GE Healthcare Pre Installation Manual

Pre Installation documents for GE Healthcare products can be accessed on the web at: www.gehealthcare.com/siteplanning

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.

GE does not take responsibility for any damages resulting from changes on drawings made by others. Errors may occur by not referring to the complete set of final issue drawings. GE cannot accept responsibility for any damage due to the partial use of GE final issue drawings, however caused. All dimensions are in millimeters unless otherwise specified. Do not scale from printed pdf files. GE accepts no responsibility or liability for defective work due to scaling from these drawings.

A1-A3

PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE
<table>
<thead>
<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
<th>DIMENSIONS LxWxH (mm)</th>
<th>WEIGHT (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>STANDARD INTEGRATED TABLE</td>
<td>2100x1350x2260</td>
<td>355</td>
</tr>
<tr>
<td>2</td>
<td>STANDARD WALL STAND</td>
<td>655x200x1900</td>
<td>75</td>
</tr>
<tr>
<td>3</td>
<td>POWER DISTRIBUTION UNIT (PDU)</td>
<td>718x437x389</td>
<td>122</td>
</tr>
<tr>
<td>4</td>
<td>POWER DISTRIBUTION BOX (PDB)</td>
<td>800x600x300</td>
<td>42</td>
</tr>
<tr>
<td>5</td>
<td>OPERATOR CONSOLE ON PEDESTAL</td>
<td>330x380x980</td>
<td>10.1</td>
</tr>
</tbody>
</table>

EXAM ROOM HEIGHT
FINISHED FLOOR TO SLAB HEIGHT
FALSE CEILING HEIGHT min. 2.50 m
<table>
<thead>
<tr>
<th>ITEM</th>
<th>QTY</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Table anchoring (see Floor Structural Details)</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>Wall Stand anchoring (see Floor Structural Details)</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>Operator console on pedestal anchoring (see Floor Structural Details)</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>150x100 horizontal wall duct</td>
</tr>
<tr>
<td>5</td>
<td>100x70 flush floor duct</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>100x70 cable inlet on the floor</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>150x100 vertical duct for PDB cabling</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Power Distribution Box (PDB)</td>
<td></td>
</tr>
</tbody>
</table>

**Basic system**
- 4 Additional electrical outlets: 230V 10/16A +G
- 2 RJ45 network socket for the main system console
- 2 System emergency off (SEO), Emergency OFF, 1.50m above floor near access doors
- 1 XR ON lamp (L1) - 24V, located near access doors

**Additional details**
- Flush floor duct
- Wall duct
**FLOOR MOUNTING**

**TABLE AND WALLSTAND**

- The supplied anchors require a minimum embedment of 55 mm [2.2 in] into the concrete. If the floor thickness is less than 75 mm [3 in], it is recommended that the unit be secured using a through-bolt method with a reinforcement plate on the back side. The ground surface must be flat and leveled.
- Anchors supplied by GE.

SCALE 1:20

**OPERATOR CONSOLE ON PEDESTAL**

- The supplied anchors require a minimum embedment of 35 mm [1.4 in] into the concrete. If the floor thickness is less than 55 mm [2.2 in], it is recommended that the unit be secured using a through-bolt method with a reinforcement plate on the back side. The ground surface must be flat and leveled.
- Anchors supplied by GE.

SCALE 1:10

**CABLE MANAGEMENT**

**FLUSH FLOOR DUCT**

- waterproof joint
- removable cover

**VERTICAL DUCT ON WALL**

- Removable coverplate

NOT TO SCALE
POWER REQUIREMENTS

<table>
<thead>
<tr>
<th>POWER REQUIREMENTS</th>
<th>NETWORK REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>POWER SUPPLY</td>
<td>3 PHASES+G 380/400/420/440/460/480 VAC ±10%</td>
</tr>
<tr>
<td>FREQUENCIES</td>
<td>50/60 Hz ± 3 Hz</td>
</tr>
<tr>
<td>POWER DEMAND</td>
<td>70 kVA</td>
</tr>
<tr>
<td>LINE IMPEDANCE</td>
<td>380V : 0.15 Ohm / 400V : 0.16 Ohm / 420V : 0.18 Ohm</td>
</tr>
<tr>
<td></td>
<td>440V : 0.20 Ohm / 460V : 0.22 Ohm / 480V : 0.24 Ohm</td>
</tr>
</tbody>
</table>

- TNC neutral point connection must not be used.
- 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 device 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 1.5 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)
- Metal cableways should be grounded.

NETWORK REQUIREMENTS

1 RJ 45 socket is required. The network connection is made at the Operator Console. 100BaseT network connection is preferred. 10BaseT network connection is acceptable.
TEMPERATURE AND HUMIDITY SPECIFICATIONS

<table>
<thead>
<tr>
<th></th>
<th>EXAM ROOM</th>
<th>CONTROL ROOM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IN-USE CONDITIONS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature</td>
<td>Min: 10 °C (50 °F)</td>
<td>Max: 40 °C (104 °F)</td>
</tr>
<tr>
<td>Relative humidity (1)</td>
<td>30% to 80%</td>
<td>30% to 80%</td>
</tr>
<tr>
<td>Humidity gradient</td>
<td>&lt; 30%/h</td>
<td>&lt; 30%/h</td>
</tr>
<tr>
<td>System heat dissipation</td>
<td>0.725 kW</td>
<td>0.006 kW</td>
</tr>
<tr>
<td></td>
<td>Max: 2.480 kW</td>
<td>Max: 0.020 kW</td>
</tr>
<tr>
<td></td>
<td>2474 BTU/hr</td>
<td>8462 BTU/hr</td>
</tr>
</tbody>
</table>

| **STORAGE CONDITIONS** | | |
| Temperature           | Min: -20 °C (-4 °F) to 70 °C (158 °F) | |
| Relative humidity (1) | 20% to 90% | |
| Temperature gradient  | < 20 °C/h (< 68 °F/h) | |
| Humidity gradient     | < 30%/h | |

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.

ENVIRONMENTAL SPECIFICATIONS

MAGNETIC INTERFERENCE
To guarantee specified imaging performance:
X-ray tubes and control console equipment must be located in ambient static field of less than 10 Gauss.

ACOUSTIC OUTPUT
Measured 1 m (3.28 ft) from any point in system.
In-use: less than 65 dBA
Stand-by: less than 55 dBA

INTERCONNECTIONS

EXAM ROOM
- Hospital Mains
- PDU
- Standard/Basic Integrated Table

CONTROL ROOM
- Operator console

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

<table>
<thead>
<tr>
<th></th>
<th>SYSTEM</th>
<th>STANDARD WALL STAND</th>
<th>BASIC WALL STAND</th>
</tr>
</thead>
<tbody>
<tr>
<td>LENGTH (mm)</td>
<td>2500</td>
<td>2000</td>
<td>2000</td>
</tr>
<tr>
<td>WIDTH (mm)</td>
<td>1250</td>
<td>700</td>
<td>700</td>
</tr>
<tr>
<td>HEIGHT (mm)</td>
<td>1000</td>
<td>400</td>
<td>400</td>
</tr>
<tr>
<td>GROSS WEIGHT (kg)</td>
<td>682</td>
<td>117</td>
<td>109</td>
</tr>
<tr>
<td>LENGTH (in)</td>
<td>98.4</td>
<td>78.7</td>
<td>78.7</td>
</tr>
<tr>
<td>WIDTH (in)</td>
<td>49.2</td>
<td>27.6</td>
<td>27.6</td>
</tr>
<tr>
<td>HEIGHT (in)</td>
<td>39.4</td>
<td>15.7</td>
<td>15.7</td>
</tr>
<tr>
<td>GROSS WEIGHT (lb)</td>
<td>1504</td>
<td>258</td>
<td>240</td>
</tr>
</tbody>
</table>

Shipping boxes are included.
GLOBAL SITE READINESS CHECKLIST (DI)

Customer Name: 
PMI Name: 
GON/SO Number: 
Field Service Name: 
Equipment: 
Country/City or City/State: 
Site Visit Date for SRC: 
SRC Status: 

Site Ready Checks at Installation

General Site Planning

Room dimensions, including ceiling height, for all Exam, Equipment/Technical & Control rooms meets GE specifications.

Ceiling support structure, if on the GE drawing, is at correct location and height according to the drawing specifications. Levelness and spacing has been measured. Overhead support Structure has been confirmed with contractor to meet GE criteria.

Rooms that will contain equipment, including staging areas if applicable, are construction debris free. Precautions must be taken to prevent debris from entering rooms containing equipment.

Finished ceiling is installed. If applicable ceiling tiles installed per PMI discretion.

Delivery route from truck to installation space has been reviewed, all communications have occurred, arrangements made for special handling (if needed). Floors along delivery route will support weight of the equipment, reinforcements arranged if needed.

System power & grounding (PDB/MDP) is available as per GE specifications, installed at point of final connection and ready to use. Lock Out Tag Out is available.

System power and grounded audit has been scheduled to be completed during installation of equipment. (If Required) GEHC PM to confirmed if needed.

Adequate room illumination installed and working.

Cableways (floor, wall, ceiling, etc.) ready for GE cables and are of correct length and diameter. Cableways routed per GE Final drawings and access openings installed as determined by GEHC PM. Surface floor duct installed at time of system installation.

HVAC systems Installed, and the site meets minimum environmental operational system requirements.

Network outlets installed and computer network available and working.

Hospital IT/connectivity contacts have been engaged and information has been added to Project management tool. (If Required)

Floor levelness/flattness is measured and within tolerance, and there are no visible defects per GEHC specifications. Floor Strength and thickness have been discussed with customer/contractor and they have confirmed GE requirements are met.

Customer supplied countertops where GE equipment will be installed are in place.

Specific for CT & X-ray

Doors and windows complete or scheduled to be installed. If applicable, radiation protection (shielding) finished & radioprotection regulatory approval for installation obtained.

PMI Signature: 
Customer signature: 
FS Signature: optional

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.