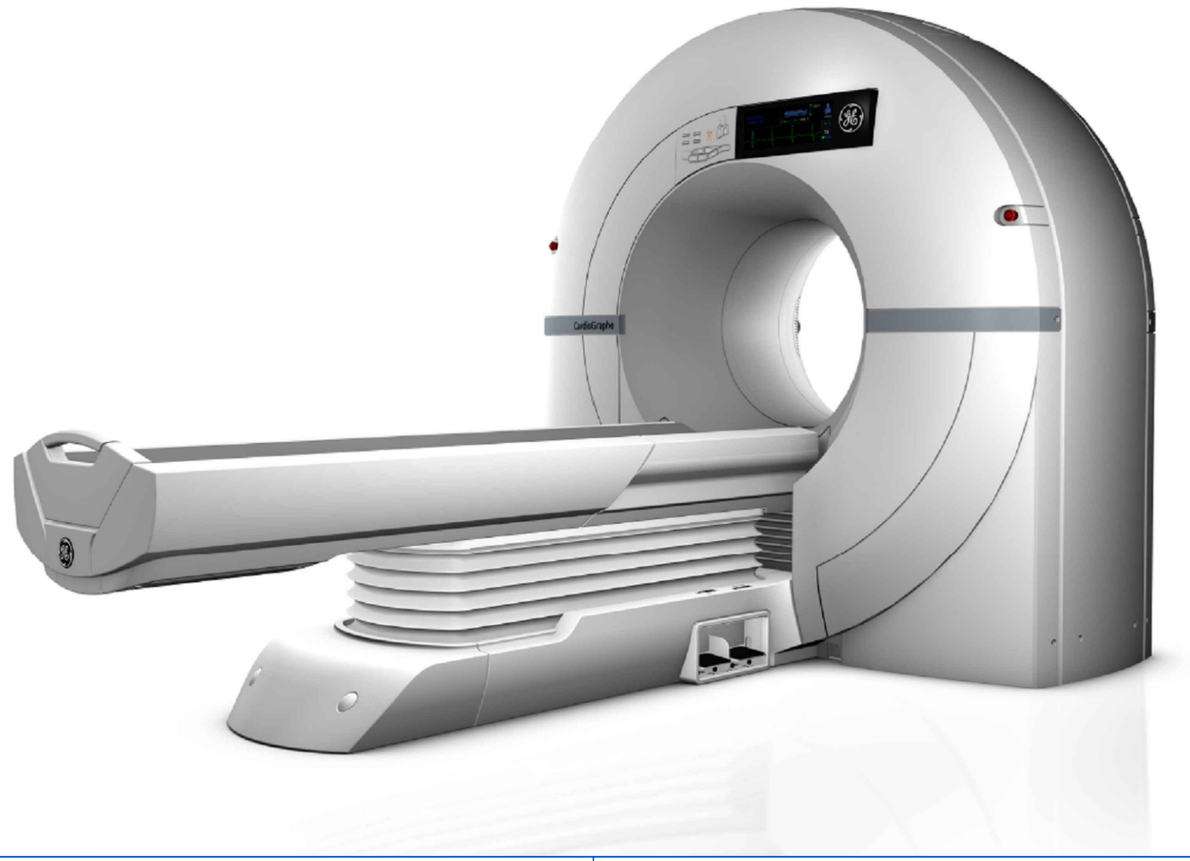


REV	DATE	MODIFICATIONS

Typical

---

01 - C1 - Cover Sheet
02 - C2 - Disclaimer - Site Readiness Checklist
03 - A1 - General Notes
04 - A2 - Equipment Layout
05 - A3 - Radiation Protection
06 - A4 - Equipment Dimensions (1)
07 - A4 - Equipment Dimensions (2)
08 - A5 - Delivery
09 - S1 - Structural Notes

10 - S2 - Structural Layout
11 - S3 - Structural Details (1)
12 - M1 - HVAC
13 - E1 - Electrical Notes
14 - E2 - Electrical Layout
15 - E3 - Electrical Elevations
16 - E4 - Power Requirements
17 - E5 - Electrical Details - Interconnect

A mandatory component of this drawing set is the GE Healthcare Pre Installation manual. Failure to reference the Pre Installation manual will result in incomplete documentation required for site design and preparation.
Pre Installation documents for GE Healthcare products can be accessed on the web at: www.gehealthcare.com/siteplanning

GE Healthcare

CARDIOGRAPHE
FINAL STUDY

Drawn by	Verified by	Concession	S.O. (GON)	PIM Manual	Rev
RET	APP	-	-	5721172-1EN	3.60

Format	Scale	File Name	Date	Sheet
A3	1/4"=1'-0"	EN-CT-TYP-CARDIOGRAPHE-NF.DWG	05/Mar/2024	01/17

DISCLAIMER

GENERAL SPECIFICATIONS

- GE is not responsible for the installation of developers and associated equipment, lighting, cassette trays and protective screens or derivatives not mentioned in the order.
- The final study contains recommendations for the location of GE equipment and associated devices, electrical wiring and room arrangements. When preparing the study, every effort has been made to consider every aspect of the actual equipment expected to be installed.
- The layout of the equipment offered by GE, the dimensions given for the premises, the details provided for the pre-installation work and electrical power supply are given according to the information noted during on-site study and the wishes expressed by the customer.
- The room dimensions used to create the equipment layout may originate from a previous layout and may not be accurate as they may not have been verified on site. GE cannot take any responsibility for errors due to lack of information.
- Dimensions apply to finished surfaces of the room.
- Actual configuration may differ from options presented in some typical views or tables.
- If this set of final drawings has been approved by the customer, any subsequent modification of the site must be subject to further investigation by GE about the feasibility of installing the equipment. Any reservations must be noted.
- The equipment layout indicates the placement and interconnection of the indicated equipment components. There may be local requirements that could impact the placement of these components. It remains the customer's responsibility to ensure that the site and final equipment placement complies with all applicable local requirements.
- All work required to install GE equipment must be carried out in compliance with the building regulations and the safety standards of legal force in the country concerned.
- These drawings are not to be used for actual construction purposes. The company cannot take responsibility for any damage resulting therefrom.

CUSTOMER RESPONSIBILITIES

- It is the responsibility of the customer to prepare the site in accordance with the specifications stated in the final study. A detailed site readiness checklist is provided by GE. It is the responsibility of the customer to ensure all requirements are fulfilled and that the site conforms to all specifications defined in the checklist and final study. The GE Project Manager of Installation (PMI) will work in cooperation with the customer to follow up and ensure that actions in the checklist are complete, and if necessary, will aid in the rescheduling of the delivery and installation date.
- Prior to installation, a structural engineer of record must ensure that the floor and ceiling is designed in such a way that the loads of the installed system can be securely borne and transferred. The layout of additional structural elements, dimensioning and the selection of appropriate installation methods are the sole responsibility of the structural engineer. Execution of load bearing structures supporting equipment on the ceiling, floor or walls are the customer's responsibility.

RADIO-PROTECTION

- Suitable radiological protection must be determined by a qualified radiological physicist in conformation with local regulations. GE does not take responsibility for the specification or provision of radio-protection.

THE UNDERSIGNED, HEREBY CERTIFIES THAT I HAVE READ AND APPROVED THE PLANS IN THIS DOCUMENT.		
DATE	**NAME**	**SIGNATURE**

CUSTOMER SITE READINESS REQUIREMENTS

REQUIRED MANUALS FOR SYSTEM PRE-INSTALLATION	
Description	**Document Number***
Product specific Pre-installation Manual	Refer to cover page
*documents can be accessed in multiple languages at *https://www.gehealthcare.com/support/manuals*	

- A mandatory component of this drawing set is the GE HealthCare Pre-installation manual. Failure to reference the Pre-installation manual will result in incomplete documentation required for site design and preparation.

- The items on the GE HealthCare Site Readiness Checklists listed below are REQUIRED to facilitate equipment delivery to the site. Equipment will not be delivered if these requirements are not satisfied.

REQUIRED SITE-READINESS CHECKLISTS FOR SYSTEM PRE-INSTALLATION	
Modality	**Document Number***
Computerized Tomography	DOC2949059
Radiology, Radiology and Fluouroscopy, Mammography, Bone Mass Densitometry	DOC2949063
All modality Customer/Contractor Worksheet	DOC2949068
*documents can be accessed in multiple languages at *https://www.gehealthcare.com/support/manuals*	

- Any deviation from these drawings must be communicated in writing to and reviewed by your local GE HealthCare installation project manager prior to making changes.

- Make arrangements for any rigging, special handling, or facility modifications that must be made to deliver the equipment to the installation site. If desired, your local GE HealthCare installation project manager can supply a reference list of rigging contractors.

- New construction requires the following;
  1. Secure area for equipment,
  2. Power for drills and other test equipment,
  3. Restrooms.

- Provide for refuse removal and disposal (e.g. crates, cartons, packing)

- For CT systems it is required to minimize vibrations within the scan room. It is the customer's responsibility to contract a vibration consultant/engineer to implement site design modifications to meet the GE vibration specification. Refer to the system Pre-installation manual for vibration specifications.

ENVIRONMENT

ALTITUDE

- The system's normal operational altitude range is -150 m to 2,400 m [492 ft to 7,875 ft], relative to sea level.
- The system can be installed at an altitude up to, but not exceeding, 3,000 m [9,843 ft] above sea level. System performance, image quality, reliability and safety cannot be guaranteed at altitudes above 3,000 m.

MAGNETIC FIELD SPECIFICATIONS

- Limit the magnetic interference to guarantee specified imaging performance.

GANTRY:

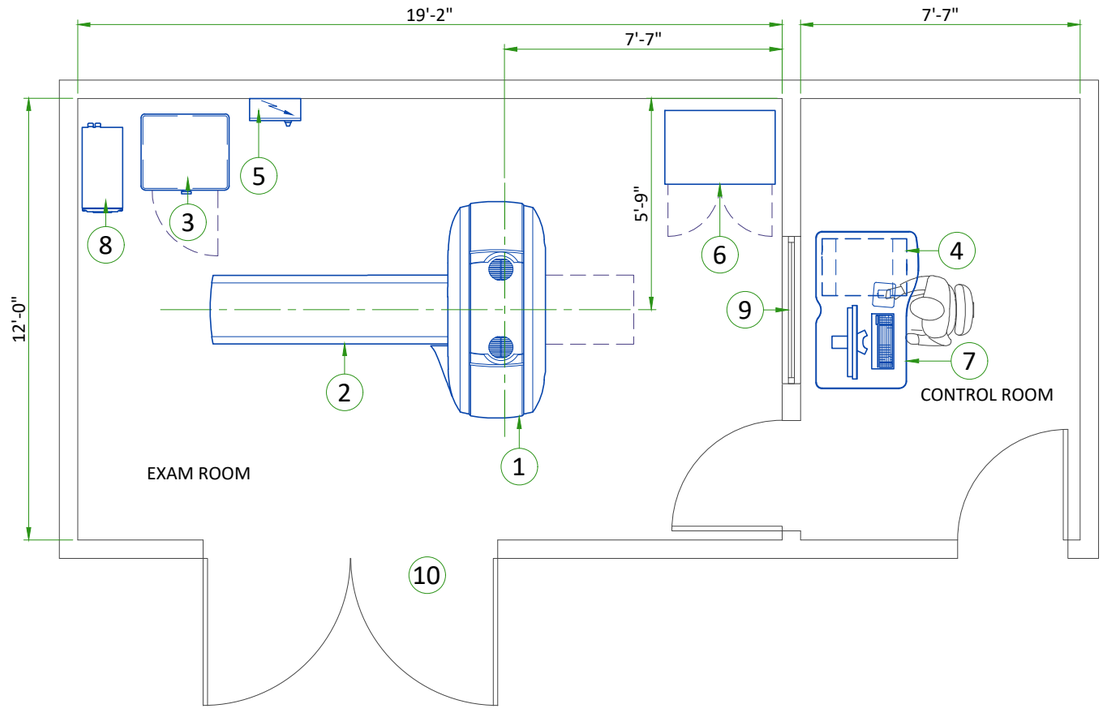
- Ambient static magnetic field is less than 1 Gauss.
- Ambient AC magnetic field is less than 0.01 Gauss peak.

OPERATOR CONSOLE:

- Ambient static magnetic field is less than 10 Gauss.

ACOUSTICS:

Room	GE Equipment Acoustic Output
Control Room	≤ 62 dBA
Exam Room	≤ 80 dBA



LEGEND			
A	GE SUPPLIED	D	AVAILABLE FROM GE
B	GE SUPPLIED/CONTRACTOR INSTALLED	E	EQUIPMENT EXISTING IN ROOM
C	CUSTOMER/CONTRACTOR SUPPLIED AND INSTALLED	*	ITEM TO BE REINSTALLED FROM ANOTHER SITE

BY	ITEM	DESCRIPTION	MAX HEAT OUTPUT (BTU/h)	WEIGHT (lbs)	MAX HEAT OUTPUT (W)	WEIGHT (kg)
A	1	GANTRY	20472	3627	6000	1645
A	2	PATIENT TABLE	-	1025	-	465
A	3	POWER DISTRIBUTION UNIT (PDU)	1201	507	352	230
A	4	OPERATOR CONSOLE	5800	95	1700	43
B	5	MAIN DISCONNECT PANEL (MDP)	-	46	-	21
A	6	STORAGE CABINET	-	90	-	41
A	7	AURORA SWS TABLE	-	88	-	40
A	8	EATON 93PS 15kW UPS	2047	558	600	253
C	9	LEAD GLASS WINDOW				
C	10	MINIMUM OPENING FOR EQUIPMENT DELIVERY IS 1118 mm x 2108 mm [44 in x 83 in], CONTINGENT ON A 2438 mm [96 in] CORRIDOR WIDTH				

EXAM ROOM HEIGHT	
FINISHED FLOOR TO SLAB HEIGHT	TBD
FALSE CEILING HEIGHT	min 7'-6"

RADIATION PROTECTION DETAILS

SHIELDING REQUIREMENTS:

Engage a qualified radiological health physicist to review your scan room shielding requirements, taking into consideration:

- Scatter radiation levels within the scanning room
- Equipment placement
- Weekly projected work-loads (number of patients/day technique (kvp*ma))
- Materials used for construction of walls, floors, ceiling, doors, and windows
- Activities in surrounding scan room areas
- Equipment in surrounding scan room areas (e.g., film developer, film storage)
- Room size and equipment placement within the room relative to room size

In case of mounting a Basic Collimator, the results described in the figures below are for a 32 cm PMMA phantom in µGy/100 mA.
The illustrations in this section depict measured radiation levels within the scanning room, while scanning a 32 cm CTDI phantom placed on the patient table, with the technique shown. Use the mAs, kV and aperture scaling factors in the table below to adjust exposure levels to the scan technique used at the site.

CT Conditions of Operation	
Scan Mode	Axial-Cine
Scan FOV (mm)	250
Detector Coverage (mm)	140
Tube Voltage (kVp)	140
Tube Current (mA)	400
Rotation Time (s)	0.5
Scan Time (s)	1
CTDI Phantom Size (diameter, cm)	32
CTDI Phantom Size (length, cm)	25

NOTE:

- Actual measurements can vary. Expected deviation equals ±15%. The maximum deviation anticipated for tube output equals ±40%.
- This publication uses µGy (micrograys) to measure radiation levels. The conversion factor from mR to µGy (micrograys) is 1 mR = 8.69 µGy.

Radiation Protection on the Horizontal Plane at the ISO (µGy/100mA)

Z-axis (m)	X-axis (m)								
	-2	-1.5	-1	-0.5	0	0.5	1	1.5	2
-3.5	3.09	3.35	3.61	3.09	2.32	2.58	2.58	2.58	2.32
-3	3.86	5.92	4.38	4.12	3.35	3.86	4.89	3.86	2.58
-2.5	2.83	5.15	5.41	6.18	5.41	5.92	5.15	4.89	2.58
-2	2.32	4.89	7.73	9.27	9.01	8.76	7.98	5.15	2.32
-1.5	1.03	3.86	12.62	16.48	16.74	16.48	11.07	4.64	1.29
-1	0.26	1.03	4.38	32.96	37.34	33.99	9.27	1.29	0.00
-0.5	0.00	0.00	0.00	ISO			0.00	0.00	0.00
0	0.00	0.00	0.77				0.77	0.26	0.00
0.5	0.26	1.03	3.86	69.27	114.85	52.53	3.35	1.29	0.52
1	2.58	3.86	15.45	26.27	24.27	26.27	13.39	3.61	2.83
1.5	2.83	5.41	14.16	15.54	11.07	12.36	11.33	6.18	3.09
2	1.80	3.09	6.18	6.95	7.47	9.79	6.44	3.86	2.06
2.5	-	-	-	3.35	4.64	4.89	0.26	-	-

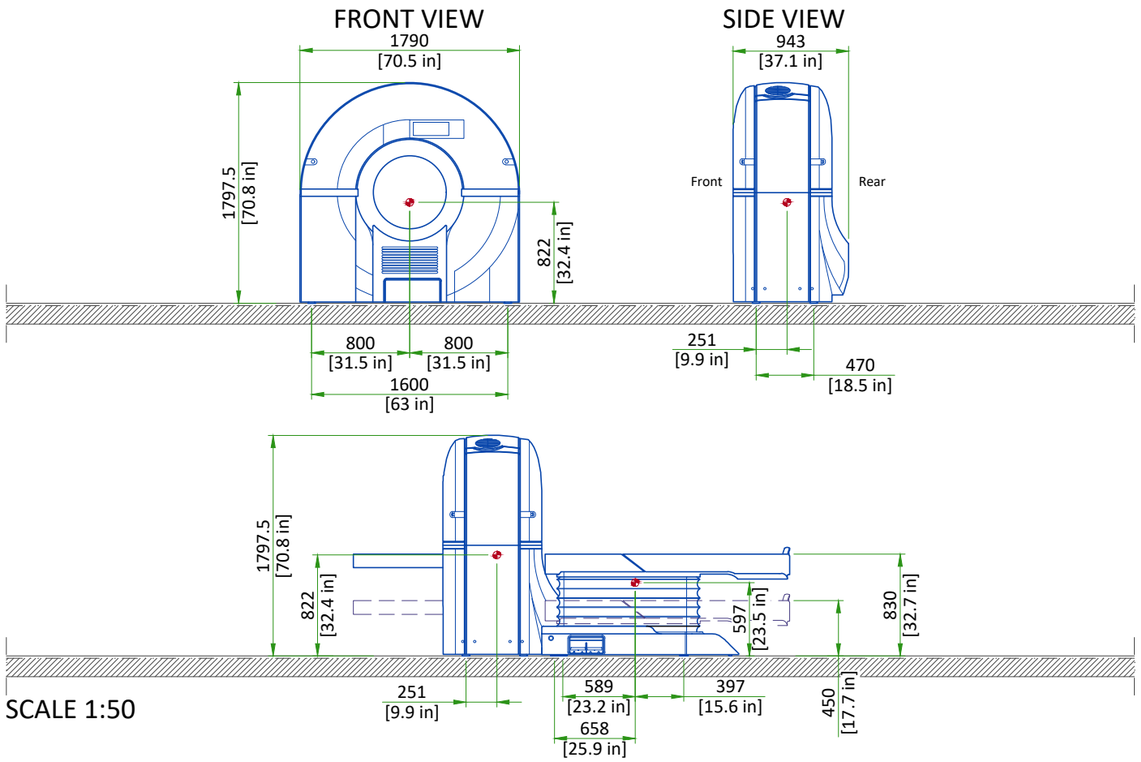
Radiation Protection on the Vertical Plane at the ISO (µGy/100mA)

Y-axis (m)	Z-axis (m)											
	-3.5	-3	-2.5	-2	-1.5	-1	-0.5	0	0.5	1	1.5	2
1.5	2.32	2.83	2.83	4.12	2.06	0.52	0.00	0.00	0.00	0.77	4.12	1.03
1	2.83	3.86	5.92	7.47	7.73	1.29	0.00	0.00	0.39	6.18	9.01	6.18
0.5	2.58	3.61	4.89	7.98	12.62	17.51	ISO		14.42	14.42	8.76	5.41
0	2.32	3.35	5.41	9.01	16.74	37.34			114.85	24.72	11.07	7.47
-0.5	0.00	0.00	0.00	Table					22.66	20.86	10.82	6.18

NOTE:

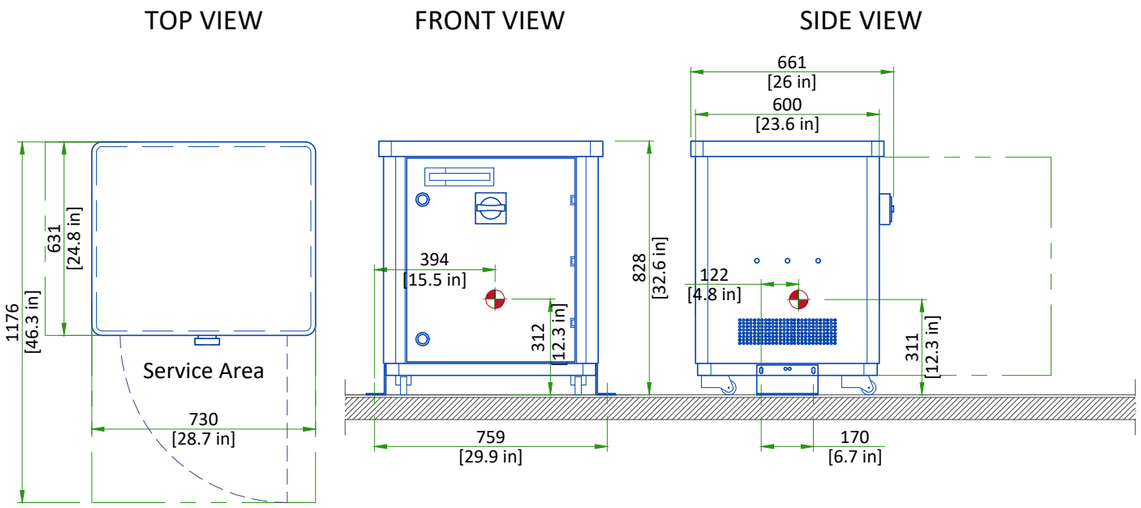
· In the figures below, dark gray boxes indicate areas in which it was not possible to collect data due to the physical scanner body
· In the figures below, light gray boxes indicate the patient table position relative to the scanner body
· 0.00 indicates a value less than 0.1 µGy

GANTRY WITH TABLE



SCALE 1:50

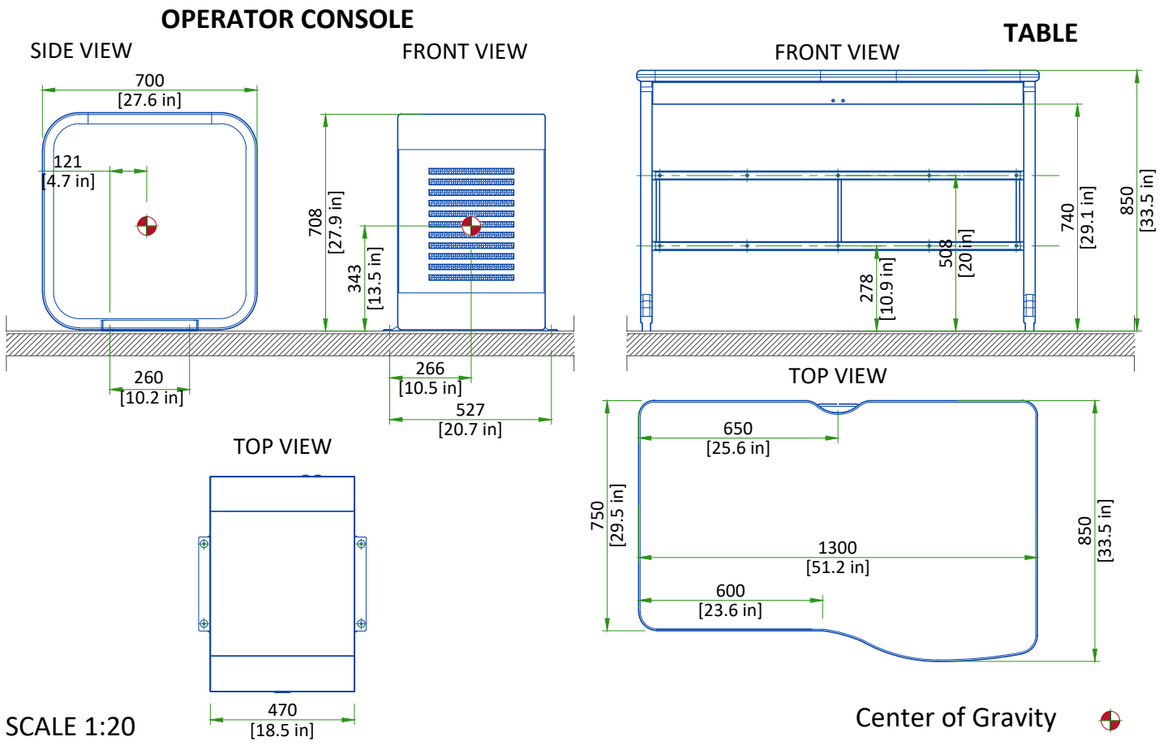
POWER DISTRIBUTION UNIT (PDU)



SCALE 1:20

Center of Gravity

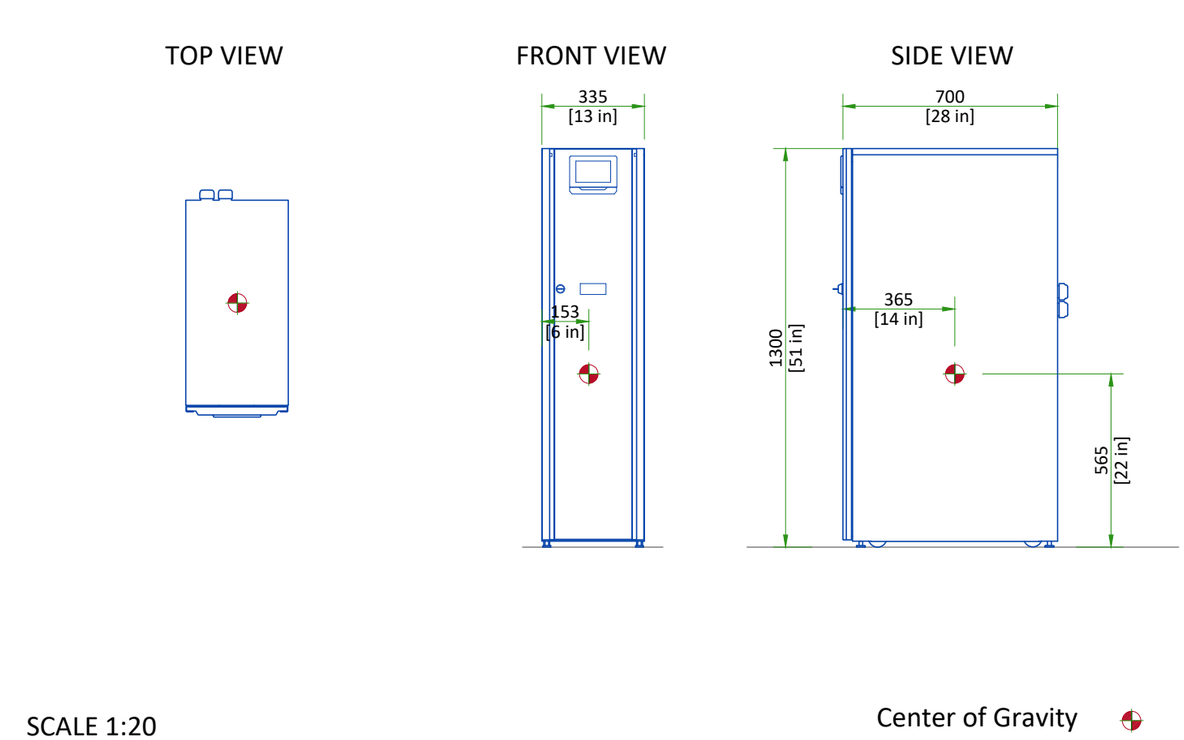
OPERATOR CONSOLE AND AURORA SWS TABLE



SCALE 1:20

Center of Gravity

PARTIAL UNINTERRUPTIBLE POWER SUPPLY

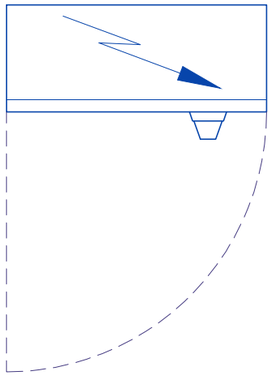


SCALE 1:20

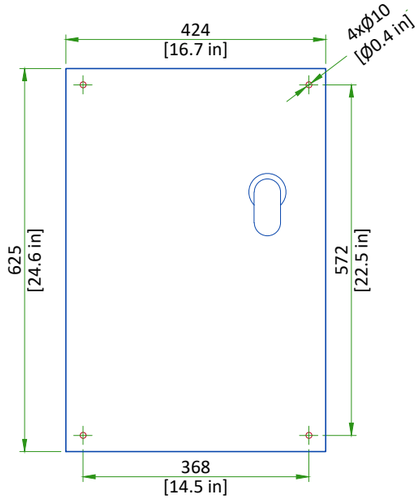
Center of Gravity

MAIN DISCONNECT PANEL

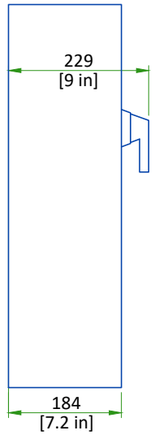
TOP VIEW



FRONT VIEW



SIDE VIEW



SCALE 1:10

DELIVERY

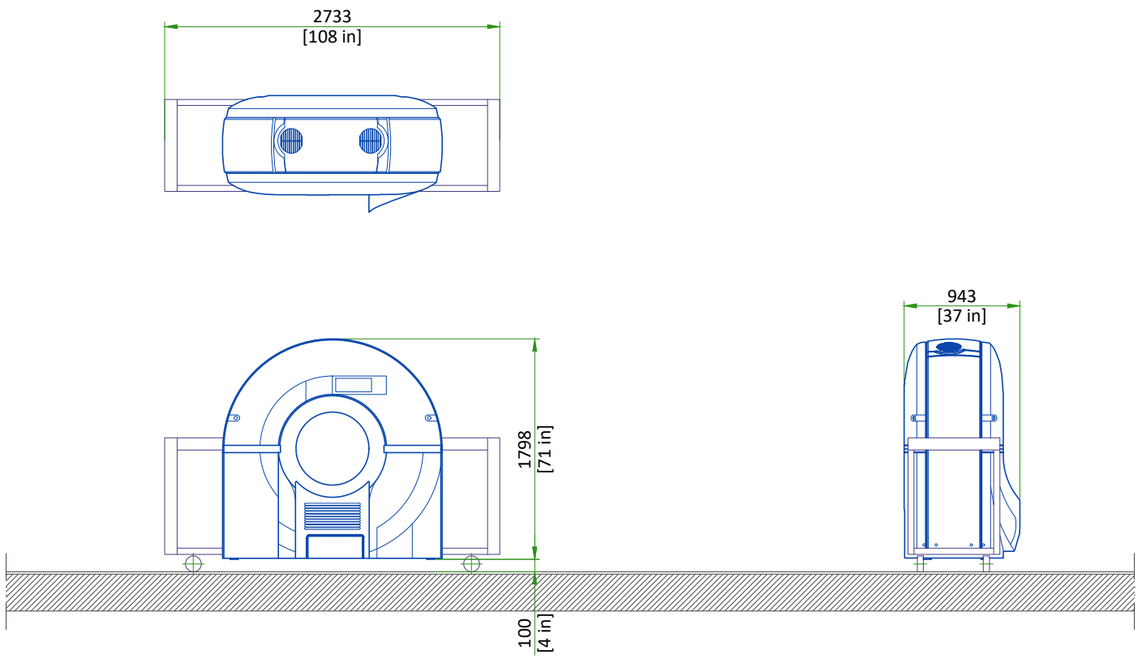
THE CUSTOMER/CONTRACTOR SHOULD:

- Provide an area adjacent to the installation site for delivery and unloading of the GE equipment.
- Ensure that the dimensions of all doors, corridors, ceiling heights are sufficient to accommodate the movement of GE equipment from the delivery area into the definitive installation room.
- Ensure that access routes for equipment will accommodate the weights of the equipment and any transportation, lifting and rigging equipment.
- Ensure that all necessary arrangements for stopping and unloading on public or private property not belonging to the customer have been made.

DIMENSIONS OF DELIVERY WITH DOLLY TRANSPORT EQUIPMENT

EQUIPMENT	DIMENSIONS			WEIGHT	
GANTRY	LENGTH	2733 mm	107.5 in	2131 kg	4697 lbs
	WIDTH	943 mm	37.1 in		
	HEIGHT	1798 mm	70.7 in		
PATIENT TABLE	LENGTH	2224 mm	86 in	490 kg	1080 lbs
	WIDTH	885 mm	35 in		
	HEIGHT	908 mm	36 in		

GANTRY DELIVERY

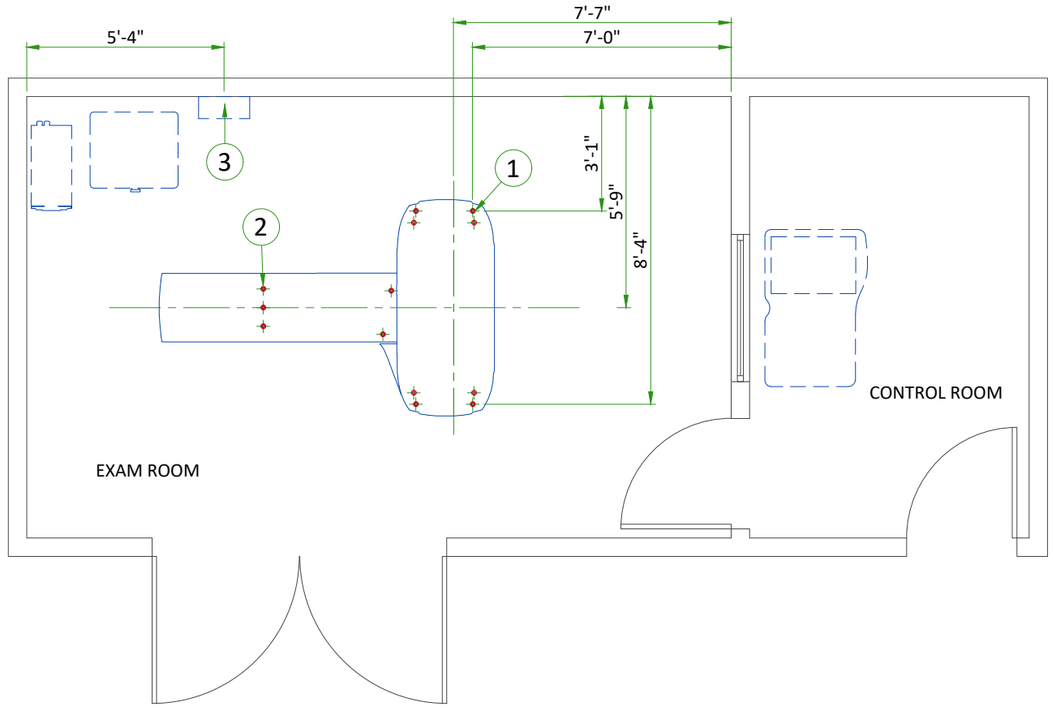


- The gantry is shipped on a dolly equipped with elevating casters (normal shipping configuration).

SCALE 1:50

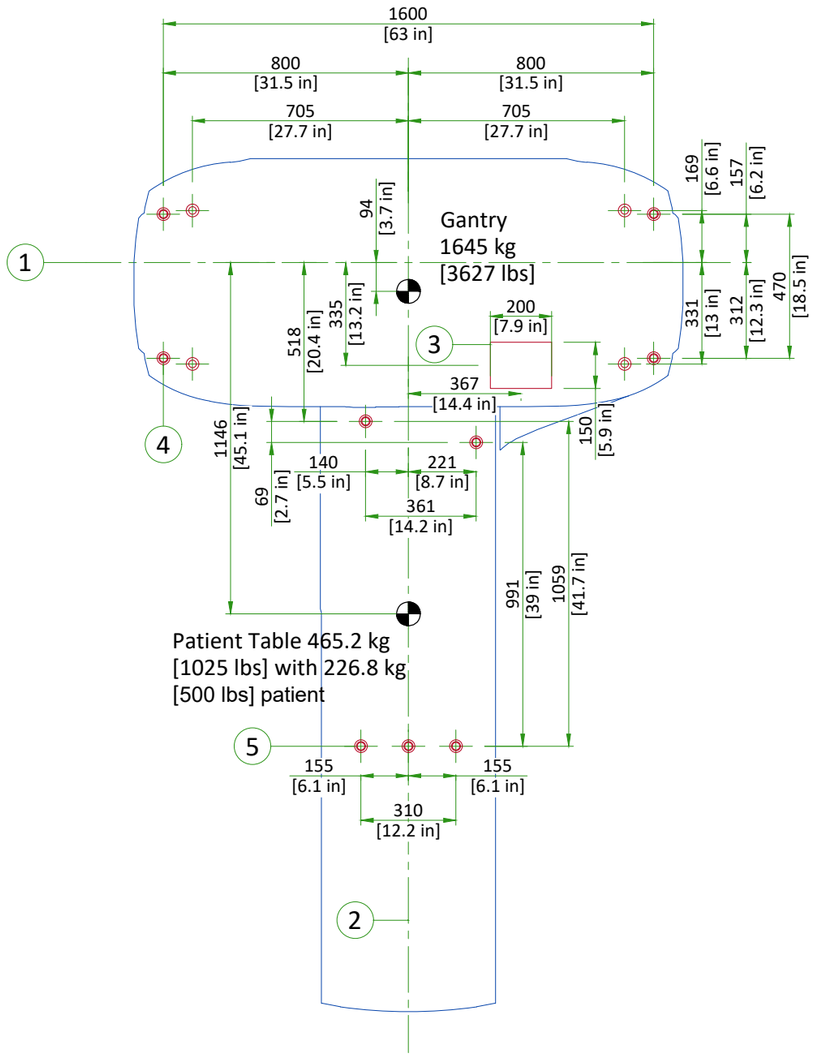
STRUCTURAL NOTES

- all steel work and parts necessary to support ceiling mounted equipment is to be supplied by the customer or his contractors.
- methods of support for the steelwork that will permit attachment to structural steel or through bolts in concrete construction should be favored. Do not use concrete or masonry anchors in direct tension.
- all units that are wall mounted or wall supported are to be provided with supports where necessary. Wall supports are to be supplied and installed by the customer or his contractors. See plan and detail sheets for suggested locations and mounting hole locations.
- all ceiling mounted fixtures, air vents, sprinklers, etc. To be flush mounted, or shall not extend more than 1/4" below the finished ceiling.
- floor slabs on which equipment is to be installed must be level to 1/4" in 10'-0"
- dimensions are to finished surfaces of room.
- customers contractor must provide all penetrations in post tension floors.
- customers contractor must provide and install any non-standard anchoring. Documents for standard anchoring methods are included with GE equipment drawings for geographic areas that require such documentation.
- customers contractor must provide and install hardware for "through the floor" anchoring and/or any bracing under access floors. This contractor must also provide floor drilling that cannot be completed because of an obstruction encountered while drilling by the GE installer such as rebar etc.
- it is the customer's responsibility to perform any floor or wall penetrations that may be required. The customer is also responsible for ensuring that no subsurface utilities (e.g., electrical or any other form of wiring, conduits, piping, duct work or structural supports (i.e. post tension cables or rebar)) will interfere or come in contact with subsurface penetration operations (e.g. drilling and installation of anchors/screws) performed during the installation process. To ensure worker safety, GE installers will perform surface penetration operations only after the customer's validation and completion of the "GE surface penetration permit"



ITEM	DESCRIPTION
	(CONTRACTOR SUPPLIED & INSTALLED)
1	Gantry anchoring pads. See Structural Detail
2	Table anchoring pads. See Structural Detail
3	Support Backing, locate as shown

ANCHORING/LOADING DISTRIBUTION TO THE FLOOR

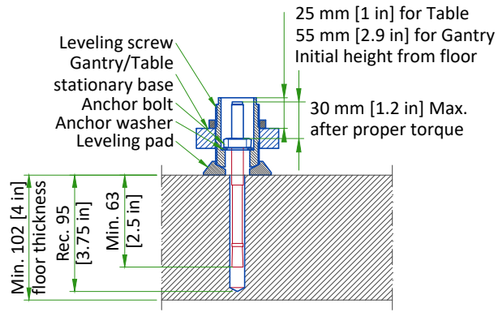


(1) Tilting axis
(2) Longitudinal axis
(3) Cable inlet area (200x150 mm [7.9 inx5.9 in])
(4) 8 Gantry anchoring points
(5) 5 Table anchoring points
◕ Center of gravity
⊕ Main anchoring points
⊕ Backup anchoring points

SCALE 1:20

FLOOR REQUIREMENTS

GE SUPPLIED ANCHORS (TABLE/GANGTRY)



NOTES:

- The recommended nominal anchor embedment before torquing anchors is 75 mm [2.9 in], minimum is 63 mm [2.5 in]
- Anchors must be installed no less than 100 mm [3.9 in] from the edge of the concrete slab or expansion joint
- Torque anchor to 60 Nm [44 ft-lb]
- In case of seismic site the type and length of the anchor must be defined in the alternative seismic anchoring plan and purchased separately by the customer. The seismic kit provided by GE Healthcare is designed for anchors that are 5/8 in (15.9 mm) in diameter.

FINISHED FLOOR REQUIREMENTS

- Installation requires a finish floor in the scan and control rooms
- The floor surface in the scan room directly under the gantry and table must be level.
- The floor levelness tolerance of the floor surface that the gantry and table will rest on is 6 mm [0.25 in] over a 3000 mm [118.2 in] distance.
- Shims should not be used to compensate for a floor that does not meet this requirement.
- Eight or more floor covering openings that are 102 mm [4 in] in diameter are made to ensure the table and gantry rest on a solid surface. These floor penetrations can be sealed if required.
- These requirements apply to all installation types.

NOT TO SCALE

TEMPERATURE AND HUMIDITY SPECIFICATIONS

IN-USE CONDITIONS

	Exam Room			Control Room		
Temperature	Min	Recommended	Max	Min	Recommended	Max
	20°C	22°C	24°C	18°C	22°C	26°C
	68°F	72°F	75°F	64°F	72°F	79°F
Temperature Gradient	**≤ 3°C/h**			**≤ 3°C/h**		
	≤ 5.4°F/h			**≤ 5.4°F/h**		
Relative humidity (1)	30% to 60%			30% to 70%		
Humidity Gradient	**≤ 5%/h**			**≤ 5%/h**		

STORAGE CONDITIONS

Temperature	+4°C to +35°C
	40° to 95°F
Temperature Gradient	**≤ 3°C/h**
	≤ 5.4°F/h
Relative humidity (1)	20 to 60%
Humidity Gradient	**≤ 5%/h**

Storage longer than 6 months is not recommended.
(1) Non-condensing

AIR RENEWAL

According to local standards.

NOTE
In case of using air conditioning systems that have a risk of water leakage it is recommended not to install it above electric equipment or to take measures to protect the equipment from dropping water.

HEAT DISSIPATION DETAILS

ROOM	DESCRIPTION	Max (kW)	Max (BTU)
Exam Room	Gantry and Patient Table	6.00	20500
	TOTAL	**6.00**	**20500**
Exam Room or Technical Room*	Power Distribution Unit	0.35	1200
	TOTAL	**0.35**	**1200**
Control Room	Operator Console	1.70	5800
	TOTAL	**1.70**	**5800**
*Technical Room is not mandatory, the placements of these elements are recommended in the Exam Room.			

ELECTRICAL NOTES

1. All wires specified shall be copper stranded, flexible, thermo-plastic, color coded, cut 10 foot long at outlet boxes, duct termination points or stubbed conduit ends. All conductors, power, signal and ground, must be run in a conduit or duct system. Electrical contractor shall ring out and tag all wires at both ends. Wire runs must be continuous copper stranded and free from splices.
1.1. Aluminum or solid wires are not allowed.
2. Wire sizes given are for use of equipment. Larger sizes may be required by local codes.
3. It is recommended that all wires be color coded, as required in accordance with national and local electrical codes.
4. Conduit sizes shall be verified by the architect, electrical engineer or contractor, in accordance with local or national codes.
5. Convenience outlets are not illustrated. Their number and location are to be specified by others. Locate at least one convenience outlet close to the system control, the power distritbution unit and one on each wall of the procedure room. Use hospital approved outlet or equivalent.
6. General room illumination is not illustrated. Caution should be taken to avoid excessive heat from overhead spotlights. Damage can occur to ceiling mounting components and wiring if high wattage bulbs are used. Recommend low wattage bulbs no higher than 75 watts and use dimmer controls (except MR). Do not mount lights directly above areas where ceiling mounted accessories will be parked.
7. Routing of cable ductwork, conduits, etc., must run direct as possible otherwise may result in the need for greater than standard cable lengths (refer to the interconnection diagram for maximum usable lengths point to point).
8. Conduit turns to have large, sweeping bends with minimum radius in accordance with national and local electrical codes.
9. A special grounding system is required in all procedure rooms by some national and local codes. It is recommended in areas where patients might be examined or treated under present, future, or emergency conditions. Consult the governing electrical code and confer with appropriate customer administrative personnel to determine the areas requiring this type of grounding system.
10. The maximum point to point distances illustrated on this drawing must not be exceeded.
11. Physical connection of primary power to GE equipment is to be made by customers electrical contractor with the supervision of a GE representative. The GE representative would be required to identify the physical connection location, and insure proper handling of GE equipment.
12. GEHC conducts power audits to verify quality of power being delivered to the system. The customer's electrical contractor is required to be available to support this activity.

- All junction boxes, conduit, duct, duct dividers, switches, circuit breakers, cable tray, etc., are to be supplied and installed by customers electrical contractor.
- Conduit and duct runs shall have sweep radius bends
- Conduits and duct above ceiling or below finished floor must be installed as near to ceiling or floor as possible to reduce run length.
- Ceiling mounted junction boxes illustrated on this plan must be installed flush with finished ceiling.
- All ductwork must meet the following requirements:

1.Ductwork shall be metal with dividers and have removable, accessible covers.
2.Ductwork shall be certified/rated for electrical power purposes.
3.Ductwork shall be electrically and mechanically bonded together in an approved manner.
4.PVC as a substitute must be used in accordance with all local and national codes.

- All openings in raceway and access flooring are to be cut out and finished off with grommet material by the customers contractor.
- General contractor to insert pull cords for all cable run conduits between the equipment room and the operators control room.
- 10 foot pigtails at all junction points.
- Grounding is critical to equipment function and patient safety. Site must conform to wiring specifications shown on this plan.

CONNECTIVITY REQUIREMENTS

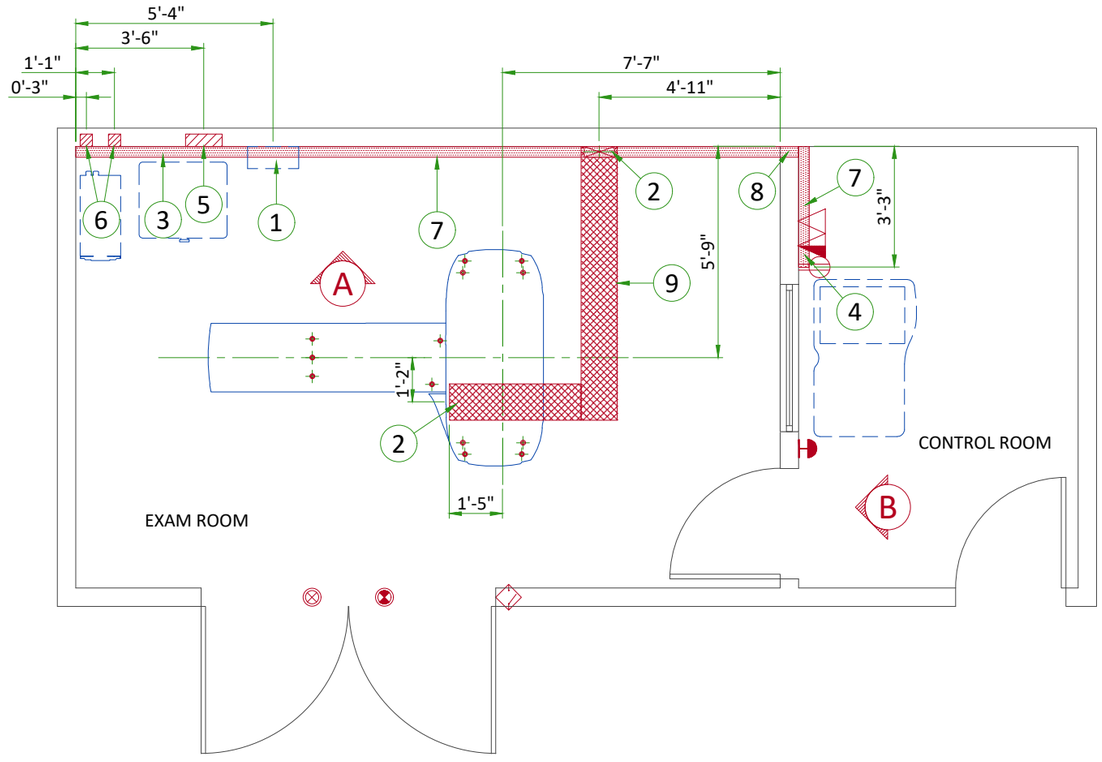
Your new GE Healthcare imaging modality will require local and remote connectivity to enable our full range of digital support:

- Local connectivity - This allows your system to connect to local devices such as PACS and modality worklist. We will require network information to configure the system(s), and a live ethernet port(s) prior to the delivery of the system(s).
- Remote connectivity - Your GE Healthcare service warranty includes InSite™ (applicable to InSite capable products), a powerful broadband-based service which enables digital tools that can help guard your hospital against equipment downtime and revenue loss by quickly connecting you to a GE Healthcare expert.

Depending on product family and software version, imaging systems can be connected in one of the following methods:

1. TLS over TCP Port 443 (Preferred method for new products) via:
    a. DNS resolution
    b. Customer-provided Proxy or
    c. GE Proxy (Available in some regions)
2. Site-to-Site IPsec VPN tunnel

Please provide the GE project manager with the contact information for the resource that can provide information required to set up these connections. GEHC will send out communication to these contacts, which will include the project's Connectivity requirements, and a Connectivity form. This form will need to be completed and returned to GEHC prior to delivery of the system to ensure the system is tested and connectivity is enabled prior to the completion of the installation.

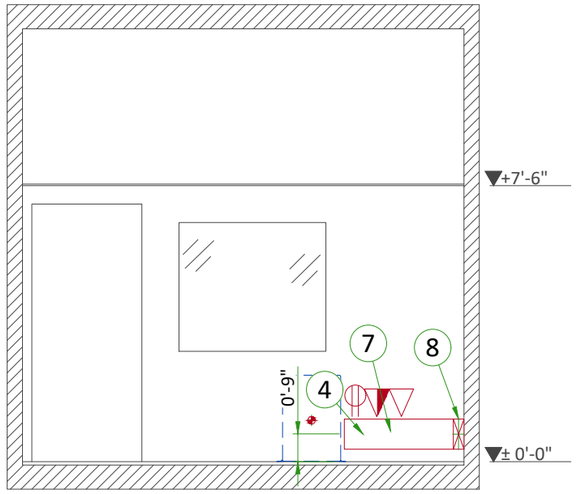


Item	Electrical Layout Item List
1	Main disconnect panel (MDP)
2	Suitable chase nipples, refer to Anchoring/Loading Distribution to the Floor detail on sheet S3 (Gantry)
3	Grommeted opening (Power Distribution Unit)
4	Grommeted opening (Operators Console)
5	12" x 16" x 4" [300 x 400 x 100] box (Power Distribution Unit)
6	4" x 4" x 4" [100 x 100 x 100] box (Partial UPS)
7	10" x 3 1/2" [250 x 100] surface wall duct with minimum 2 dividers
8	10" x 3 1/2" [250 x 100] duct thru wall with minimum 2 dividers
9	12" x 3" [300 x 100] trench duct with minimum 2 dividers

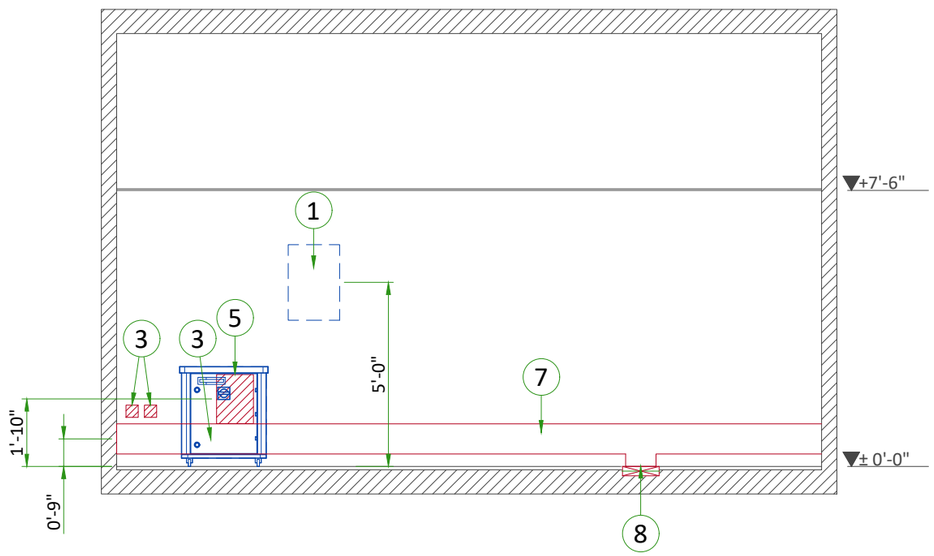
ITEM	QTY	Electrical Outlet Legend Customer/contractor supplied and installed items unless otherwise specified. Height above floor determined by local codes unless otherwise specified.
		System emergency off (SEO), (recommended height 1.2m [48"] above floor)
		X-Ray room warning light control panel
		X-Ray ON lamp (L1) - 24V
		Door interlock switch (needed only if required by state/local codes)
		Duplex hospital grade, dedicated wall outlet 120-v, single phase power
		Network outlet
		Dedicated telephone line(s)

Additional Conduit Runs
(Contractor Supplied and Installed)

From (Bubble # / Item)	To (Bubble # / Item)	Qty	Size	
			In.	mm
3 Phase Power	1 Main Disconnect	1	As req'd	As req'd
1 Main Disconnect	Emergency Off	1	1/2	13
	5 Power Distribution Unit	1	As req'd	As req'd
5 Power Distribution Unit	Door Switch	1	1/2	13
	Warning Light Control	1	1/2	13
Warning Light		1	1/2	13
1 Phase Power		1	1/2	13
1 Main Disconnect Panel	6 Partial UPS	1	1 1/4	30
5 Power Distribution Unit		1	2	50



A



B

POWER REQUIREMENTS

POWER SUPPLY	**3 PHASES+G 380/400/420/440/460/480 V ± 10%**
FREQUENCIES	**50/60 Hz ± 3 Hz**
MAXIMUM POWER DEMAND	**115 kVA**
AVERAGE (CONTINUOUS) POWER DEMAND	**10 kVA**
POWER FACTOR	**0.85**

- Power supply should come into a Main Disconnect Panel (MDP) containing the protective units and controls.
- The section of the supply cable should be calculated in accordance with its length and the maximum permissible voltage drops.
- There must be discrimination between supply cable protective device at the beginning of the installation (main low-voltage transformer side) and the protective devices in the MDP.

SUPPLY CHARACTERISTICS

- Power input must be separate from any others which may generate transients (elevators, air conditioning, radiology rooms equipped with high speed film changers...).
- All equipment (lighting, power outlets, etc...) installed with GE system components must be powered separately.
- Phase imbalance 2% maximum.
- Transients must be less than 1500V peak. (on a 400V line)

GROUND SYSTEM

- System of equipotential grounding.
- Equipotential: The equipotential link will be by means of an equipotential bar. This equipotential bar should be connected to the protective earth conductors in the ducts of the non GE cableways and to additional equipotential connections linking up all the conducting units in the rooms where GE system units are located.

CABLES

- All cables must be isolated and flexible, cable color codes must comply with standards for electrical installation.
- The cables from signaling and remote control (Y, SEO, L...) will go to MDP with a pigtail length of 1.5m [59 in], and will be connected during installation. Each conductor will be identified and isolated (screw connector).

CABLEWAYS

The general rules for laying cableways should meet the conditions laid down in current standards and regulations, with regard to:

- Protecting cables against water (cableways should be waterproof).
- Protecting cables against abnormal temperatures (proximity to heating pipes or ducts).
- Protecting cables against temperature shocks.
- Replacing cables (cableways should be large enough for cables to be replaced).
- Metal cableways should be grounded.

FEEDER TABLE

MIN. FEEDER WIRE SIZE, AWG OR MCM (sq. mm)/VAC	MINIMUM FEEDER WIRE LENGTH - ft (m)							
	50 (15)	100 (30)	150 (46)	200 (61)	250 (76)	300 (91)	350 (107)	400 (122)
480 VAC	4 (25)	4 (25)	4 (25)	4 (25)	4 (25)	4 (25)	4 (25)	3 (30)

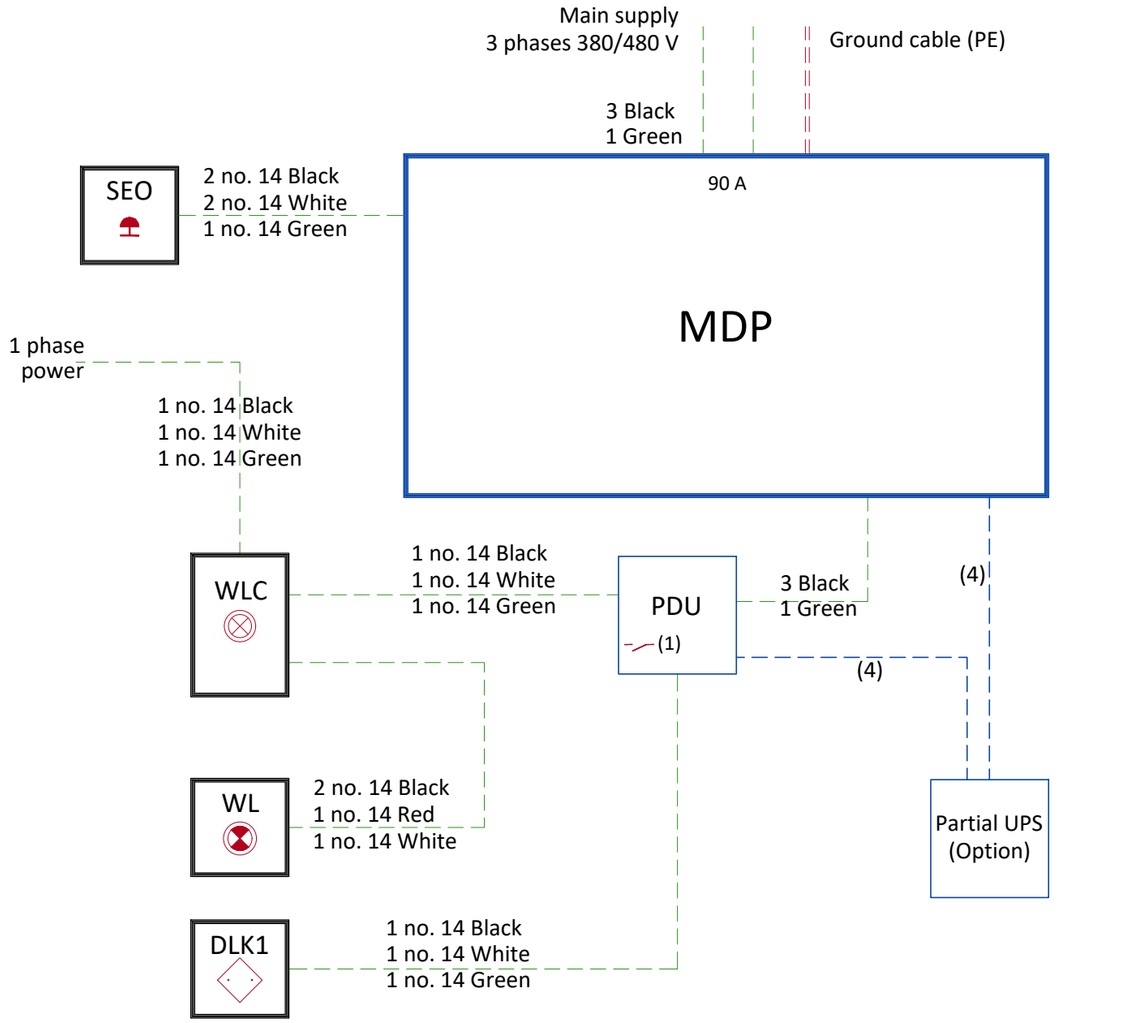
GENERAL NOTES

In all cases qualified personnel must verify that the feeder (at the point of take-off) and the run to the CT system meet all the requirements stated in the PIM

For a single unit installation, the minimum transformer size is 115 kVA, with 2.4% rated regulation at unity power factor. Resultant maximum allowable feeder regulation is 3.4%

Grounding conductor will be a 4 (25) minimum. This ground will run from the equipment back to the power source/main grounding point and always travel in the same conduit with the feeders

POWER DISTRIBUTION



MDP	Main Disconnect Panel
PDU	Power distribution unit
SEO	Emergency OFF button (Control Room), located 1.50m (4.9') above floor
WLC	Warning Light Control
WL	Warning Light
DLK1	Door Interlock Switch (needed only if required by state/local codes)

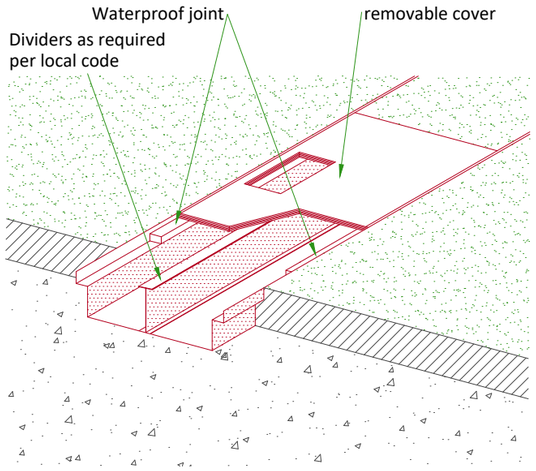
Cable SUPPLIED BY CUSTOMER
Cable SUPPLIED BY GE
Equipment SUPPLIED BY CUSTOMER
Equipment SUPPLIED BY GE

Notes :

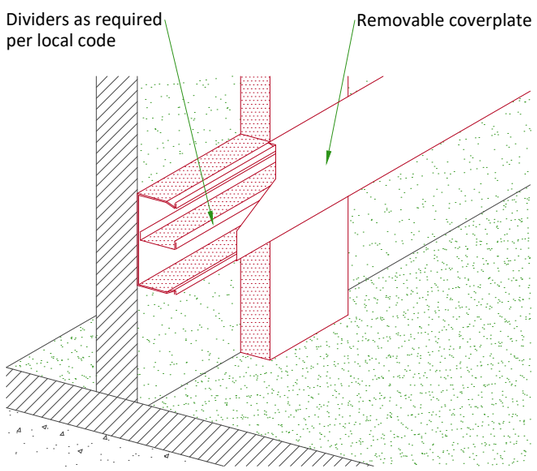
(1)	Two dry contacts: "System ON" and "X-Ray ON", both released by PDU. Max. voltage = 30 V
(2)	If length < 10 m (32.8') Cable with 2m (6.6') extra length on the floor behind the back of PDU
(3)	Cable with 2m (6.6') extra length on the floor behind the back of PDU
(4)	Cable delivered with partial UPS installed by GE (Option)

TYPICAL CABLE MANAGEMENT

FLUSH FLOOR DUCT



WALL DUCT



NOT TO SCALE

INTERCONNECTIONS