<table>
<thead>
<tr>
<th>REV</th>
<th>DATE</th>
<th>MODIFICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td>First issue drawing</td>
</tr>
</tbody>
</table>

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 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.

<table>
<thead>
<tr>
<th>DRAWN BY</th>
<th>VERIFIED BY</th>
<th>CONCESSION</th>
<th>S.O. (GON)</th>
<th>PIM MANUAL</th>
<th>REV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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<td>5429007-1EN</td>
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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>A3</td>
<td>1:50</td>
<td>EN-NUC-TYP-BRIVO_NM_615.DWG</td>
<td>13/MAR/2020</td>
<td>01/10</td>
</tr>
</tbody>
</table>
### FLOOR-ELECTRICAL LAYOUT

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QTY</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gantry anchoring (see Structural Details)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Table anchoring (see Structural Details)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>150x100 cable inlet on the floor</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>100x100 cable inlet on the floor</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>150x70 flush floor duct</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>100x70 flush floor duct</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>150x100 horizontal wall duct</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>150x100 cable inlet on the floor and 150x100 vertical duct from floor to MDP (h=1.1 m)</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Main Disconnect Panel (MDP)</td>
<td></td>
</tr>
</tbody>
</table>

### Basic system
- **8** Electrical outlet 10/16A 230V + G
- **1** 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
- **1** System emergency off (SEO), (recommended height 1.50m-1.85m above floor)
- **1** System ON light (L) - 24V

### Injector Option
- **1** Electrical outlet for Injector: 230V 10/16A

### Xeleris Option
- **1** Electrical outlets for Xeleris workstation: 10/16A 230V + G linked to the hospital UPS or through a dedicated UPS of 1 kVA single phase (if available)
- **1** RJ 45 network socket for Xeleris workstation

### Diagram Details
- **CONTROL AREA**
- **EXAM ROOM**
- **Rush floor duct**
- **Wall duct**
LOADING DISTRIBUTION TO THE FLOOR

Gantry weight: 1595 kg [3517 lb] (with HEGP collimators mounted)

Table weight: 360 kg [794 lb]

Center of gravity

SCALE 1:25

FLOOR SPECIFICATIONS

- Floor leveling area: 512 cm [201.6 in] x 374 cm [147.2 in] (covering the entire planned area of table and gantry surface).
- Slope less than 13 mm [0.5 in] over 4300 mm [160 in], if slope is between 13 mm [0.5 in] and 30 mm [1.18 in] refer to PIM for additional requirements.
- Flatness: the surface must be smooth, with deviations of no more than 5 mm [0.195 in] between depressions and high spots in any 1500 mm [59 in] throughout the room or system installation area.
- Floor surface: a single poured surface.
- Floor strength: in order to enable mounting of the system floor anchors, concrete floors must have a minimum cube strength of f’c=4350 psi. (30 MPa) at 28 days (curing time) for 25/30 concrete
- Floor thickness: the system's floor anchors are designed for use only on concrete floors that meet the minimal 140 mm [5.5 in] concrete floor requirements
- The selected anchoring method must have a pulling tensile force of 19.7 kN on each of the anchors bolting the NM gantry to the floor.

GANTRY ANCHORING

HILTI-HSL-3 M10/40 anchor
Torque: 35 Nm

CABLE MANAGEMENT

FLUSH FLOOR DUCT

WALL DUCT

NOT TO SCALE
POWER REQUIREMENTS

<table>
<thead>
<tr>
<th>POWER SUPPLY</th>
<th>SINGLE PHASE + N 208-240 VAC ±10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>FREQUENCIES</td>
<td>50/60 Hz ± 3 Hz</td>
</tr>
<tr>
<td>MAXIMUM POWER DEMAND</td>
<td>6 kVA</td>
</tr>
<tr>
<td>CONTINUOUS (AVERAGE) POWER DEMAND</td>
<td>2.5 kVA</td>
</tr>
</tbody>
</table>

- Line 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, equal to 2.9% max. of regulation for feeder size.
- 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 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.
- Maximum voltage regulation at full load= 6% (including line impedance)
- Transients must be less than 1500 V peak (on a 230 V line). A record of power input disturbances over a continuous one-week period (prior to delivery) enables determination of the frequency and degree of these disturbances and can be used to ascertain the need to provide line conditioning equipment.

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 system 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.
- The cables from signaling and remote control (Y, SEO, L ...) will go to MDP 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

POWER DISTRIBUTION

- Main supply Single phase 173-250 VAC
- Ground cable (PE)

- Emergency Off (Exam room)
  - SEO1
  - 3 x 1.5
  - 24 V

- Emergency Off (Control room)
  - SEO2
  - 3 x 1.5
  - 24 V

- Remote Control ON/OFF (Control room)
  - Y
  - 7 x 1.5
  - 24 V

PDB SCHEMATICS AND DETAILS THAT APPEAR ON THIS PAGE ARE THE PROPERTY OF “GE MEDICAL SYSTEMS FRANCE”

Notes:
1. 3 AWG8 (8.3mm²) cable with a usable length of 12m is delivered with the system.
   (If the distance between the PDB and the gantry exceeds 12m, the cable must be supplied by customer)
2. GE gantry contains transformer with multiple taps that can accommodated listed voltages.
DETAILED SCHEMATICS OF POWER DISTRIBUTION BOX

3 x 400V
3 PHASE MAIN SUPPLY FROM
GENERAL ELECTRIC BOARD

PE L N

4

IG INTERRUPTER
2x50A

MBD1
2x32A
Type D
300mA

C1
2x32A

EARTH BAR

3xAWG8 (8.3mm²)
Supplied by GE
If length < 12m

GANTRY
GAMMA
CAMERA

R1

24V

B1
2x3A
Type D

B2
10A+N
Type C

CONTROL
SIGNALLING

EMERGENCY OFF
BUTTON
IN EXAM ROOM

EMERGENCY OFF
BUTTON
IN CONTROL ROOM

SYSTEM REMOTE
CONTROL
IN CONTROL ROOM

ON PDB
DOOR

ON
Green 24VAC

OFF Red 24VAC

ON PDB
DOOR

24V

H1 White 24VAC

R1

MBD1: D type magnetic breaker
C1: 24 VAC 50 Hz contactor
B1/B2: Circuit breaker
R1: 24 VAC 50 Hz relay

ON

OFF

ON PDB
DOOR

24V

H1 White 24VAC

R1

C1

ON
Green 24VAC

OFF Red 24VAC

PDB SCHEMATICS AND DETAILS THAT APPEAR ON THIS PAGE ARE THE PROPERTY OF "GE MEDICAL SYSTEMS FRANCE"
ENVIRONMENT

MAGNETIC FIELD SPECIFICATIONS
In order to avoid interference on the system, the static field limits from the surrounding environment must be less than 1 Gauss in both the scan and the operator rooms.

VIBRATION SPECIFICATIONS
The system components are sensitive to vibration in the frequency range of 0.5 to 20 Hz, depending on the amplitude of the vibration. It is the customer’s responsibility to contract a vibration consultant or qualified engineer to verify that these specifications are met and implement an appropriate solution.

To minimize vibrations, the system must be installed on a solid floor, as far as possible from vibration sources (parking lots, roadways, heliports, elevators, hospital power plants... etc).

The maximum steady state vibration transmitted through the floor should not exceed 0.002 m/s² RMS maximum single frequency above ambient baseline from 0.5 to 80 Hz (measured per 1/3 octave band).

Please refer to the PIM for detailed information.

ACOUSTIC SPECIFICATIONS
The system creates acoustic noise. In compliance with IEC 601-1-1standard the measured noise (at 1m distance away from the system) is less than 70 db.

It is recommended that the wall and ceiling surface is of a sound dampening material so that the noise is not reverberated and amplified.

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 accomodate 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>LENGTH</th>
<th>WIDTH</th>
<th>HEIGHT</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>NM GANTRY WITH DETECTORS MOUNTED</td>
<td>1680 mm [66.1 in]</td>
<td>1500 mm [59 in]</td>
<td>2200 mm [86.6 in]</td>
<td>1765 kg [3892 lb]</td>
</tr>
<tr>
<td>NM GANTRY WITHOUT THE DETECTORS</td>
<td>1680 mm [66.1 in]</td>
<td>1500 mm [59 in]</td>
<td>2200 mm [86.6 in]</td>
<td>2175 kg [4685 lb]</td>
</tr>
<tr>
<td>TABLE</td>
<td>3000 mm [118.1 in]</td>
<td>900 mm [35.4 in]</td>
<td>1400 mm [55 in]</td>
<td>562 kg [1239 lb]</td>
</tr>
</tbody>
</table>

INTERCONNECTIONS

RADIOACTIVE ISOTOPES

USING RADIOACTIVE ISOTOPES
Since the system involves the use of radioactive isotopes, compliance with Nuclear Regulatory Commission regulations, or similar regulatory requirements (depending on the country), must be adhered to and all permissions obtained well in advance. It is recommended that regulatory compliance is arranged early in the site planning process.

It is essential that all preparations are completed so that required source materials can be obtained prior to installation, including calibration sources. Take into consideration that these sources may have fairly long delivery lead times, yet may also have a short half life, so that it may not be advisable to store them over long periods of time.

RADIOACTIVE ISOTOPES FOR SYSTEM CALIBRATION

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic calibration</td>
<td>Site has license for Tc⁹⁹⁹</td>
</tr>
<tr>
<td>Co⁵⁷ (Rectangular Flood Source)</td>
<td>Tc⁹⁹⁹ will be available during installation</td>
</tr>
<tr>
<td>Tl⁴⁰</td>
<td>P⁹⁹⁹⁹</td>
</tr>
<tr>
<td>I¹²⁴</td>
<td>I¹¹¹</td>
</tr>
<tr>
<td>Ga⁷⁷</td>
<td>Xe¹³³ (inhalation gas)</td>
</tr>
</tbody>
</table>

SITE NAME | BRIVO NM 615 | EN-NUC-TYP-BRIVO_NM_615.DWG | Rev 0 | Date 13/MAR/2020 | Environment - Delivery - Interconnections | 07/10
PATIENT TABLE

Optional head extender

GANTRY AND PATIENT TABLE

SIDE VIEW

COLLIMATOR CARTS

SIDE VIEW

FRONT VIEW

TOP VIEW

NOT TO SCALE

PATIENT TABLE

Optional head extender

SIDE VIEW

FRONT VIEW

NOT TO SCALE

Date
Rev
/10
08/10
TEMPERATURE AND HUMIDITY SPECIFICATIONS

IN-USE CONDITIONS

<table>
<thead>
<tr>
<th>EXAM /CONTROL ROOM</th>
<th>MIN</th>
<th>RECOMMENDED</th>
<th>MAX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>18°C [64 °F]</td>
<td>22°C [72 °F]</td>
<td>26°C [79 °F]</td>
</tr>
<tr>
<td>Temperature gradient</td>
<td>≤ 3 °C/h [≤ 5 °F/h]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative humidity (1)</td>
<td>30% to 80%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humidity gradient</td>
<td>≤ 5%/h</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

STORAGE CONDITIONS

| Temperature | +4 °C to +27 °C [+40 °F to +80 °F] |
| Temperature gradient | ≤ 3 °C/h [≤ 5 °F/h] |
| Relative humidity (1) | 20% to 80% |
| Humidity gradient | ≤ 5%/h |
| Air pressure | 700 hPA to 1060 hPa |

(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

<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>Exam Room</td>
<td>Gantry</td>
<td>1.00</td>
<td>3412</td>
</tr>
<tr>
<td></td>
<td>Patient table</td>
<td>0.20</td>
<td>682</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>1.20</td>
<td>4094</td>
</tr>
<tr>
<td>Exam/Control Room</td>
<td>NM acquisition station</td>
<td>0.08</td>
<td>256</td>
</tr>
<tr>
<td></td>
<td>Xeleris Workstation</td>
<td>0.08</td>
<td>256</td>
</tr>
<tr>
<td></td>
<td>6kVA UPS</td>
<td>0.44</td>
<td>1500</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>0.15</td>
<td>512</td>
</tr>
</tbody>
</table>
**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 local authority 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.

---

### 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

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Site Planning</td>
<td>Room dimensions, including ceiling height, for all Exam, Equipment/Technical &amp; Control rooms meet GE specifications.</td>
</tr>
<tr>
<td>Ceiling support structure, if on the GE drawing, is at correct location and height according to the drawing specifications. Leveness and spacing has been measured. Overhead support Structure has been confirmed with contractor to meet GE criteria.</td>
<td></td>
</tr>
<tr>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>System power &amp; 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.</td>
<td></td>
</tr>
<tr>
<td>System power and grounded audit has been scheduled to be completed during installation of equipment. (If Required) GEHC PM to confirmed if needed.</td>
<td></td>
</tr>
<tr>
<td>Adequate room illumination installed and working.</td>
<td></td>
</tr>
<tr>
<td>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.</td>
<td></td>
</tr>
<tr>
<td>HVAC systems installed, and the site meets minimum environmental operational system requirements.</td>
<td></td>
</tr>
<tr>
<td>Network outlets installed and computer network available and working.</td>
<td></td>
</tr>
<tr>
<td>Hospital/IT/connectivity contacts have been engaged and information has been added to Project management tool. (If Required)</td>
<td></td>
</tr>
<tr>
<td>Floor levelness/thickness has been discussed with customer/contractor and they have confirmed GE requirements are met.</td>
<td></td>
</tr>
<tr>
<td>Customer supplied countertops where GE equipment will be installed are in place.</td>
<td></td>
</tr>
</tbody>
</table>

#### Specific for PET and Nuclear Medicine

- Nuclear Medicine systems levelness measurement survey must be provided to GE prior to delivery.
- Site has license for using/importing radioactive sources and a Hot Lab is available. Radioactive Sources should be available for system calibration during installation.
- 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:**

---

**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>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>