DEFINIUM TEMPO/TEMPO PRO
FINAL 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

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 drawing. 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.

GE Healthcare
**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.

---

**DISCLAIMER**

**CUSTOMER SITE READINESS REQUIREMENTS**

**REQUIRED MANUALS FOR SYSTEM PRE-INSTALLATION**

<table>
<thead>
<tr>
<th>Description</th>
<th>Document Number*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product specific Pre-installation Manual</td>
<td>Refer to cover page</td>
</tr>
</tbody>
</table>

*documents can be accessed in multiple languages at [https://customer-doc.cloud.gehealthcare.com/#/cdp/dashboard](https://customer-doc.cloud.gehealthcare.com/#/cdp/dashboard)

- 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 Checklist [DOC1809666](#) are REQUIRED to facilitate equipment delivery to the site. Equipment will not be delivered if these requirements are not satisfied.
  - 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.

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

<table>
<thead>
<tr>
<th>DATE</th>
<th>NAME</th>
<th>SIGNATURE</th>
</tr>
</thead>
</table>

---

Typical | DEFINIUM TEMPO/TEMPO PRO | EN-RAD-TYP-DEFINIUM_TEMPO-NF.DWG | - | Rev E | Date 18/Jan/2024 | C2 - Disclaimer - Site Readiness | 02/16
ENVIROMENTAL SPECIFICATIONS

MAGNETIC INTERFERENCE

In order to avoid interference on the system, static field limits from the surrounding environment must be less than <1 Gauss around the unit.

LIGHT REQUIREMENTS

For the electronic ballast of fluorescent lamp in exam room, the operating frequency should be above 42 kHz.
Recommended lamp for patient exposure: LED 75-350 lux/15-60W or Fluorescent 75-350 lux/30-90W
Recommended lamp for GE service: LED 350-800 lux/60-150W or Fluorescent 350-800 lux/90-300W

ACOUSTIC OUTPUT

Measured 1 m [3.28 ft] from any point in system.
In-use: less than 65 dBA
Stand-by: less than 60 dBA

ALTITUDE AND ATMOSPHERIC PRESSURE

Maximum height above sea level: 3000m [9843 ft]
Minimum depth below sea level: -30m [-98 ft]
Maximum atmospheric pressure: 106 kPa
Minimum atmospheric pressure: 70 kPa
Allowable in-use rate of change: <1.8 kPa/hour
Allowable storage rate of change (equipment in original shipping containers): <76 kPa/hour
The chart shows the application possible to perform with the present equipment positioning, however the sales contract may not include it.

Auto Image Pasting at Wall Stand

Yes

THE FOLLOWING SHOTS ARE NOT AVAILABLE IN THIS LAYOUT

REAR TO FRONT CROSS TABLE SHOT

FINISHED FLOOR TO SLAB HEIGHT

TBD

FALSE CEILING HEIGHT

rec. 9'-5"

For Accessory Sales: (866) 281-7545 Options 1, 2, 2 or mail to: ghecaccessorysales@ge.com

DEFINIUM TEMPO/TEMPO PRO

EN-RAD-TYP-DEFINIUM_TEMPO-NF.DWG  1/4"=1'-0"  Rev E  Date  18/Jan/2024  A2 - Equipment Layout  04/16
**FOCAL SPOT TRAVEL WITH 3M BRIDGE**

Note: Focal Spot Travel varies depending on the length of bridge and rails. Refer to equipment layout.

**EXAM ROOM CEILING HEIGHTS**

<table>
<thead>
<tr>
<th>SYSTEM CONFIGURATION</th>
<th>WALLSTAND POSITION</th>
<th>SPECIFICATION</th>
<th>CEILING HEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2m or 3m Bridge</td>
<td>Any</td>
<td>Recommended</td>
<td>2860 mm [9'-5&quot;]</td>
</tr>
<tr>
<td>Table + Extended WS</td>
<td>Foot</td>
<td>Range</td>
<td>2715-2887 mm [8'-11&quot; to 9'-6&quot;]</td>
</tr>
<tr>
<td></td>
<td>Head</td>
<td>Range</td>
<td>2587-2887 mm [8'-6&quot; to 9'-6&quot;]</td>
</tr>
<tr>
<td>Table + Standard WS</td>
<td>Foot</td>
<td>Range</td>
<td>2587-2887 mm [8'-6&quot; to 9'-6&quot;]</td>
</tr>
<tr>
<td></td>
<td>Head</td>
<td>Range</td>
<td>2855-2887 mm [9'-5&quot; to 9'-6&quot;]</td>
</tr>
<tr>
<td>Table + Non-tilting WS</td>
<td>Foot or head</td>
<td>Range</td>
<td>2587-2887 mm [8'-6&quot; to 10&quot;]</td>
</tr>
<tr>
<td></td>
<td>Front or rear</td>
<td>Range</td>
<td>2715-2887 mm [8'-13&quot; to 9'-6&quot;]</td>
</tr>
</tbody>
</table>

Note: measured from the floor to the top of the longitudinal rails

**ADAPTER**

<table>
<thead>
<tr>
<th>ADAPTER</th>
<th>APPLICABLE CEILING HEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long (standard)</td>
<td>2587-2687 mm [8'-6&quot; to 8'-10&quot;] or lower</td>
</tr>
<tr>
<td>Medium</td>
<td>2687-2787 mm [8'-10&quot; to 9'-2&quot;]</td>
</tr>
<tr>
<td>Short</td>
<td>2787-2887 mm [9'-2&quot; to 9'-6&quot;] or higher</td>
</tr>
</tbody>
</table>

**FRONT VIEW A-A'**

**SIDE VIEW B-B'**
**CLEARANCE AREAS**

**PERFORMANCE TABLE WITH STANDARD WALLSTAND**

![Performance Table Diagram]

*Recommended service access clearance is 915 mm [3 ft].

**SCALE 1:50**

**ACCESS POINT POSITION**

AP Wall-mounting position:
- There are 6 different positions available for AP wall-mounting.
- Install at more than 2.5 m [8.2 ft] height from floor level to avoid potential blocking from human or other obstacles.
- One Ethernet cable to Magic PC and one power cable to system cabinet are connected on the back of the AP.
- Use wall mount adapter included with AP.
- AP is only provided for wireless system, it is not included in Non Wireless Configuration system.

**GRID HOLDER**

The bottom edge of the Grid Holder must be < 300 mm [11.8 in] from the bottom of the Holder to the floor.

**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**

<table>
<thead>
<tr>
<th>EQUIPMENT</th>
<th>DIMENSIONS LxWxH mm (in)</th>
<th>WEIGHT kg (lb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>STANDARD WALLSTAND</td>
<td>2111x911x1860 (83.1x35.9x73.2)</td>
<td>260 kg (573 lbs) + dolly</td>
</tr>
<tr>
<td>EXTENDED WALLSTAND</td>
<td>2340x911x1860 (92.1x35.9x73.2)</td>
<td>280 kg (617 lbs) + dolly</td>
</tr>
<tr>
<td>NON-TILT WALLSTAND</td>
<td>2000x911x1840 (78.7x35.9x72.4)</td>
<td>260 kg (573 lbs) + dolly</td>
</tr>
<tr>
<td>PERFORMANCE TABLE</td>
<td>1372x1000x1360 (51.2x37.4x35.4)</td>
<td>137 kg (302 lbs)</td>
</tr>
<tr>
<td>STATIONARY RAILS (4 m)*</td>
<td>4400x62.5x84.3 (173x2.5x3.3)</td>
<td>48 kg (106 lbs)</td>
</tr>
<tr>
<td>OTS</td>
<td>1260x870x1250 (49.6x34.3x49.2)</td>
<td>350 kg (772 lbs)</td>
</tr>
<tr>
<td>2M BRIDGE</td>
<td>3248x822x429 (127.9x32.4x16.9)</td>
<td>194 kg (423 lbs)</td>
</tr>
<tr>
<td>3M BRIDGE</td>
<td>3248x822x429 (127.9x32.4x16.9)</td>
<td>224 kg (494 lbs)</td>
</tr>
</tbody>
</table>

Refer to Equipment Layout for site-specific equipment configuration.

*Available in lengths up to 5.79 m (19 ft)

**SCALE 1:20**

![Grid Holder Diagram]
CEILING REQUIREMENTS

To allow installation of the stationary rail cross-members, clearance is required between the ends of the stationary rails and the walls.

It is recommended that sprinkler heads not be placed between the stationary rails. All sprinkler heads should be mounted so they do not extend downward more than 6.35 mm [1/4 in] from the ceiling while in the 'resting' position.

In addition, there should not be anything mounted in the ceiling (i.e. lights, A/C returns, etc) between the stationary rails. This is because the OTS longitudinal drive belt assembly is located on the movable bridge, approximately centered between the two stationary rails, and may come into contact with those ceiling-mounted items during normal use.

Stationary rails are designed for top (ceiling) mounting. Rails can be ordered and are supplied in the following sizes:

- 3505 mm [11'-6"]
- 4115 mm [13'-6"]
- 4220 mm [14'-6"]
- 4720 mm [15'-6"]
- 5030 mm [16'-6"]
- 5330 mm [17'-6"]
- 5640 mm [18'-6"]
- 5790 mm [19'-0"]

The choice of length depends on room size, configuration, and the possible presence of obstructions.

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STRUCTURAL NOTES

- 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 for suggested locations.
- Control walls shall be constructed to minimum 2130mm (7'-0") high.
- 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".
- Different anchor types are used to install the components of the system. Refer to Structural Requirements Section(s) of the Pre-Installation Manual for each anchor requirement.
- Refer to the Structural Requirements Section for the required minimum embedment.
- The ground surface must be flat and leveled, maximum tolerance for leveling is ±1.5 mm per 1 m (0.2 in per 10 feet). A grout pad provided by the contractor is required to meet this specification. The maximum pad thickness is 6.3 mm (0.25 in).

The ground surface must be flat and leveled, maximum tolerance for leveling is ±1.5 mm per 1 m (0.2 in per 10 feet). A grout pad provided by the contractor is required to meet this specification. The maximum pad thickness is 6.3 mm (0.25 in).
1. Area occupied by GE supplied table baseplate
2. Area occupied by GE supplied wall stand baseplate

**CONTRACTOR SUPPLIED & INSTALLED**
3. Support backing, locate as shown.
4. Structural support in ceiling for fastening ceiling supported equipment. Supports to run continuous with no fittings extending below face of channel, run wall to wall, be parallel, square, and in the same horizontal plane, flush with the finished ceiling. Rails are mounted to these supports every 2'-2" and require 350 lbs. (597 lbs. In seismic regions) per bolt load. Methods of support that permit attachment to structural steel or through bolts in concrete should be favored. Do not use screw anchors in direct tension.
5. Structural support in ceiling for fastening cable drape rail. Supports to run continuous with no fittings extending below face of channel, run wall to wall, be parallel, square, and in the same horizontal plane, flush with the finished ceiling. Rails are mounted to these supports every 2'-2" and require 50 lbs. Per bolt load. Methods of support that permit attachment to structural steel or through bolts in concrete should be favored. Do not use screw anchors in direct tension.
**TABLE ANCHORING**

**PERFORMANCE TABLE BASEPLATE**

The floor bearing the system is recommended to be concrete and the thickness to be determined by a Structural Engineer to properly support the equipment loads. The supplied anchors require a minimum embedment of 90 mm (3.5 in) into the concrete. If the floor thickness is less than 95 mm (3.74 in), it is recommended that the unit be secured using a through-bolt method with a reinforcement plate on the back side.

**FLOOR LEVELNESS**

6mm [1/4 in] maximum variance over 3048mm [10 ft]

SCALE 1:20

**WALLSTAND ANCHORING**

**WALLSTAND BASE**

30 mm [1.18 in] mounting locations (x2) for Image Pasting Barrier option.

DO NOT DRILL UNTIL FINAL WALLSTAND ALIGNMENT HAS BEEN COMPLETED BY GEHC FSE.

Concrete area for wall stand installation should be 1 m² [39.37 ft²]. The floor levelness tolerance of the floor surface that the wallstand will rest on is 6 mm [1/4 in] over a 3048 mm [10 ft] distance.

SCALE 1:10

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**OTS SUSPENSION RAILS MOUNTING SPECIFICATIONS**

**3 m BRIDGE**

When a 22.7 kg [50 lb] force is applied vertically upward, downward or horizontally at any support rail mounting point, the attachment interface must not deflect more than 1.5 mm [1/16 in]

When a 136 kg [330 lb] load is applied vertically downward or horizontally at any stationary rail mounting point, the attachment interface must not deflect more than 1.5 mm [1/16 in]

Rec: 660.4 ±1.5 mm [26 ±1/16 in].

Max: 1320 mm [52 in] with universal rail option.

The bottom surface of stationary rail and cable support rail must be flat, no obvious protrusions larger than 1mm. (only applicable for non-Unistrut construction)

Stationary rail mounting points must be parallel within ±1.5 mm [1/16 in]

Distance between holes axis 660.4 mm [26 in], Maximum load per screw is 160 kg [353 lb], however each mounting screw must not “PULL OUT” or otherwise fail under a vertically downward dead load of 635 kg [1400 lb]. Bolts for mounting stationary rails on Unistrut or equivalent supplied by GE (1/2" - 13 headed bolts)

**ADDITIONAL RAIL REQUIREMENTS**

The bottom surface of the stationary rail and cable support rails must be horizontal, and the height difference between each support rail edge along the lateral direction must be less than 2 mm (or angle with level along lateral direction must less than 2°).
SUGGESTED UNISTRUT STRUCTURE FOR OTS SUSPENSION

Contractor supplied and installed structural supports flush with finished ceiling.

Contractor supplied and installed finished ceiling (ceiling & supports must not extend below face of structural supports).

GEHC supplied spring nuts with bolts.

GEHC supplied cable chain or drape rail.

Ceiling height as specified on installation drawings.

STRUCTURAL SUPPORT SYSTEM IS NOT SUPPLIED OR INSTALLED BY GE HEALTHCARE

DETAIL 1

Contractor supplied and installed structural supports flush with finished ceiling.

GEHC supplied longitudinal stationary rail.

NOT TO SCALE

DETAIL 2

Contractor supplied and installed structural supports flush with finished ceiling.

GEHC supplied cable chain or drape rail.

NOT TO SCALE
## TEMPERATURE AND HUMIDITY SPECIFICATIONS

### IN-USE CONDITIONS

<table>
<thead>
<tr>
<th>ROOM</th>
<th>DESCRIPTION</th>
<th>HEAT DISSIPATION (kW)</th>
<th>HEAT DISSIPATION (BTU/hr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>STANDBY</td>
<td>IN-USE</td>
</tr>
<tr>
<td><strong>Exam Room</strong></td>
<td>Table</td>
<td>0.071</td>
<td>0.253</td>
</tr>
<tr>
<td></td>
<td>Table Detector power</td>
<td>0.015</td>
<td>0.045</td>
</tr>
<tr>
<td></td>
<td>Wall Stand [Standard/Extended]</td>
<td>0.035</td>
<td>0.072</td>
</tr>
<tr>
<td></td>
<td>WS Detector power</td>
<td>0.015</td>
<td>0.045</td>
</tr>
<tr>
<td></td>
<td>OTS &amp; Collimator</td>
<td>0.058</td>
<td>0.159</td>
</tr>
<tr>
<td></td>
<td>Tube Rotor</td>
<td>0</td>
<td>0.222</td>
</tr>
<tr>
<td></td>
<td>AP</td>
<td>0.017</td>
<td>0.017</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td><strong>0.802</strong></td>
<td><strong>1.993</strong></td>
</tr>
<tr>
<td><strong>Control Room</strong></td>
<td>PC and Monitor</td>
<td>0.14</td>
<td>0.24</td>
</tr>
<tr>
<td></td>
<td>UPS</td>
<td>0.009</td>
<td>0.013</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td><strong>0.149</strong></td>
<td><strong>0.253</strong></td>
</tr>
</tbody>
</table>

### STORAGE CONDITIONS

<table>
<thead>
<tr>
<th>ROOM</th>
<th>DESCRIPTION</th>
<th>Temperature</th>
<th>Temperature gradient</th>
<th>Relative humidity (1)</th>
<th>Humidity gradient</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exam Room</strong></td>
<td></td>
<td>-5°C [23°F] to +50°C [122°F]</td>
<td>&lt; 10°C/h [&lt; 50°F/h]</td>
<td>20% to 75%</td>
<td>&lt; 30%/h</td>
</tr>
<tr>
<td><strong>Control Room</strong></td>
<td>PC and Monitor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 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

<table>
<thead>
<tr>
<th>ROOM</th>
<th>DESCRIPTION</th>
<th>HEAT DISSIPATION (kW)</th>
<th>HEAT DISSIPATION (BTU/hr)</th>
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<td></td>
<td><strong>TOTAL</strong></td>
<td><strong>0.149</strong></td>
<td><strong>0.253</strong></td>
</tr>
</tbody>
</table>
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.

Connectivity Requirements

- 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.
  1.2. Wire sizes given are for use of equipment. Larger sizes may be required by local codes.
  1.3. It is recommended that all wires be color coded, as required in accordance with national and local electrical codes.
  1.4. Conduit sizes shall be verified by the architect, electrical engineer or contractor, in accordance with local or national codes.
  1.5. 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 distribution unit and one on each wall of the procedure room. Use hospital approved outlet or equivalent.
  1.6. 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.
  1.7. 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).
  1.8. Conduit turns have large, sweeping bends with minimum radius in accordance with national and local electrical codes.
  1.9. 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.
  1.10. The maximum point to point distances illustrated on this drawing must not be exceeded.
  1.11. 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.
  1.12. GEHC Conductor 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.

Electrical Notes

- 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:
  2.1. Ductwork shall be metal with dividers and have removable, accessible covers.
  2.2. Ductwork shall be certified/rated for electrical power purposes.
  2.3. 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 pigtail at all junction points.
- Grounding is critical to equipment function and patient safety. Site must conform to wiring specifications shown on this plan.
Electrical Outlet Legend

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
Dedicated telephone line(s)
Network outlet

Additional Conduit Runs
(Contractor Supplied and Installed)

<table>
<thead>
<tr>
<th>From (Bubble # / Item)</th>
<th>To (Bubble # / Item)</th>
<th>Qty</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Phase Power</td>
<td>Main Disconnect Panel</td>
<td>1</td>
<td>As req'd</td>
</tr>
<tr>
<td>1</td>
<td>Main Disconnect Panel</td>
<td>1 As req'd</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Emergency Off</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Systems Cabinet</td>
<td>1</td>
<td>As req'd</td>
</tr>
<tr>
<td>Warning Light</td>
<td>Warning Light Control</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>1 Phase Power</td>
<td>Warning Light Control</td>
<td>1</td>
<td>As req'd</td>
</tr>
<tr>
<td></td>
<td>Door Switch</td>
<td>1</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>TIB</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Access Point</td>
<td>1</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Access Point</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Electrical Layout Item List

1. Main Disconnect Panel (MDP)
2. Suitable bushings & locknuts (Table)
3. Flush 12" x 4" [300 x 100] box (Control)
4. Flush box - size per local code (Chest Unit)
5. Flush box - size per local code (Generator)
6. Flush box - size per local code (Access Point)
7. Flush box - size per local code (TIB)
8. 18" x 3 1/2" [450 x 100] Flush vertical wall duct with minimum 2 dividers
9. Box above ceiling size per local code
10. One 1" [25] conduit above ceiling
11. One 1 1/2" [38] conduit above ceiling
12. One 2" [50] conduit above ceiling
13. One 2 1/2" [64] conduit above ceiling
14. One 3 1/2" [89] conduit above ceiling
15. One 2" [50] conduit below floor
16. One 2 1/2" [64] conduit below floor
17. Flush box in ceiling size per local code
18. Grommeted opening (OTS)
**POWER REQUIREMENTS**

| POWER SUPPLY | 380/400/415/440/460/480VAC Wye THREE-PHASE + G ±10% |
| FREQUENCIES | 50/60Hz ± 3Hz |
| POWER DEMAND | 125kVA |
| MAXIMUM LINE RESISTANCE | 380V : 0.096/ 400V : 0.100 / 415V : 0.113 / 440V : 0.125 / 480V : 0.150 |

- Power supply should come into a power distribution box (PDB/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 material at the beginning of the installation (main low-voltage transformer side) and the protective devices in the PDB/MDP.

**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.
- Cables for signals and remote control (Y, SEO, L...) will go to PDB with a pigtail length of 1.5m.

**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

**Power Requirements**

- Emergency Off (Control room)
- Emergency Off (Exam room) if applicable
- Emergency Off (Technical room) if applicable
- Remote ON/OFF (Control room) if applicable

**Suppliers**

- Cable SUPPLIED BY CUSTOMER
- Cable SUPPLIED BY GE
- Equipment SUPPLIED BY CUSTOMER
- Equipment SUPPLIED BY GE
- MDP Main Disconnect Panel
- SKL Ground wire size

**Recommended minimum customer supplied Main Disconnect Panel (MDP) rating**

- Power/Voltage: 80 kW
- 380 V: 95 A
- 400 V: 90 A
- 415 V: 85 A
- 440 V: 82 A
- 460 V: 78 A
- 480 V: 75 A

**Feeder Table - JEDI 80kW Systems Cabinet**

<table>
<thead>
<tr>
<th>Wire run length (ft)</th>
<th>Minimum Wire Size, AWG or MCC (mm²)/VAC</th>
</tr>
</thead>
<tbody>
<tr>
<td>380 VAC</td>
<td>400 VAC</td>
</tr>
<tr>
<td>50 (15)</td>
<td>2 (35)*</td>
</tr>
<tr>
<td>100 (30)</td>
<td>2 (35)*</td>
</tr>
<tr>
<td>150 (45)</td>
<td>1/0 (95)</td>
</tr>
<tr>
<td>200 (61)</td>
<td>2/0 (70)</td>
</tr>
<tr>
<td>250 (76)</td>
<td>2/0 (70)</td>
</tr>
<tr>
<td>300 (91)</td>
<td>4/0 (100)</td>
</tr>
<tr>
<td>350 (107)</td>
<td>3/0 (85)</td>
</tr>
<tr>
<td>400 (122)</td>
<td>3/0 (85)</td>
</tr>
<tr>
<td>450 (133)</td>
<td>4/0 (100)</td>
</tr>
</tbody>
</table>

*minimum wire size for circuit breaker, based on recommended overcurrent protection

**Grounding**

The grounding conductor will be of same size as the feeder. This ground will run from the equipment back to the facility power source/main grounding point and always travel in the same conduit with the feeders and neutral.

**Notes:**

1. Wire size: 2x1.5mm² [16AWG]
2. Wire size: 6x2mm² [14AWG] and 1x2mm² [14AWG] GND