




**SITE NAME**  
**CITY**  
**COUNTRY**

REV	DATE	MODIFICATIONS
01 - Cover Sheet		
02 - Equipment Layout		
03 - Floor - Electrical Layout		
04 - Floor Structural Details		
05 - Power Requirements - Power Distribution		
06 - Environment - Delivery - Table Views		
07 - Interconnection		
08 - Disclaimer - Site Readiness		



**GE Healthcare**

GE contact name  
Phone number  
Email address

**OPTIMA RF420  
TYPICAL STUDY**

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](http://www.gehealthcare.com/siteplanning)

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Drawn by	Verified by	Concession	S.O. (GON)	PIM Manual	Rev
-	-	-	-	5725001-8EN	1
Format	Scale	File Name		Date	Sheet
A3	1:50	EN-RF-TYP-OPTIMA-RF420.DWG		07/MAR/2024	01/08

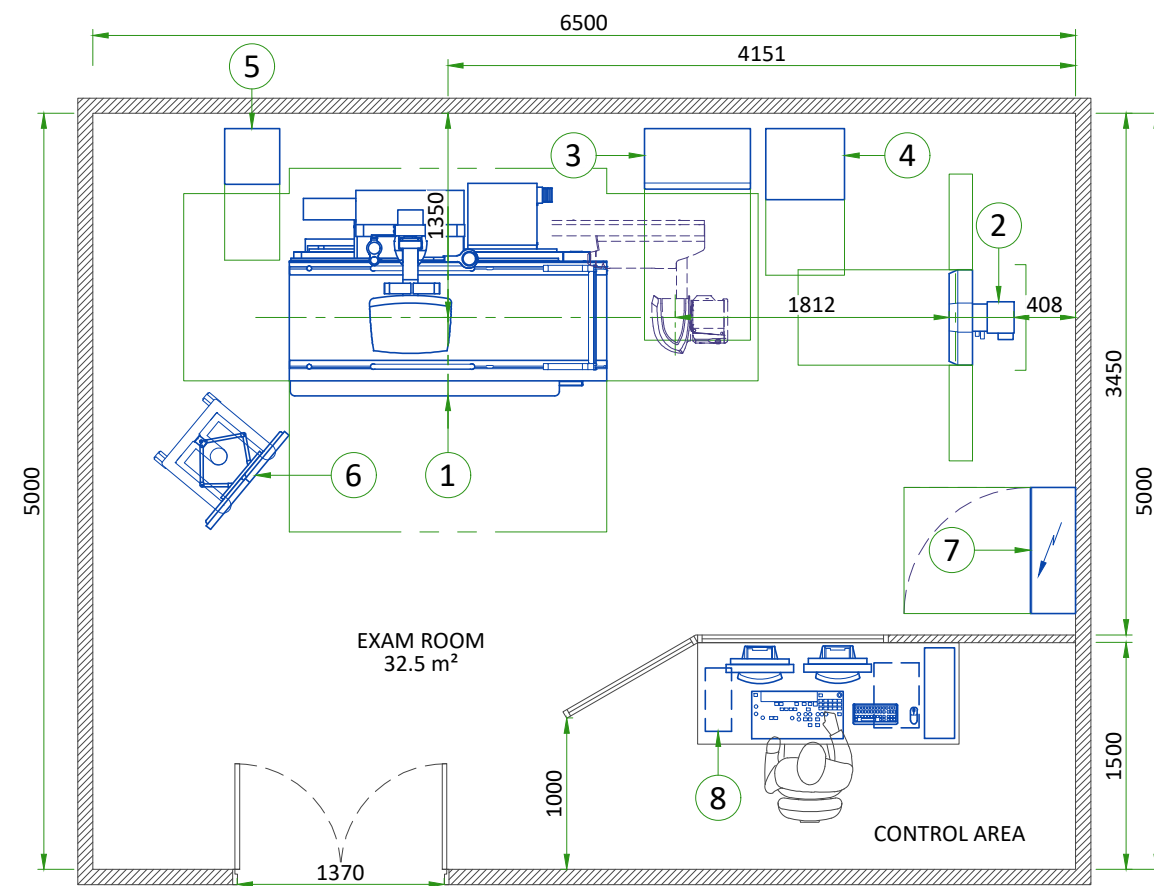
## EQUIPMENT LAYOUT

ITEM	DESCRIPTION	DIMENSIONS LxWxH (mm)	WEIGHT (kg)
1	ELEVATING TABLE	1340x2105x2090	755
2	WALL STAND	630x436x2171	140
3	GENERATOR	400x700x1803	270
4	STARTER	470x520x402	56
5	HEAT EXCHANGER	370x364x152	12
6	MONITOR CART - DOUBLE	573x654x1454	52
7	POWER DISTRIBUTION BOX (PDB)	835x300x1035	-
8	OPERATOR CONSOLE	175x418x367	13

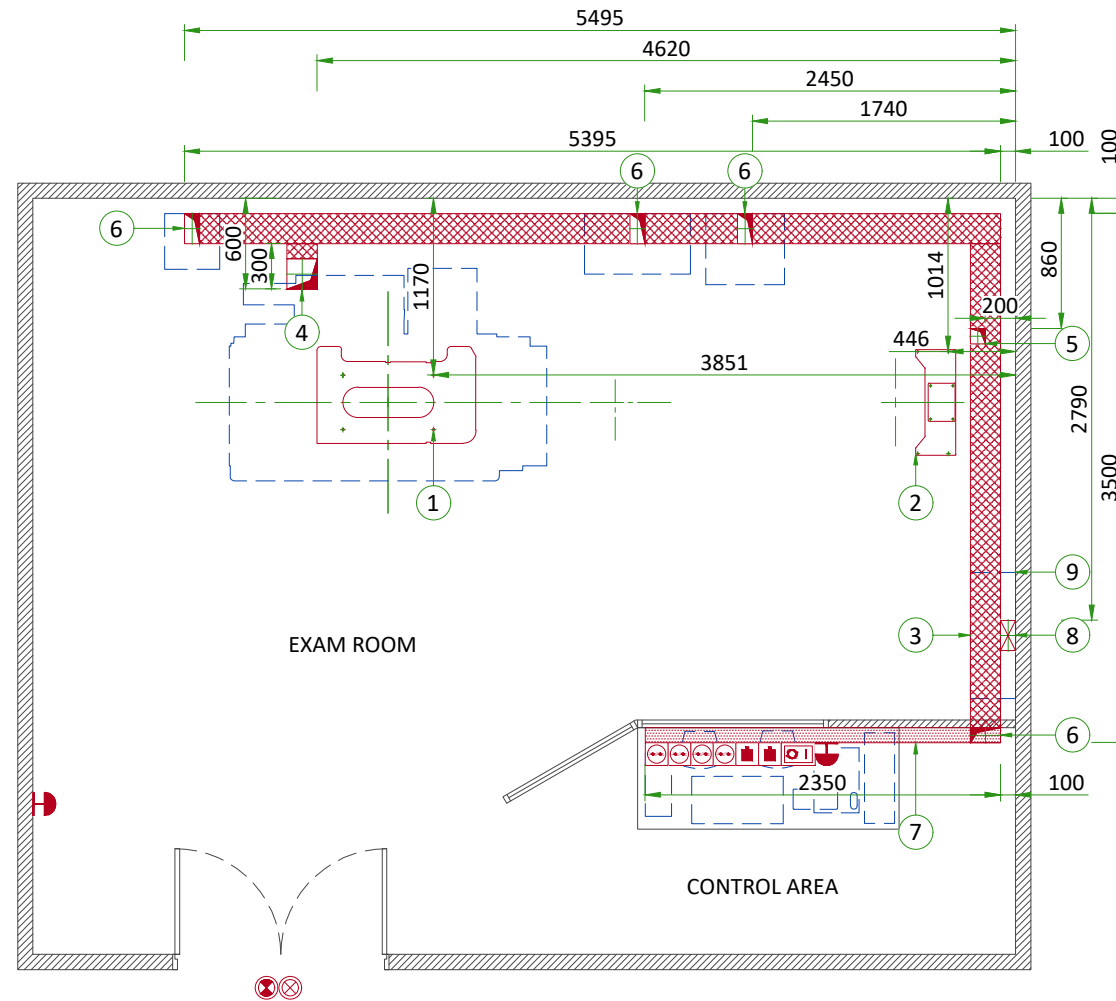
WALL - ACCORDING TO RECEIVED DRAWING

### EXAM ROOM HEIGHT

FINISHED FLOOR TO SLAB HEIGHT	-
FALSE CEILING HEIGHT	Min. 2.60 m



## FLOOR - ELECTRICAL LAYOUT

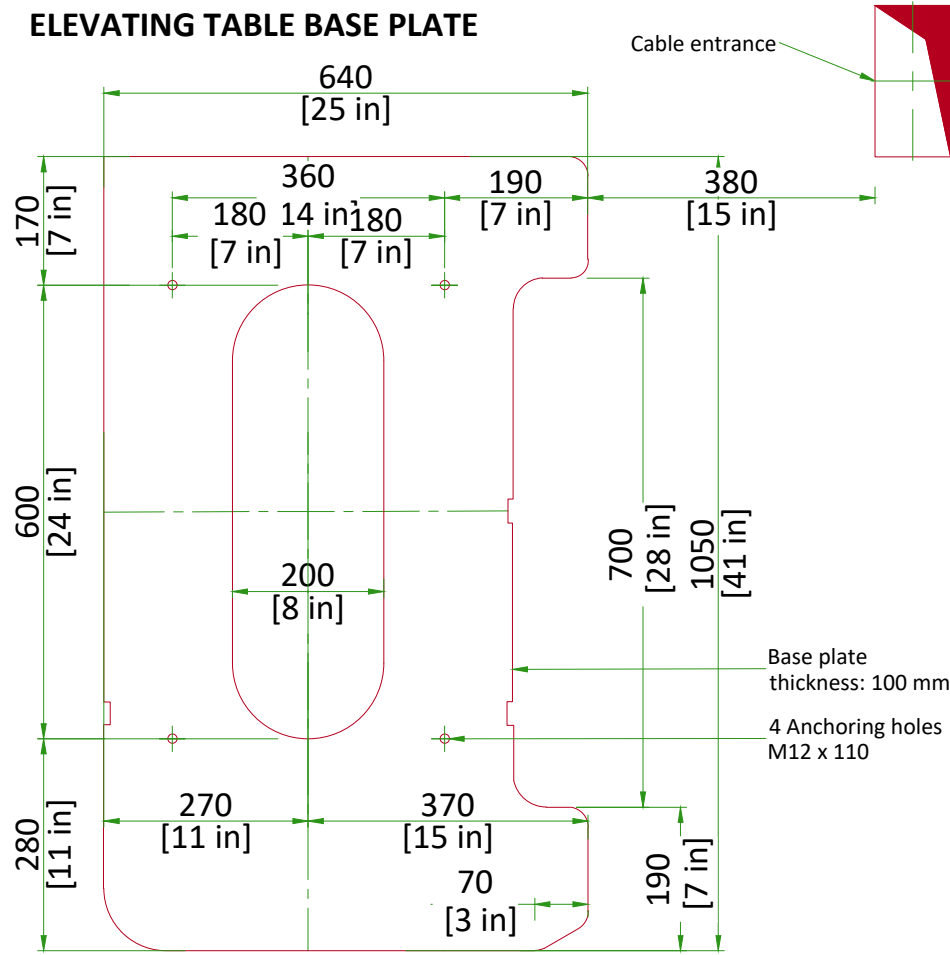


N.	QTY	DESCRIPTION
1		Table anchoring (see Floor Structural Details)
2		Wallstand anchoring (see Floor Structural Details)
3		200x100 flush floor duct
4		200x200 cable inlet on the floor
5		100x100 cable inlet on the floor
6		200x100 cable inlet on the floor
7		200x100 horizontal wall duct
8		200x100 cable inlet on the floor and vertical wall duct for PDB (h=1.1m)
9		Power distribution box (PDB)

Basic system		
	4	Electrical outlet 10/16A 230V + G
	2	RJ 45 network socket
	1	System remote control (Y), locked when power OFF "ON" and "OFF" impulse buttons with indicator lamps red=ON / green=OFF located at 1.50m above floor
	2	System emergency off (SEO), (recommended height 1.50m-1.85m above floor)
	1	System ON light (L) - 24V
	1	X-Ray ON lamp (L1) - 24V

## FLOOR MOUNTING

### ELEVATING TABLE BASE PLATE



### FLOOR DETAILS

Operation/Maintenance load: 7.40 kN

Actual load (including the vibration factor of the equipment): 9.26 kN

Floor occupation area: 0.40 m<sup>2</sup>

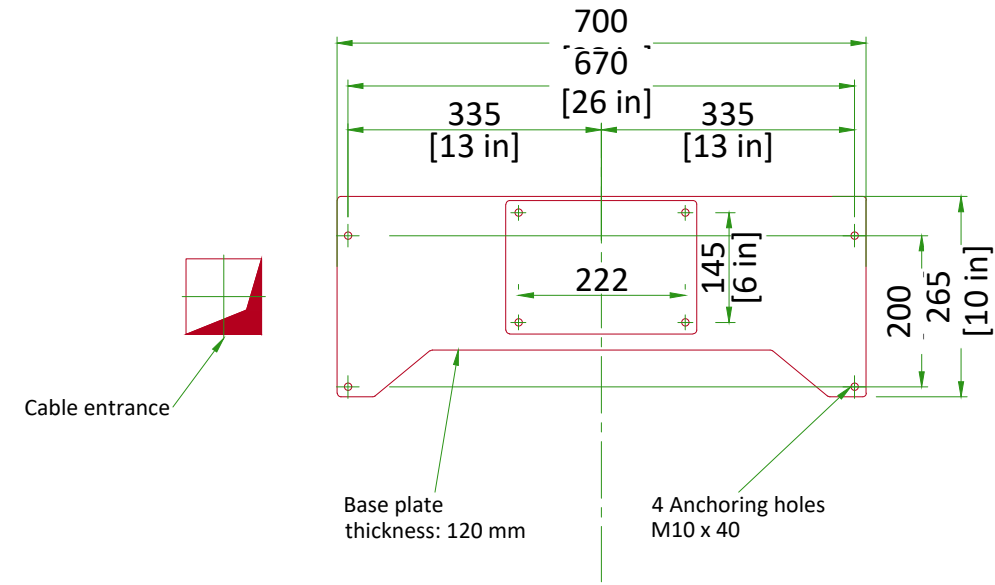
Unit load: 23.1 kN/m<sup>2</sup> (If the strength is less than this value, floor reinforcing work is required)

Tensile strength of an anchor : 17.4 kN  
Shear strength of an anchor: 12.4 kN

SCALE 1:10

## FLOOR MOUNTING

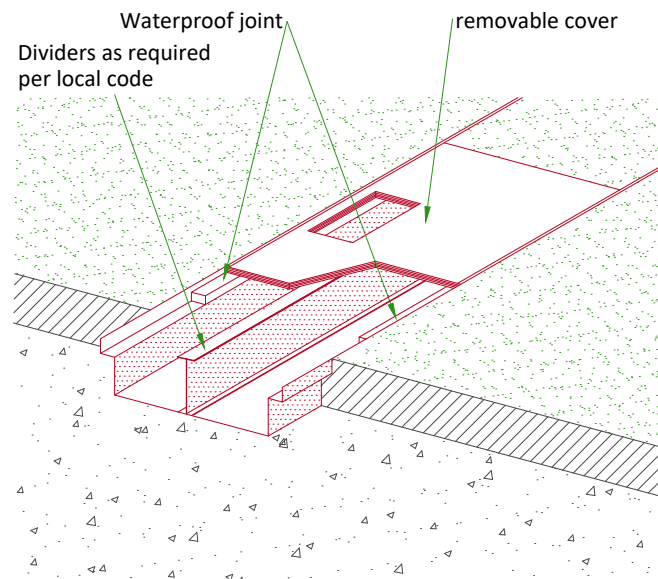
### WALLSTAND BASE PLATE



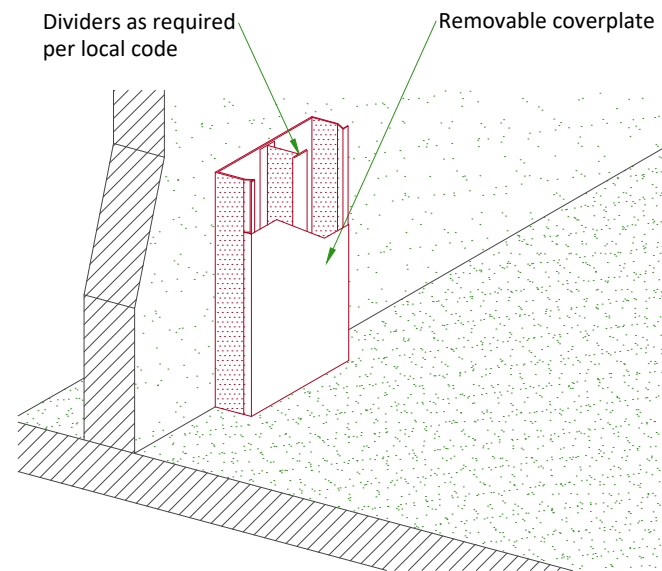
SCALE 1:10

## TYPICAL CABLE MANAGEMENT

### FLUSH FLOOR DUCT



### VERTICAL DUCT ON WALL



NOT TO SCALE

## POWER REQUIREMENTS

POWER SUPPLY	3 PHASES+N+G 380/400/415/440V ±10%
FREQUENCIES	50/60 Hz ± 0.5 Hz
MAXIMUM INPUT POWER (0.1 sec max)	130 kVA
AVERAGE CONTINUES POWER	1660 W
LINE IMPEDANCE PER WIRE	0.13 Ohm/400V

- Line supply should come into a power distribution box (PDB) 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 PDB.

### SUPPLY CHARACTERISTICS

- Power input must be separated 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.

### GROUND SYSTEM

- 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 units are located.

### CABLES

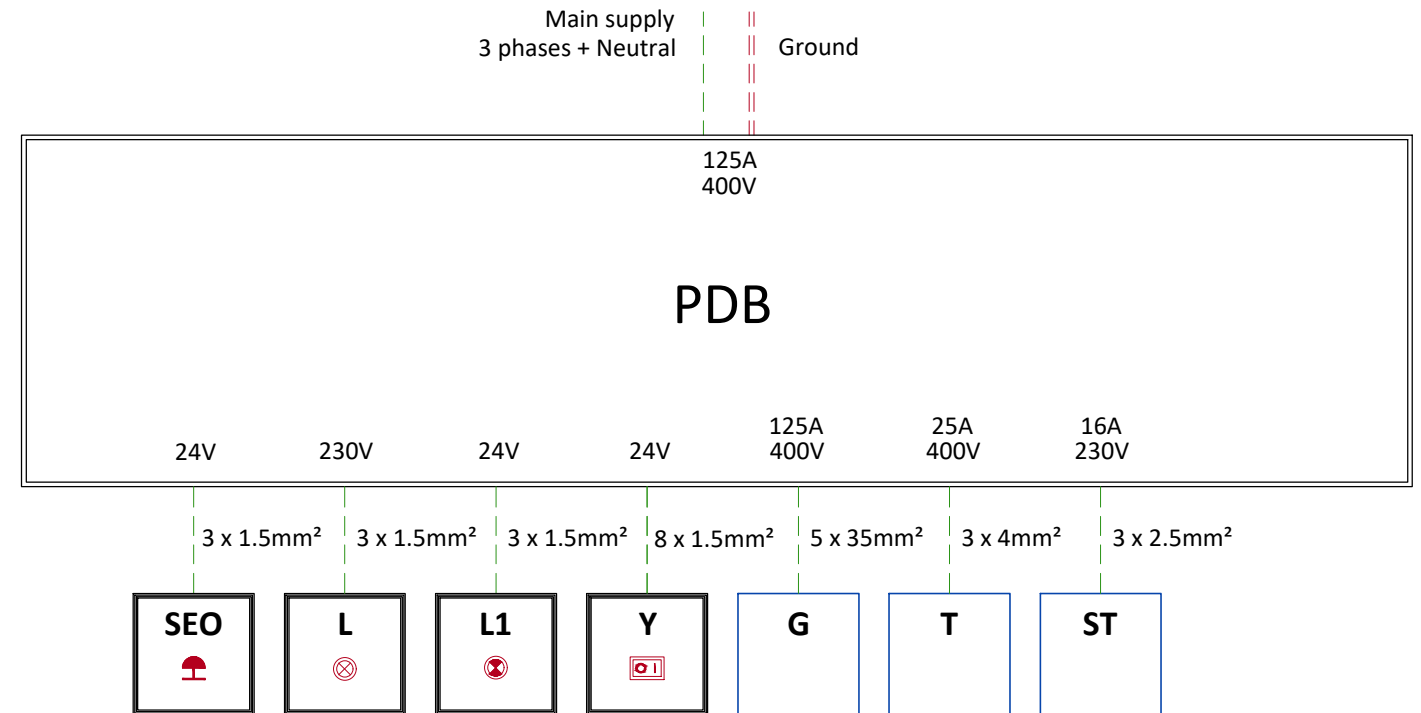
- Power and cable installation must comply with the distribution diagram below.
- All cables must be isolated and flexible, cable color codes must comply with standards for electrical installation.
- Case PDB furnished by GE: The cables for signals and remote control (Y, SEO, L...) will go to PDB with a pigtail length of 1.5m, 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.

## POWER DISTRIBUTION



- PDB** Power Distribution Box
- Y** System remote-control locked when power OFF, "ON" and "OFF" impulse buttons with indicator lamps red=on / green=off
- L** System ON light - 24V - Located near access doors
- L1** X-Ray ON light - 24V - Located near access doors
- SEO** Emergency OFF, near access doors
- G** Generator
- T** Transformer (Digital Image Processor)
- ST** Starter

- Cable SUPPLIED BY CUSTOMER
- Equipment SUPPLIED BY CUSTOMER
- Equipment CAN BE ORDERED FROM GE
- Equipment SUPPLIED BY GE

## TEMPERATURE AND HUMIDITY SPECIFICATIONS

### IN-USE CONDITIONS

	EXAM ROOM		CONTROL ROOM	
	Min	Max	Min	Max
Temperature	10°C	35°C	10°C	35°C
Relative humidity (1)	30% to 75%		30 to 75%	
Heat dissipation	Stand-by	In use	Stand-by	In use
	0.25 kW	1.59 kW	0.035 kW	0.035 kW

### STORAGE CONDITIONS

Temperature	-10°C to 50°C
Relative humidity (1)	10% to 95%

Material should not be stored for more than 90 days.

(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.

## DELIVERY

### THE CUSTOMER/CONTRACTOR SHOULD:

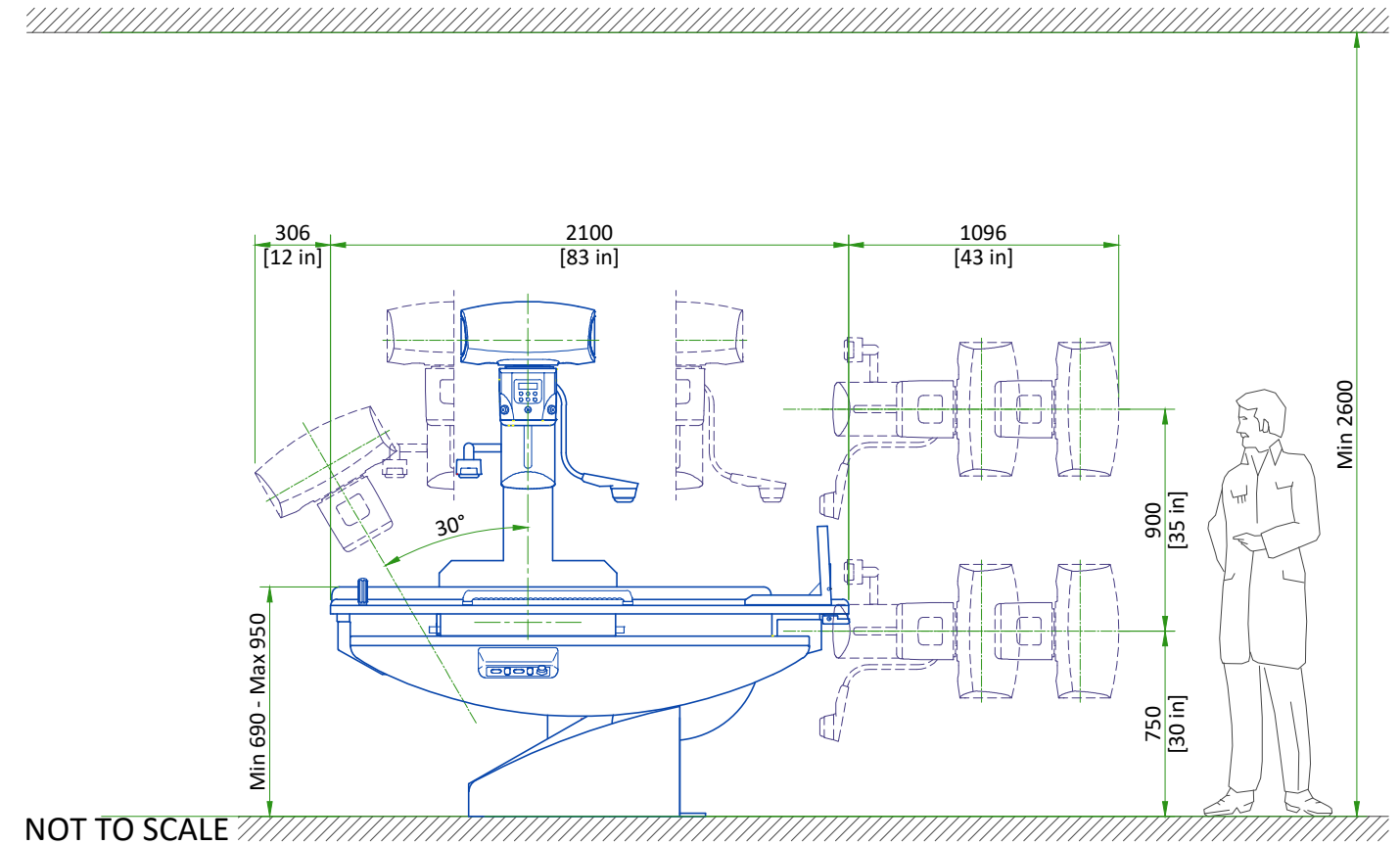
- Provide an area, adjacent to the X-Ray suite, for delivery and unloading of the GE equipment,
- Ensure that the dimensions of all doors, corridors, ceiling heights, are sufficient to accommodate the movement of GE equipment from the delivery area to the specific rooms of the X-Ray site.
- Ensure that the access route will accommodate the weights of the equipment and any transportation, lifting and rigging equipment,
- If the parking and dock facilities are on property which does not belong to the customer, ensure that all necessary steps have been taken to ensure their temporary use by GE.

### SHIPPING DIMENSIONS AND WEIGHTS IN BOXES

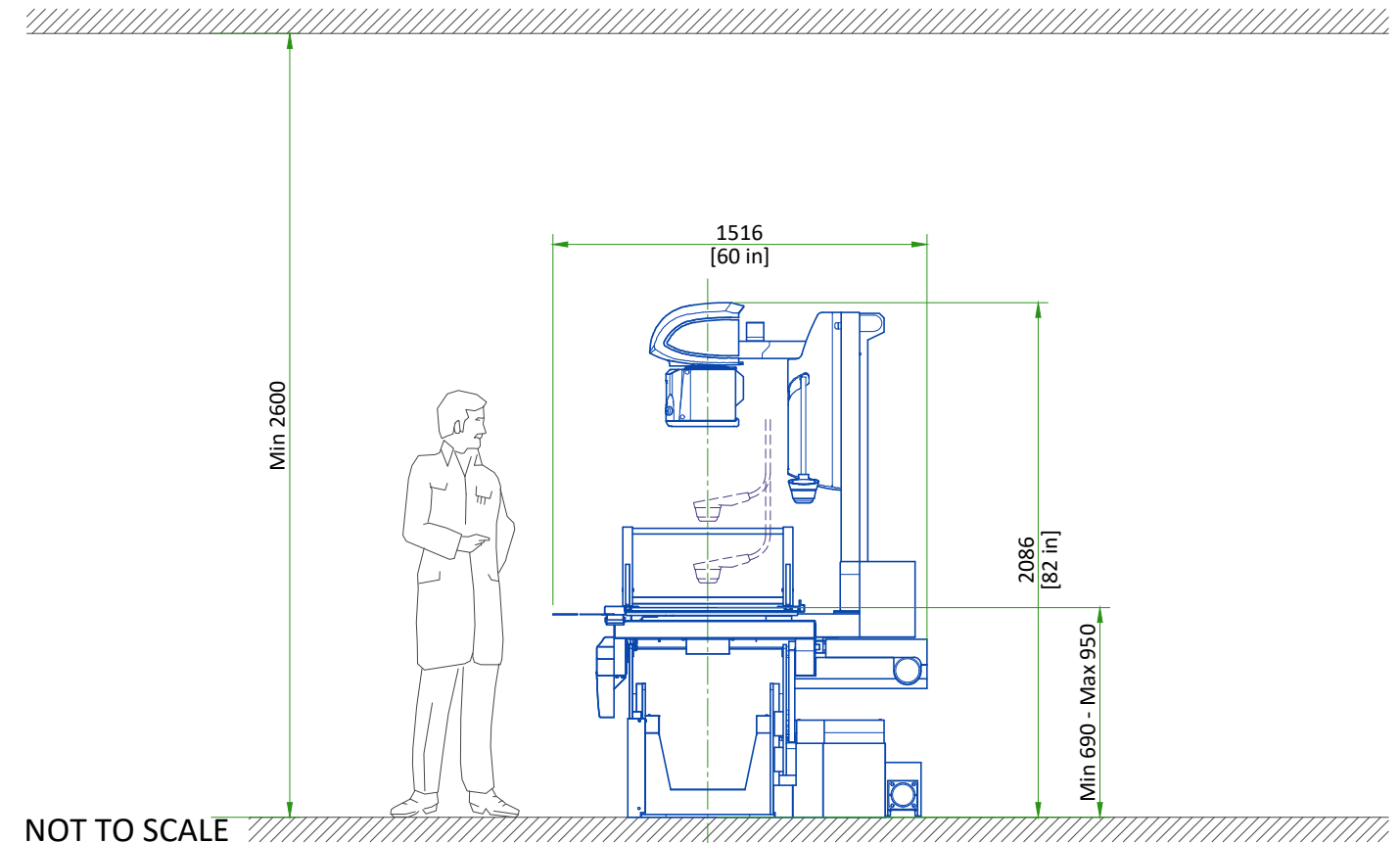
Equipment	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	WEIGHT (kg)
Elevating table	2310	1510	1110	680
Generator	1160	1010	2020	470
Image Capture Computer	1160	1060	1000	180
Monitor (2)	1210	810	850	75
Wallstand (option)	2310	860	870	200

Minimum door opening for equipment delivery is 1350x1800, contingent on a 1400x1800 corridor

## TABLE FRONT VIEW

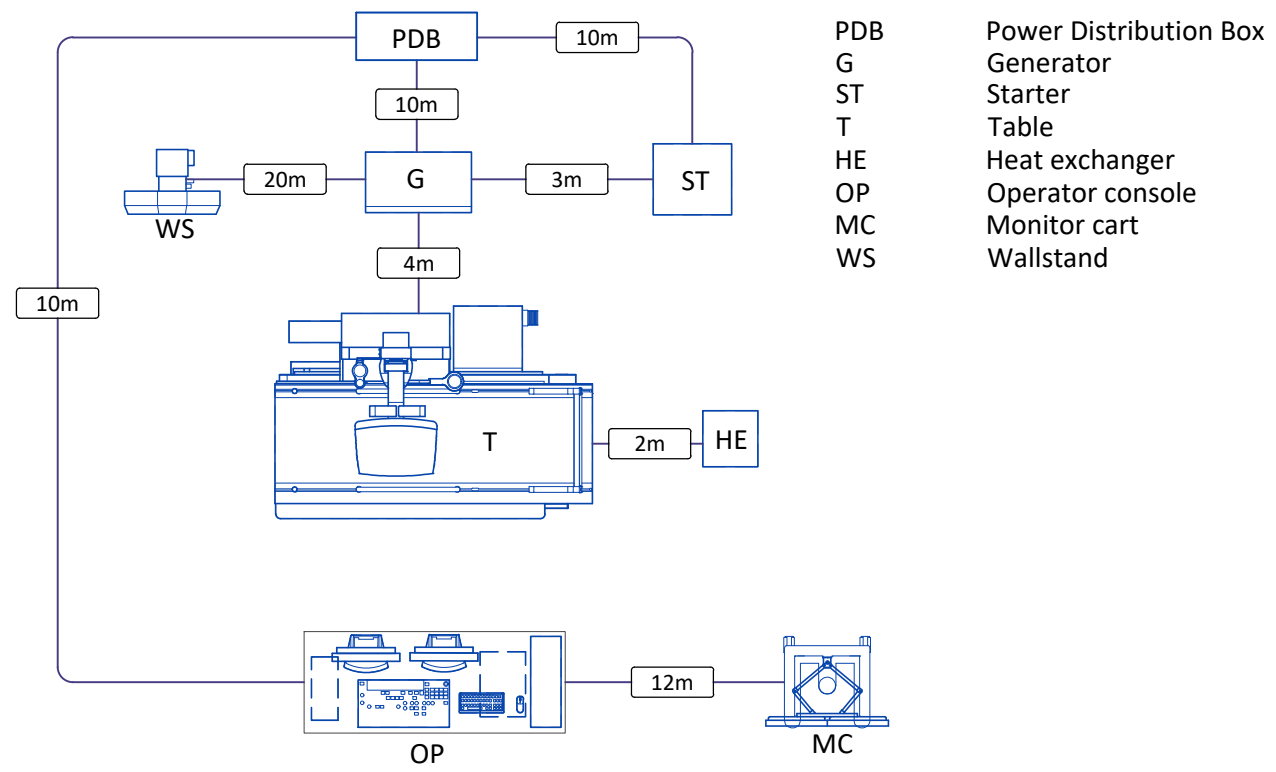


## TABLE SIDE VIEW



# INTERCONNECTIONS

## CONFIGURATION WITH WALLSTAND



## 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.

<b>THE UNDERSIGNED, HEREBY CERTIFIES THAT I HAVE READ AND APPROVED THE PLANS IN THIS DOCUMENT.</b>		
<b>DATE</b>	<b>NAME</b>	<b>SIGNATURE</b>

## 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 <a href="https://www.gehealthcare.com/support/manuals">https://www.gehealthcare.com/support/manuals</a>	

- 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 Fluoroscopy, Mammography, Bone Mass Densitometry	DOC2949063
All modality Customer/Contractor Worksheet	DOC2949068
*documents can be accessed in multiple languages at <a href="https://www.gehealthcare.com/support/manuals">https://www.gehealthcare.com/support/manuals</a>	

- 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.