### PRE-INSTALLATION REQUIREMENTS FOR SENOGRAPEH PRISTINA TYPICAL STUDY

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<th>DATE</th>
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GE Healthcare

**GE Contact Name**

Phone Number

E-mail address

### SITE NAME

CITY

COUNTRY

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Drawn by: [Name]
Verified by: [Name]
S.O.: [Name]
PIM Ref & Rev: 5729303-1-8EN Rev.1
Date: 01/07

Scale: 1:50
Format: A3

EN-MAM-TYP-SENO_PRISTINA.DWG
WALL - ACCORDING TO RECEIVED DRAWING

EXAM ROOM HEIGHT

FINISHED FLOOR TO SLAB HEIGHT
rec. 2.50 m

FALSE CEILING HEIGHT

ITEM DESCRIPTION DIMENSIONS LeWxH (mm) WEIGHT (kg)
1 GANTRY 1312x628x2288 394
2 CONTROL STATION 374x775x1855 150
3 POWER DISTRIBUTION BOX (PDB - NOT SUPPLIED BY GE) - -
4 SENORIS WORKSTATION - DIAGNOSE MODE - -

POSITION TO BE DEFINED

EXAM ROOM
12.5 m²
<table>
<thead>
<tr>
<th>ITEM</th>
<th>QTY</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Gantry anchoring (see Floor &amp; Wall Struct Details)</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>Control station anchoring (see Floor &amp; Wall Struct Details)</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>100x100 cableduct on the floor</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>100x100 vertical duct from floor to PDB</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>Power Distribution Box (PDB)</td>
</tr>
</tbody>
</table>

### Basic system

- **Electrical outlet 10/16A 230V + G**
- **RJ 45 network socket**
- **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**
- **System emergency off (SECO), (recommended height 1.50m-1.85m above floor)**
- **System ON light (L) - 24V**
- **X-Ray ON lamp (L1) - 24V**
- **Door interlock switch**

### Options (Senotis Workstation)

- **Electrical outlets 10/16A+G - 230V, linked to the hospital UPS or through a dedicated UPS of 3kVA single phase (if available)**
- **2 RJ45 network sockets**
ANCHORING TO THE FLOOR

**Gantry**

- Cable inlet 50x50
- Gantry axis
- Baseplate
- Anchoring 4 holes Ø10
  - Max bolt pull tension at each point
  - 760 daN (non seismic areas)

**Control Station**

- Cable inlet 50x50
- Cable inlets
- Baseplate
- Anchoring 4 holes Ø10
  - Max bolt pull tension at each point
  - 760 daN (non seismic areas)

**NOTE:**

- Anchors supplied by GE (For non-seismic areas only)
- Min floor thickness 120 mm (102 mm for seismic areas)
- The floor surface must remain horizontal and flat within ±2.5 mm per meter after installation of the Gantry and the Control Station.
- If customer floor is not concrete slab floor (e.g. raised technical flooring, timber etc.) consultation is mandatory with a structural engineer.

NOT TO SCALE

ROOM HEIGHT REQUIREMENTS

<table>
<thead>
<tr>
<th>LIFT UPPER LIMIT BUMPER STOPPER POSITION</th>
<th>CORRESPONDING TUBE HEAD HEIGHT</th>
<th>MINIMUM CEILING HEIGHT</th>
<th>CORRESPONDING BUCKY PLANE MAXIMUM HEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottom</td>
<td>2235 mm</td>
<td>2300 mm</td>
<td>1340 mm</td>
</tr>
<tr>
<td>Middle</td>
<td>2335 mm</td>
<td>2400 mm</td>
<td>1440 mm</td>
</tr>
<tr>
<td>Top (default setting)</td>
<td>2395 mm</td>
<td>2500 mm</td>
<td>1500 mm</td>
</tr>
</tbody>
</table>

CABLE MANAGEMENT

**Duct on the Floor**

- Removable coverplate

**Wall Duct**

- Removable coverplate

NOT TO SCALE
**POWER REQUIREMENTS**

- Power 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 line resistance phase.

**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**
- 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.
- All cables must be isolated and flexible, cable color codes must comply with standards for electrical installation.
- The cables from signalling and remote control (Y, SEO, L...) will go to PDB with a pigtail length of 1.5 m, 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),
  - Only GE cables are running inside cableways.
  - Metal cableways should be grounded.

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**POWER DISTRIBUTION**

- **PDB**
  - Main supply
    - Single phase 200/240V
    - Ground
    - Min 6mm²

- **SEO** System emergency OFF, located at 1.50m above floor
- **Y** System remote control, locked when power OFF "ON" and "OFF" impulse buttons with indicator lamps, red=ON / green=OFF, located at 1.50m above floor
- **G** Generator cabinet built in the Gantry
- **L** System ON lamp max 30V, located near access doors
- **L1** XRay ON light max 30V, located near access doors
- **SW** Room door switch
- **Y** ON/OFF impulse buttons with indicator lamps

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**POWER REQUIREMENTS**

<table>
<thead>
<tr>
<th>Category</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>POWER SUPPLY</strong></td>
<td>Single phase + Ground</td>
</tr>
<tr>
<td><strong>VOLTAGES</strong></td>
<td>200V 208V 220V 230V 240V ± 10%</td>
</tr>
<tr>
<td>**MAXIMUM INSTANTANEOUS POWER (DURING EXPOSURE)</td>
<td>4.6 kVA</td>
</tr>
<tr>
<td><strong>MAXIMUM POWER IN STAND BY</strong></td>
<td>1.2 kVA</td>
</tr>
<tr>
<td><strong>FREQUENCIES</strong></td>
<td>50/60Hz ± 3Hz</td>
</tr>
<tr>
<td><strong>LINE IMPEDANCE PER WIRE</strong></td>
<td>0.4 Ohm/200V 0.48 Ohm/220V 0.53 Ohm/230V 0.57 Ohm/240V</td>
</tr>
</tbody>
</table>

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TEMPERATURE AND HUMIDITY SPECIFICATIONS

IN-USE CONDITIONS

Environmental conditions must ensure patient and operator comfort and must be maintained within the range below:

<table>
<thead>
<tr>
<th></th>
<th>Min</th>
<th>Recommended</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>15°C</td>
<td>23°C ± 3°C</td>
<td>30°C</td>
</tr>
<tr>
<td>Temperature gradient</td>
<td></td>
<td></td>
<td>≤ 15°C/hour</td>
</tr>
<tr>
<td>Relative humidity</td>
<td></td>
<td></td>
<td>(non-condensing) ≤ 10% to 80%</td>
</tr>
<tr>
<td>System heat dissipation</td>
<td></td>
<td></td>
<td>Standby</td>
</tr>
<tr>
<td></td>
<td>0.36 kW</td>
<td>0.814 kW</td>
<td></td>
</tr>
</tbody>
</table>

STORAGE CONDITIONS

<table>
<thead>
<tr>
<th></th>
<th>Short term (&lt; 5 days)</th>
<th>Long term (&gt; 5 days)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>-5°C to +30°C</td>
<td>Relatively low</td>
</tr>
<tr>
<td>Relative humidity (non-condensing)</td>
<td>10 to 95%</td>
<td>&lt; 50% (recommended)</td>
</tr>
</tbody>
</table>

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.

ENVIRONMENTAL SPECIFICATIONS

MAGNETIC INTERFERENCE

The Senographe Pristina system is immune to surrounding magnetic fields of up to 37.5 mGauss.

LIGHT REQUIREMENTS

In order to obtain a room brightness value of 100 lux or less for correct viewing of monitor images, the room lights must be equipped with a dimmer switch. Shades and/or drapes must be fitted to windows.

CONNECTIVITY REQUIREMENTS

Broadband Connections are necessary during the installation process and going forward to ensure full support from the Engineering Teams for the customers' system. Maximum performance and availability for the customers' system is maintained and closely monitored during the lifetime of the system. Proactive and reactive maintenance is available utilising the wide range of digital tools using the connectivity solutions listed below:

- Site-to-Site VPN/GE Solution
- Site-to-Site VPN/Customer Solution
- Connection through Dedicated Service Network
- Internet Access - connectivity for InSite 2.0

The requirements for these connectivity solutions are explained in the broadband solutions catalogue (separate document).

The Senographe Pristina system must be connected to the hospital Ethernet network via the AXIS Computer within the Control Station in order to exchange data with other medical equipment (network hosts) on the hospital network. Typical medical equipment (network hosts) usually connected to the Senographe Pristina system include the following:

- Worklist providers (HIS or RIS)
- Mass archiver (Storage or PACS)
- Review stations (i.e. GE SenoIris)
- CAD (Computer Aided Detection)
- Network transfer systems (i.e. DICOM Shuttle)
- Printers

Before installation, the following information must be obtained for each network host so that it can be declared in the AXIS Computer:

- IP address for the network host
- Host name
- Port Number
- Application Entity Title (AET)
- Subnet mask

The hospital network administrator usually supplies this information.

Before installation, so that the AXIS Computer within the Control Station can communicate with the hospital network, the following information must be obtained:

- An IP address assigned to the AXIS Computer
- IP address of the hospital Gateway
- Subnet mask
- If additional routers and/or static routes are used by the hospital, those must also be provided

The hospital network administrator usually supplies this information.

NOTE

Connection of Senographe Pristina to the hospital network that includes other equipment could result in previously unidentified risks to patients, operators or third parties.
INTERCONNECTIONS

3.5m

Right Foot Switch
Gantry
Left Foot Switch

CONTROL STATION

DELIVERY

THE CUSTOMER/CONTRACTOR MUST:

- Provide an area, adjacent to the GE 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 GE 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 local regulations. GE does not take responsibility for the specification or provision of radio-protection.
- 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 GE site.

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>CRATE 1</th>
<th>CRATE 2</th>
<th>CRATE 3</th>
<th>CRATE 4</th>
<th>CRATE 5</th>
<th>CRATE 6</th>
<th>CRATE 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depth (mm)</td>
<td>1531</td>
<td>1075</td>
<td>695</td>
<td>1010</td>
<td>1255</td>
<td>Very</td>
<td></td>
</tr>
<tr>
<td>Width (mm)</td>
<td>845</td>
<td>1055</td>
<td>1074</td>
<td>670</td>
<td>885</td>
<td>Very</td>
<td></td>
</tr>
<tr>
<td>Height (mm)</td>
<td>2160</td>
<td>1452</td>
<td>1510</td>
<td>160</td>
<td>100</td>
<td>Very</td>
<td></td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>486</td>
<td>120</td>
<td>129.2</td>
<td>8</td>
<td>15</td>
<td>Very</td>
<td></td>
</tr>
</tbody>
</table>

NOTE
The dimensions and mass of crates 6 and 7 can vary according to the options chosen by the customer

DELIVERY WITH DOLLIES/TRANSPORTATION TOOL

Minimum dimensions for door:
Width: 700 mm
Height without gantry column front covers 1958 mm
Height without gantry column rear covers 1908 mm

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 conformance with local regulations. GE does not take responsibility for the specification or provision of radio-protection.