longitudinal, rail Length	4.0 – 6.0 m (13.1 – 19.7 ft)	4.0 – 6.0 m (13.1 – 19.7 ft)

Item	Description	Dimension Premium	Dimension Basic
G	Longitudinal, rail width	10.0 cm (3.9 in.)	10.0 cm (3.9 in.)
H	Minimum distance from the right wall to the chimney	300.0 ± 66.0 cm (118.0 in ± 26.0 in.)	N/A

## Cabling for the Basic OTC

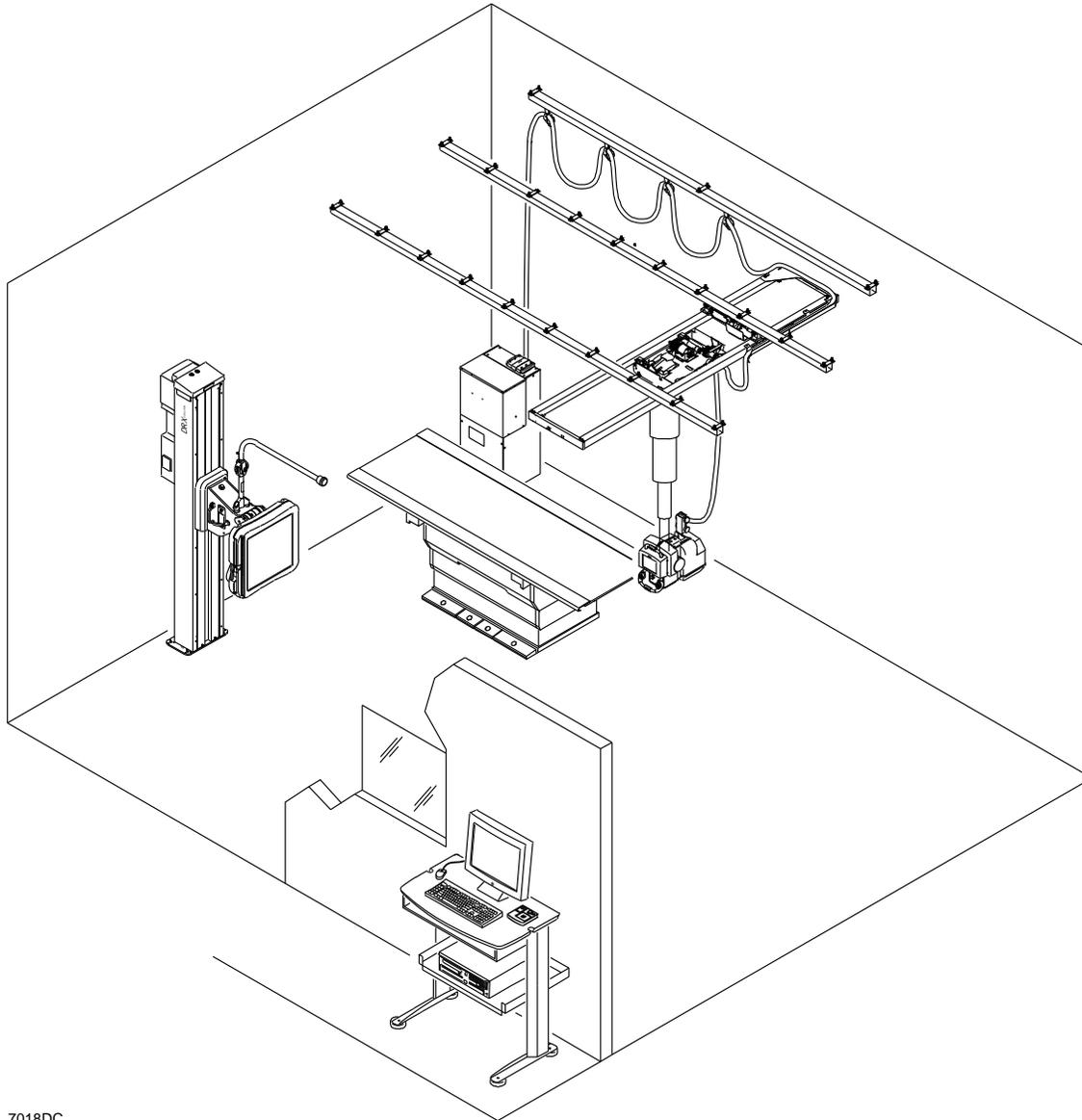
### Take-up Rail to the Right



H230\_7017DC

This graphic displays the take-up rail to the right side of the OTC. The cables from the OTC are routed along the take-up rail to the PDU.

Take-up Rail to the Left



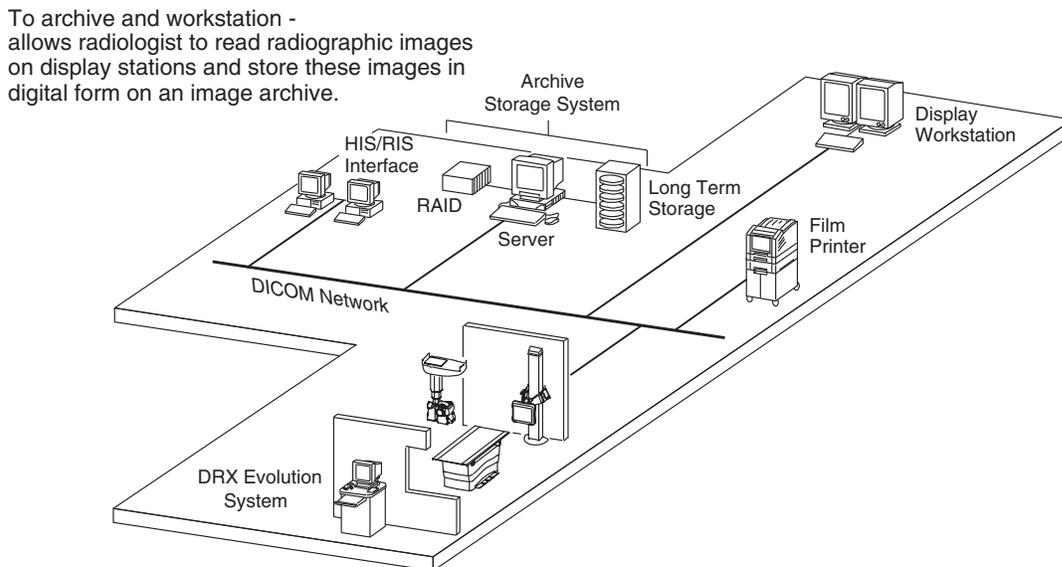
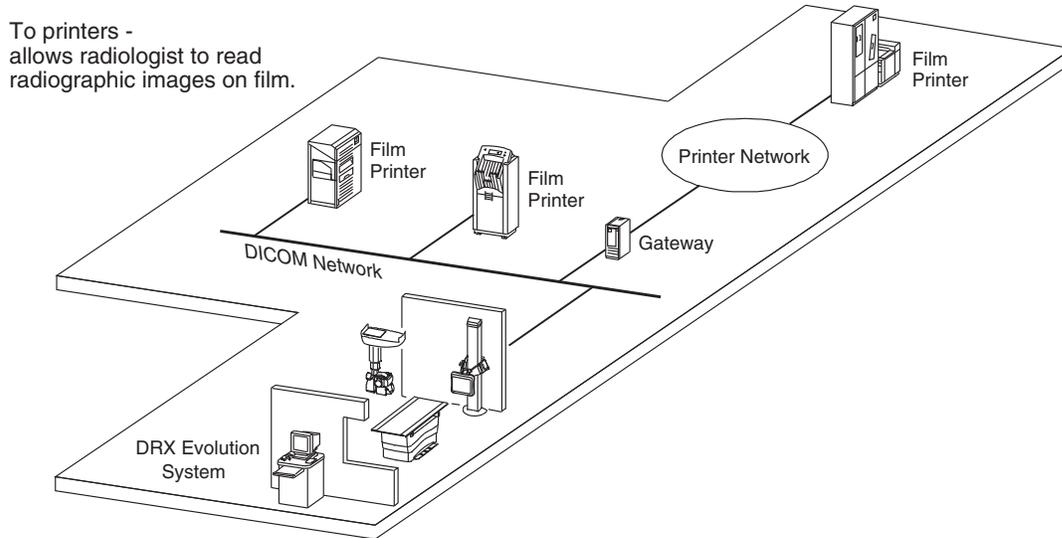
H230\_7018DC

This graphic displays the take-up rail to the left side of the OTC. The cables from the OTC are routed along the take-up rail to the PDU.

## Section 5: Network Configurations

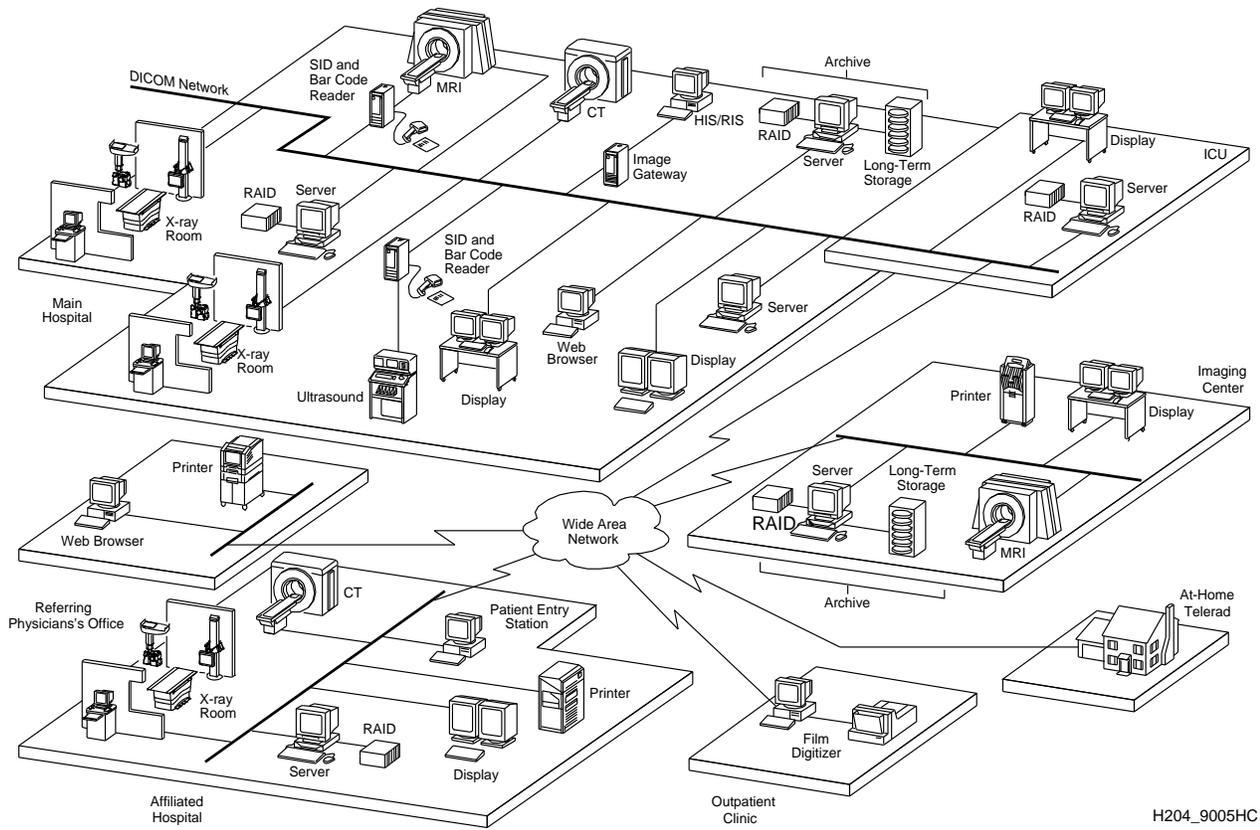
### Network Configuration

The figure captures the DRX-Evolution connected to the output devices through a local and wide area network.



H230\_9000DC

### Typical Wide Area Network (WAN) Configuration



H204\_9005HC

## Communication Requirements

### Recommended Network Requirements



#### Important

- 10 Base-2 (Thin Net), 10 Base-5 (Thick Net), and all BNC networks are not supported.
- The maximum operation will not occur if the minimum requirements are not available.
  - 100 BaseT
  - Full-Duplex
  - Switched
- The network patch cable is provided by the customer.

### Telephone Line Requirements

There must be one telephone line for the technician to communicate with your Carestream Health service provider.



#### Note

Additional telephone lines might be a requirement. See [“Remote Access Requirements” on Page 53](#).

### Remote Access Requirements

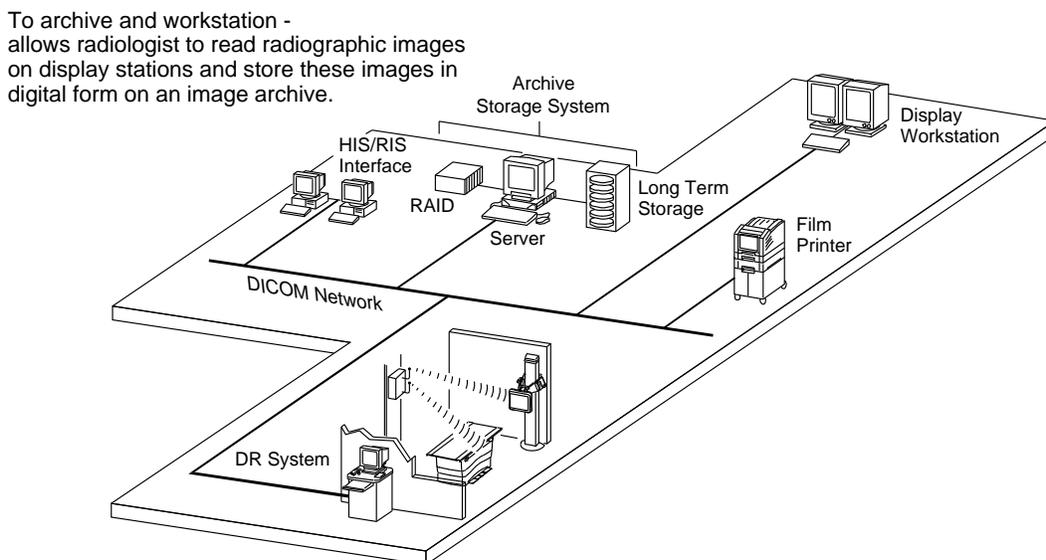
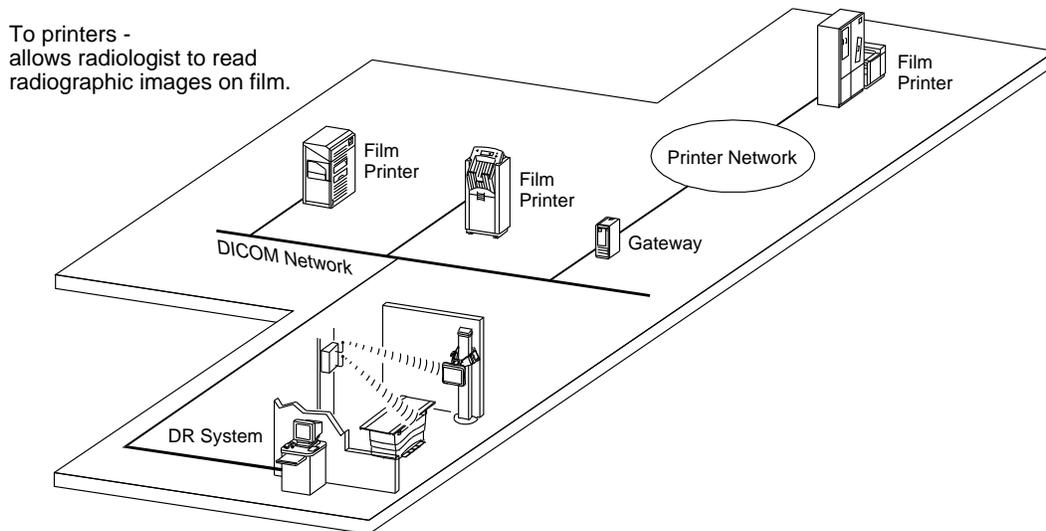
Remote Access Method	Customer Information	Hardware Requested From Customer
Connection to the DRX-Evolution	1 IP Address	Live network connection
Direct-dial connection through other CR or DR Systems	<ul style="list-style-type: none"> <li>• Telephone number</li> <li>• 1 IP address on the same subnet as the system that will be connected to the modem. The system that will be connected to the modem line will need 3 IP addresses.</li> </ul>	<ul style="list-style-type: none"> <li>• Live modem line to one of the other devices on the same subnet</li> <li>• Live network connection</li> </ul>

## DRX-1 System Wireless Network Specifications



### Important

- This system uses a private WLAN, not the hospital/clinic WLAN.
- The system can have no more than 3 detectors associated with the AP, where only one of the clients will be actively communicating with the AP.
- The DRX-1 System AP channel is fixed and the transmit power is set at installation.
- Because of the intermittent bursts of data lasting only a few seconds and the low transmission power, the impact of the DRX-1 System WLAN on the hospital mobile devices is minimal.



H224\_9010DC

## DRX-1 System Wireless Network Specifications

<b>Technical Specifications</b>	
<b>Network Protocol</b>	TCP/IP
<b>Network Type</b>	Isolated private wireless LAN (WLAN)
<b>Wireless Protocol</b>	802.11 A or N
<b>Band 1/2 Antenna</b>	
Frequency Band	5.15–5.35 GHz
Available Channels (fixed at installation)	36, 40, 44, and 48
<b>Band 4 Antenna</b>	
Frequency Band	5.745–5.825 GHz
Available Channels (fixed at installation)	149, 153, 157, 161, and 165
<b>Maximum Power of Detector Radio)</b>	50 mW
<b>Number of Antennas on Detector</b>	One each on 2 sides
<b>IP Addressing</b>	Static private IP addresses for detectors, AP, and console
<b>Agency approvals</b>	FCC Part 15
<b>Typical Data Size</b>	One 15 MB file per image
<b>Dual Homed PC (two NIC cards)</b>	Hospital network connection, private network connection

<b>Security</b>	
<b>WPA2-PSK AES</b>	Factory and user-loaded keys, WPA2–Personal, FIPS 140-2 compliant AES encryption
<b>SSID</b>	Broadcast
<b>Private Patient Identification Data</b>	No patient ID data exchanged with detector
<b>Username and Password</b>	Non-default username and password

## Section 6: DRX-Evolution Installation Labor Guide

The following tables for Days 1 — 5 show the suggested activities, minimum and maximum hours, number of installers, and total hours and installer hours.

### Day 1

Suggested Activities	Minimum Hr	Maximum Hr	Installer 1	Installer 2	Total Installer Hours
Deliver of the system and cut the rails	2.0	3.0	1.0	1.0	2.0
Hang the OTC longitudinal rails	3.0	4.0	2.0	2.0	4.0
Lay out the room—unpacking	1.5	2.0	1.0	1.0	2.0
Cut the transverse bridge rails and build the bridge	3.0	4.0	2.0	2.0	4.0
Cut and hang the x-rails	1.5	2.0	1.0	1.0	2.0
Install the wall stand and appropriate hardware	1.5	2.0	1.0	1.0	2.0
<b>Totals</b>	12.5	17.0	8.0	8.0	16.0

### Day 2

Suggested Activities	Minimum Hr	Maximum Hr	Installer 1	Installer 2	Total Installer Hours
Hang the OTC to the rails	1.0	2.0	1.0	1.0	2.0
Install the IGUS trays and chain/harness	4.0	6.0	2.0	3.0	5.0
Run cables from the OTC to the PDU	1.0	2.0	1.0	1.0	2.0
Move the PDU to the room and prepare for power	1.0	1.5	1.0	0	1.0
Run cables from the console area to the PDU	1.0	1.5	1.0	1.0	2.0
Position the wall stand and run cables to the PDU	1.5	2.0	1.0	1.0	2.0
Do the daily room cleaning and tool pickup	1.0	2.0	1.0	1.0	2.0
<b>Totals</b>	10.5	17.0	8.0	8.0	16.0

### Day 3

Suggested Activities	Minimum Hr	Maximum Hr	Installer 1	Installer 2	Total Installer Hours
Position the table and run cables to the PDU	1.0	2.0	1.0	1.5	2.5
Do the PDU cabling connections	1.5	2.0	2.0	0	2.0
Do the J-box cabling	0.5	1.0	0	1.0	1.0
Build up the console computer and accessories	1.0	2.0	0	1.5	1.5
Install the longitudinal drive and accessories	1.0	2.0	0	1.5	1.5
Check the incoming power and power up the system	0.5	1.0	1.0	0	1.0
Configure the console SW and FW updates	1.0	2.0	0	1.5	1.5
Do the room mechanical basics and calibration	2.5	3.0	2.0	1.0	3.0
Do the tube calibration and seasoning	1.0	2.0	2.0	0	2.0
<b>Totals</b>	10.0	17.0	8.0	8.0	16.0

**Day 4**

<b>Suggested Activities</b>	<b>Minimum Hr</b>	<b>Maximum Hr</b>	<b>Installer 1</b>	<b>Installer 2</b>	<b>Total Installer Hours</b>
Do the detector configuration and calibration	1.5	2.0	2.0	0	2.0
Mount the table and install covers	1.5	2.0	1.0	1.0	2.0
Mount the wall stand and install covers	1.5	2.0	1.0	1.0	2.0
Install the OTC covers and miscellaneous	1.5	2.0	0	2.0	2.0
Do the AEC calibration	1.5	2.0	1.0	1.0	2.0
Do the acceptance test	1.5	2.0	2.0	0	2.0
Do the daily room cleaning, tool pickup, and contingency	2.5	3.0	1.0	2.0	3.0
<b>Totals</b>	11.5	15.0	8.0	7.0	15.0

**Day 5**

<b>Suggested Activities</b>	<b>Minimum Hr</b>	<b>Maximum Hr</b>	<b>Installer 1</b>	<b>Installer 2</b>	<b>Total Installer Hours</b>
Check the system	0.5	1.0	1.0	0	1.0
Set up the détentes and check the network (print, store, and work list)	1.0	1.5	1.0	0	1.0
Back up the system	0.5	1.0	1.0	0	1.0
Do the daily room cleaning, tool pickup, and contingency	0.5	1.0	1.0	0	1.0
Feed back the Install, FDA 2579, and Acceptance and Compliance forms	0.5	1.0	1.0	0	1.0
<b>Totals</b>	3.0	5.5	5.0	0	5.0

## Section 7: Seismic Approvals

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**Important**

For seismic specifications and approval information, see the *Specification for the Seismic Installations of the CARESTREAM DRX-Evolution/DRX-Evolution Plus*, 6J5580.

## Section 8: Publication History

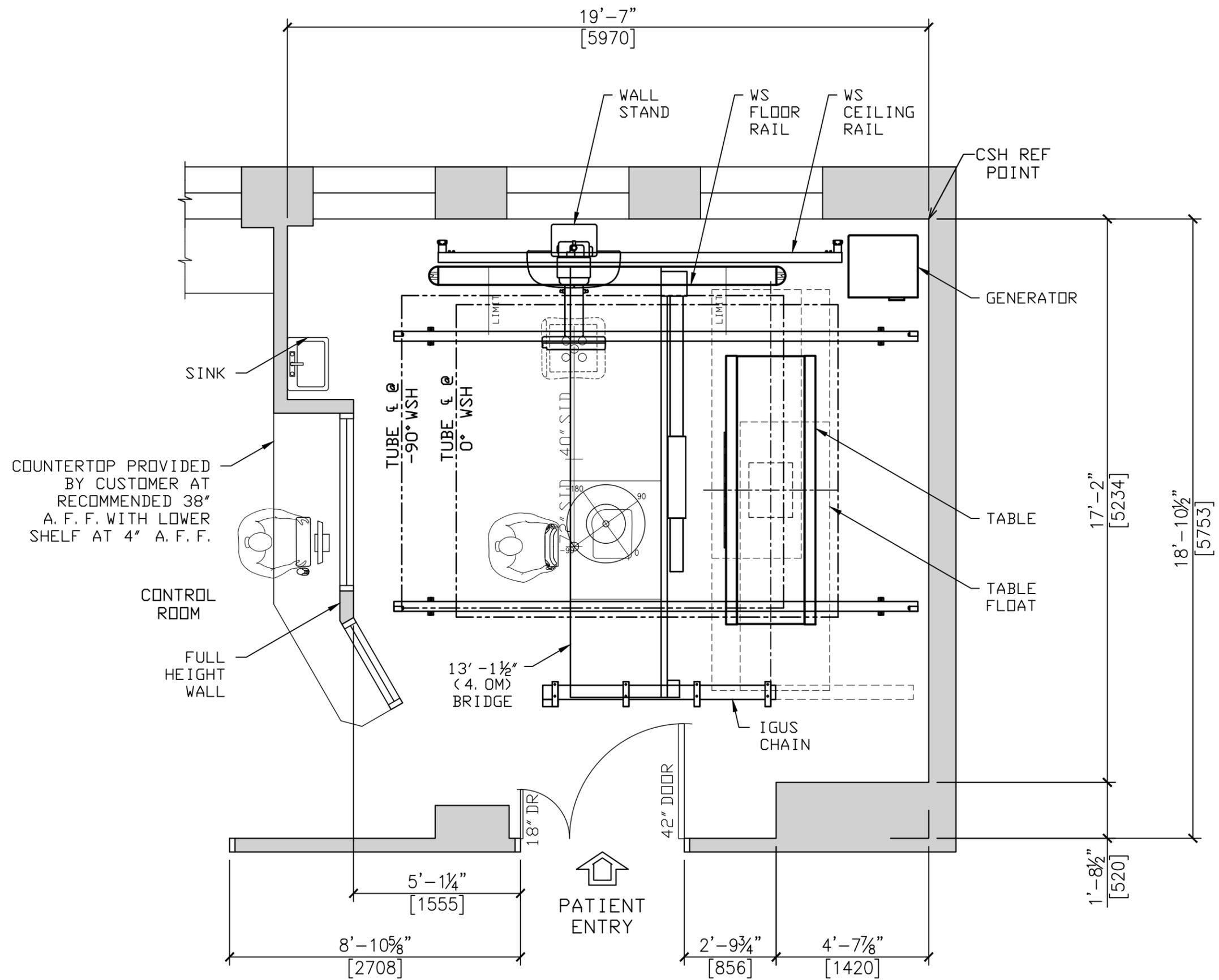
Revision	Publication Date	Changed Pages	Notes
n/a	2009-09-23	All	New Publication
n/a	2009-12-02	Various	Revision
n/a	2010-05-27	Various	Revision
n/a	2010-08-25	Various	Revision
n/a	2010-12-21	Various	Revision
n/a	2011-04-07	Various	Removed the Seismic Approvals section from this publication and created a new publication for Seismic Approvals, 6J5580
n/a	2011-08-19	Various	Updated for the VI Extension project
n/a	2012-04-03	All	Updated and reformatted
n/a	2012-09-12	30, 31, and 32	Updated the ceiling, floor, and electrical structure specifications
n/a	2013-02-21	1 and 22	Updated for the linear tomography
n/a	2014-01-17	8, 31, 44, and Room Layouts section	Updated some specifications and changed the Room Layouts section to Examples 1–4
n/a	2014-09-17	6 and 8	Corrected headings for the PDU and added new packed specifications for the HP 5800 computer
n/a	2015-07-31	6, 11, 22, 28	Added specifications for the OTC Tall Room Extension and removed DRX detector information to reference the Service Portal
n/a	2015-10-16	1 and various	Changed title to include “Evolution Plus” and removed “System” from the DRX-Evolution System throughout
Previous versions were approved in the DocMan document management system			
A	2016-01-08	13, 29, DRX-Evolution Installation Labor Guide section	Updated dimensions for the Table Float and Mounting Anchors for the Table; added CARESTREAM Wall Stand with the X-rail Minimum Ceiling Height—Side View; added a new section for the DRX-Evolution Installation Labor Guide
B	2019-02-06	Throughout	Updated caution symbols to new standards
			Updated revision designation to Alpha 2023-02-16 to match PLI
		12	Added table-base width to illustration and table
		31	Updated wire-size maximum size Updated Power Requirements
		53, 54	Clarified Total Installers column of tables as Total Installer Hours.
C	2019-03-18	31	Updated the Main Power Configurations section
D	2020-06-05	53	Updated the DRX-Evolution Installation Labor Guide tables
E	2021-02-18	Various	Added information for the new table.

Revision	Publication Date	Changed Pages	Notes
F	2021-08-23	Various	Added references and information for VX3733-TAB and VX3733-TABC.
G	2023-02-16	9 12 14 18  24 28 34	Updated info for system computers Updated Vertical Operating Range of the OTC Updated table for Table Top Float Updated drawing for CARESTREAM Basic and Premium Wall Stand  Added Tomosynthesis to section title Added new dimensions Updated Voltage Configurations table

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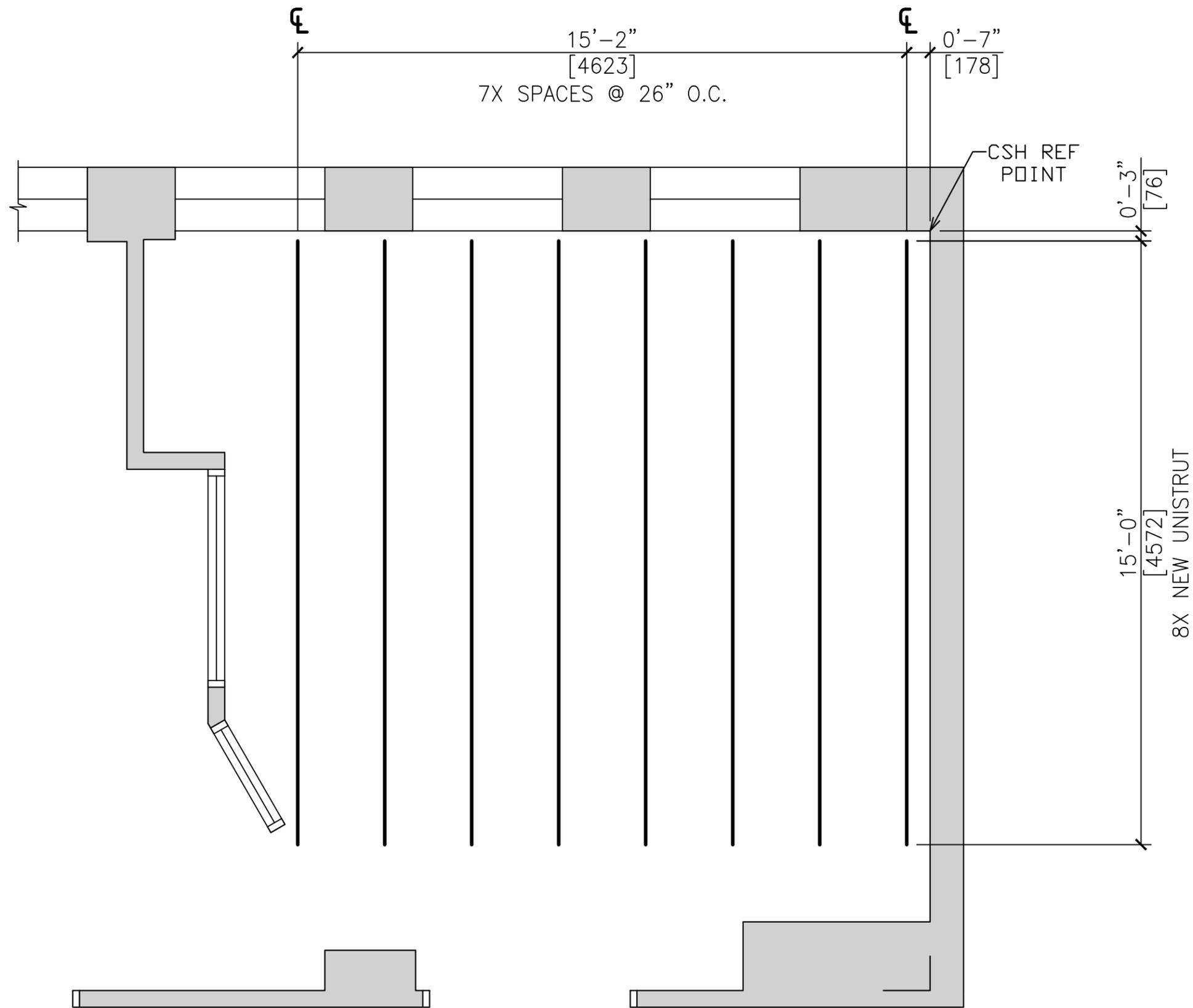
Carestream Health, Inc.  
150 Verona Street  
Rochester, NY, USA14608



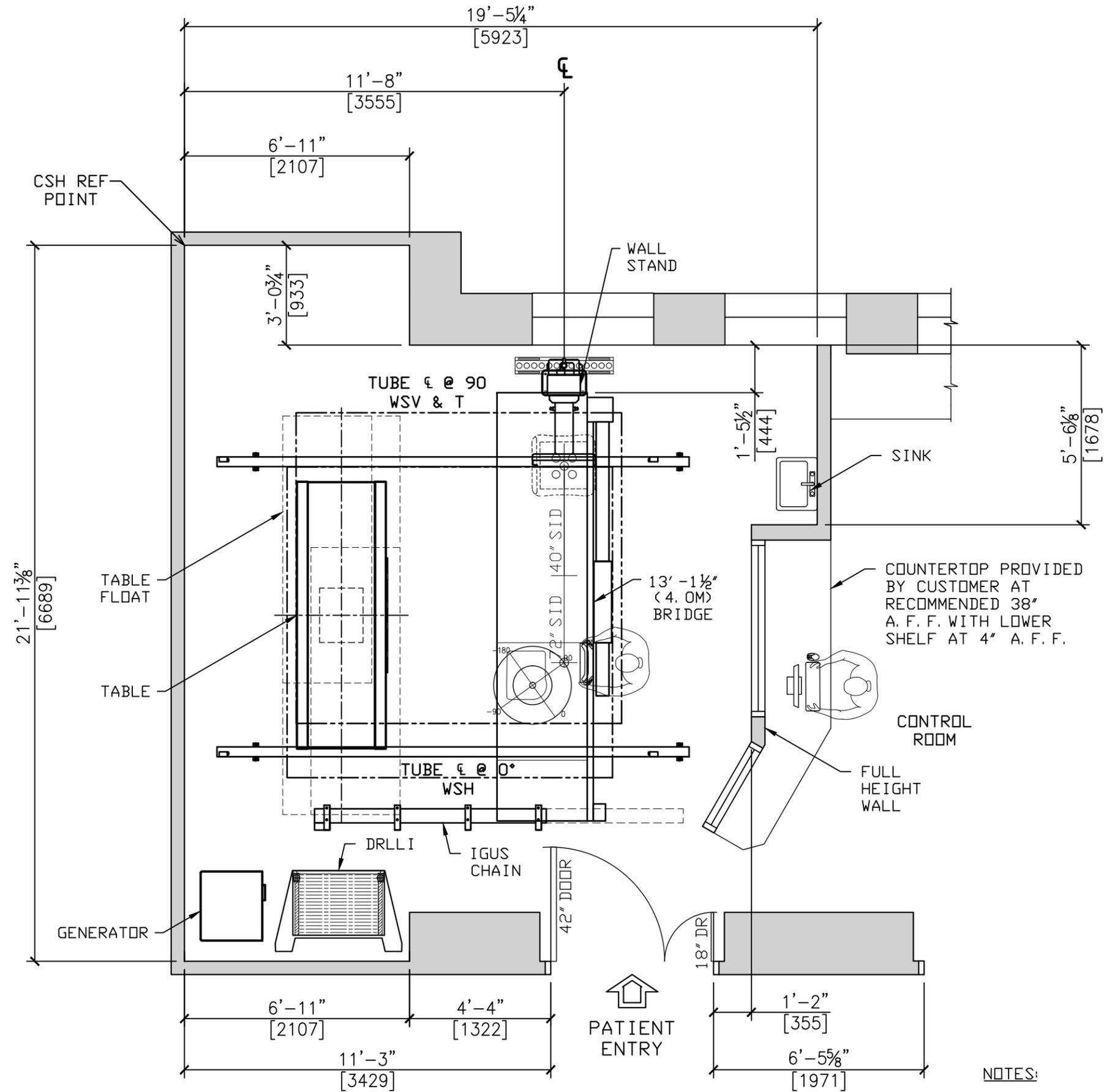
SCARBOROUGH HEALTH NETWORK ROOM 4511  
 EVOLUTION SYSTEM EQUIPMENT PLAN  
 REV-PA3 12-31-2024

NOTES:

72" SID TO FLOOR  
 IS OBTAINABLE

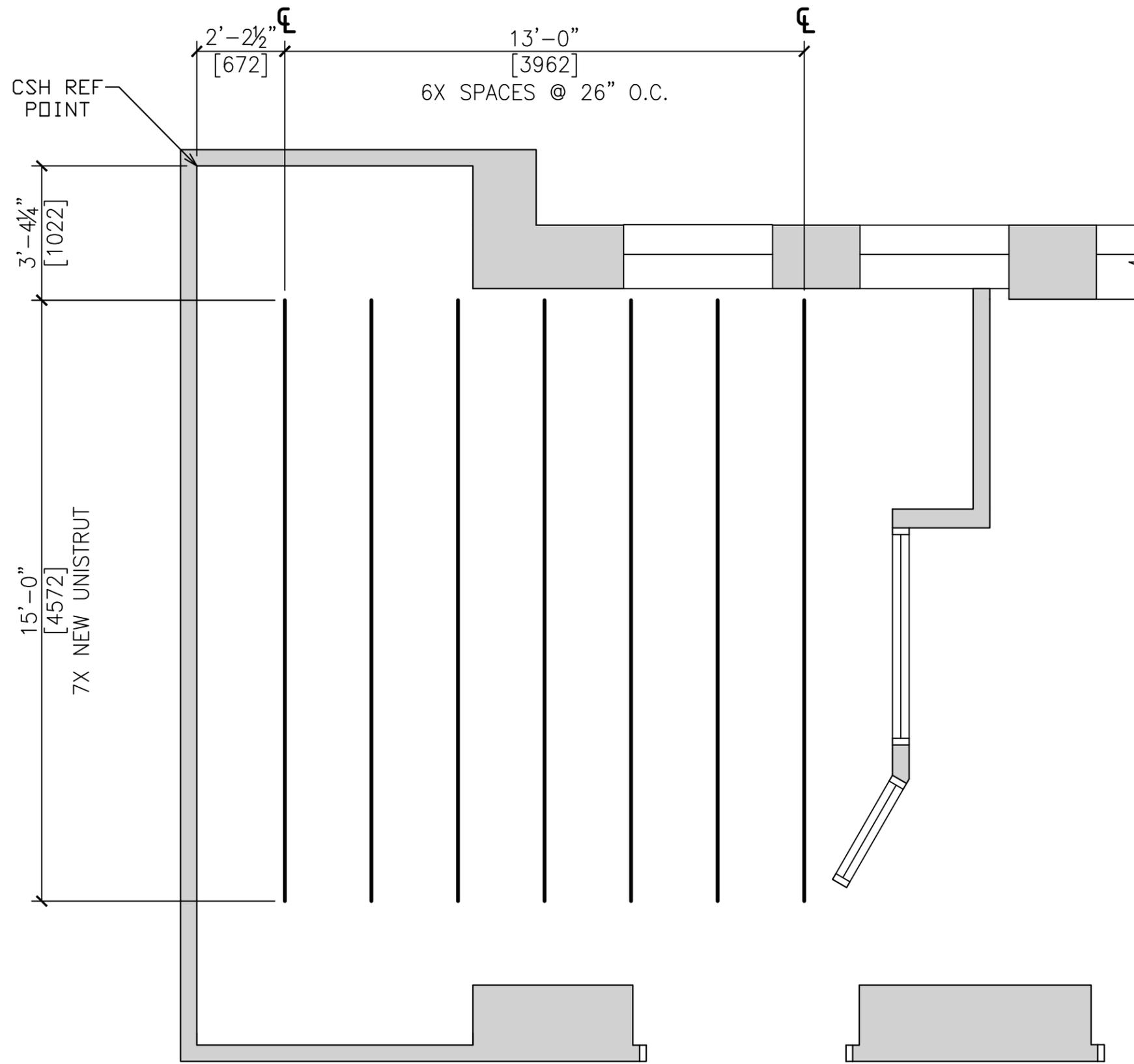


SCARBOROUGH HEALTH NETWORK ROOM 4511  
 EVOLUTION SYSTEM UNISTRUT PLAN  
 REV-PA3 12-31-2024



SCARBOROUGH HEALTH NETWORK ROOM 4513  
 EVOLUTION SYSTEM EQUIPMENT PLAN  
 REV-PA3 12-31-2024

NOTES:  
 CROSS TABLE FROM  
 BEHIND IS NOT  
 OBTAINABLE  
 72" SID TO FLOOR  
 IS OBTAINABLE



SCARBOROUGH HEALTH NETWORK ROOM 4513  
EVOLUTION SYSTEM UNISTRUT PLAN  
REV-PA3 12-31-2024