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Discovery* XR656 GII
Pre-Installation

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LEGAL NOTES

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CONTACT INFORMATION

Discovery XR656

Discovery* XR656 GII Systems can be sold by the below names and be manufactured by the below manufactures.

Model Name	Manufacturer (*) Manufacturer Site	Manufacturer address
Discovery XR656	GE HUALUN MEDICAL SYSTEMS CO. Ltd	No.1 Yong Chang North Road Beijing Economic Technological Development Zone BEIJING 100176 CHINA
	GE MEDICAL SYSTEMS, LLC	3000 North Grandview Blvd WAUKESHA, WI 53188 UNITED STATES

IMPORTANT PRECAUTIONS

LANGUAGE

ПРЕДУПРЕЖДЕНИЕ
(BG)

- **ТОВА УПЪТВАНЕ ЗА РАБОТА Е НАЛИЧНО САМО НА АНГЛИЙСКИ ЕЗИК.**
- **АКО ДОСТАВЧИКЪТ НА УСЛУГАТА НА КЛИЕНТА ИЗИСКА ЕЗИК, РАЗЛИЧЕН ОТ АНГЛИЙСКИ, ЗАДЪЛЖЕНИЕ НА КЛИЕНТА Е ДА ОСИГУРИ ПРЕВОД.**
- **НЕ ИЗПОЛЗВАЙТЕ ОБОРУДВАНЕТО ПРЕДИ ДА СТЕ СЕ КОНСУЛТИРАЛИ И РАЗБРАЛИ УПЪТВАНЕТО ЗА РАБОТА.**
- **НЕСПАЗВАНЕТО НА ТОВА ПРЕДУПРЕЖДЕНИЕ МОЖЕ ДА ДОВЕДЕ ДО НАРАНЯВАНЕ НА ДОСТАВЧИКА НА УСЛУГАТА, ОПЕРАТОРА ИЛИ ПАЦИЕНТ В РЕЗУЛТАТ НА ТОКОВ УДАР ИЛИ МЕХАНИЧНА ИЛИ ДРУГА ОПАСНОСТ.**

警告
(ZH-CN)

- 本维修手册仅提供英文版本。
- 如果维修服务提供商需要非英文版本，客户需自行提供翻译服务。
- 未详细阅读和完全理解本维修手册之前，不得进行维修。
- 忽略本警告可能对维修人员，操作员或患者造成触电、机械伤害或其他形式的伤害。

VÝSTRAHA
(CS)

- **TENTO PROVOZNÍ NÁVOD EXISTUJE POUZE V ANGLICKÉM JAZYCE.**
- **V PŘÍPADĚ, ŽE EXTERNÍ SLUŽBA ZÁKAZNÍKŮM POTŘEBUJE NÁVOD V JINÉM JAZYCE, JE ZAJIŠTĚNÍ PŘEKLADU DO ODPOVÍDAJÍCÍHO JAZYKA ÚKOLEM ZÁKAZNÍKA.**
- **NESNAŽTE SE O ÚDRŽBU TOHOTO ZAŘÍZENÍ, ANIŽ BYSTE SI PŘEČETLI TENTO PROVOZNÍ NÁVOD A POCHOPILI JEHO OBSAH.**
- **V PŘÍPADĚ NEDODRŽOVÁNÍ TÉTO VÝSTRAHY MŮŽE DOJÍT K PORANĚNÍ PRACOVNÍKA PRODEJNÍHO SERVISU, OBSLUŽNÉHO PERSONÁLU NEBO PACIENTŮ VLIVEM ELEKTRICKÉHOP PROUDU, RESPEKTIVE VLIVEM MECHANICKÝCH ČI JINÝCH RIZIK.**

ADVARSEL
(DA)

- **DENNE SERVICEMANUAL FINDES KUN PÅ ENGELSK.**
- **HVIS EN KUNDES TEKNIKER HAR BRUG FOR ET ANDET SPROG END ENGELSK, ER DET KUNDENS ANSVAR AT SØRGE FOR OVERSÆTTELSE.**
- **FORSØG IKKE AT SERVICERE UDSTYRET MEDMINDRE DENNE SERVICEMANUAL HAR VÆRET KONSULTERET OG ER FORSTÅET.**
- **MANGLENDE OVERHOLDELSE AF DENNE ADVARSEL KAN MEDFØRE SKADE PÅ GRUND AF ELEKTRISK, MEKANISK ELLER ANDEN FARE FOR TEKNIKEREN, OPERATØREN ELLER PATIENTEN.**

WAARSCHUWING

(NL)

- **DEZE ONDERHOUDSHANDLEIDING IS ENKEL IN HET ENGELS VERKRIJGBAAR.**
- **ALS HET ONDERHOUDSPERSONEEL EEN ANDERE TAAL VEREIST, DAN IS DE KLANT VERANTWOORDELIJK VOOR DE VERTALING ERVAN.**
- **PROBEER DE APPARATUUR NIET TE ONDERHOUDEN VOORDAT DEZE ONDERHOUDSHANDLEIDING WERD GERAADPLEEGD EN BEGREPEN IS.**
- **INDIEN DEZE WAARSCHUWING NIET WORDT OPGEVOLGD, ZOU HET ONDERHOUDSPERSONEEL, DE OPERATOR OF EEN PATIËNT GEWOND KUNNEN RAKEN ALS GEVOLG VAN EEN ELEKTRISCHE SCHOK, MECHANISCHE OF ANDERE GEVAREN.**

WARNING

(EN)

- **THIS SERVICE MANUAL IS AVAILABLE IN ENGLISH ONLY.**
- **IF A CUSTOMER'S SERVICE PROVIDER REQUIRES A LANGUAGE OTHER THAN ENGLISH, IT IS THE CUSTOMER'S RESPONSIBILITY TO PROVIDE TRANSLATION SERVICES.**
- **DO NOT ATTEMPT TO SERVICE THE EQUIPMENT UNLESS THIS SERVICE MANUAL HAS BEEN CONSULTED AND IS UNDERSTOOD.**
- **FAILURE TO HEED THIS WARNING MAY RESULT IN INJURY TO THE SERVICE PROVIDER, OPERATOR OR PATIENT FROM ELECTRIC SHOCK, MECHANICAL OR OTHER HAZARDS.**

HOIATUS

(ET)

- **KÄESOLEV TEENINDUSJUHEND ON SAADAVAL AINULT INGLISE KEELES.**
- **KUI KLIENDITEENINDUSE OSUTAJA NÕUAB JUHENDIT INGLISE KEELEST ERINEVAS KEELES, VASTUTAB KLIENT TÕLKETEENUSE OSUTAMISE EEST.**
- **ÄRGE ÜRITAGE SEADMEID TEENINDADA ENNE EELNEVALT KÄESOLEVA TEENINDUSJUHENDIGA TUTVUMIST JA SELLEST ARU SAAMIST.**
- **KÄESOLEVA HOIATUSE EIRAMINE VÕIB PÕHJUSTADA TEENUSEOSUTAJA, OPERAATORI VÕI PATSIENDI VIGASTAMIST ELEKTRILÖÖGI, MEHAANILISE VÕI MUU OHU TAGAJÄRJEL.**

VAROITUS

(FI)

- **TÄMÄ HUOLTO-OHJE ON SAATAVILLA VAIN ENGLANNIKSI.**
- **JOS ASIAKKAAN HUOLTOHENKILÖSTÖ VAATII MUUTA KUIN ENGLANNINKIELISTÄ MATERIAALIA, TARVITTAVAN KÄÄNNÖKSEN HANKKIMINEN ON ASIAKKAAN VASTUULLA.**
- **ÄLÄ YRITÄ KORJATA LAITTEISTOA ENNEN KUIN OLET VARMASTI LUKENUT JA YMMÄRTÄNYT TÄMÄN HUOLTO-OHJEEN.**
- **MIKÄLI TÄTÄ VAROITUSTA EI NOUDATETA, SEURAUKSENA VOI OLLA HUOLTOHENKILÖSTÖN, LAITTEISTON KÄYTTÄJÄN TAI POTILAAN VAHINGOITTUMINEN SÄHKÖISKUN, MEKAANISEN VIAN TAI MUUN VAARATILANTEEN VUOKSI.**

ATTENTION

(FR)

- **CE MANUEL DE MAINTENANCE N'EST DISPONIBLE QU'EN ANGLAIS.**
- **SI LE TECHNICIEN DU CLIENT A BESOIN DE CE MANUEL DANS UNE AUTRE LANGUE QUE L'ANGLAIS, C'EST AU CLIENT QU'IL INCOMBE DE LE FAIRE TRADUIRE.**
- **NE PAS TENTER D'INTERVENTION SUR LES ÉQUIPEMENTS TANT QUE LE MANUEL SERVICE N'A PAS ÉTÉ CONSULTÉ ET COMPRIS.**
- **LE NON-RESPECT DE CET AVERTISSEMENT PEUT ENTRAÎNER CHEZ LE TECHNICIEN, L'OPÉRATEUR OU LE PATIENT DES BLESSURES DUES À DES DANGERS ÉLECTRIQUES, MÉCANIQUES OU AUTRES.**

WARNUNG

(DE)

- **DIESE SERVICEANLEITUNG EXISTIERT NUR IN ENGLISCHER SPRACHE.**
- **FALLS EIN FREMDER KUNDENDIENST EINE ANDERE SPRACHE BENÖTIGT, IST ES AUFGABE DES KUNDEN FÜR EINE ENTSPRECHENDE ÜBERSETZUNG ZU SORGEN.**
- **VERSUCHEN SIE NICHT DIESE ANLAGE ZU WARTEN, OHNE DIESE SERVICEANLEITUNG GELESEN UND VERSTANDEN ZU HABEN.**
- **WIRD DIESE WARNUNG NICHT BEACHTET, SO KANN ES ZU VERLETZUNGEN DES KUNDENDIENSTTECHNIKERS, DES BEDIENERS ODER DES PATIENTEN DURCH STROMSCHLÄGE, MECHANISCHE ODER SONSTIGE GEFAHREN KOMMEN.**

ΠΡΟΕΙΔΟΠΟΙΗΣΗ

(EL)

- **ΤΟ ΠΑΡΟΝ ΕΓΧΕΙΡΙΔΙΟ ΣΕΡΒΙΣ ΔΙΑΤΙΘΕΤΑΙ ΣΤΑ ΑΓΓΛΙΚΑ ΜΟΝΟ.**
- **ΕΑΝ ΤΟ ΑΤΟΜΟ ΠΑΡΟΧΗΣ ΣΕΡΒΙΣ ΕΝΟΣ ΠΕΛΑΤΗ ΑΠΑΙΤΕΙ ΤΟ ΠΑΡΟΝ ΕΓΧΕΙΡΙΔΙΟ ΣΕ ΓΛΩΣΣΑ ΕΚΤΟΣ ΤΩΝ ΑΓΓΛΙΚΩΝ, ΑΠΟΤΕΛΕΙ ΕΥΘΥΝΗ ΤΟΥ ΠΕΛΑΤΗ ΝΑ ΠΑΡΕΧΕΙ ΥΠΗΡΕΣΙΕΣ ΜΕΤΑΦΡΑΣΗΣ.**
- **ΜΗΝ ΕΠΙΧΕΙΡΗΣΕΤΕ ΤΗΝ ΕΚΤΕΛΕΣΗ ΕΡΓΑΣΙΩΝ ΣΕΡΒΙΣ ΣΤΟΝ ΕΞΟΠΛΙΣΜΟ ΕΚΤΟΣ ΕΑΝ ΕΧΕΤΕ ΣΥΜΒΟΥΛΕΥΤΕΙ ΚΑΙ ΕΧΕΤΕ ΚΑΤΑΝΟΗΣΕΙ ΤΟ ΠΑΡΟΝ ΕΓΧΕΙΡΙΔΙΟ ΣΕΡΒΙΣ.**
- **ΕΑΝ ΔΕ ΛΑΒΕΤΕ ΥΠΟΨΗ ΤΗΝ ΠΡΟΕΙΔΟΠΟΙΗΣΗ ΑΥΤΗ, ΕΝΔΕΧΕΤΑΙ ΝΑ ΠΡΟΚΛΗΘΕΙ ΤΡΑΥΜΑΤΙΣΜΟΣ ΣΤΟ ΑΤΟΜΟ ΠΑΡΟΧΗΣ ΣΕΡΒΙΣ, ΣΤΟ ΧΕΙΡΙΣΤΗ Ή ΣΤΟΝ ΑΣΘΕΝΗ ΑΠΟ ΗΛΕΚΤΡΟΠΛΗΞΙΑ, ΜΗΧΑΝΙΚΟΥΣ Ή ΑΛΛΟΥΣ ΚΙΝΔΥΝΟΥΣ.**

FIGYELMEZTETÉS

(HU)

- **EZEN KARBANTARTÁSI KÉZIKÖNYV KIZÁRÓLAG ANGOL NYELVEN ÉRHETŐ EL.**
- **HA A VEVŐ SZOLGÁLTATÓJA ANGOLTÓL ELTÉRŐ NYELVRE TART IGÉNYT, AKKOR A VEVŐ FELELŐSSÉGE A FORDÍTÁS ELKÉSZÍTTETÉSE.**
- **NE PRÓBÁLJA ELKEZDENI HASZNÁLNI A BERENDEZÉST, AMÍG A KARBANTARTÁSI KÉZIKÖNYVBEN LEÍRTAKAT NEM ÉRTELMEZTÉK.**
- **EZEN FIGYELMEZTETÉS FIGYELMEN KÍVÜL HAGYÁSA A SZOLGÁLTATÓ, MŰKÖDTETŐ VAGY A BETEG ÁRAMÜTÉS, MECHANIKAI VAGY EGYÉB VESZÉLYHELYZET MIATTI SÉRÜLÉSÉT EREDMÉNYEZHETI.**

AÐVÖRUN
(IS)

- **ÞESSI ÞJÓNUSTUHANDBÓK ER EINGÖNGU FÁANLEG Á ENSKU.**
- **EF AÐ ÞJÓNUSTUVEITANDI VIÐSKIPTAMANNS ÞARFNAST ANNAS TUNGUMÁLS EN ENSKU, ER ÞAÐ SKYLDA VIÐSKIPTAMANNS AÐ SKAFFA TUNGUMÁLAÞJÓNUSTU.**
- **REYNIÐ EKKI AÐ AFGREIÐA TÆKIÐ NEMA AÐ ÞESSI ÞJÓNUSTUHANDBÓK HEFUR VERIÐ SKOÐUÐ OG SKILIN.**
- **BROT Á SINNA ÞESSARI AÐVÖRUN GETUR LEITT TIL MEIÐSLA Á ÞJÓNUSTUVEITANDA, STJÓRNANDA EÐA SJÚKLINGS FRÁ RAFLOSTI, VÉLRÆNU EÐA ÖÐRUM ÁHÆTTUM.**

AVVERTENZA
(IT)

- **IL PRESENTE MANUALE DI MANUTENZIONE È DISPONIBILE SOLTANTO IN INGLESE.**
- **SE UN ADDETTO ALLA MANUTENZIONE ESTERNO ALLA GEMS RICHIEDE IL MANUALE IN UNA LINGUA DIVERSA, IL CLIENTE È TENUTO A PROVVEDERE DIRETTAMENTE ALLA TRADUZIONE.**
- **SI PROCEDA ALLA MANUTENZIONE DELL'APPARECCHIATURA SOLO DOPO AVER CONSULTATO IL PRESENTE MANUALE ED AVERNE COMPRESO IL CONTENUTO.**
- **IL NON RISPETTO DELLA PRESENTE AVVERTENZA POTREBBE FAR COMPIERE OPERAZIONI DA CUI DERIVINO LESIONI ALL'ADDETTO ALLA MANUTENZIONE, ALL'UTILIZZATORE ED AL PAZIENTE PER FOLGORAZIONE ELETTRICA, PER URTI MECCANICI OD ALTRI RISCHI.**

警告
(JA)

- このサービスマニュアルには英語版しかありません。
- サービスを担当される業者が英語以外の言語を要求される場合、翻訳作業はその業者の責任で行うものとさせていただきます。
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경고

(KO)

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BRĪDINĀJUMS

(LV)

- **ŠĪ APKALPES ROKASGRĀMATA IR PIEEJAMA TIKAI ANGĻU VALODĀ.**
- **JA KLIENTA APKALPES SNIEDZĒJAM NEPIECIEŠAMA INFORMĀCIJA CITĀ VALODĀ, NEVIS ANGĻU, KLIENTA PIENĀKUMS IR NODROŠINĀT TULKOŠANU.**
- **NEVEICIET APRĪKOJUMA APKALPI BEZ APKALPES ROKASGRĀMATAS IZLASĪŠANAS UN SAPRAŠANAS.**
- **ŠĪ BRĪDINĀJUMA NEIEVĒROŠANA VAR RADĪT ELEKTRISKĀS STRĀVAS TRIECIENA, MEHĀNISKU VAI CITU RISKU IZRAISĪTU TRAUMU APKALPES SNIEDZĒJAM, OPERATORAM VAI PACIENTAM.**

ĮSPĖJIMAS

(LT)

- **ŠIS EKSPLOATAVIMO VADOVAS YRA PRIEINAMAS TIK ANGLŲ KALBA.**
- **JEI KLIENTO PASLAUGŲ TIEKĖJAS REIKALAUJA VADOVO KITA KALBA – NE ANGLŲ, NUMATYTI VERTIMO PASLAUGAS YRA KLIENTO ATSAKOMYBĖ.**
- **NEMĖGINKITE ATLIKTI ĮRANGOS TECHNINĖS PRIEŽIŪROS, NEBENT ATSIŽVELGĖTE Į ŠĮ EKSPLOATAVIMO VADOVĄ IR JĮ SUPRATOTE.**
- **JEI NEATKREIPSITE DĖMESIO Į ŠĮ PERSPĖJIMĄ, GALIMI SUŽALOJIMAI DĖL ELEKTROS ŠOKO.**
- **MECHANINIŲ AR KITŲ PAVOJŲ PASLAUGŲ TIEKĖJUI, OPERATORIUI AR PACIENTUI.**

ADVARSEL

(NO)

- **DENNE SERVICEHÅNDBOKEN FINNES BARE PÅ ENGELSK.**
- **HVIS KUNDENS SERVICELEVERANDØR TRENGER ET ANNET SPRÅK, ER DET KUNDENS ANSVAR Å SØRGE FOR OVERSETTELSE.**
- **IKKE FORSØK Å REPARERE UTSTYRET UTEN AT DENNE SERVICEHÅNDBOKEN ER LEST OG FORSTÅTT.**
- **MANGLENDE HENSYN TIL DENNE ADVARSELEN KAN FØRE TIL AT SERVICELEVERANDØREN, OPERATØREN ELLER PASIENTEN SKADES PÅ GRUNN AV ELEKTRISK STØT, MEKANISKE ELLER ANDRE FARER.**

OSTRZEŻENIE

(PL)

- **NINIEJSZY PODRĘCZNIK SERWISOWY DOSTĘPNY JEST JEDYNIE W JĘZYKU ANGIELSKIM.**
- **JEŚLI DOSTAWCA USŁUG KLIENTA WYMAGA JĘZYKA INNEGO NIŻ ANGIELSKI, ZAPEWNIENIE USŁUGI TŁUMACZENIA JEST OBOWIĄZKIEM KLIENTA.**
- **NIE PRÓBOWAĆ SERWISOWAĆ WYPOSAŻENIA BEZ ZAPOZNANIA SIĘ I ZROZUMIENIA NINIEJSZEGO PODRĘCZNIKA SERWISOWEGO.**
- **NIEZASTOSOWANIE SIĘ DO TEGO OSTRZEŻENIA MOŻE SPOWODOWAĆ URAZY DOSTAWCY USŁUG, OPERATORA LUB PACJENTA W WYNIKU PORAŻENIA ELEKTRYCZNEGO, ZAGROŻENIA MECHANICZNEGO BĄDŹ INNEGO.**

ATENÇÃO

(PT)

- **ESTE MANUAL DE ASSISTÊNCIA TÉCNICA SÓ SE ENCONTRA DISPONÍVEL EM INGLÊS.**
- **SE QUALQUER OUTRO SERVIÇO DE ASSISTÊNCIA TÉCNICA, QUE NÃO A GEMS, SOLICITAR ESTES MANUAIS NOUTRO IDIOMA, É DA RESPONSABILIDADE DO CLIENTE FORNECER OS SERVIÇOS DE TRADUÇÃO.**
- **NÃO TENTE REPARAR O EQUIPAMENTO SEM TER CONSULTADO E COMPREENDIDO ESTE MANUAL DE ASSISTÉNCIA TÉCNICA**
- **O NÃO CUMPRIMENTO DESTE AVISO PODE POR EM PERIGO A SEGURANÇA DO TÉCNICO, OPERADOR OU PACIENTE DEVIDO A CHOQUES ELÉTRICOS, MECÂNICOS OU OUTROS.**

ATENŢIE

(RO)

- **ACEST MANUAL DE SERVICE ESTE DISPONIBIL NUMAI ÎN LIMBA ENGLEZĂ.**
- **DACĂ UN FURNIZOR DE SERVICII PENTRU CLIENŢI NECESITĂ O ALTĂ LIMBĂ DECÂT CEA ENGLEZĂ, ESTE DE DATORIA CLIENTULUI SĂ FURNIZEZE O TRADUCERE.**
- **NU ÎNCERCAŢI SĂ REPARAŢI ECHIPAMENTUL DECÂT ULTERIOR CONSULTĂRII ŞI ÎNŢELEGERII ACESTUI MANUAL DE SERVICE.**
- **IGNORAREA ACESTUI AVERTISMENT AR PUTEA DUCE LA RĂNIREA DEPANATORULUI, OPERATORULUI SAU PACIENTULUI ÎN URMA PERICOLELOR DE ELECTROCUTARE, MECANICE SAU DE ALTĂ NATURĂ.**

ОСТОРОЖНО!

(RU)

- **ДАННОЕ РУКОВОДСТВО ПО ОБСЛУЖИВАНИЮ ПРЕДЛАГАЕТСЯ ТОЛЬКО НА АНГЛИЙСКОМ ЯЗЫКЕ.**
- **ЕСЛИ СЕРВИСНОМУ ПЕРСОНАЛУ КЛИЕНТА НЕОБХОДИМО РУКОВОДСТВО НЕ НА АНГЛИЙСКОМ, А НА КАКОМ-ТО ДРУГОМ ЯЗЫКЕ, КЛИЕНТУ СЛЕДУЕТ САМОСТОЯТЕЛЬНО ОБЕСПЕЧИТЬ ПЕРЕВОД.**
- **ПЕРЕД ОБСЛУЖИВАНИЕМ ОБОРУДОВАНИЯ ОБЯЗАТЕЛЬНО ОБРАТИТЕСЬ К ДАННОМУ РУКОВОДСТВУ И ПОЙМИТЕ ИЗЛОЖЕННЫЕ В НЕМ СВЕДЕНИЯ.**
- **НЕСОБЛЮДЕНИЕ ТРЕБОВАНИЙ ДАННОГО ПРЕДУПРЕЖДЕНИЯ МОЖЕТ ПРИВЕСТИ К ТОМУ, ЧТО СПЕЦИАЛИСТ ПО ОБСЛУЖИВАНИЮ, ОПЕРАТОР ИЛИ ПАЦИЕНТ ПОЛУЧАТ УДАР ЭЛЕКТРИЧЕСКИМ ТОКОМ, МЕХАНИЧЕСКУЮ ТРАВМУ ИЛИ ДРУГОЕ ПОВРЕЖДЕНИЕ.**

UPOZORNENIE

(SK)

- **TENTO NÁVOD NA OBSLUHU JE K DISPOZÍCII LEN V ANGLIČTINE.**
- **AK ZÁKAZNÍKOV POSKYTOVATEĽ SLUŽIEB VYŽADUJE INÝ JAZYK AKO ANGLIČTINU, POSKYTNUTIE PREKLADATEĽSKÝCH SLUŽIEB JE ZODPOVEDNOSŤOU ZÁKAZNÍKA.**
- **NEPOKÚŠAJTE SA O OBSLUHU ZARIADENIA SKÔR, AKO SI NEPREČÍTATE NÁVOD NA OBLUHU A NEPOROZUMIETE MU.**
- **ZANEDBANIE TOHTO UPOZORNENIA MÔŽE VYÚSTIŤ DO ZRANENIA POSKYTOVATEĽA SLUŽIEB, OBSLUHUJÚCEJ OSOBY ALEBO PACIENTA ELEKTRICKÝM PRÚDOM, DO MECHANICKÉHO ALEBO INÉHO NEBEZPEČENSTVA.**

ATENCION

(ES)

- **ESTE MANUAL DE SERVICIO SOLO EXISTE EN INGLES.**
- **SI ALGUN PROVEEDOR DE SERVICIOS AJENO A GEMS SOLICITA UN IDIOMA QUE NO SEA EL INGLES, ES RESPONSABILIDAD DEL CLIENTE OFRECER UN SERVICIO DE TRADUCCION.**
- **NO SE DEBERA DAR SERVICIO TECNICO AL EQUIPO, SIN HABER CONSULTADO Y COMPRENDIDO ESTE MANUAL DE SERVICIO.**
- **LA NO OBSERVANCIA DEL PRESENTE AVISO PUEDE DAR LUGAR A QUE EL PROVEEDOR DE SERVICIOS, EL OPERADOR O EL PACIENTE SUFRAN LESIONES PROVOCADAS POR CAUSAS ELÉCTRICAS, MECÁNICAS O DE OTRA NATURALEZA.**

VARNING

(SV)

- **DEN HÄR SERVICEHANDBOKEN FINNS BARA TILLGÄNGLIG PÅ ENGELSKA.**
- **OM EN KUNDS SERVICETEKNIKER HAR BEHOV AV ETT ANNAT SPRÅK ÄN ENGELSKA ANSVARAR KUNDEN FÖR ATT TILLHANDAHÅLLA ÖVERSÄTTNINGSTJÄNSTER.**
- **FÖRSÖK INTE UTFÖRA SERVICE PÅ UTRUSTNINGEN OM DU INTE HAR LÄST OCH FÖRSTÅR DEN HÄR SERVICEHANDBOKEN.**
- **OM DU INTE TAR HÄNSYN TILL DEN HÄR VARNINGEN KAN DET RESULTERA I SKADOR PÅ SERVICETEKNIKERN, OPERATÖREN ELLER PATIENTEN TILL FÖLJD AV ELEKTRISKA STÖTAR, MEKANISKA FAROR ELLER ANDRA FAROR.**

DİKKAT

(TR)

- **BU SERVİS KILAVUZUNUN SADECE İNGİLİZCESİ MEVCUTTUR.**
- **EĞER MÜŞTERİ TEKNİSYENİ BU KILAVUZU İNGİLİZCE DIŞINDA BİR BAŞKA LİSANDAN TALEP EDERSE, BUNU TERCÜME ETTİRMEK MÜŞTERİYE DÜŞER.**
- **SERVİS KILAVUZUNU OKUYUP ANLAMADAN EKİPMANLARA MÜDAHALE ETMEYİNİZ.**
- **BU UYARIYA UYULMAMASI, ELEKTRİK, MEKANİK VEYA DİĞER TEHLİKELERDEN DOLAYI TEKNİSYEN, OPERATÖR VEYA HASTANIN YARALANMASINA YOL AÇABİLİR.**

DAMAGE IN TRANSPORTATION

All packages should be closely examined at time of delivery. If damage is apparent write “Damage In Shipment” on ALL copies of the freight or express bill BEFORE delivery is accepted or “signed for” by a GE representative or hospital receiving agent. Whether noted or concealed, damage MUST be reported to the carrier immediately upon discovery, or in any event, within 14 days after receipt, and the contents and containers held for inspection by the carrier. A transportation company will not pay a claim for damage if an inspection is not requested within this 14 day period.

Call GEHC Global Parts 1-800-548-3366 and select option 8, immediately after damage is found. At this time be ready to supply name of carrier, delivery date, consignee name, freight or express bill number, item damaged and extent of damage.

Complete instructions regarding claim procedure are found in Section S of the Policy And Procedures Bulletins.

14 July 1993

CERTIFIED ELECTRICAL CONTRACTOR STATEMENT

All electrical Installations that are preliminary to positioning of the equipment at the site prepared for the equipment shall be performed by licensed electrical contractors. In addition, electrical feeds into the Power Distribution Unit shall be performed by licensed electrical contractors. Other connections between pieces of electrical equipment, calibrations and testing shall be performed by qualified GE Healthcare personnel. The products involved (and the accompanying electrical installations) are highly sophisticated, and special engineering competence is required. In performing all electrical work on these products, GE will use its own specially trained field engineers. All of GE’s electrical work on these products will comply with the requirements of the applicable electrical codes.

The purchaser of GE equipment shall only utilize qualified personnel (i.e., GE's field engineers, personnel of third-party service companies with equivalent training, or licensed electricians) to perform electrical servicing on the equipment.

IMPORTANT...X-RAY PROTECTION

X-ray equipment, if not properly used, may cause injury. Accordingly, the instructions herein contained should be thoroughly read and understood by everyone who will use the equipment before you attempt to place this equipment in operation. The General Electric Company, Healthcare Group, will be glad to assist and cooperate in placing this equipment in use.

Although this apparatus incorporates a high degree of protection against x-radiation other than the useful beam, no practical design of equipment can provide complete protection. Nor can any practical design compel the operator to take adequate precautions to prevent the possibility of any persons carelessly exposing themselves or others to radiation.

It is important that anyone having anything to do with x-radiation be properly trained and fully acquainted with the recommendations of the National Council on Radiation Protection and Measurements as published in NCRP Reports available from NCRP Publications, 7910 Woodmont Avenue, Room 1016, Bethesda, Maryland 20814, and of the International Commission on Radiation Protection, and of any other local authorities, and take adequate steps to protect against injury.

The equipment is sold with the understanding that the General Electric Company, Healthcare Group, its agents, and representatives have no responsibility for injury or damage which may result from improper use of the equipment.

Various protective materials and devices are available. It is urged that such materials or devices be used.

OMISSIONS & ERRORS

Customers, please contact your GE Sales or Service representatives.

GE personnel, please use the GEHC iTrak Process to report all omissions, errors, and defects in this publication.

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Revision History

Revision	Date	Reason for change
1	Nor 18, 2013	First release
2	Jul 22, 2014	1. Add US Standard dimension 2. Update the MIS chart at page 142 and 143 3. Add hazard information at page 21 4. Add heat output of UPS in Table 4-3 at page 104 5. Add Table cable entrance at page 118 6. Add Cable connector size in Chapter 7
3	Jul 10, 2015	1. Add note the PC cannot be put on the ground directly at Section 1.1 Chapter 2 2. Update the data of some components at Table 1-1, 2-3, 2-5 3. Update Pasting footstool height at Section 2.7 Chapter 2 4. Update MIS Cable Chart in Section 3.0 Chapter 7 5. Add notice Recommended concrete strength is B40 or equivalent at Section 1.2 Chapter 2
4	Mar 20, 2016	1. Update Cable Information at Section 2.0 Chapter 7 2. Update MIS Cable Chart at Section 3.0 chapter 7
5	NOV 11, 2016	1. Chapter 2 Equipment Section 2.7: Update Image Pasting Barrier
6	Jan. 12, 2018	This revise was used to address some field feedback and improvement. Detailed as below. 1. Chapter 2: updated pictures for battery and Desktop Battery Charger under section 1.1; removed 4th column Weight/occupied area in Table 2-5 under section 2.9; under Section 3.5, deleted original 8 Illustrations from 2-48 to 2-51 and from 2-59 to 2-62, then added 3 new Illustrations (G2 XR656 Room Layout: G2 Table & WS at Foot, Min size G2 XR656 room template with G2 Table & WS at Foot (3m bridge), G2 XR656 Room Layout: G2 Table & WS at Head) after original Illustration 2-47. 2. Chapter 5: changed Table number from 5-10 to 5-8 and revised Illustration 5-1 with new mark under section 2.4.1; added a drawing for Cable entrance in G2 table base center under section 5.2. 3. Chapter 7: added a new part 5368672-4 under section 2.5; corrected a typing error from Dangle to Dongle under section 2.9; added titles for MIS cable chart under section 3.0.
7	Dec. 27, 2022	1. Chapter 2 Equipment Section 2.9: Update PN:2400546 from "M8 X 190mm" to "M8 X 135mm" on table 2-5

List of Effected Pages

PAGES	REVISION	PAGES	REVISION
1 through 138	1	1 through 140	7
1 through 138	2		
1 through 132	3		
1 through 136	4		
1 through 136	5		
1 through 138	6		

Table of Contents

Preface
Publication Conventions

Standardized conventions for representing information is a uniform way of communicating information to a reader in a consistent manner. Conventions are used so that the reader can easily recognize the actions or decisions that must be made. There are a number of character and paragraph styles used in this publication to accomplish this task. Please become familiar with them before proceeding forward.

It is important that you read and understand hazard statements, and not just ignore them.

Section 1.0 Safety & Hazard Information

Proper product safety labeling allows a person to safely use or service a product. The format and style for safety communications reflected in this publication represents the harmonization of IEC/ ISO 3864 and ANSI Z535 standards.

Within this publication, different paragraph and character styles are used to indicate potential hazards. Paragraph prefixes, such as hazard, caution, danger and warning, are used to identify important safety information. Text (Hazard) styles are applied to the paragraph contents that are applicable to each specific safety statement.

Repair parts weighting more than 35 lbs or require more than 35lbs of mechanical effort shall have written procedures defining lifting assistance tools/features or document that it is a two or more person operation.

1.1 Hazard Messages

Any action that will, or could potentially cause personal injury will be preceded by the safety alert symbol and an appropriate signal word. The safety alert symbol is the triangle with an exclamation mark within it. It is always used next to the signal word to indicate the severity of the hazard. Together, they are used to indicate a hazard exists.

Signal words describe the severity of possible human injuries that may be encountered. The alert symbol and signal word are placed immediately before any paragraph they affect. Safety information includes:

1.) Signal Word - The seriousness level of the hazard.

2.) Symbol or Pictorial - The consequence of interaction with the hazard.

3.) Word Message:

   a.) The nature of the hazard (i.e. the type of hazard).

   b.) How to avoid the hazard.

The safety alert symbol is not used when an action can only cause equipment damage.

1.2 Text Format of Signal Words

DANGER - INDICATES AN IMMINENTLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY. THIS SIGNAL WORD IS TO BE LIMITED TO THE MOST EXTREME SITUATIONS.

WARNING - INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.

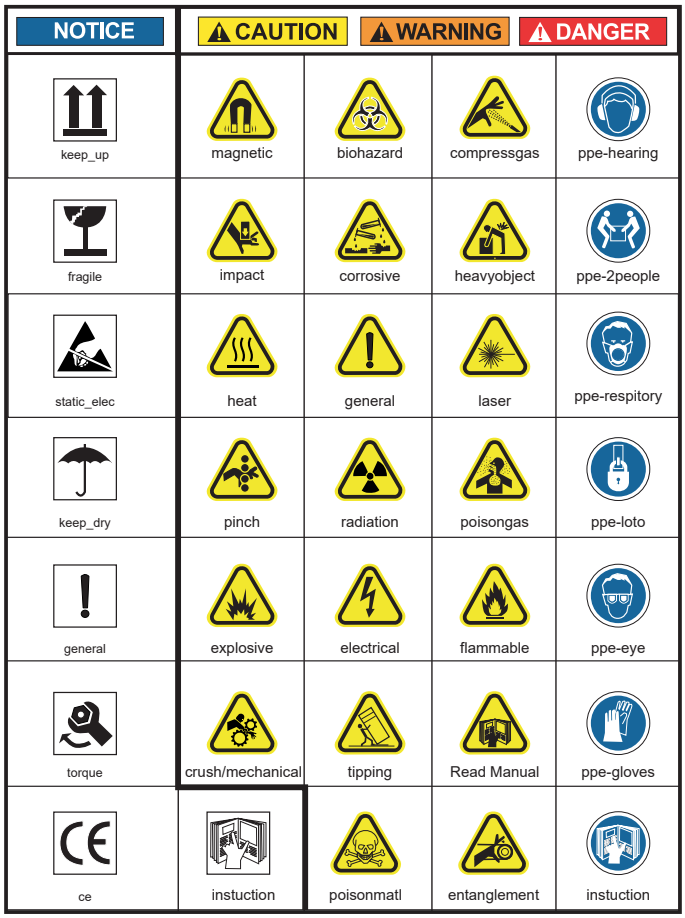
Caution - Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTICE - Indicates information or a company policy that relates directly or indirectly to the safety of personnel or protection of property. This signal word is associated directly with a hazard or hazardous situation and is used in place of 'DANGER,' 'WARNING,' or 'CAUTION.' It can include:

- **Destruction of a disk drive**
- **Potential for internal mechanical damage, such as to a X-ray tube**

1.3 Symbols and Pictorials Used

The following Symbols and Pictorials may be used in this publication. These graphical icons (symbols) may be used to make you aware of specific types of hazards that could possibly cause harm.



1.4 Equipment Classifications

The following equipment classifications are applicable to the product:

- Equipment classification with respect to protection from electric shock: Class I
- Degree of protection from electric shock: Type B
- Degree of protection against ingress of liquids: Not classified
- Equipment not suitable for use in the presence of a flammable anesthetic mixture with air or with nitrous oxide
- Mode of operation: Continuous operation with intermittent loading

Section 2.0 Publication Conventions

2.1 General Paragraph and Character Styles

Prefixes are used to highlight important non-safety related information. Paragraph prefixes (such as Purpose, Example, Comment or Note) are used to identify important but non-safety related information. Text styles are also applied to text within each paragraph modified by the specific prefix.

EXAMPLES OF PREFIXES USED FOR GENERAL INFORMATION:

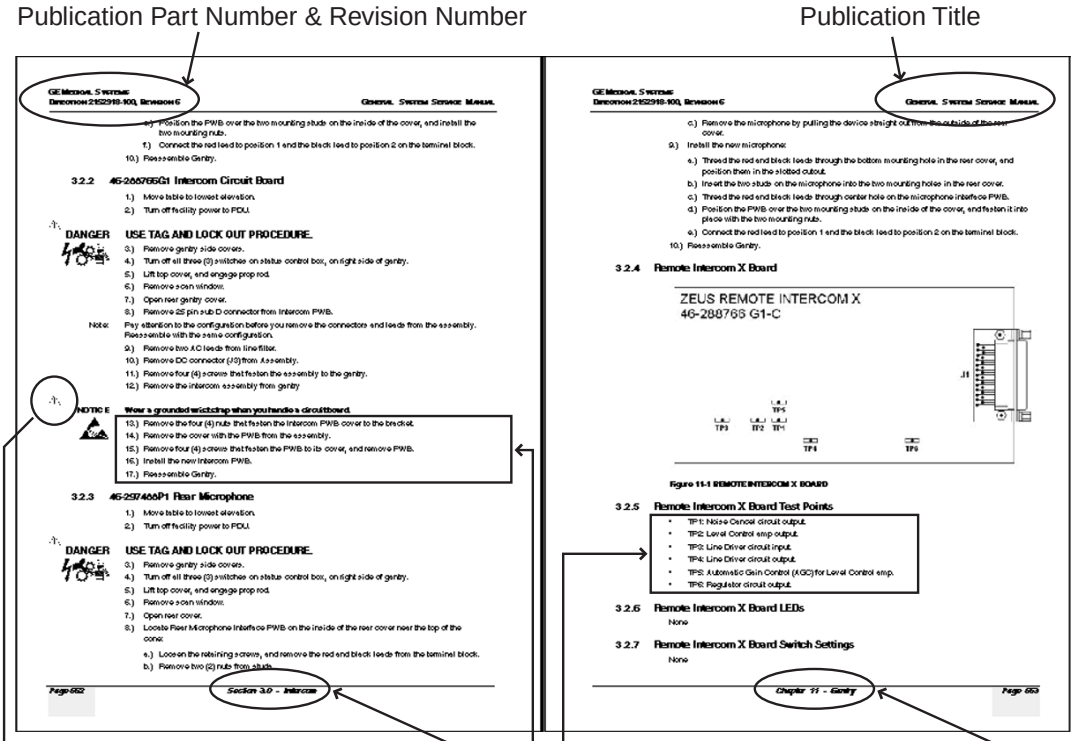
Purpose: Introduces and provides meaning as to the information contained within the chapter, section or subsection (such as used at the beginning this chapter, for example).

Note: Conveys information that should be considered important to the reader.

Example: Used to make the reader aware that the paragraph(s) that follow are examples of information possibly stated previously.

Comment: Represents "additional" information that may or may not be relevant to your situation.

2.2 Page Layout



Headers and footers in this publication are designed to allow you to quickly identify your location. The document part number and revision number appear in every header on every page. Odd

numbered page footers indicate the current chapter, its title and current page number. Even numbered page footers show the current section and its title, as well as the current page number.

2.3 Computer Screen Output/Input Text Character Styles

Within this publication, mono-spaced character styles (fonts) are used to indicate computer text that is either screen input or output. Mono-spaced fonts, such courier, are used to indicated text direction. When you type at your keyboard, you are generating computer input. Occasionally you will see the math operator “greater-than” and “less-than” symbols used to indicate the start and finish of variable output. When reading text generated by the computer, you are reading it as computer generated output. In addition to direction, characters are italicized (e.g. *italics*) to indicate information specific to your system or site.

Example: Fixed Output

`This paragraph’s font represents computer generated screen “fixed” output. Its output is fixed from the sense that it does not vary from application to application. It is the most commonly used style used to indicate filenames, paths and text that do not change from system to system. The character style used is a fixed width such as courier.`

Example: Variable Output

This paragraph’s font represents computer screen output that is “variable”. It is used to represent output that varies from application to application or system to system. Variable output is sometimes found placed between greater-than and less-than operators for clarification. For example: <variable_ouput> or <3.45.120.3>. In both cases, the < and > operators are not part of the actual input.

Example: Fixed Input

This paragraph’s font represents fixed input. It is computer input that is typed-in via the keyboard. Typed input that does not vary from application to application or system to system. Fixed text the user is required to supply as input. For example: cd /usr/3p

Example: Variable Input

This paragraph’s font represents computer input that can vary from application to application or system to system. With variable text, the user is required to supply system dependent input or information. Variable input sometimes is placed between greater-than and less-than operators. For example: <variable_input>. In these cases, the (<>) operators would be dropped prior to input. For example: **ypcat hosts | grep *<3.45.120.3>* would be typed into the computer as**

ypcat hosts | grep *3.45.120.3*

without the greater-than and less-than operators.

2.4 Buttons, Switches and Keyboard Inputs (Hard & Soft Keys)

Different character styles are used to indicate actions requiring the reader to press either a hard or soft button, switch or key. Physical hardware, such as buttons and switches, are called hard keys because they are hard wired or mechanical in nature. A keyboard or on/off switch would be a hard key. Software or computer generated buttons are called soft keys because they are software generated. Software driven menu buttons are an example of such keys. Soft and hard keys are represented differently in this publication.

Example: Hard Keys

A power switch **ON/OFF** or a keyboard key like **ENTER** is indicated by applying a character style that uses both over and under-lined bold text. This is a hard key.

Example: Soft Keys

Whereas the computer MENU button that you would click with your mouse or touch with your hand uses over and under-lined regular text. This is a soft key.

Chapter 1 General Requirements

Section 1.0 Objectives and Overview Summary

1.1 Objective and Scope of This Manual

This document is intended as a guide and informational resource for planning and properly preparing a location for the installation of a Discovery XR656 G2 system.

1.2 Summary

The purchaser is responsible for completion of “Pre-Installation.” This includes the procurement and installation of all required materials and services to get the room ready for installation of the product. This responsibility includes providing:

• A clean and safe work environment for installation of the product (finished floor, ceiling, walls, and proper room lighting).

• A location suitable for the installation of the product.

• Suitable support structures in the floor, walls, or ceiling necessary for the mounting of the product and/or its components.

• Installation of conduit, ducts and/or raceways necessary to route cables safely.

• Electrical power and grounds of specified quality and reliability.

• Electrical power of the required voltage, including an Emergency-Off safety switch in the room. Power and ground cables to the PDU.

• Properly installed and sized junction boxes, including covers and fittings at locations required and called out in architectural drawings.

• Use GE-recommended wires and cables as defined in this document.

Section 2.0 Common Product Requirements

2.1 Dimensions and Layout

Carefully check room layouts for adequate radiographic coverage, necessary clearances and provision for related equipment. Good judgement is required to avoid compromising important features. There must be ample maneuvering space allowed for the hospital cart and for personnel around the table.

Section 3.0 Delivery Requirements

3.1 Door Size Requirements

Minimum door sizes also apply to hallway and elevator.

Door Height: The minimum door height accommodated is 190cm (75in) when the Wall Stand is tilted on the dolly.

Door Width:

• The minimum door width to accommodate the Table is: 95cm (37.5in).

• The minimum door width is calculated based on a straight-in approach requiring a 2.5 m (8 ft) wide corridor. Minimum widths will change based on narrower corridors.

• The minimum door width to accommodate the Image Paste Barrier is 1.1m (44in) wide x 2.1m (82in) high.

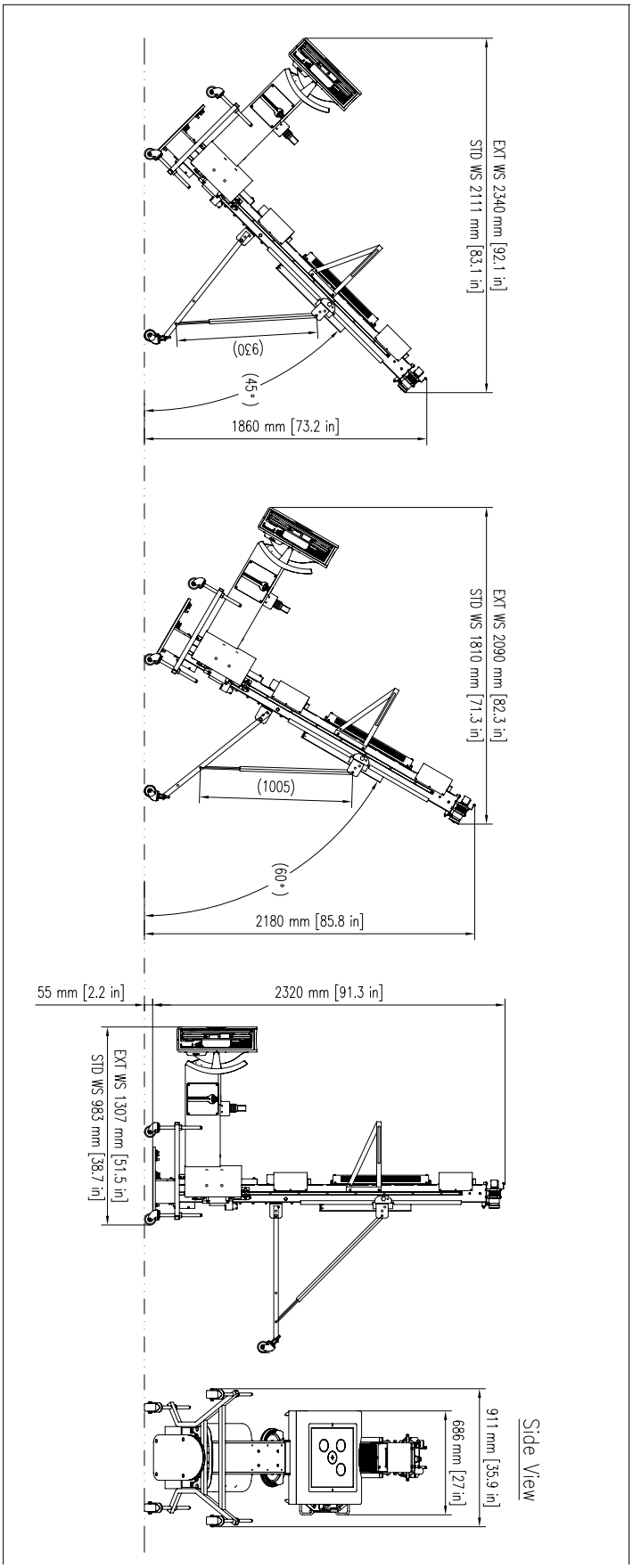
3.2 Minimum Elevator Depth Requirements

The minimum elevator depth to accommodate is 2.45m (96.46in) when the Wall Stand is tilted on the dolly.

3.3 Shipping Fixtures and Carts

The wall stand is delivered on a fixture. See Illustration 1-1.

Illustration 1-1: Wall Stand: Site In-Transit Dimensions



NOTICE

The cabinet can pass up a maximum slope of 10 degrees and pass over a maximum barrier on the floor of 25mm (0.98 in).

Illustration 1-2: Cabinet with its wheels in transit

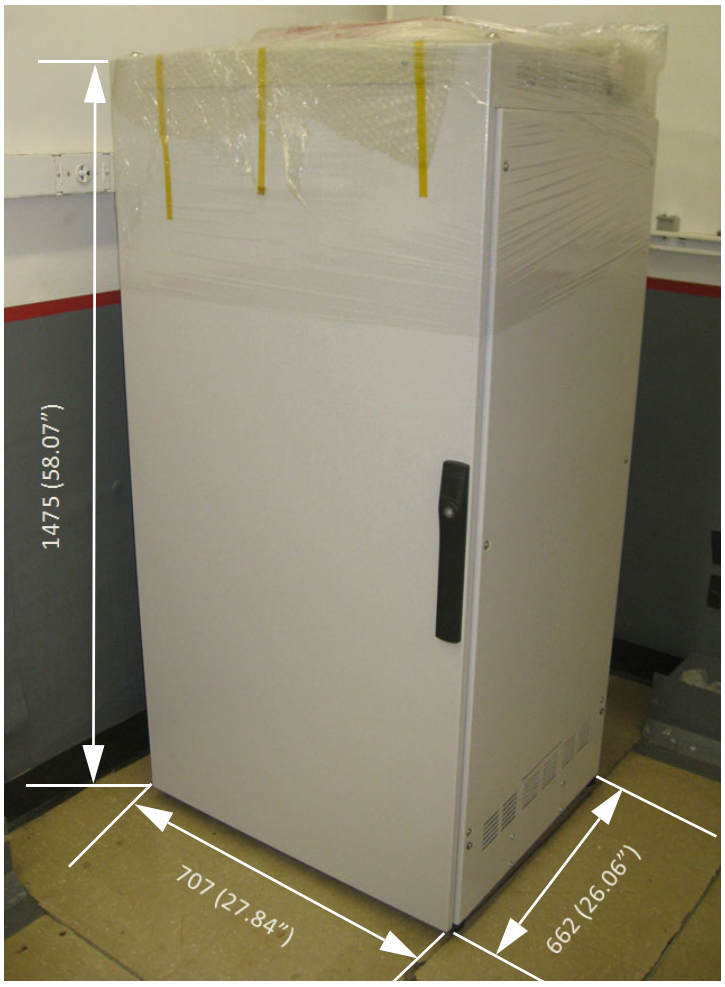
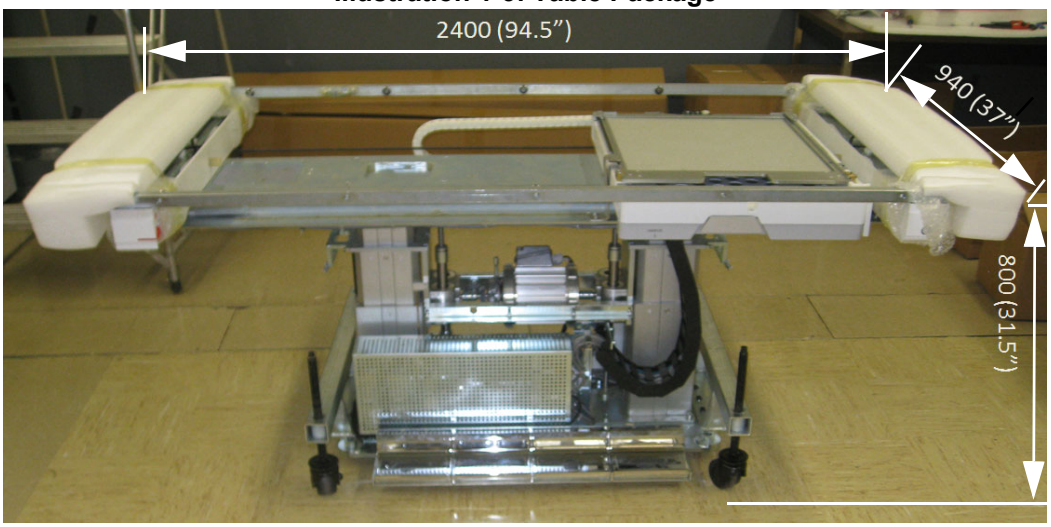


Illustration 1-3: Table Package



Some system components are packed into two “Lean Carts”. See Illustration 1-4 and Illustration 1-5.

Illustration 1-4: Exam Room Lean Cart

Illustration 1-5: Control and Options Lean Cart

NOTICE

The dimension of System Accessory Packing Box made in GEHL is 1400*1350*1050 mm.

3.4 Shipping Dimensions and Weights

Table 1-1 SHIPPING DATA

Component	Shipping Data				
	Shipping Dimensions (Approx)			SHIPPING WEIGHT (approx)	SHIPPING METHOD
	Length	Width	Height		
Stationary Rail (5.79m) (set of 2 rails)	5.92 m (233 in)	178 mm (7 in)	76 mm (3 in)	62.6 kg (138 lbs)	box
2 Meter Bridge with OTS and Drive Belt	2210 mm (87 in)	737 mm (29 in)	178 mm (7 in)	355.3 kg (782.5 lbs)	box/crate/skid
3 Meter Bridge with OTS and Drive Belt	3099 mm (122 in)	737 mm (29 in)	178 mm (7 in)	375.3 kg (827.5 lbs)	box/crate/skid
4 Meter Bridge with OTS and Drive Belt	5080 mm (200 in)	737 mm (29 in)	203 mm (8 in)	443.2 kg (977.3 lbs)	box/crate/skid
2 Meter Cable Drape Rail and Support	813 mm (32 in)	584 mm (23 in)	229 mm (9 in)	74.8 kg (165.25 lbs)	box/skid
3 Meter Cable Drape Rail and Support	813 mm (32 in)	584 mm (23 in)	229 mm (9 in)	82.1 kg (180.9 lbs)	box/skid
4 Meter Cable Drape Rail and Support	813 mm (32 in)	584 mm (23 in)	229 mm (9 in)	83.6 kg (184.25 lbs)	box/skid
System Cabinet	900 mm (35.4 in)	770 mm (30.3 in)	1650 mm (65in)	370 kg (814 lbs)	box
System Cabinet Hardware	707mm (27.8 in)	662 mm (26 in)	1475 mm (58 in)	320 kg (705 lbs)	box/ skid
System Cabinet in Transit	707mm (27.8 in)	662 mm (26 in)	1475 mm (58 in)	320 kg (705 lbs)	skid
Wall Stand	2440 mm (96 in)	940 mm (37 in)	1270 mm (50 in)	464 kg (1023 lbs)	crate / skid
Extended Wall Stand	2440 mm (96 in)	940 mm (37 in)	1651 mm (65 in)	493 kg (1087 lbs)	crate / skid
Detector Assembly	1042 mm (41 in)	1194 mm (47 in)	737 mm (29 in)	88 kg (194 lbs)	crate / skid
Table Assembly	2600 mm (8.53ft)	1240 mm (4.07ft)	870 mm (2.85ft)	496 kg (1093.5 lbs)	box / skid
Table Assembly in Transit	2400mm (95in)	940mm (37in)	800mm (31.5in)	440 kg (970 lbs)	dolly
Stretcher: Non-elevating (Option)	2312 mm (91 in)	1042 mm (41 in)	940 mm (37 in)	164 kg (360 lbs)	box / skid
Stretcher: Carbon Fiber Non-elevating (Option)	2300 mm (90.5 in)	770 mm (30 in)	230 mm (9 in)	70 kg (154 lbs)	crate
Stretcher: Elevating (Option)	2250 mm (99 in)	920 mm (37 in)	810 mm (32 in)	350 kg (772 lbs)	crate/skid
Exam Room Lean Cart	2134 mm (84 in)	762 mm (30 in)	1524 mm (60 in)	varies	wheeled cart
Control & Options Lean Cart	1308 mm (51.5 in)	762 mm (30 in)	1397 mm (55 in)	varies	wheeled cart
Detector Bin	540 mm (21.3 in)	360 mm (14.2 in)	120 mm (4.7 in)	15 kg (33 lbs)	box

NOTICE

OTS shipping packing have two type sizes, one is from GEHL China and one is from USA. Table 1-1 is OTS shipping data of from GEHL China.

3.4.1 OTS shipping data of from GEHL

Item	Packing Name	Dimension mm	Kg	Part Name	Description
1	PM110306	1440×1130×980	332	B00002JA	OTS SUSPENSION (Main body)
2	PM110318	1120×1060×1000	187	B00002JB	OTS COVER KIT
				B00002JC	REVOLUTION XR/D OTS USER INTERFACE
				B00002JD	STIFFENER PLATE ASM
				B00002JE	ANTI-BACKLASH - FOOT
				B00002JF	ANTI-BACKLASH - HEAD
				B00002JG	LONG DRIVE ASM
				B00002JJ	INFRARED REMOTE
				B00002JL	DEFINIUM 8000 AUTO COLLIMATOR
				B00002LL	REVOLUTION XR/D TUBE COVER KIT
3	PM110307	3254×794×500	172	B00002JN	3M IB BRIDGE FOR THUNDER
				B00002JH	XT CABLE DRAPE OR CONCEALMENT SUPPORTS (MIST GRAY)
	PM110311	4554×794×500	246	B00002JR	4M IB BRIDGE FOR THUNDER
				B00002JH	XT CABLE DRAPE OR CONCEALMENT SUPPORTS (MIST GRAY)
4	PM110308	2800×325×250	47	B00002K	DRAPE WITH 3 M BRIDGE
	PM110310	4140×325×250	65	B00002KB	DRAPE WITH 4 M BRIDGE
5	PM110314	4300×380×330	122	B00002KJ	11 FOOT 2 INCH (134 INCH) (340CM)~ 13 FOOT 2 INCH (158 INCH) (401CM)
	PM110313	5840×380×330	160	B00002LF	13 FOOT 6 INCH (162 INCH) (411.5CM)~ 19 FOOT (228 INCH) (579CM)
6	PM110309	1600×230×420	70	B00002LJ	2/3M BELT SELECT
	PM110312	2860×230×420	105	B00002LK	4M BELT SELECT

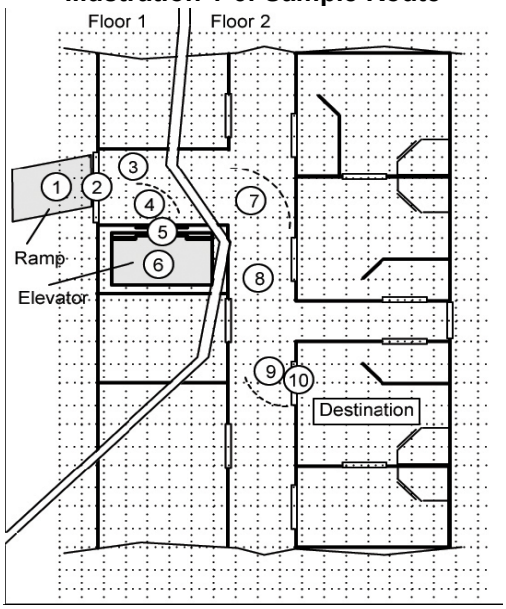
3.5 Preparing the Delivery Route

1. Sketch out the Route
   Begin preparing Route Survey by sketching the area of the hospital or clinic which will receive the equipment. Include all areas on the delivery route from outside of building to destination. See sample sketch below in.

NOTICE

The reference numbers in circles refer to the Route Survey data shown in Illustration 1-6. The Route Survey is a form on which site data is listed.

Illustration 1-6: Sample Route



2. Survey the Route
Record all loading capacities, corridor widths, door openings, turning radii, flooring materials, elevator sizes, obstructions and so on for reference.

3. Check the Route
Verify equipment can actually be transported via the route determined.

Section 4.0 Product Storage and Handling Requirements

4.1 Relative Humidity and Temperature

This section provides information for the environmental requirements for the storage of the system.

NOTICE

STORAGE values only refer to equipment that is still in shipping containers. If the equipment is partially or completely installed, refer to IN-USE values.

Table 1-2 Environmental Requirements (Relative Humidity & Temperature)

Product or Component	Relative Humidity (Non-Condensing)				Temperature			
	IN-USE		STORAGE		IN-USE		STORAGE	
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
URP Detector	30%	60%	10%	85%	15°C (59° F)	35°C (95° F)	-5° C (23° F)	50° C (122° F)
Wall Stand/Extended Wall Stand	30%	60%	10%	85%	15°C (59° F)	35°C (95° F)	-20°C (-4° F)	60° C (140° F)
Table(TBL)	30%	60%	10%	85%	15°C (59° F)	35°C (95° F)	-20°C (-4° F)	60° C (140° F)
OTS	30%	60%	10%	85%	15°C (59° F)	35°C (95° F)	-20°C (-4° F)	60° C (140° F)
System Cabinet(SKL1)	30%	60%	10%	85%	15°C (59° F)	35°C (95° F)	-20°C (-4° F)	60° C (140° F)
Maxiray 100-09 X-ray Tube (RAD)	30%	60%	10%	85%	15°C (59° F)	35°C (95° F)	-20°C (-4° F)	60° C (140° F)
Operator Console	30%	60%	10%	85%	15°C (59° F)	35°C (95° F)	-20°C (-4° F)	60° C (140° F)
PC Tower	30%	60%	10%	85%	15°C (59° F)	35°C (95° F)	-20°C (-4° F)	60° C (140° F)
LCD Monitor	30%	60%	10%	85%	15°C (59° F)	35°C (95° F)	-20°C (-4° F)	60° C (140° F)
Radiographic Stretcher Table (optional)	30%	60%	10%	85%	15°C (59° F)	35°C (95° F)	-20°C (-4° F)	60° C (140° F)

Limits for rates of change:

In-Use	Storage
<10 degree C / hour	<20 degree C / hour
<30% / hour	<30% / hour

4.2 Atmospheric Pressure

Table 1-3 Environmental Requirements - (Altitude & Atmospheric Pressure)

PRODUCT OR COMPONENT	ALTITUDE		ATMOSPHERIC PRESSURE	
	Stationary Operating Environment and Non-operating Environment			
	MIN	MAX	MIN	MAX
Total System Limits	-30 m (-98.43 ft)	3000 m (9,842.52 ft)	70 kPa	106 kPa

Limits for rates of change:

In-Use:	Storage:
<1.8 kPA / hour	<76 kPA / hour

NOTICE

Non-operating Environment values only refer to equipment that is still in shipping containers. If the equipment is partially or completely installed, refer to Stationary Operating Environment values.

Chapter 2 Equipment

Section 1.0 System Components

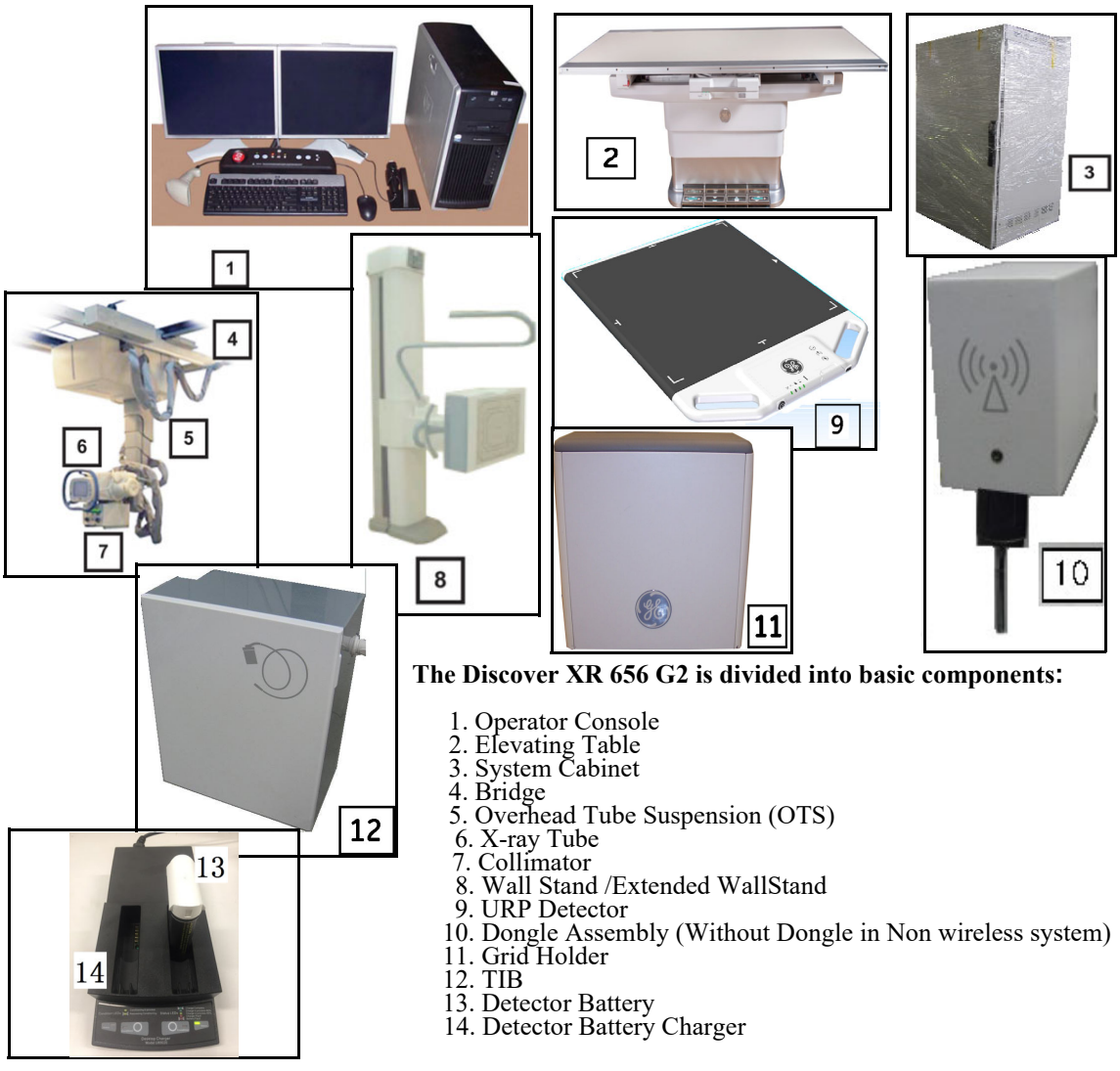
1.1 System Components

The Discovery XR656 G2 system may consist of the following main components:

- Elevating Table with a URP Digital Detector and Power Supply
- JEDI X-ray Control Sub-system and Power Unit (1 System Cabinet)
- Overhead Tube Support (OTS)
- URP Digital Detector Wallstand with Tilting Receptor, Ion Chamber and Removable Grid
- Workstation with 2 Monitors, Keyboard, Mouse, RCIM, and Bar Code Reader

Note: The PC cannot be put on the ground directly.

Illustration 2-1: System Component Identification



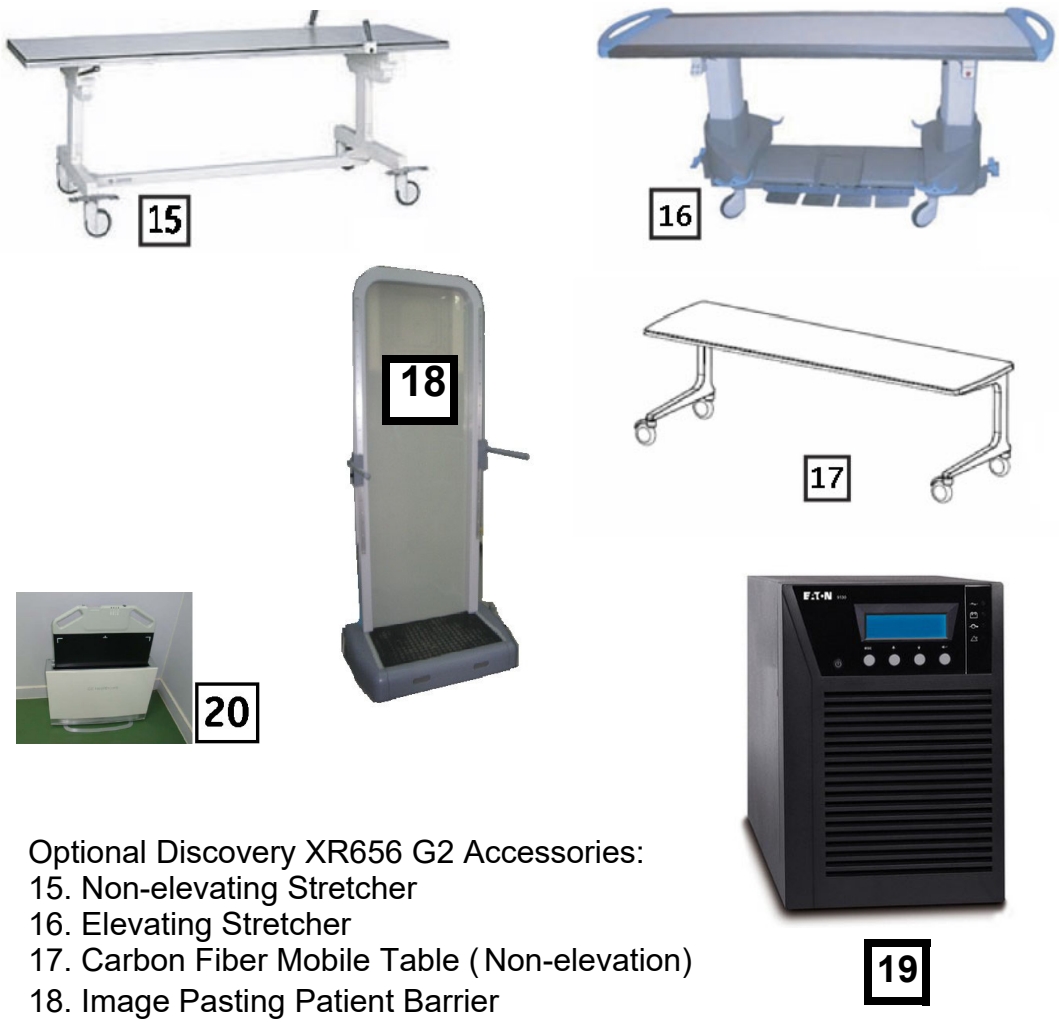
The Discover XR 656 G2 is divided into basic components:

1. Operator Console
2. Elevating Table
3. System Cabinet
4. Bridge
5. Overhead Tube Suspension (OTS)
6. X-ray Tube
7. Collimator
8. Wall Stand /Extended WallStand
9. URP Detector
10. Dongle Assembly (Without Dongle in Non wireless system)
11. Grid Holder
12. TIB
13. Detector Battery
14. Detector Battery Charger

The Discovery XR656 G2 system can include the following free-standing components, which can be purchased as options (see Illustration 2-2):

- Non-elevating Stretcher
- Carbon Fiber Mobile Table (Non-elevation)
- Image Pasting Patient Barrier (included with the Wallstand Image Pasting option)
- UPS
- Detector BIN

Illustration 2-2: Optional System Component Identification



Optional Discovery XR656 G2 Accessories:
15. Non-elevating Stretcher
16. Elevating Stretcher
17. Carbon Fiber Mobile Table (Non-elevation)
18. Image Pasting Patient Barrier
19. UPS
20. Detector BIN

1.2 Room Requirements

1.2.1 Acoustic Output

Table 2-1 System Acoustic Output

COMPONENT	SOUND OUTPUT (dBA)	
	IN-USE (measured 1m from any point in system)	STAND-BY (measured 1m from any point in system)
System	<55	<55

1.2.2 Floor Requirements

The preferred method of installing the wall stand is to use the provided typical floor anchors (Non-Seismic ONLY).

1.2.2.1 Floor Requirements When Using Provided Typical Floor Anchors

⚠ CAUTION

Concrete area for wall stand installation should be 1 m2 (39.37 in2).

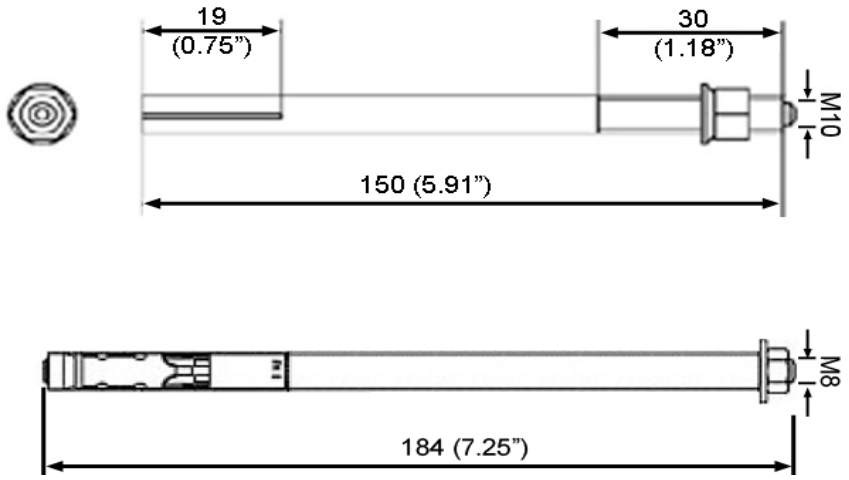
Anchors must be a minimum of 90 mm (3.54 in) from any concrete edge including ducts and cracks. In addition, the general condition of the concrete in the immediate mounting area should be inspected to ensure that anchors will be set in good quality concrete.

NOTICE

Recommended concrete strength is B40 or equivalent.

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 (3.54 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.

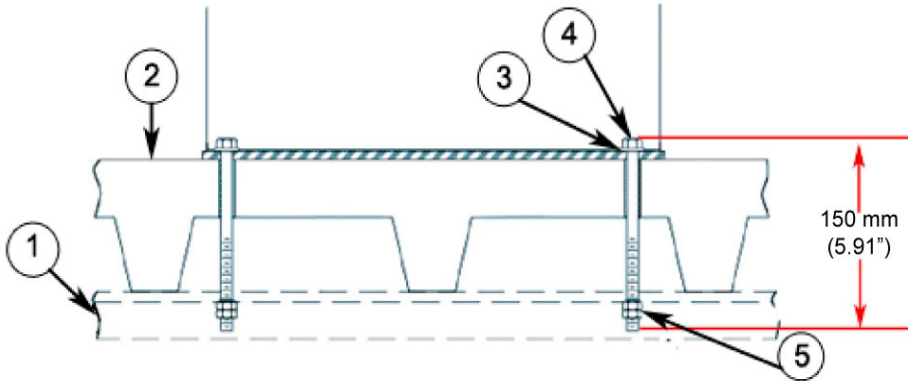
Illustration 2-3: Typical Floor Anchors



1.2.2.2 Pan-Type Floor Construction Requirement

For pan-type floor construction, steel channels must be designed by a local structural engineer to span floor joists.See Illustration 2-4.

Illustration 2-4: Thru-Bolt Floor Mounting (Pan-Type Floor Construction)



Item	Description
1	For Pan-Type Floor Construction Joists Must Be Spanned With Steel Channels (Customer Furnished)
2	Floor
3	Flat Washer
4	Thru Bolt for 16 mm (Hole Of Appropriate Length.)
5	2-Hex Nuts

1.2.3 Ceiling Requirements

NOTICE

- 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 1/4” (6.35 mm) 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 4 inch (10.2 cm) increments between 134 inches (3.4 m) and 222 inches (5.64 m), plus a 228 inch (5.79 m) length totaling 24 different sizes. The choice of length depends on room size, configuration and the possible presence of obstructions.

Complete details of room dimensions must be known when planning an installation. Work with the architect or building engineer and obtain approval from the customer before proceeding with the layout plan.

Methods of support that will permit attachment to structural steel or through bolts in concrete construction should be favored. Do not use anchors in direct tension.Each rail has mounting holes on 660.4mm (26 in) centers with the first hole located 55 mm (2 in) from the rail mount end. The last hole is located either 55mm (2in) from the other end with a variable space of less than 660.4mm (26in) between it and the second last hole.

Table 2-2 Recommended and Minimum Room Heights (Floor to Top of Longitudinal Rail)

Configuration	Specifications	Ceiling
2M, 3M or 4-Meter Bridge	Recommended	2895.6 mm (114")
2M, 3M Bridge with Advanced Applications Option	Minimum	2692.4 mm (106")
4M Bridge with Advanced Applications	Minimum	2698.75 mm (106.25")
2M/3M Bridge without Advanced Applications	Minimum	2616.2 mm (103")
4M Bridge without Advanced Applications	Minimum	2622.55mm (103.25")
3M Bridge with Wallstand at Front Position	Minimum	2870 mm (113")
4M Bridge with Wallstand at Front Position	Minimum	2876.35mm (113.25")

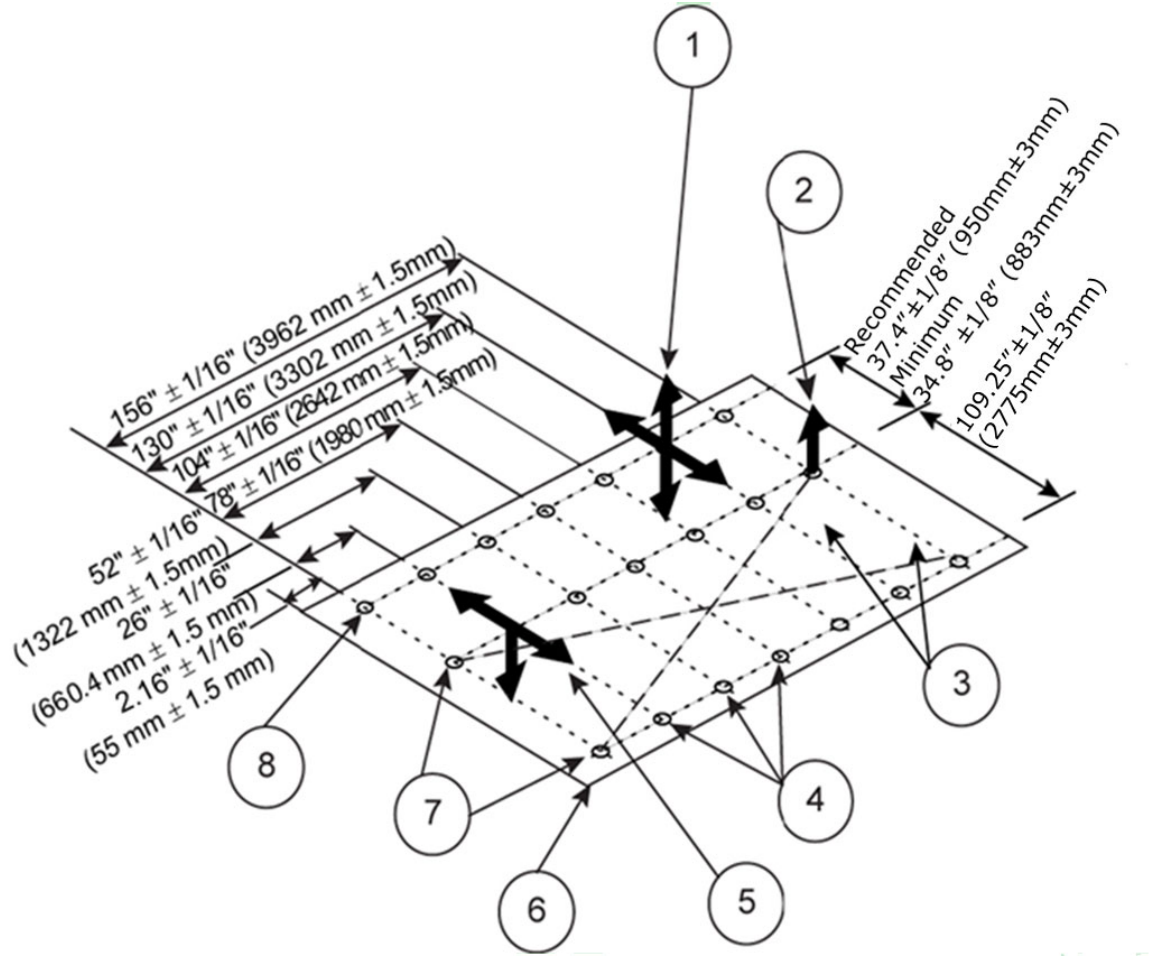
* A system with a 2M or 3M Bridge has a minimum ceiling requirement of 2692.4 mm (106 in). The 4-Meter Bridge has an additional 6.35mm (0.25in) of height, thus the minimum ceiling height required for a 4-Meter Bridge system to use the VolumeRAD Option is 2717.8mm (107in) as indicated above.

Referring to the layout drawings, the ± 3mm (1/8inch) requirement for parallelism of the stationary rail is critical. Therefore, great care must be exercised in locating the mounting points. Illustration 2-5 through Illustration 2-10 outline requirements that the stationary rail mounting interface must meet.

For site planning, please refer to the Illustrations in the OTS section of Chapter 2 - Equipment / System Component Dimensions and Weights.

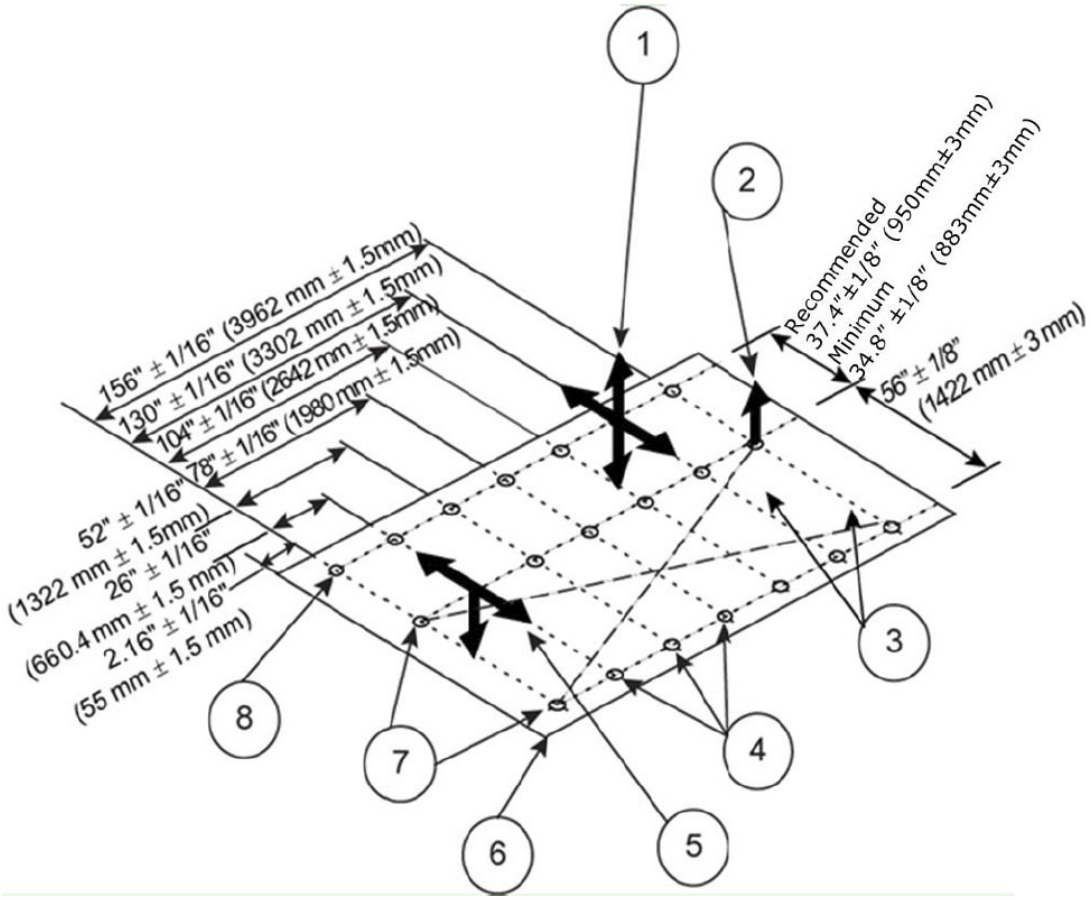
For low ceiling height, the stationary rails may be mounted directly to the ceiling slab or to flush mounted Unistrut or similar structure. For higher rooms in which a false ceiling is to be used, the stationary rails may be attached to rigid vertical members hung from the ceiling slab. A supplementary channel may be secured to the bottom of the vertical members to facilitate provision for mounting holes. A Unistrut system or equivalent is a convenient type of support to employ. See Illustration 2-8, Illustration 2-9 and Illustration 2-10.

Illustration 2-5: 4 Meter Bridge Specifications for a Typical 5.44 m (17 foot - 10 inch) Stationary Rail Mounting Interface (Both Rails Ceiling Mounted)



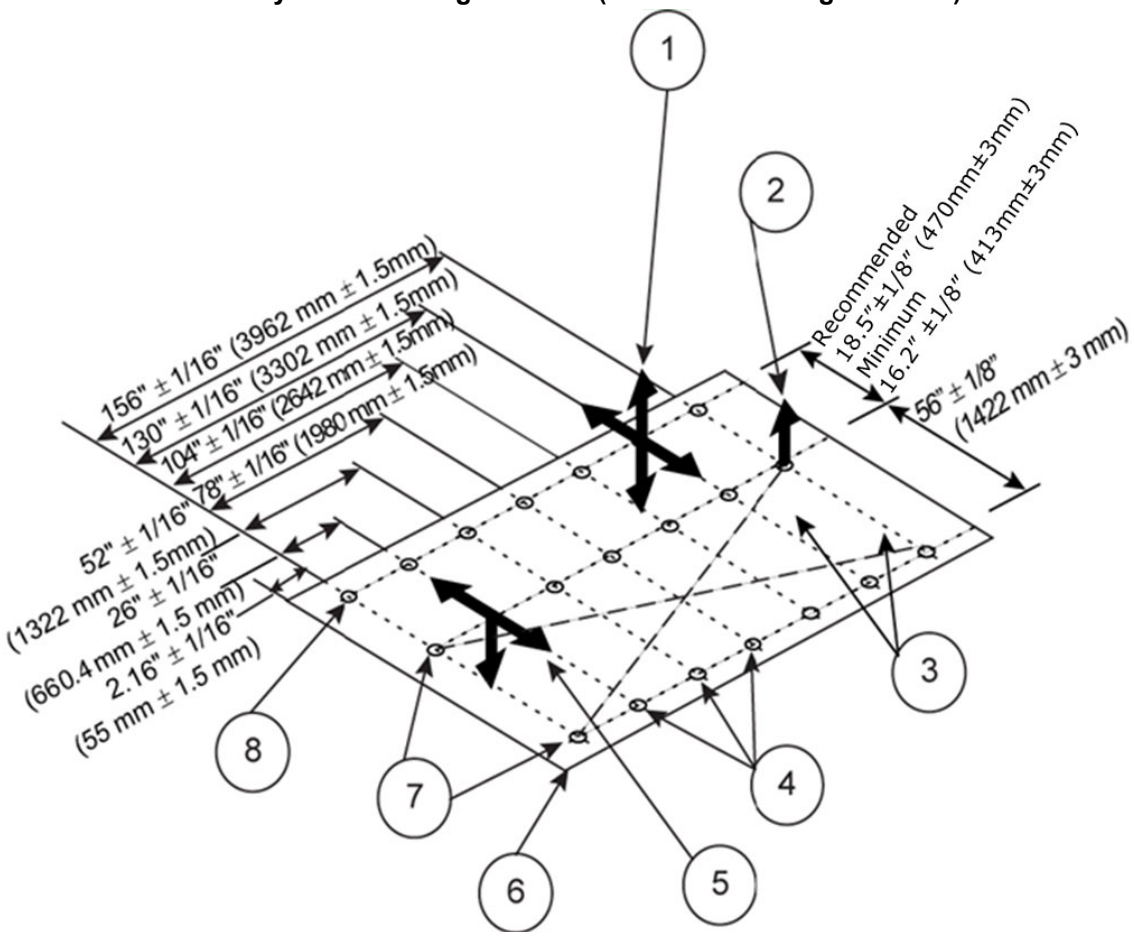
Item	Description
1	When a 50 lb. (22.7 kg) force is applied vertically upward, vertically downward, or horizontally at any support rail mounting point, the attachment interface must not deflect more than 1/16” (1.5 mm).
2	When a 100 lb. (45.4 kg) force is applied vertically upward at any stationary rail mounting point, the attachment interface MUST not deflect more than 1/16” (1.5 mm).
3	Diagonals must be equal within ±1/4” (6.5 mm).
4	All mounting points must be located on a common centerline within ±1/16” (1.5 mm).
5	When a 300 lb. (136 kg) load is applied vertically downward or horizontally at any stationary rail mounting point, the attachment interface MUST not deflect more than 1/16” (1.5 mm).
6	All mounting points must be in the same horizontal plane within ±3/32” (2.4 mm)
7	Stationary rail mounting points must be parallel within ±1/8” (3 mm)
8	Cable takeup support rail mounting points

Illustration 2-6: 3 Meter Bridge Specifications for a Typical 4064mm (13 foot - 4 inch) Stationary Rail Mounting Interface (Both Rails Ceiling Mounted)



Item	Description
1	When a 50 lb. (22.7 kg) force is applied vertically upward, vertically downward, or horizontally at any support rail mounting point, the attachment interface must not deflect more than 1/16” (1.5 mm).
2	When a 100 lb. (45.4 kg) force is applied vertically upward at any stationary rail mounting point, the attachment interface MUST not deflect more than 1/16” (1.5 mm).
3	Diagonals must be equal within ±1/4” (6.5 mm).
4	All mounting points must be located on a common centerline within ±1/16” (1.5 mm).
5	When a 300 lb. (136 kg) load is applied vertically downward or horizontally at any stationary rail mounting point, the attachment interface MUST not deflect more than 1/16” (1.5 mm).
6	All mounting points must be in the same horizontal plane within ±3/32” (2.4 mm)
7	Stationary rail mounting points must be parallel within ±1/8” (3 mm)
8	Cable takeup support rail mounting points

Illustration 2-7: 2 Meter Bridge Specifications for a Typical 4064mm (13 foot - 4 inch) Stationary Rail Mounting Interface (Both Rails Ceiling Mounted)



Item	Description
1	When a 50 lb. (22.7 kg) force is applied vertically upward, vertically downward, or horizontally at any support rail mounting point, the attachment interface must not deflect more than 1/16” (1.5 mm).
2	When a 100 lb. (45.4 kg) force is applied vertically upward at any stationary rail mounting point, the attachment interface MUST not deflect more than 1/16” (1.5 mm).
3	Diagonals must be equal within ±1/4” (6.5 mm).
4	All mounting points must be located on a common centerline within ±1/16” (1.5 mm).
5	When a 300 lb. (136 kg) load is applied vertically downward or horizontally at any stationary rail mounting point, the attachment interface MUST not deflect more than 1/16” (1.5 mm).
6	All mounting points must be in the same horizontal plane within ±3/32” (2.4 mm)
7	Stationary rail mounting points must be parallel within ±1/8” (3 mm)
8	Cable takeup support rail mounting points

Illustration 2-8: Suggested UNISTRUT Structure for OTS Suspension with 2 m Bridge

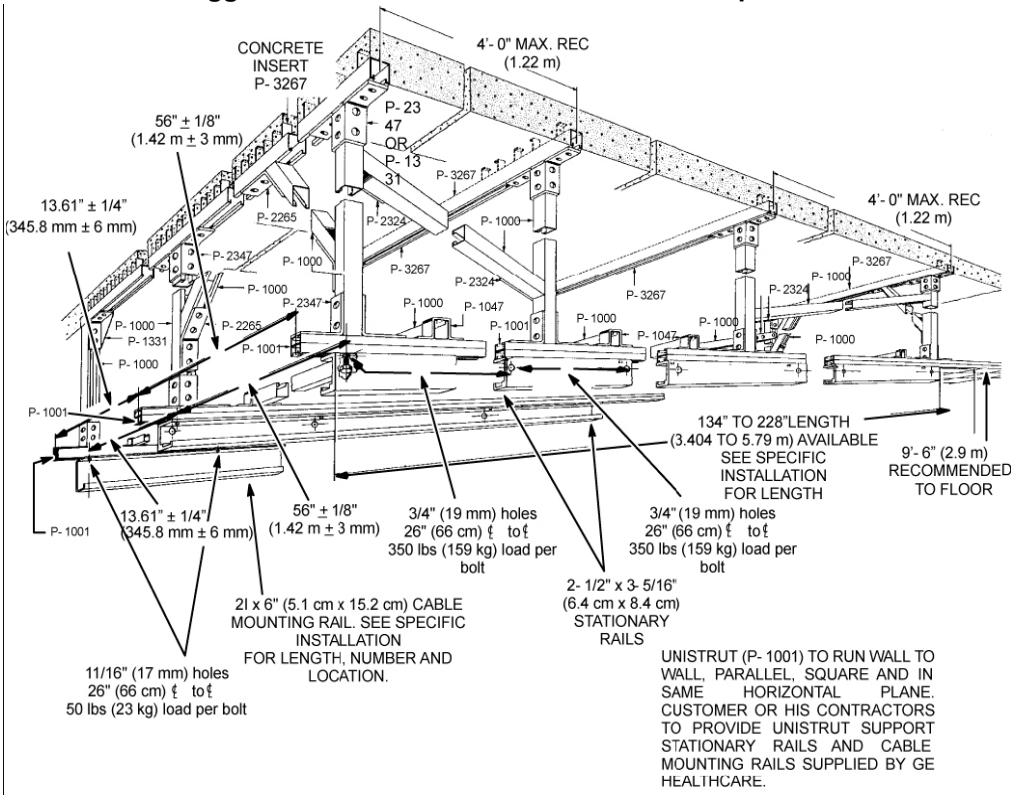


Illustration 2-9: Suggested UNISTRUT Structure for OTS Suspension with 3 m Bridge

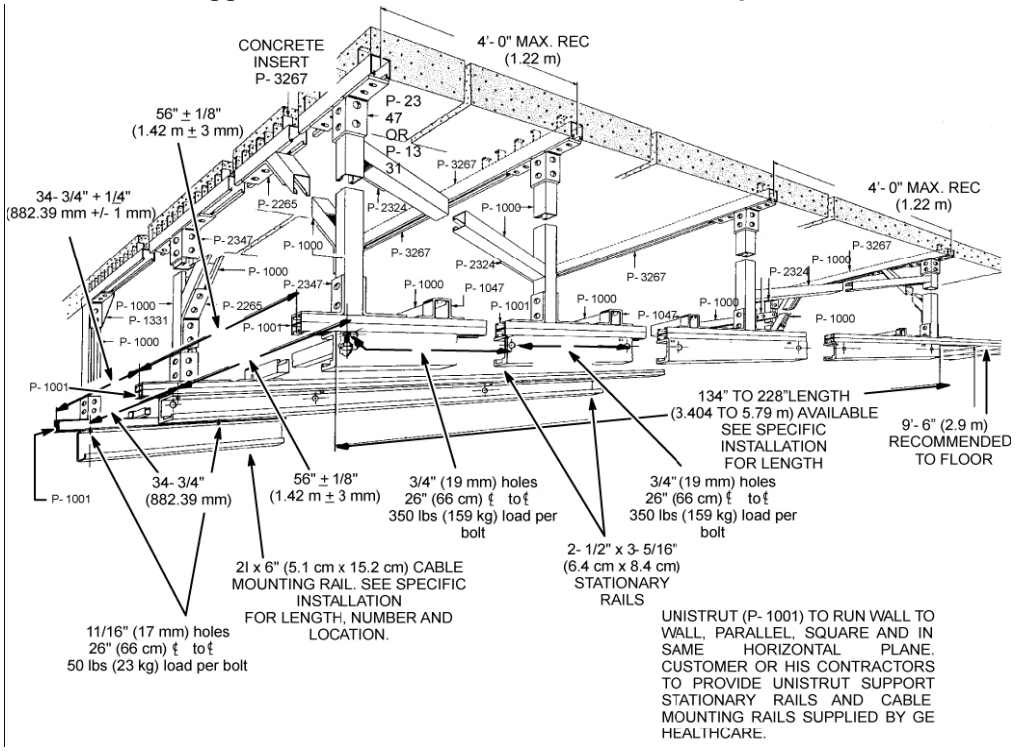


Illustration 2-10: Suggested UNISTRUT Structure for OTS Suspension with 4 m Bridge

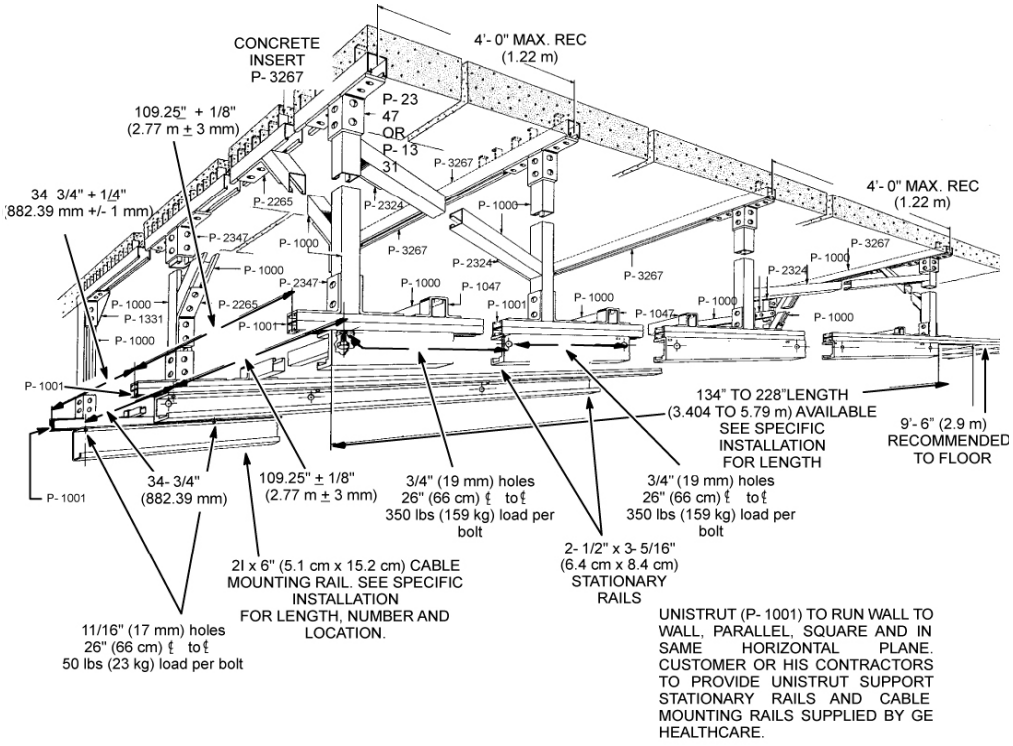


Illustration 2-11: Stationary Rail Mounting Locations and Clearances with 2M Bridge

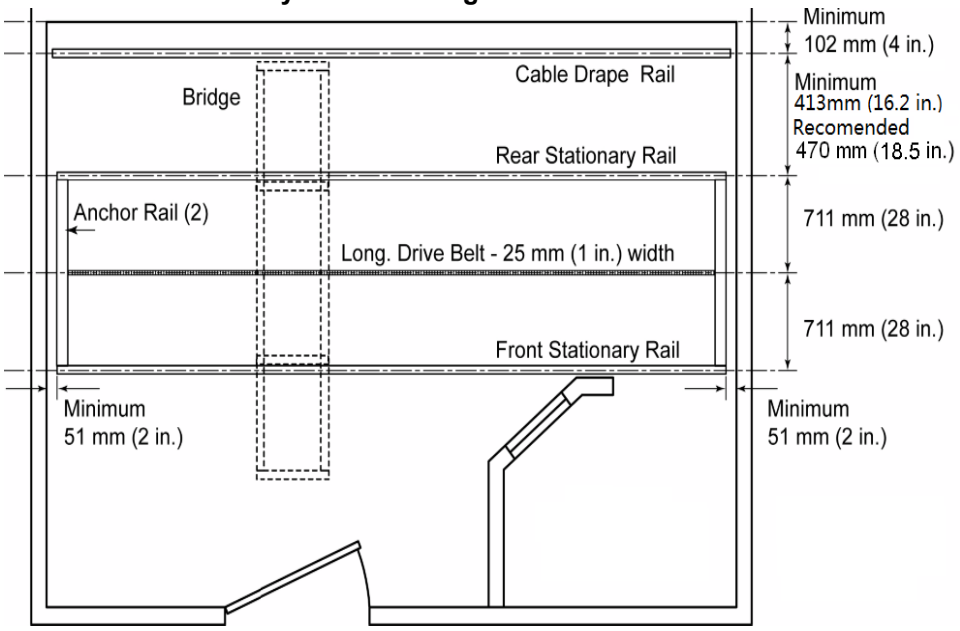


Illustration 2-12: Stationary Rail Mounting Locations and Clearances with 3M Bridge

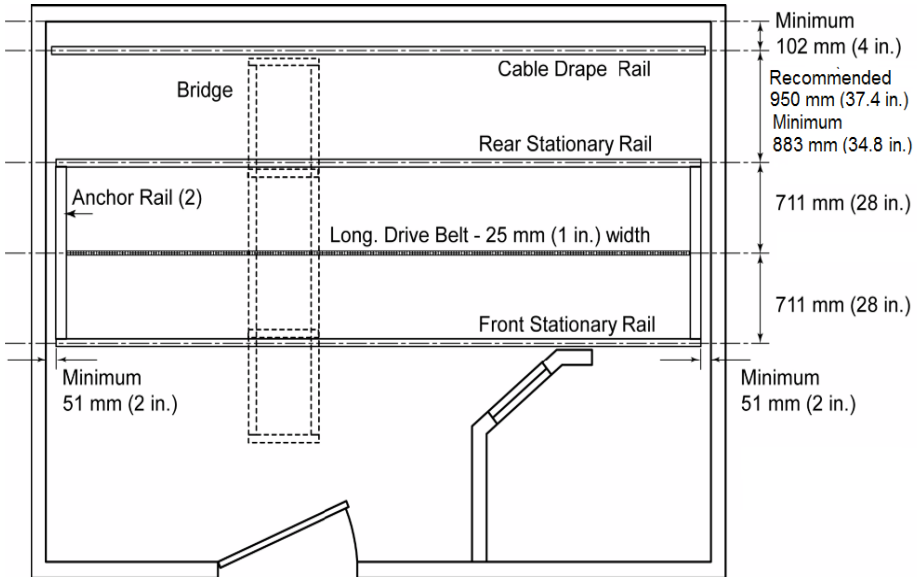
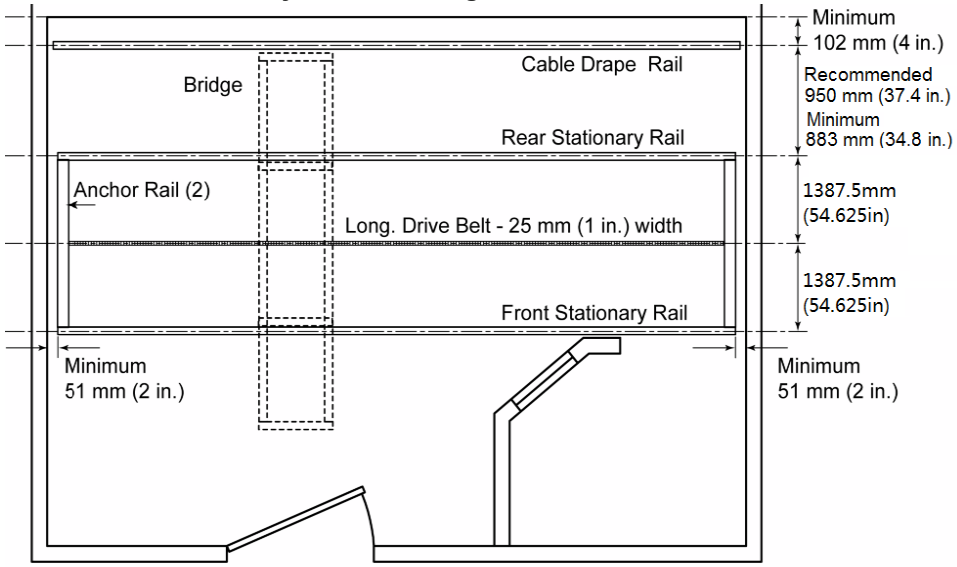


Illustration 2-13: Stationary Rail Mounting Locations and Clearances with 4M Bridge



1.2.4 Wall Requirements

TIB, Detector BIN and Dongle ASSY should be installed on a suitable wall can afford the ASSY. The parameters of these terms are shown in Table 2-3 and Table 2-5.

1.2.4.1 Tether Interface Box (TIB)

Provide a wall space to hang the TIB in the exam room, see Illustration 2-14. Expanding plastic sleeves are provided for the wall screws which are designed to expand into the drywall.

NOTICE

TIB bottom should be installed 1m (39.37in) height from the floor.

Illustration 2-14-1: TIB structure overview

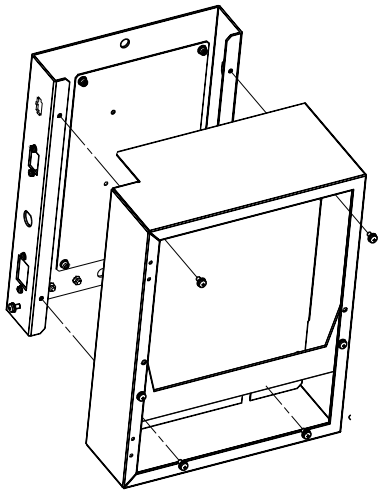
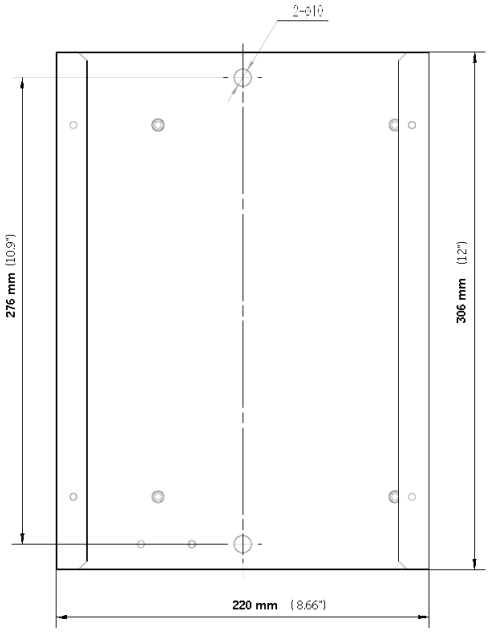


Illustration 2-14-2: TIB rear cover (wallmount)



1.2.4.2 Detector BIN

NOTICE

Detector BIN should be installed 10cm to 20cm (4in to 8in) height from the Detector Bin bottom to the floor.

Illustration 2-15-1: Detector BIN structure overview

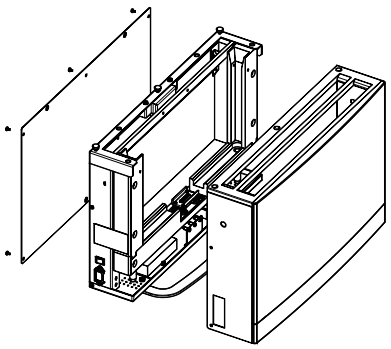
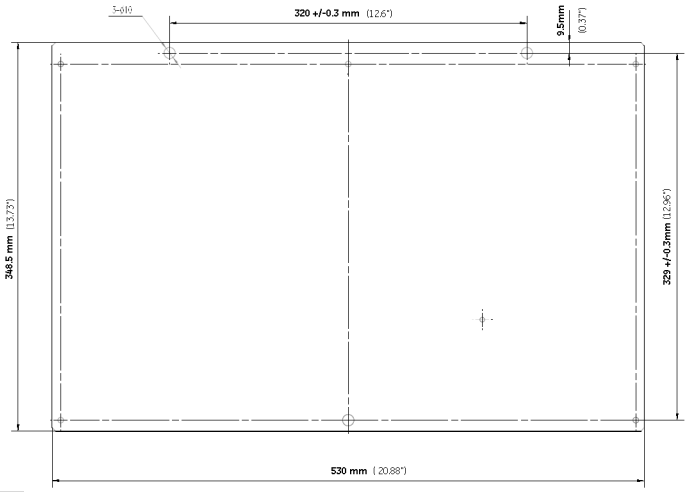
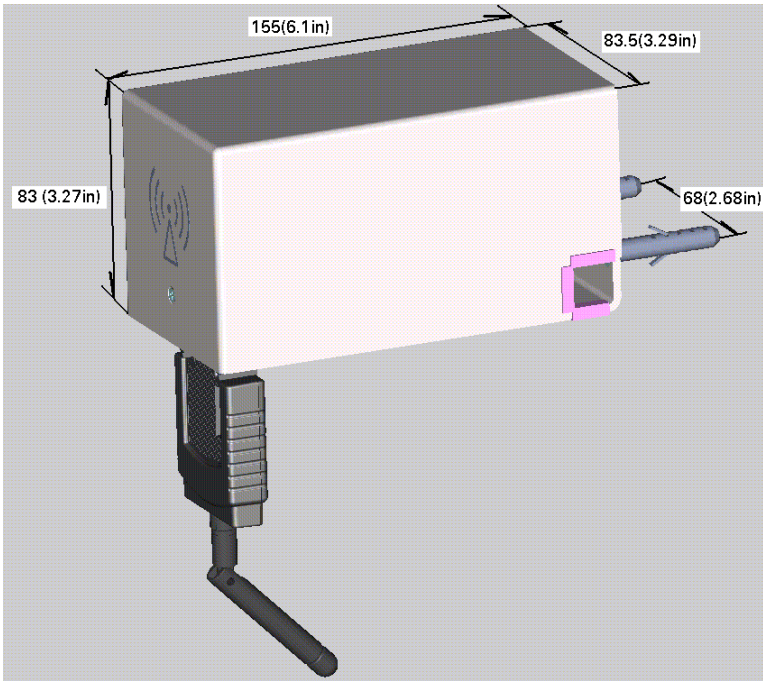


Illustration 2-15-2: Detector BIN rear cover (wall mount)



1.2.4.3 Dongle Assembly

Illustration 2-16: Dongle structure overview



NOTICE

Dongle is only be provided for wireless system. that is not including in Non Wireless Configuration system.

1.2.4.4 Grid Holder

NOTICE

Grid Holder should be installed 10cm to 20cm (4in to 8in) height from the Grid Holder Bottom to the floor.

Illustration 2-17-1: Grid Holder overview

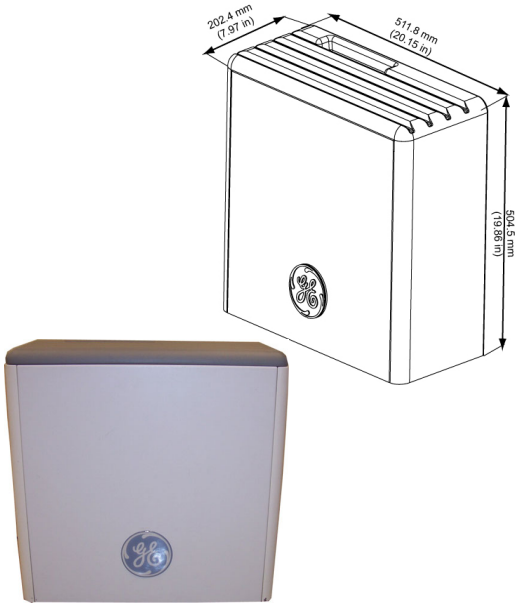
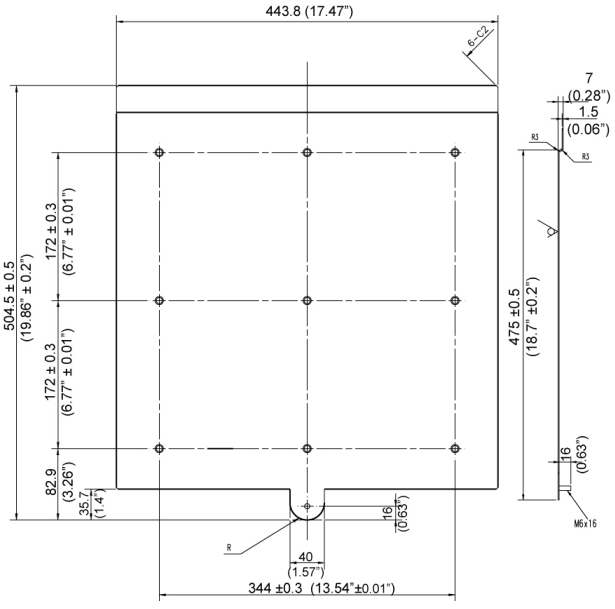
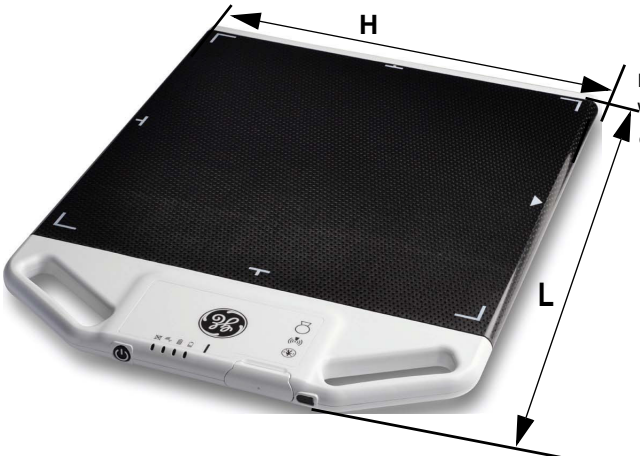


Illustration 2-17-2: Grid Holder Wall Panel



1.2.4.5 Flash Pad Detector

Illustration 2-18: Flash Pad Detector overview



Dimensions: L 580 mm, H 452 mm, T 24 mm
Weighs: 4.5kg (9.92 lbs) with battery; 0.18kg (0.40 lbs)
Can support up to 160 kg (352 lbs) of distributed load
• Battery or tether operated. Includes two rechargeable and exchangeable batteries and 7 m cable (4 m or 10 m optional) for optimal connectivity and power
• Battery allows for 150 images to be taken in 3 hours
• Detector storage bin with built in power charger
• Desktop battery pack charger (up to two battery packs)
• QAP (Quality Assurance Procedure)

1.2.5 Room Light Requirements

For the electronic ballast of fluorescent lamp in exam room, the operating frequency should be above 42KHz, For reference:

Priority	Manufacture	Type		Manufactory Product number	Operating frequency	Remarks
1	OSRAM	T5	QTi2X35/49/80	4008321174291	45...70KHZ	Except QTIS e 3x36/220-240CW
		T8	QTIS e series, For example: QTIS e 1x18/220-240	4050300775388		
2	Philips	T5	HF-P III TL5 series: HF-P 149 TL5 HO III HF-P 149 TL5 HO III HF-P 114-35 TL5 HE III HF-P 114-35 TL5 HE III	 913713028066 913713028166 913713031066 913713031166	46KH	
		T8	HF-P III TLD series: HF-P118TL-D III HF-P218TL-D III HF-P136TL-D III HF-P236TL-D III HF-P158TL-D III HF-P258TL-D III	 913713031266 913713031366 913713031566 913713031666 913713031866 913713031966	45KH	
3	GE	T8	Resi-Proline T8: GE232-120-RES/432-120-RES	97782 97783	Above 42KHz	
			Multi-Volt proline T8 GE-132-MV-N/GE-159-MV-N	30189/95		

Suggest adding the Anti-IR coating to fluorescent lamp. The anti-IR coating should be able to filter IR signal with 940nm wavelength. Otherwise, it's possible to lead to the IR controller cannot work normally sometimes.

Section 2.0 System Component Dimensions and Weights

2.1 Dimensions

Table 2-3 Product Physical Characteristics (Width / Depth / Height)

PRODUCT OR COMPONENT	DIMENSIONS			References
	Width	Depth	Height	
Operator Console: PC Tower HP z420 LCD Monitor RCIM	167.9 mm (6.6 in) 387 mm (15.2 in) 451 mm (17.8 in)	455.3 mm (17.9 in) 180 mm (7.1 in) 135 mm (5.3 in)	450.2 mm (17.7 in) 504 mm (19.9 in) 70 mm (2.8 in)	
Stationary Rail (each) 2 Meter Bridge 3 Meter Bridge 4 Meter Bridge	5.79 m (19 ft) 2099mm (82.64in) 3077mm (10.1ft) 4387.5mm (172.64in)	62.3 mm (2.45 in) 659mm (26in) 659mm (26in) 667.8 mm (26.29 in)	84.3 mm (3.32 in) 169mm (6.66in) 169mm (6.66in) 163 mm (6.4 in)	See Illustration 2-23 to Illustration 2-28
Table Assembly	2400 mm (7.87 in)	933 mm (36.73 in)	500 - 850 mm (19.69 - 33.46 in)	See Illustration 2-19
Table Top Movement Dimension	680mm±10mm (26.77in±0.39in)	280mm±10mm (11.02in±0.39in)	NA	See Illustration 2-19-1
Table Base Assembly	920mm (36.22")	450mm (17.72")	20mm (0.79")	See Illustration 2-19
Stretchers (optional): Non-elevating Non-elevating (carbon fiber) Elevating	 2159 mm (85 in) 2200 mm (86.6 in) 2437 mm (96 in)	 870 mm (34.25 in) 650 mm (25.5 in) 895 mm (35.24 in)	 705 mm (27.75 in) 700 mm (27.5 in) 1010 mm (39.76 in) Max.	 See Illustration 2-31 See Illustration 2-32 See Illustration 2-33
Overhead Tube Support Includes: carriage, collimator, tube, and UIF	607 mm (23.89 in)	1016 mm (40 in)	889 mm (35 in)	See Illustration 2-22-1 and Illustration 2-22-2 and Illustration 2-22-3
System Cabinet	707 mm (27.84 in)	662 mm (26.06 in)	1475 mm (58 in)	See Illustration 2-20-1 and Illustration 2-20-2
Tether Interface Box	220 mm (8.66 in)	110 mm (4.3in)	306mm (12 in)	See Illustration 2-14-1 and Illustration 2-14-2
Wall Stand	686~1266 mm (27~49.85 in)	1344 mm (52.91 in)	2628mm (103.46in)	See Illustration 2-29 and Illustration 2-30-1 and Illustration 2-30-2
Extended Wall Stand	686~1266 mm (27~49.85 in)	1668 mm (65.67 in)	2628 mm (103.46 in)	See Illustration 2-29 and Illustration 2-30-1 and Illustration 2-30-2
Image Pasting Barrier with Footstool (option)	1110.4 mm (43.71 in)	656.76 mm (25.86 in)	2070 mm (81.5 in)	See Illustration 2-34
Detector BIN	530 mm (20.88 in)	119 mm (4.7 in)	348.5 mm (13.75 in)	See Illustration 2-15-1 and Illustration 2-15-2
Dongle Assembly	83.5 mm (3.29 in)	155 mm (6.1in)	83 mm (3.27 in)	See Illustration 2-16
Flash Pad (URP detector)	L 580 mm(22.83 in)	H 452 mm(17.8in)	T 24 mm(0.94in)	See Illustration 2-18-2
Grid Holder	511.8 mm (20.15 in)	202.4 mm (7.97 in)	504.5 mm (19.86 in)	See Illustration 2-17-1 and Illustration 2-17-2
UPS (option)	214 mm (8.43 in)	410 mm (16.14 in)	325 mm (12.80 in)	See Illustration 2-35

2.2 Table

Illustration 2-19: Table Views

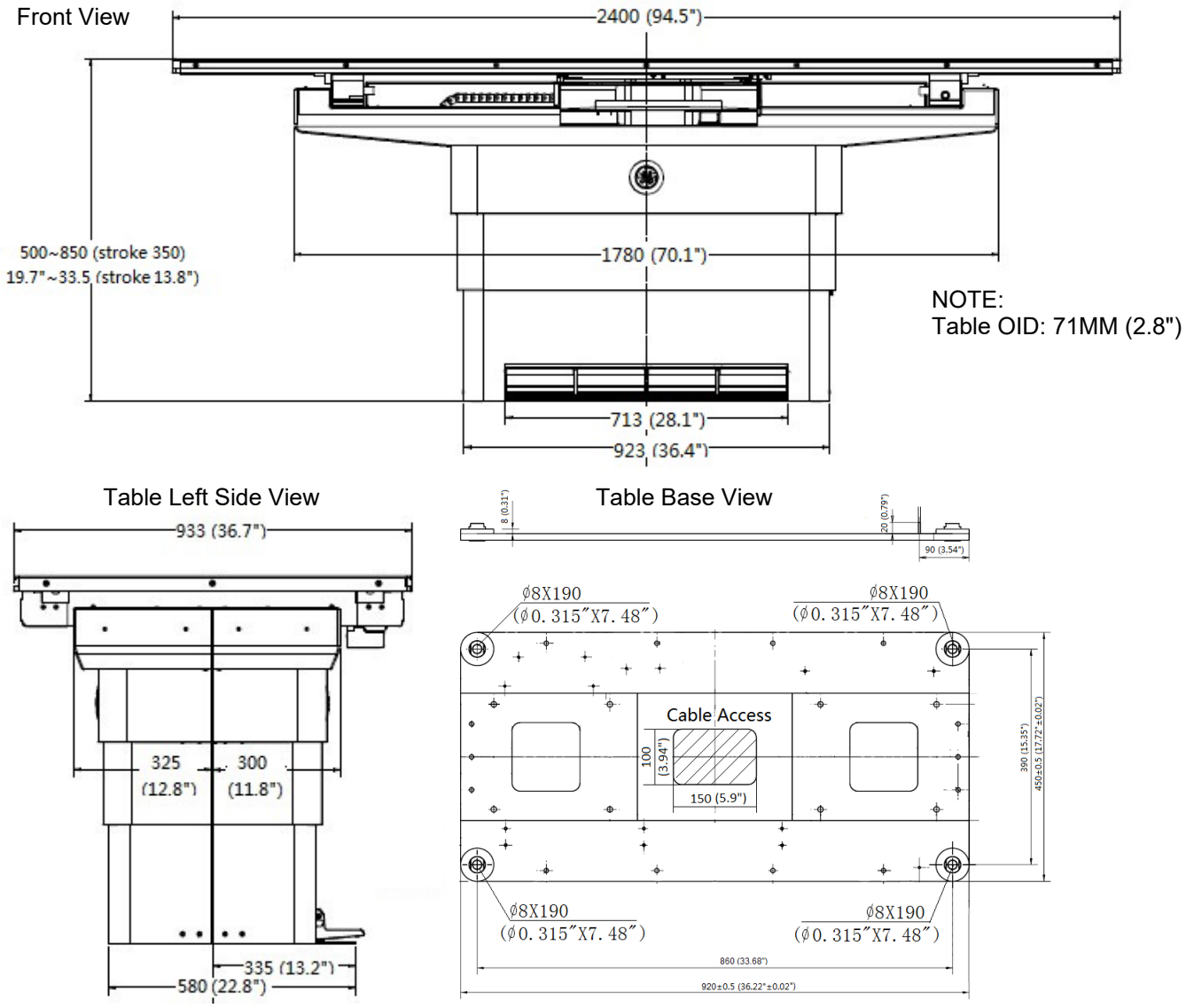
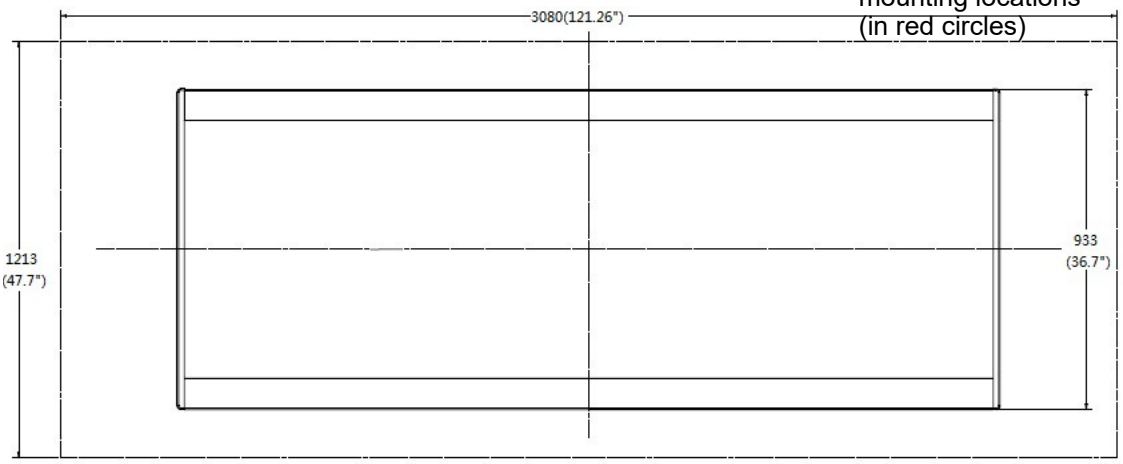


Illustration 2-19-1: Table Top Movement Dimensions



2.3 System Cabinet

Illustration 2-20-1: System Cabinet Dimensions (Front, Top, Left)

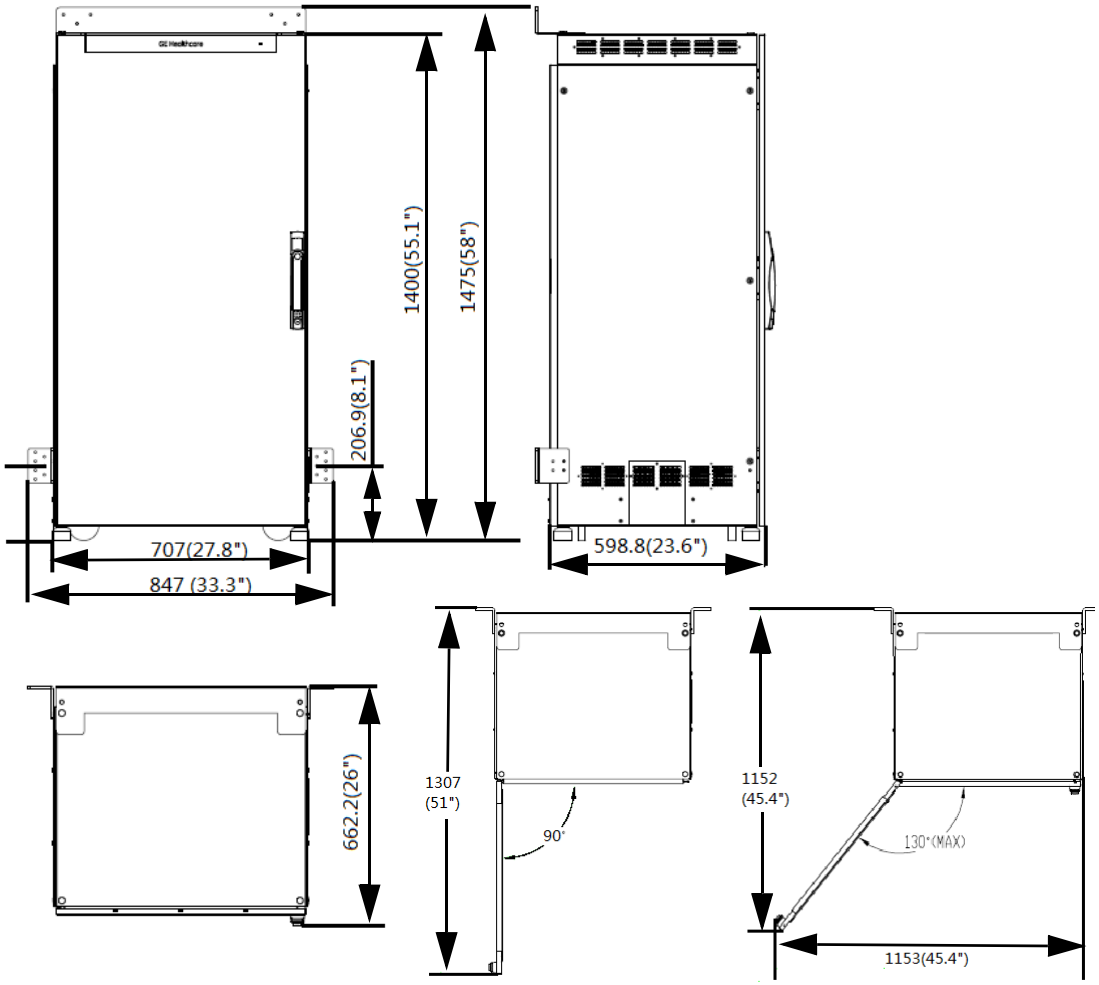
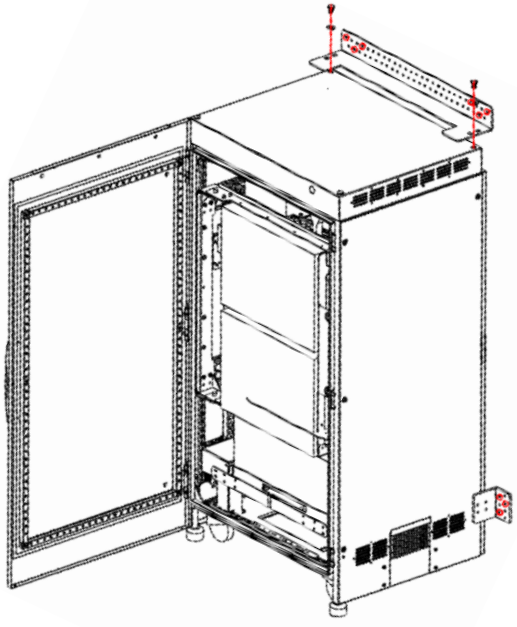


Illustration 2-20-2: System Cabinet Wall-Mount Bracket



2.4 Over-Head Tube Support (OTS)

The OTS comprises a system for suspending and supporting an X-ray tube unit and collimator. It employs a spring counterpoise mechanism to balance these loads. The OTS's main components are the stationary rails, the bridge and the support column.

Illustration 2-22-1: OTS Travel Range

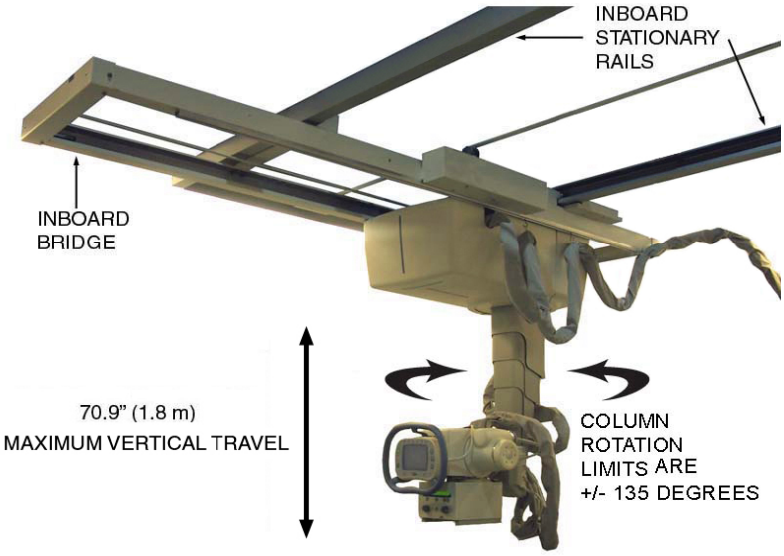


Illustration 2-22-2: OTS Dimensions

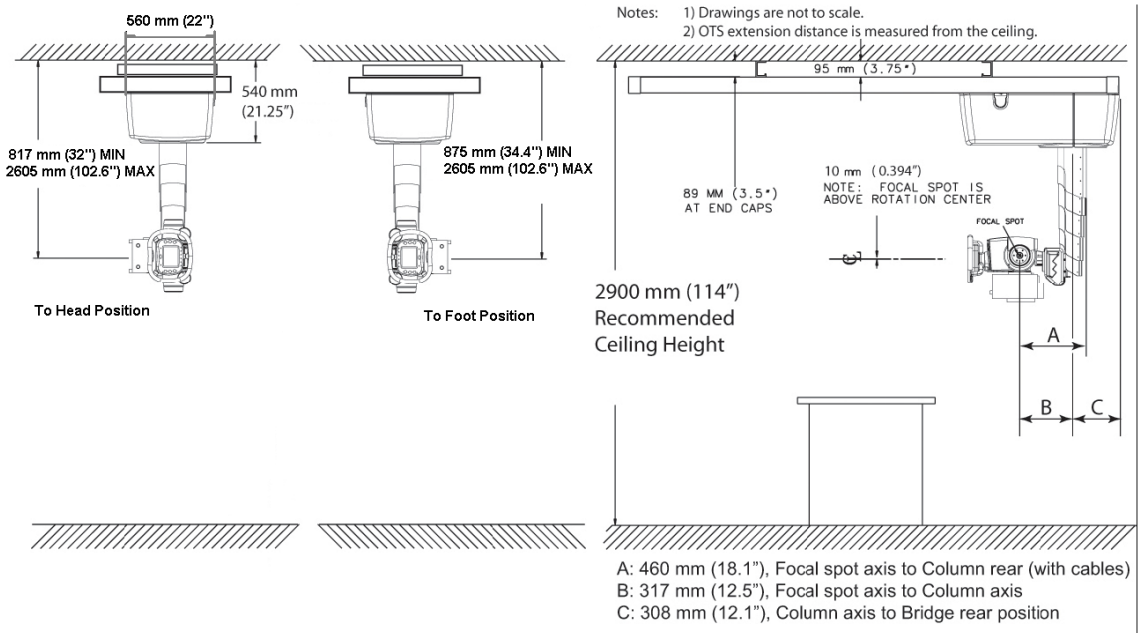


Illustration 2-22-3: OTS Suspension Side View (Refer to Table 2-2)

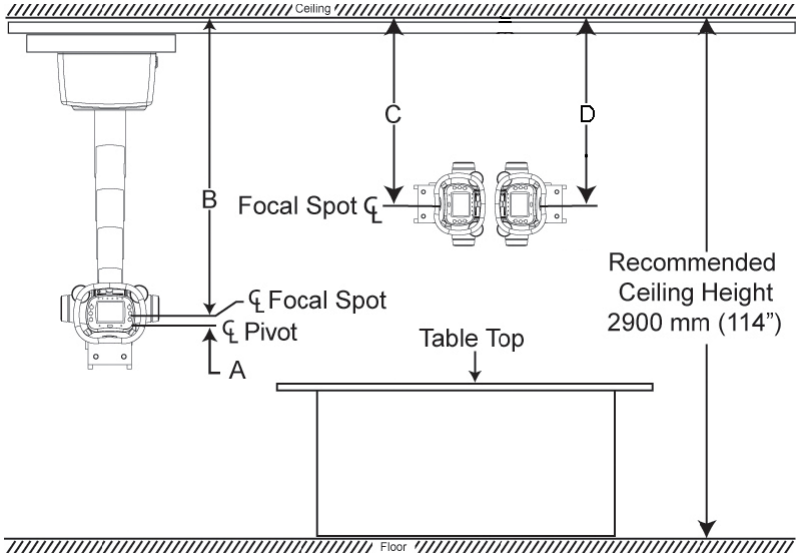


Table 2-4 OTS Suspension Vertical Travel Limits (See Illustration 2-22-3)

TRAVEL LOCATION	DIMENSIONS WITH THE MAXIRAY 100 TUBE UNIT	MIN.	MAX.
A	FOCAL SPOT ABOVE TUBE PIVOT POINT	1.7 mm (0.07 in)	----------
B	COLLIMATOR POINTED DOWN (VERTICAL)	807 mm (31.77 in)	2607 mm (102.64 in)
C	COLLIMATOR POINTED SIDEWAYS (Head HORIZONTAL)	817 mm (32.17 in)	2605 mm (102.6 in)
D	COLLIMATOR POINTED SIDEWAYS (Foot HORIZONTAL)	875 mm (34.4 in)	2605 mm (102.6 in)

Illustration 2-23: 2M Focal Spot Travel - Tube and Column at 0 Degrees

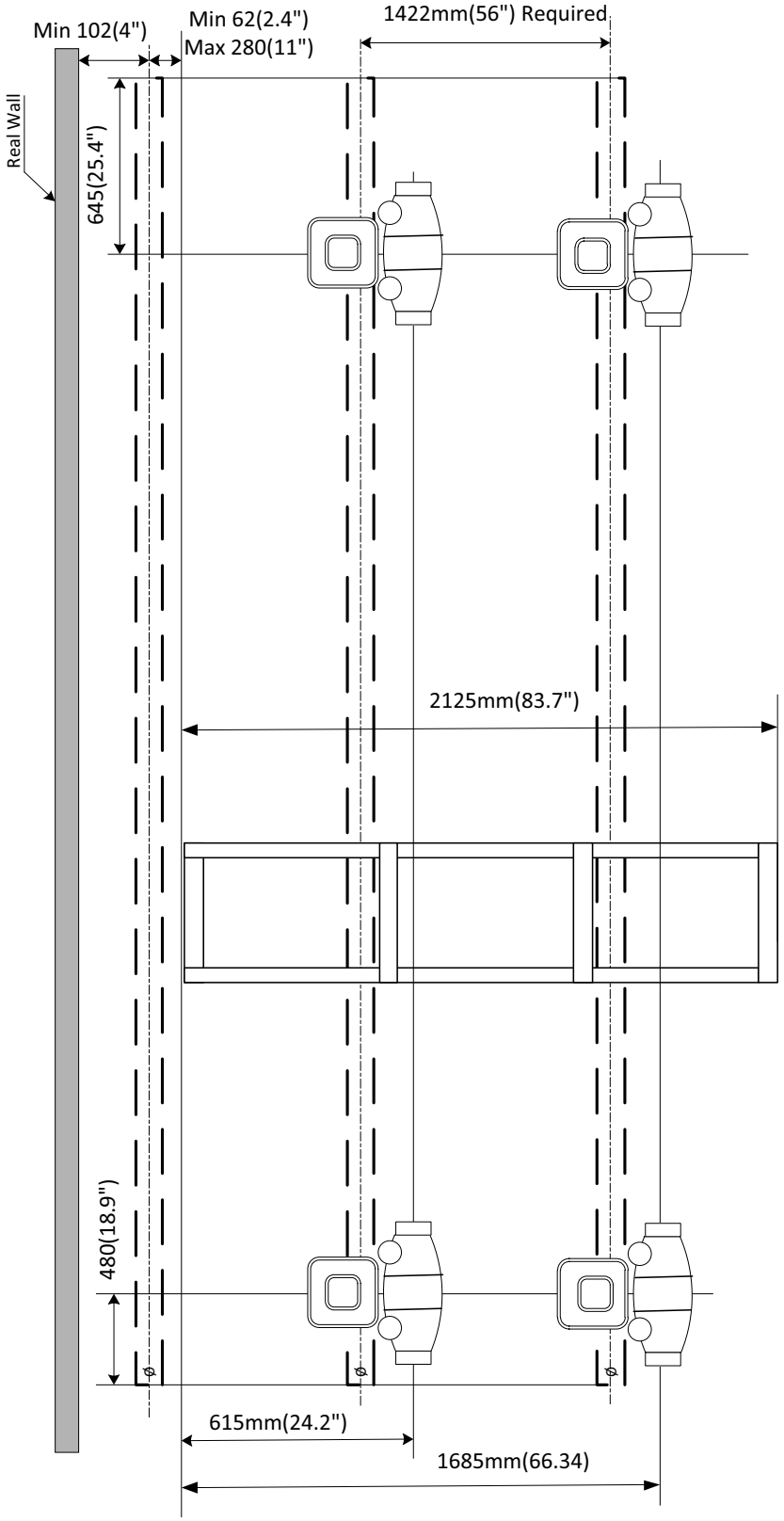


Illustration 2-24: 2M Focal Spot Travel - Tube at 0 and Column at 90 Degrees

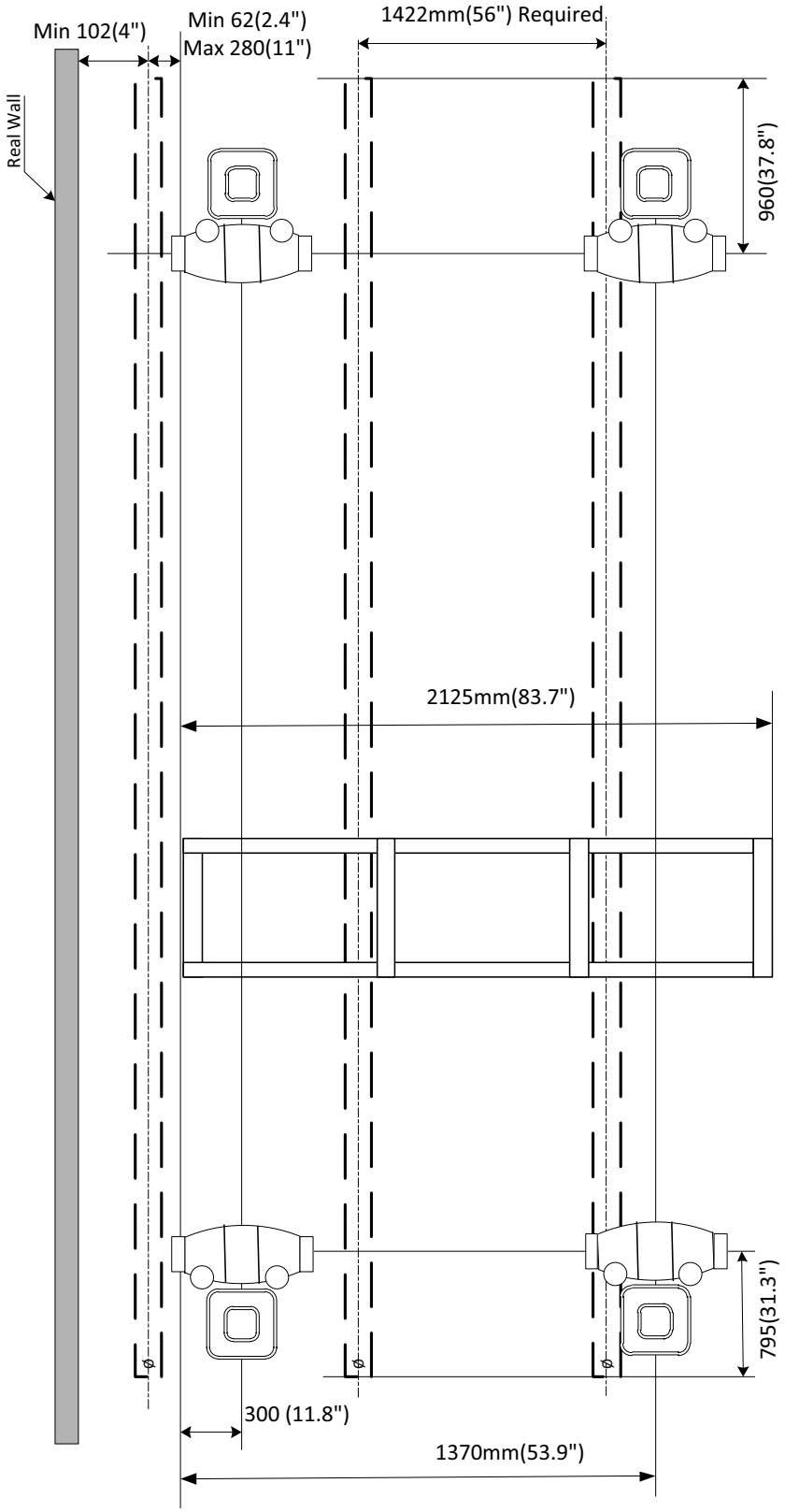


Illustration 2-25: 3M Focal Spot Travel - Tube and Column at 0 Degrees

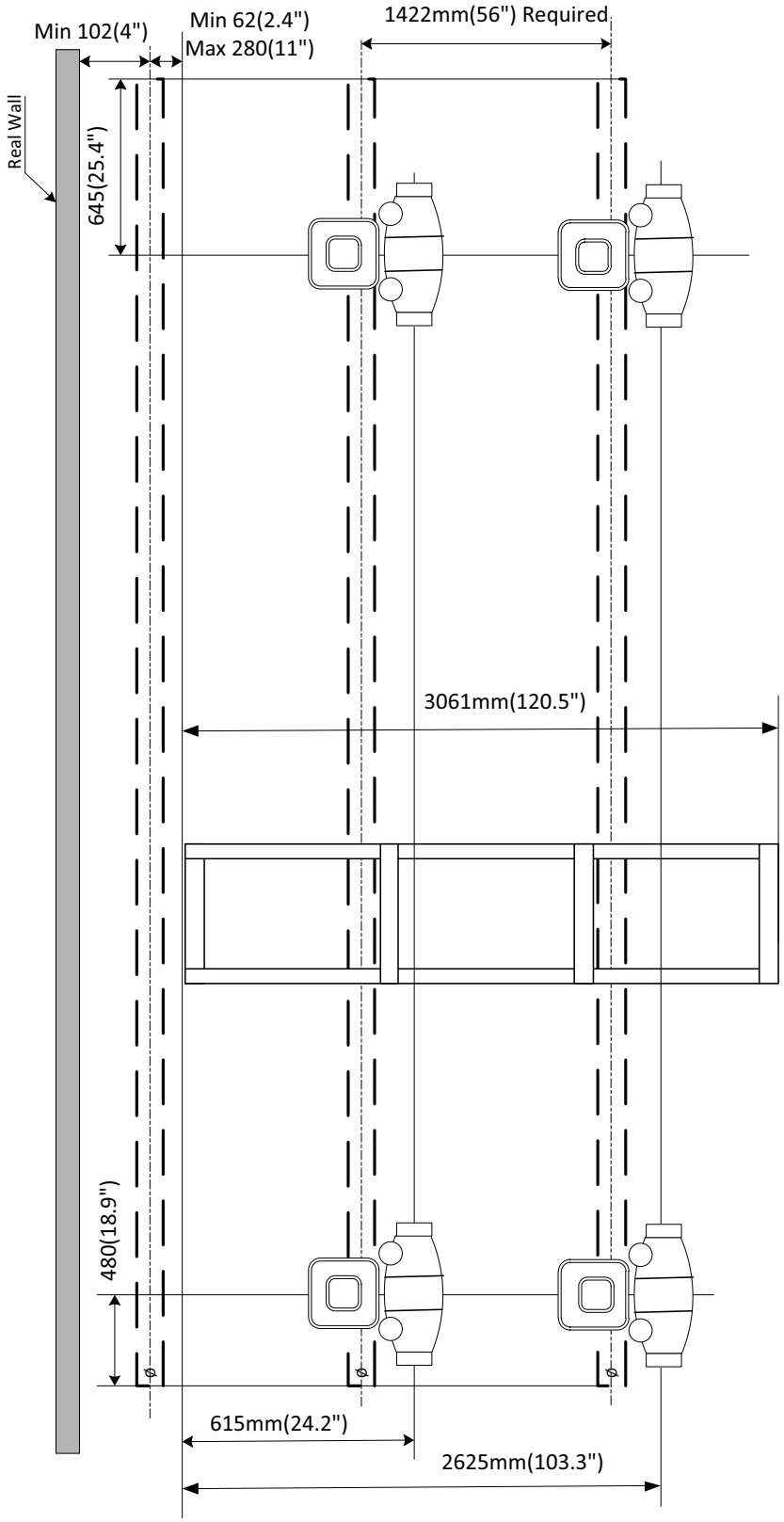


Illustration 2-26: 3M Focal Spot Travel - Tube at 0 and Column at 90 Degrees

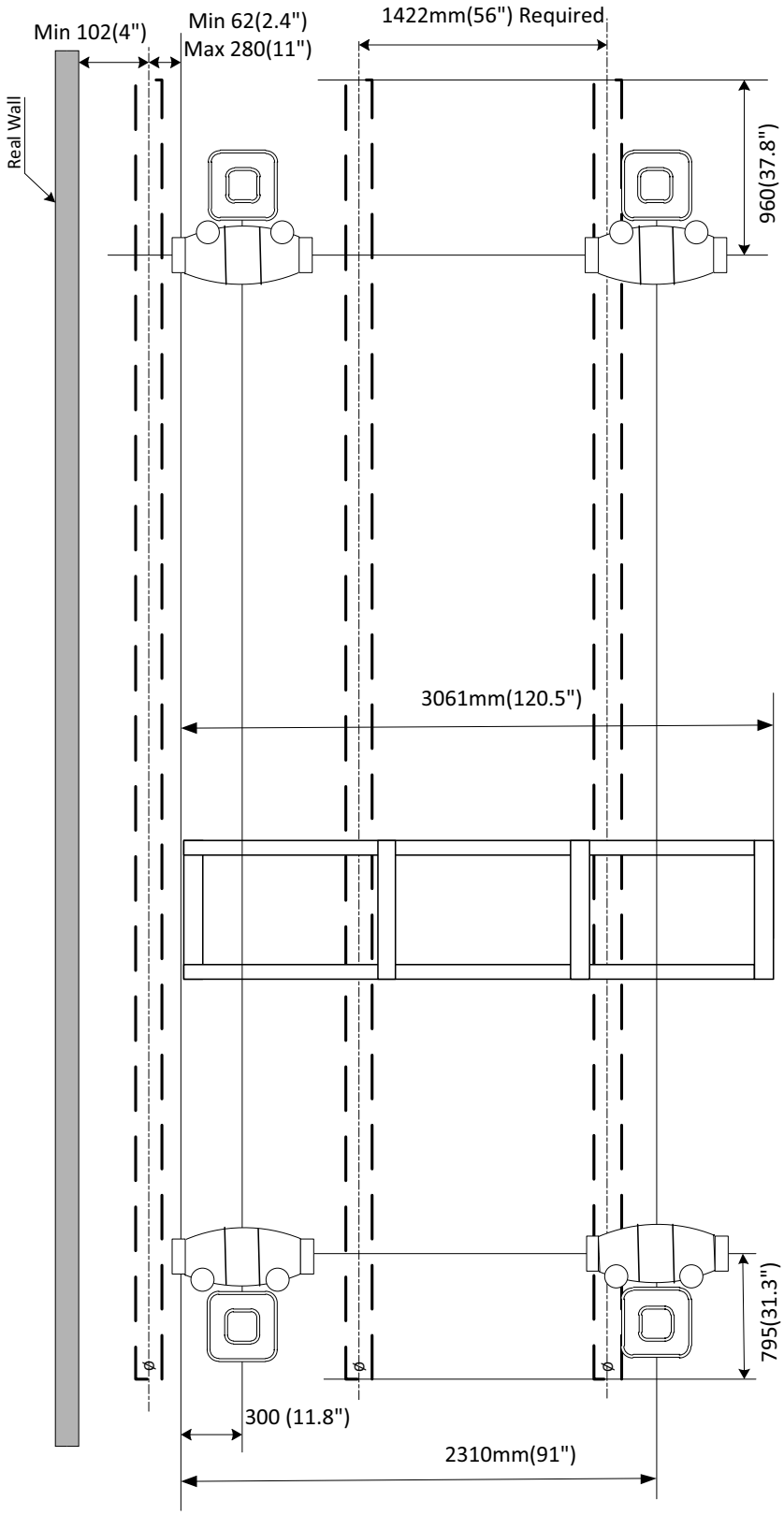


Illustration 2-27: 4M Focal Spot Travel - Tube and Column at 0 Degrees

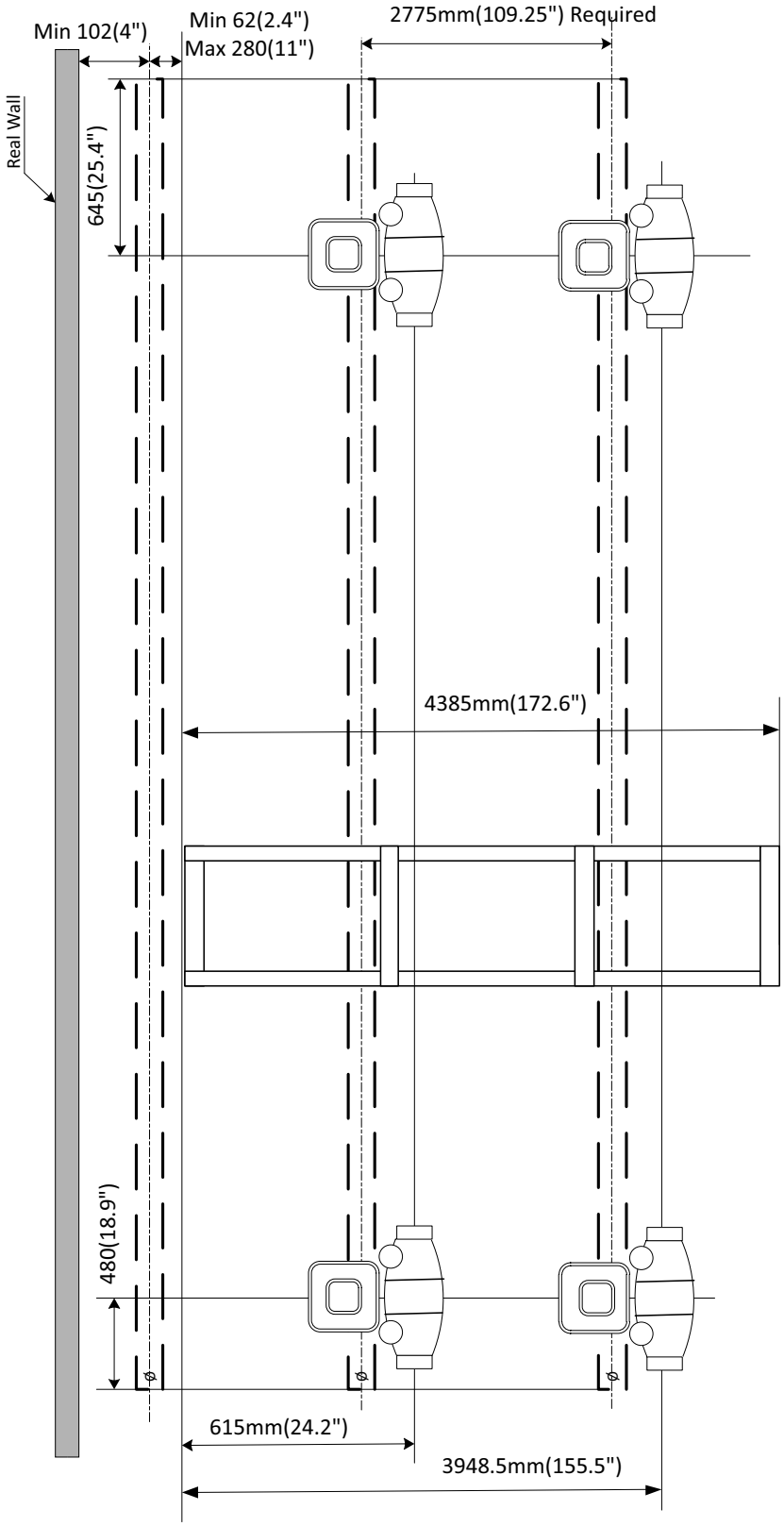
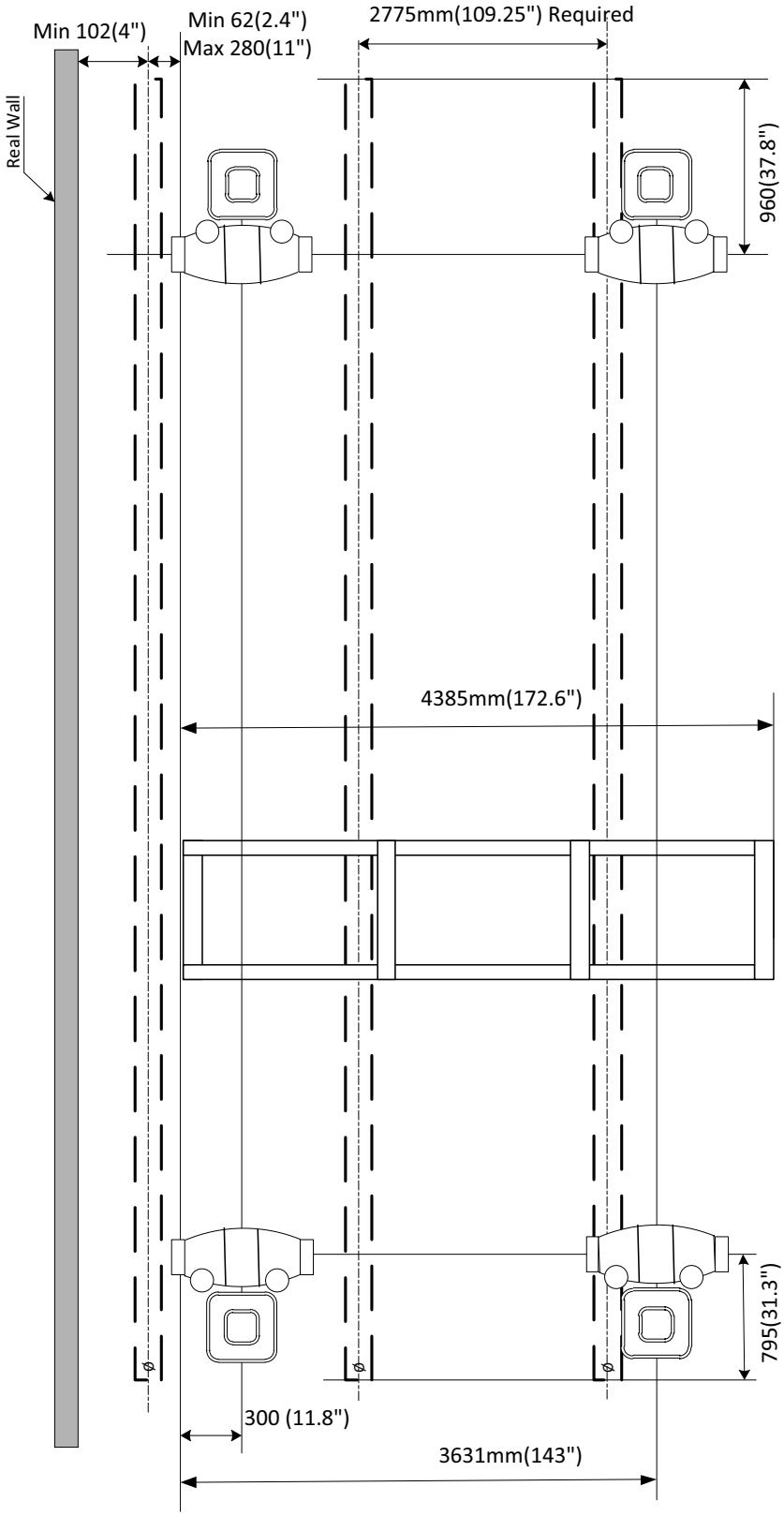
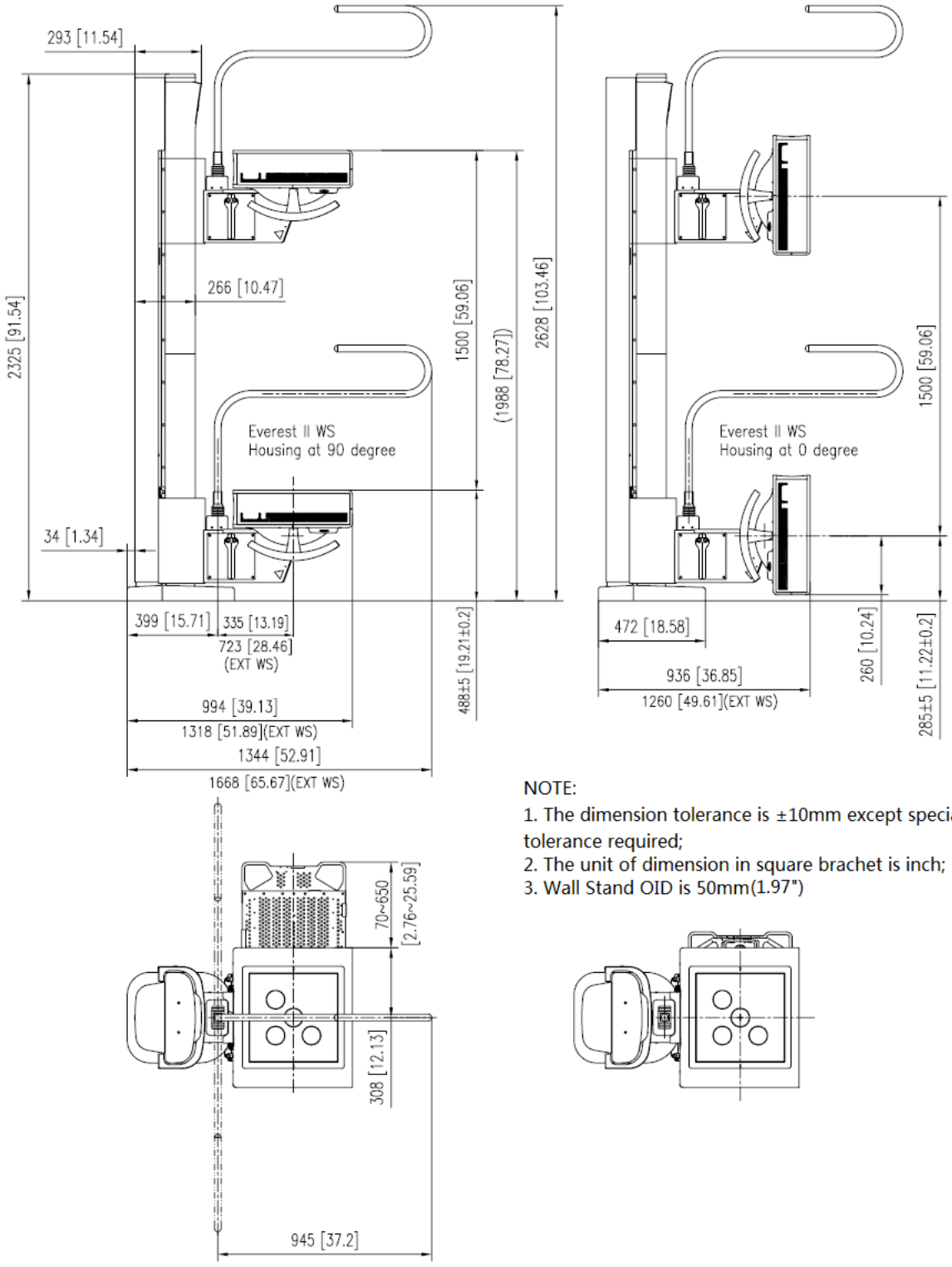


Illustration 2-28: 4M Focal Spot Travel - Tube at 0 and Column at 90 Degrees



2.5 Wall Stands

Illustration 2-29: Wall Stand Dimensions (0 and 90 degrees)



NOTE:
1. The dimension tolerance is ±10mm except special tolerance required;
2. The unit of dimension in square brachet is inch;
3. Wall Stand OID is 50mm(1.97")

Illustration 2-30-1: Wall Stand Base Plate Dimensions

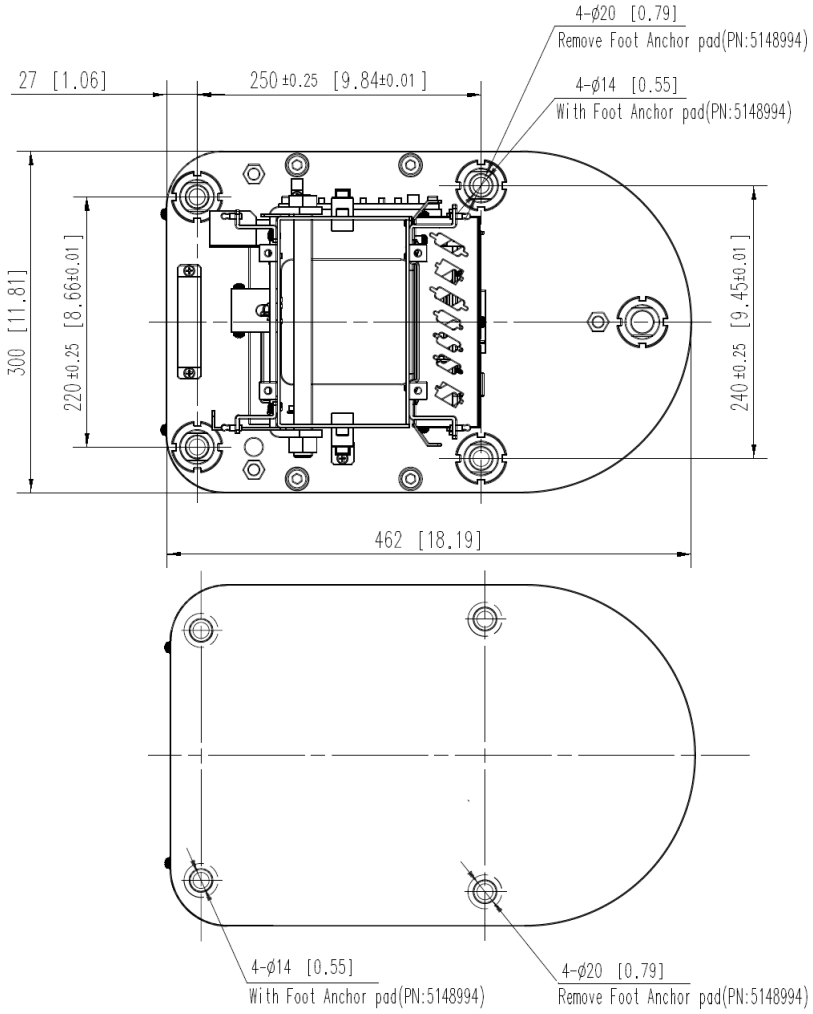
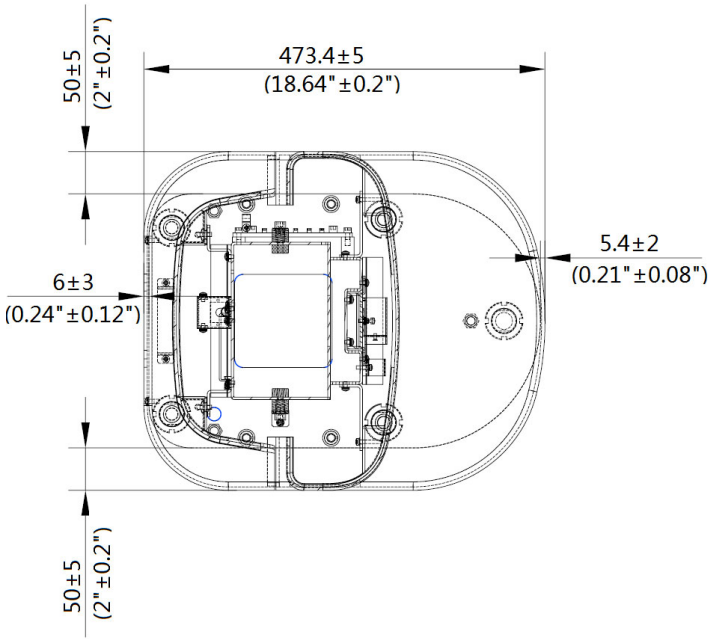


Illustration 2-30-2: Wall Stand Base Plate and its Cover Dimensions



2.6 Stretcher Tables

Illustration 2-31: E6401J Stretcher Dimensions (optional)

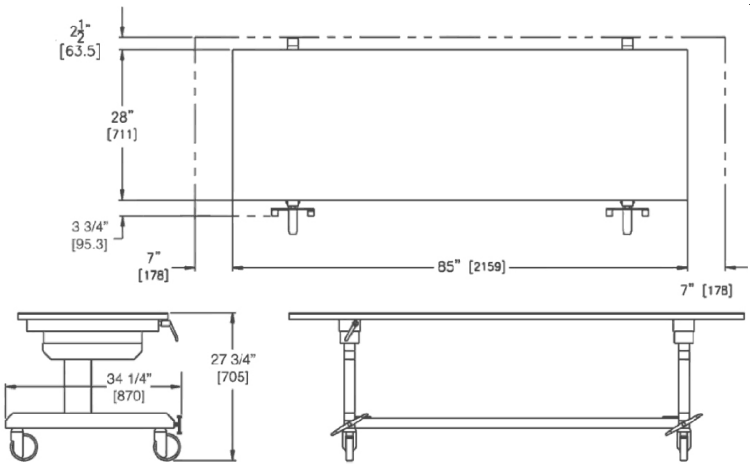


Illustration 2-32: S1700JM Carbon Fiber Stretcher Dimensions (optional)

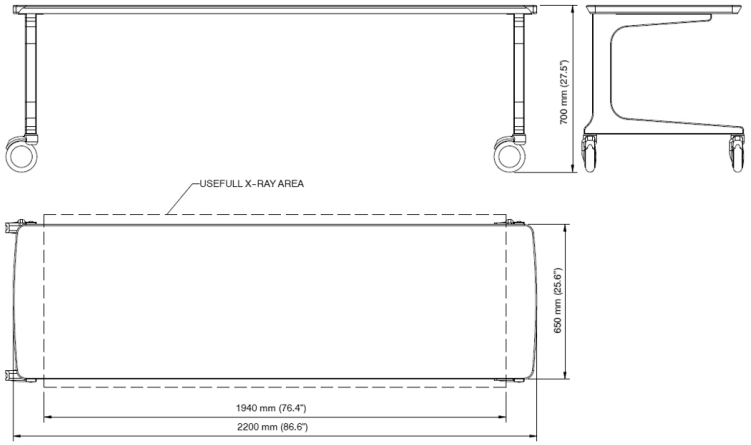
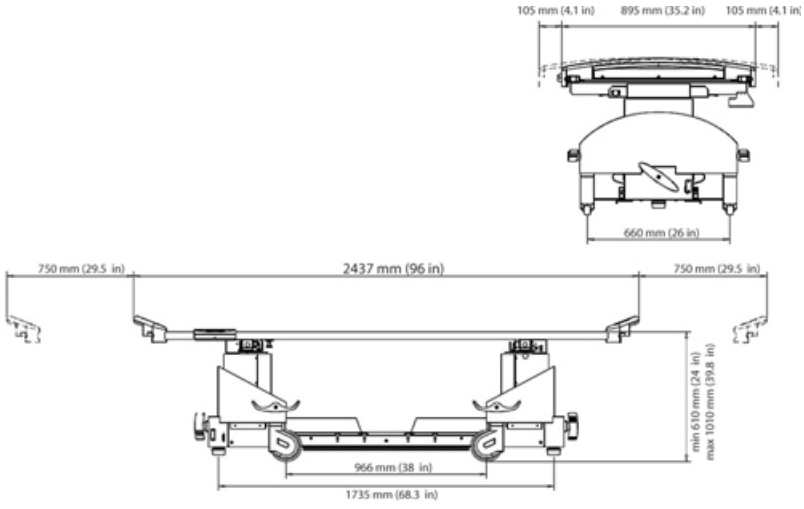
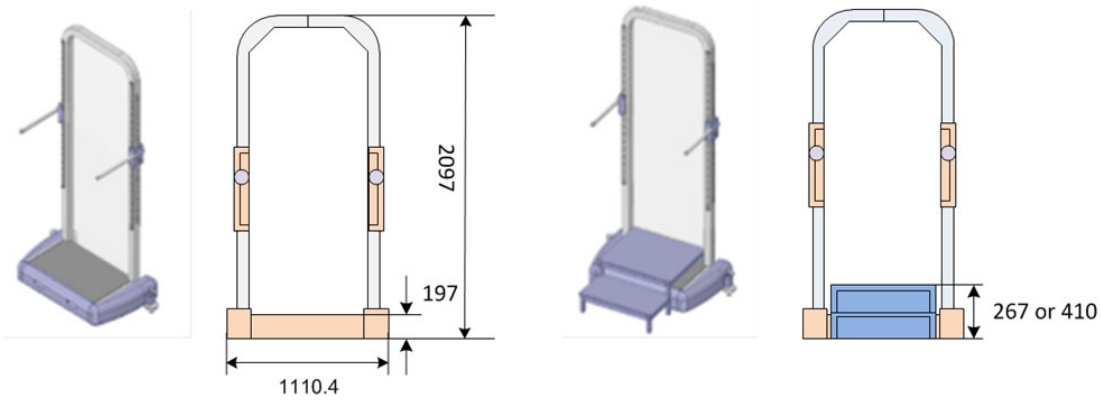


Illustration 2-33: E6401K and E10811VB Stretcher Dimensions (optional)



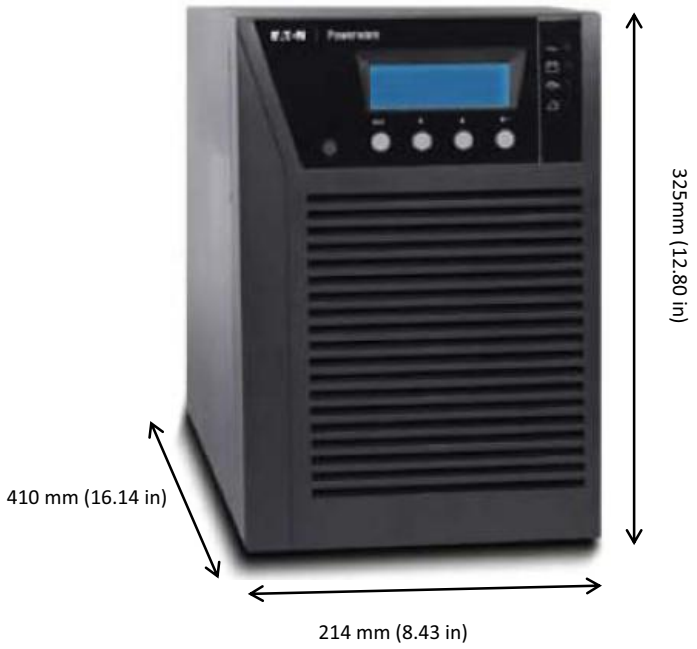
2.7 Image Pasting Barrier

Illustration 2-34: Image Pasting Barrier Dimensions (Optional)



2.8 UPS

Illustration 2-35: UPS Dimensions (Optional)



NOTICE

If the UPS grounding impedance exceeds 0.2ohm, UPS will alarm with site wiring fault and this could be disabled through UPS "User Settings", but not recommended

2.9 Weights, Floor/Ceiling Loading and Recommended Mounting Methods

Table 2-5 Product Physical Characteristics (weight)

PRODUCT OR COMPONENT	WEIGHT	LOAD BEARING AREA ft2 (m2)	RECOMMENDED MOUNTING INFORMATION
Operator Console: PC Tower HP z420 LCD Monitor	 19.6 Kg (43.2pounds) 8.2 kg (18.1 lbs)		Shelf or table mounted but not anchored.
Table Assembly	440 kg (970 lbs)	0.838 m2 (9.02 ft2)	Floor mounting Recommendation: (4) M8 X 135 mm anchors (2400546, supplied)
Table Assembly with a maximum patient weight of 320kg (705lbs)	760kg (1675lbs)	0.838 m2 (9.02 ft2)	NA
Stretchers (optional): Non-elevating Non-elevating (carbon fiber) Elevating	 102 kg (225 lbs) 32 kg (70.5 lb) 310 kg (683 lbs)		Not anchored Not anchored Not anchored
Wall Stand	270 kg (596 lbs)	0.129 m2	Bossard M10x150L anchors to floor (supplied)
Extended Wall Stand	280 kg (618 lbs)	0.129 m2	Bossard M10x150L anchors to floor (supplied)
Stationary Rail (5.79 m)	62.6 kg (138 lbs) pair		
2 Meter Bridge	64 kg (140 lbs)		
3 Meter Bridge	84 kg (185 lbs)		
4 Meter Bridge	138.3 kg (305 lbs)		
2 Meter Cable Assembly	42 kg (93 lbs)		
3 Meter Cable Assembly	49 kg (108 lbs)		
4 Meter Cable Assembly	49.9 kg (110 lbs)		
2 Meter Cable Drape Track Kit	3.3 kg (7.25 lbs)		
3 Meter Cable Drape Track Kit	3.6 kg (7.9 lbs)		
4 Meter Cable Drape Track Kit	4.2 kg (9.25 lbs)		
Cable Drape Support	29.5 kg (65 lbs)		
Overhead Tube Support (includes X-ray Tube)	215.5 kg (475 lbs)		
Upper OTS Covers	9.5 kg (21 lbs)		
Collimator	14 kg (31 lbs)		
Stiffener Plate	10.4 kg (23 lbs)		
UIF	3.2 kg (7 lbs)		
Longitudinal Drive	13.6 kg (30 lbs)		
2 Meter and 3 Meter Longitudinal Drive Belt Kit	19.7 kg (43.5 lbs)		
4 Meter Longitudinal Drive Belt Kit	33.3 kg (73.3 lbs)		

Table 2-5 Product Physical Characteristics (weight)

PRODUCT OR COMPONENT	WEIGHT	LOAD BEARING AREA ft2 (m2)	RECOMMENDED MOUNTING INFORMATION
Anti-backlash Kits	5.4 kg (12 lbs)		
System Cabinet	320 kg (705 lbs)	0.46 m2 (5 ft.2)	5/16 in. or 8 mm (6) anchors to floor 5/16 in. or 8 mm (6) anchors to wall (Mounting hardware not provided by GEHC)
Grid Holder Assembly	13.8 kg (30.42 lbs)		Mount on wall
Image Pasting Barrier with Footstool (option)	54.44 kg (120 lbs)		Floor mounted but not anchored. Located near Wall Stand base.
Detector BIN	15 Kg (33 lbs)	NA	Floor mounting (not anchored) or wall mount
Tether Interface Box	7 Kg (15.4 lbs)	NA	wall mount
Dongle Assembly	0.8 Kg (1.76 lbs)	NA	wall mount
Flash Pad Detector	4.5kg (9.92 lbs) with battery	NA	
Detector Battery	0.18kg (0.40 lbs)	NA	
UPS	34.5 Kg (76.06 lbs)	0.08774 m2 (0.944 ft2)	

2.10 Longitudinal Rails

According to site room size, you may select the most suitable rails as below:

- S2100JC_XR656 HD Rails_WSO Mfg. Refer to PCM: 61361656 PCM (for WSO make)

Table 2-6 WSO longitudinal rails

Item	Cat Number	Description
1	B0228JA	19 FOOT (228 INCH) (579CM) INBOARD RAIL PAIR CUT TO LENGTH WITH WARE STRIPS, LOCK STRIP, ASSEMBLED. ALSO INCLUDES: BUMPER BRACKETS, BUMPERS, AND SHIMS.
2	B0222JA	18 FOOT 6 INCH (222 INCH) (564CM) INBOARD RAIL PAIR CUT TO LENGTH WITH WARE STRIPS, LOCK STRIP, ASSEMBLED. ALSO INCLUDES: BUMPER BRACKETS, BUMPERS, AND SHIMS.
3	B0210JA	17 FOOT 6 INCH (210 INCH) (533CM) INBOARD RAIL PAIR CUT TO LENGTH WITH WARE STRIPS, LOCK STRIP, ASSEMBLED. ALSO INCLUDES: BUMPER BRACKETS, BUMPERS, AND SHIMS.
4	B0198JA	16 FOOT 6 INCH (198 INCH) (503CM) INBOARD RAIL PAIR CUT TO LENGTH WITH WARE STRIPS, LOCK STRIP, ASSEMBLED. ALSO INCLUDES: BUMPER BRACKETS, BUMPERS, AND SHIMS.

Table 2-6 WSO longitudinal rails

Item	Cat Number	Description
5	B0186JA	15 FOOT 6 INCH (186 INCH) (472CM) INBOARD RAIL PAIR CUT TO LENGTH WITH WARE STRIPS, LOCK STRIP, ASSEMBLED. ALSO INCLUDES: BUMPER BRACKETS, BUMPERS, AND SHIMS.
6	B0174JA	14 FOOT 6 INCH (174 INCH) (442CM) INBOARD RAIL PAIR CUT TO LENGTH WITH WARE STRIPS, LOCK STRIP, ASSEMBLED. ALSO INCLUDES: BUMPER BRACKETS, BUMPERS, AND SHIMS.
7	B0162JA	13 FOOT 6 INCH (162 INCH) (411.5CM) INBOARD RAIL PAIR CUT TO LENGTH WITH WARE STRIPS, LOCK STRIP, ASSEMBLED. ALSO INCLUDES: BUMPER BRACKETS, BUMPERS, AND SHIMS.

- S39252JE_XR656 HD Rails_Hualun Mfg.Refer to PCM: 61360656PCM (for Hualun make)

Hualun longitudinal rails

Item	Cat Number	Description
1	B0228JA	19 FOOT (228 INCH) (579CM) INBOARD RAIL PAIR CUT TO LENGTH WITH WARE STRIPS, LOCK STRIP, ASSEMBLED. ALSO INCLUDES: BUMPER BRACKETS, BUMPERS, AND SHIMS.
2	B0222JA	18 FOOT 6 INCH (222 INCH) (564CM) INBOARD RAIL PAIR CUT TO LENGTH WITH WARE STRIPS, LOCK STRIP, ASSEMBLED. ALSO INCLUDES: BUMPER BRACKETS, BUMPERS, AND SHIMS.
3	B0210JA	17 FOOT 6 INCH (210 INCH) (533CM) INBOARD RAIL PAIR CUT TO LENGTH WITH WARE STRIPS, LOCK STRIP, ASSEMBLED. ALSO INCLUDES: BUMPER BRACKETS, BUMPERS, AND SHIMS.
4	B0198JA	16 FOOT 6 INCH (198 INCH) (503CM) INBOARD RAIL PAIR CUT TO LENGTH WITH WARE STRIPS, LOCK STRIP, ASSEMBLED. ALSO INCLUDES: BUMPER BRACKETS, BUMPERS, AND SHIMS.
5	B0186JA	15 FOOT 6 INCH (186 INCH) (472CM) INBOARD RAIL PAIR CUT TO LENGTH WITH WARE STRIPS, LOCK STRIP, ASSEMBLED. ALSO INCLUDES: BUMPER BRACKETS, BUMPERS, AND SHIMS.
6	B0174JA	14 FOOT 6 INCH (174 INCH) (442CM) INBOARD RAIL PAIR CUT TO LENGTH WITH WARE STRIPS, LOCK STRIP, ASSEMBLED. ALSO INCLUDES: BUMPER BRACKETS, BUMPERS, AND SHIMS.
7	B0162JA	13 FOOT 6 INCH (162 INCH) (411.5CM) INBOARD RAIL PAIR CUT TO LENGTH WITH WARE STRIPS, LOCK STRIP, ASSEMBLED. ALSO INCLUDES: BUMPER BRACKETS, BUMPERS, AND SHIMS.

Section 3.0 Room Layout

3.1 Required Service Access Clearance

Allow appropriate space for service access of equipment. Illustrations are shown below indicating the required access space for servicing the equipment.

Illustration 2-36: System Cabinet

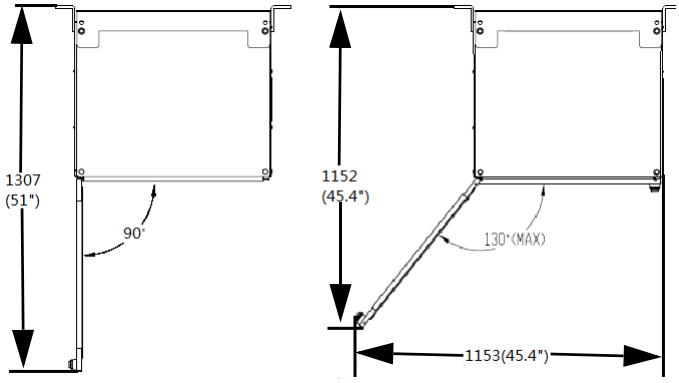
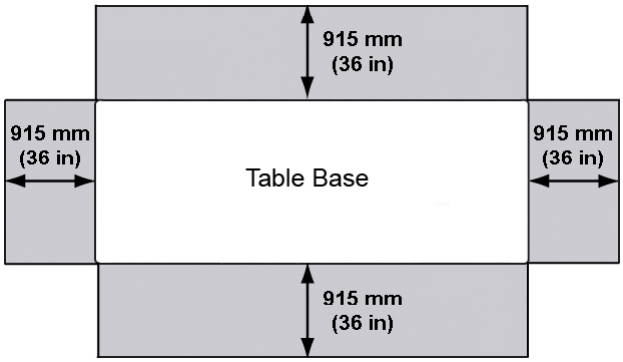
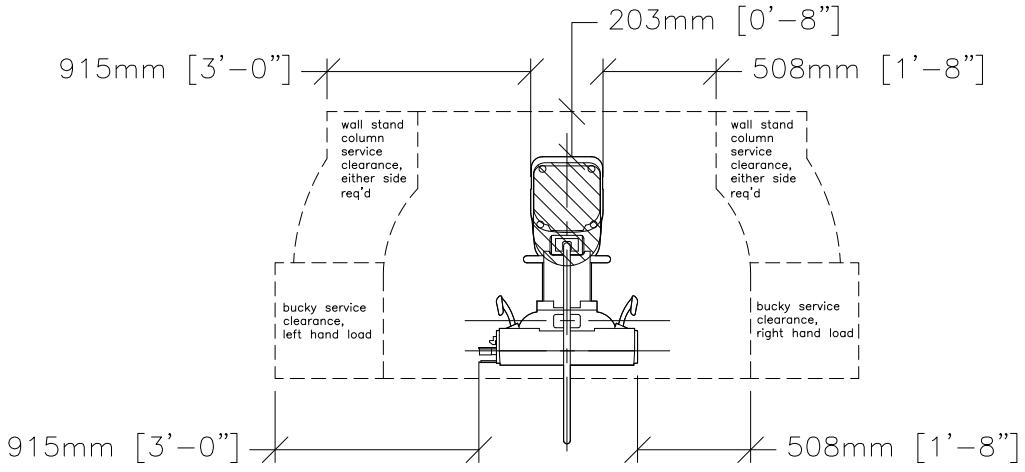


Illustration 2-37: Table



Recommended Required Service Access Clearance is 36 in.
Minimum Required Service Access Clearance is 24 in

Illustration 2-38: Wall Stand



3.2 Clinical Access

Make sure that you plan the room with the following clinical access requirements:

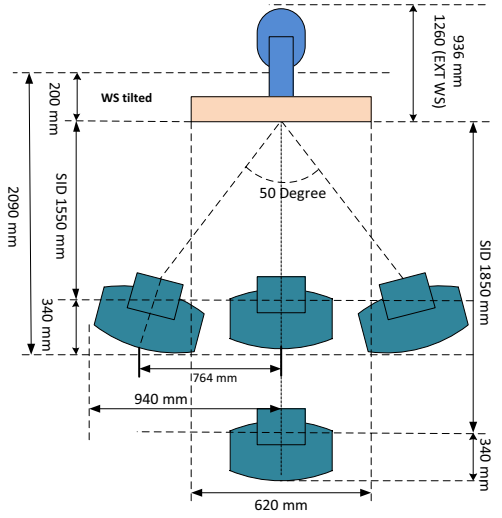
• Provide easy access to the patient table. Stretchers and other mobile hospital equipment must reach the table quickly.

• Table cannot be installed at 90 degrees to the ceiling stationary rails.

• The Wall Stand can be configured to allow grid insertion direction from either the left or the right. Workflow and room dimensions should be considered.

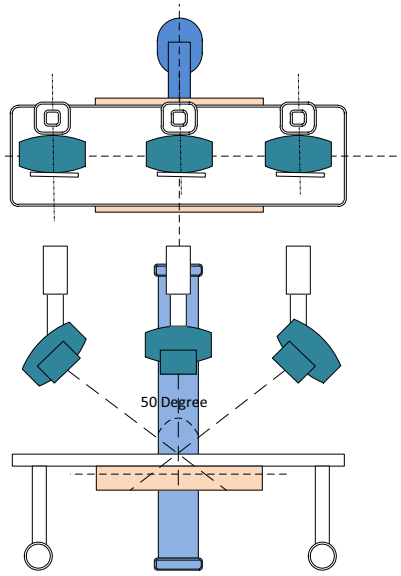
3.2.1 Wallstand cross table TOMO Clinical Access

Illustration 2-39: Wall Stand Cross Table TOMO



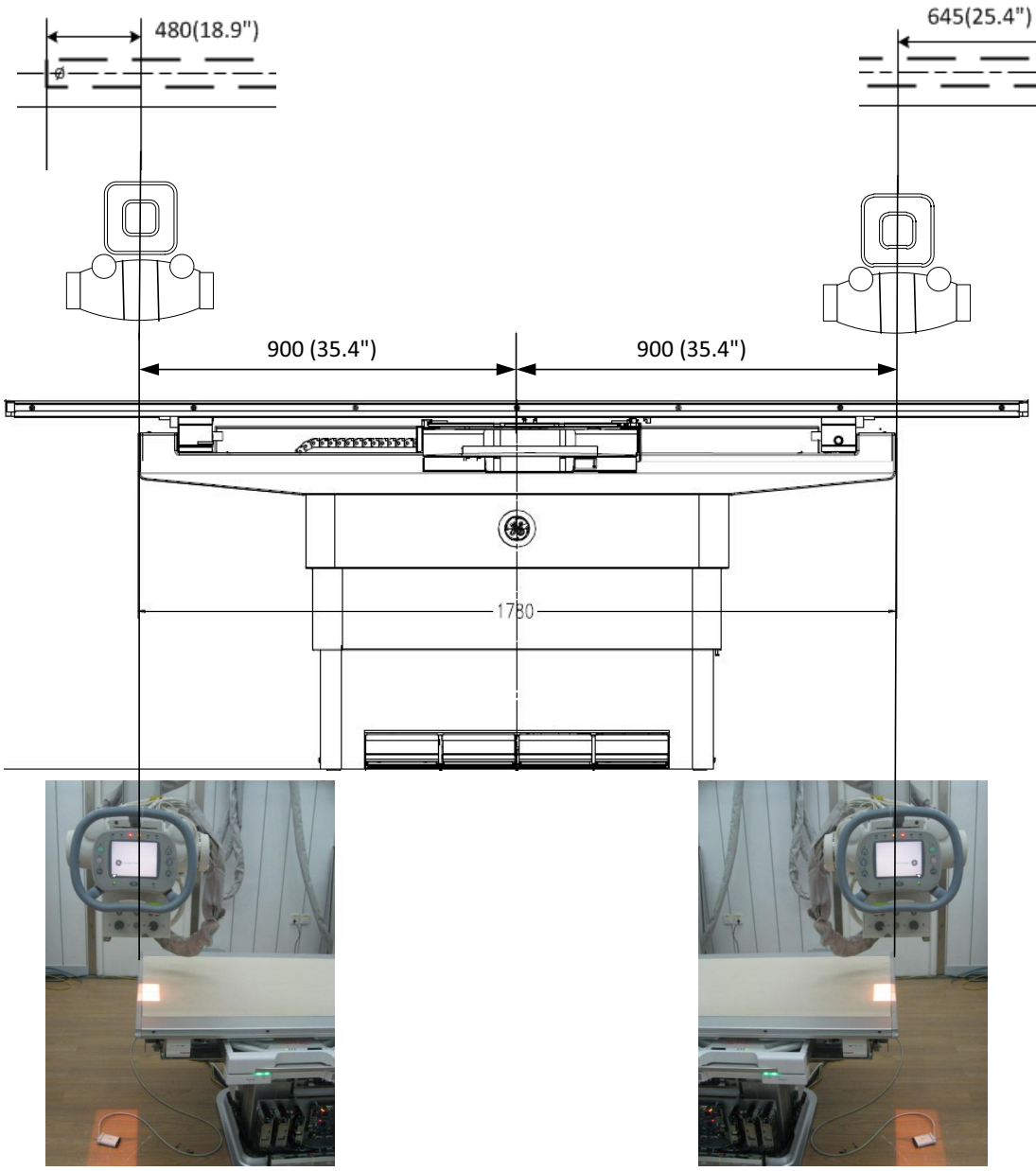
3.2.2 Extended Wallstand TOMO

Illustration 2-40:Extended Wall Stand TOMO



3.2.3 Table Head or Foot Installation Limitation Position

Illustration 2-41: Table Head or Foot Installation Limitation Position



The length between table center and left rail end is 1380mm (54.33 in) (Head limitation)
The length between table center and right rail end is 1545mm (60.83 in). (Foot limitation)
These installation limitation position can meet the Table TOMO room layout demand.

3.3 Peripheral Equipment

Consult hospital personnel regarding additional space requirements for the following types of hospital equipment:

- Storage Cabinets
- Sinks
- Oxygen Stations
- Monitoring Equipment
- Crash Cart

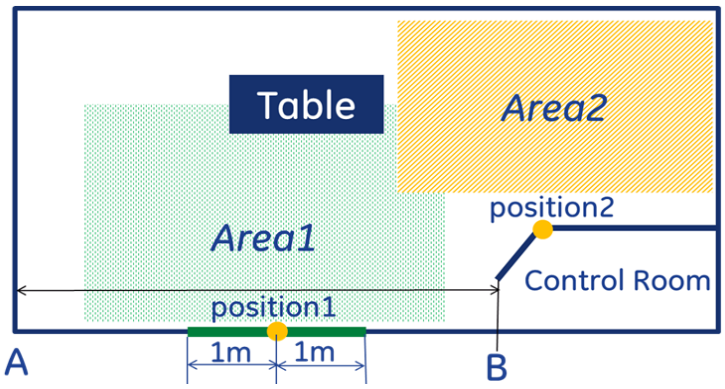
3.4 Dongle default location and adjusting range

NOTICE

Dongle ASM location which is critical for wireless signal quality, other components can be located anywhere cable length allows and customer prefer for application. So this section just describe room layout requirements for Dongle ASM installation.

3.4.1 Inside control room layout:

Illustration 2-42: Inside control room layout



1.) If the most common used digital cassette application is area-1, select position1 as the default dongle installation position; If it's area2 use position2 as dongle default installation position

2.) Position1 is in the center from point A to B, that means it's the center position from edge of control room wall to exam room wall. The height requirement of dongle is 30cm lower than the ceiling. There is the possible adjusting range for dongle location if selecting position1, and the adjusting range is 1 meter both in left and right direction.

3.) Position2 is in the corner of control room. Height requirement is same as position2, 30cm lower to the ceiling. No adjusting range for this location.

4.) Dongle angle shall be 45 degrees toward the wall.

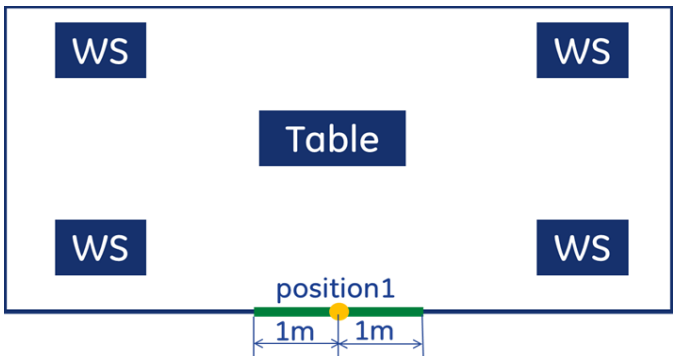
5.) Site preparation shall reserve the conduit for position1/2 and adjusting range to make sure the dongle cables could be routed inside the conduit.

6.) There shall be no metal obstacle within the 20 cm range of dongle installation position

7.) There shall be no obstacle between dongle and digital cassette area

3.4.2 Outside control room layout

Illustration 2-43: Out control room layout



1.) There is only one default dongle installation – position1, it's the center position of the examination room
2.) Dongle installation position's height shall be 30cm lower than the ceiling
3.) Dongle angle shall be 45 degrees toward the wall.
4.) Site preparation shall reserve the conduit for position1/2 and adjusting range to make sure the dongle cables could be routed inside the conduit.
5.) There shall be no metal obstacle within the 20 cm range of dongle installation position
6.) There shall be no obstacle between dongle and digital cassette area

3.5 Configurations and option

In Table 2-4 below, " √ " indicates which room configurations are supported for the System.

Table 2-7 Discovery XR656 System Configuration

System	Wall Stand Type	Detector Type	Bridge Length, Wall Stand Position											
			2M Bridge				3M Bridge				4M Bridge			
			Front	Back	Head	Foot	Front	Back	Head	Foot	Front	Back	Head	Foot
WS Only	Standard	URP+			√	√	√	√	√	√	√	√	√	√
WS Only	Extended	URP+			√	√			√	√			√	√
Table Only		URP+	√				√				√			
OTS Only		URP+	√				√				√			
WS & Table	Standard	URP+			√	√	√	√	√	√	√	√	√	√
WS & Table	Extended	URP+			√	√			√	√			√	√

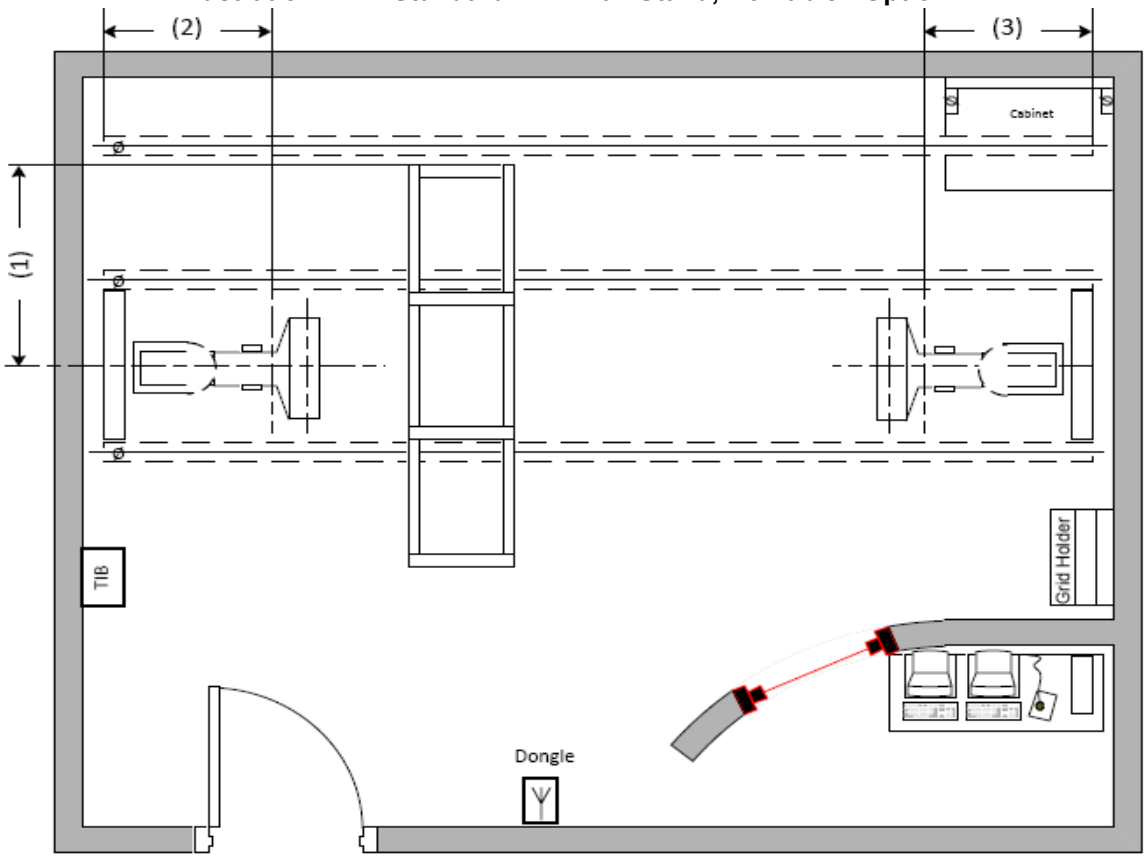
NOTE: * Cross-Table Tomo (to WS) and EWS Tomo Applications NOT available with a 2M Bridge.

Drawings for these room configurations are shown in the following pages. They include dimensional requirements between components and show which Tomo and Image Pasting applications (purchasable options) can be used in a room that meets those dimensional requirements.

Following are recommended room/system layouts, 90 degree tilted bucky shot requirements are shown, but are not needed to calibrate the system.

NOTE: Below room layouts contain Item (5) is required considering the possible conflict between the table and the GE provide stretcher table. Item (5) can be adjusted if no GE provide stretch table.

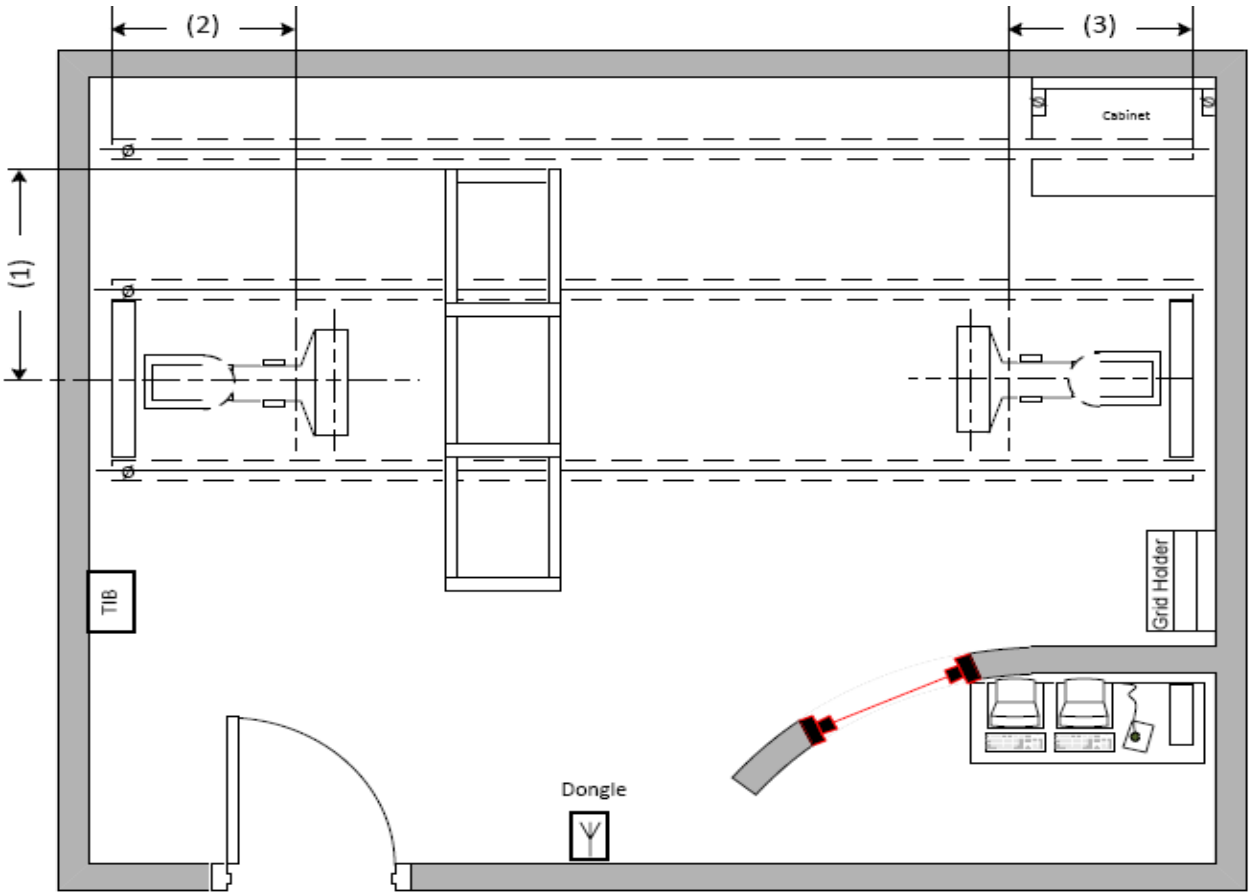
Illustration 2-44: Standard Arm Wall Stand, No Table - Option 1



ITEM	Bridge Length	Dimension			Description
			MM	In	
(1)	2M		N/A		Back of bridge to center line of Wallstand
	3M	Min	1379	54.3	
		Max	1861	73.3	
	4M	Min	1379	54.3	
		Max	3184	125.4	
(2)	ALL	Min	580	22.8	Head End of rail to center line of tilted Detector
(3)	ALL	Min	745	29.3	Foot End of rail to center line of tilted Detector

The Following TOMO & Image Pasting Applications are Possible With The Layout As Shown In These Drawings	YES	NO
Wall Stand TOMO and/or Wall Stand Image Paste	✓	
Table TOMO and/or Table Image Paste		✓
Wall Stand Cross Table TOMO	✓	
Extended Wall Stand TOMO		✓

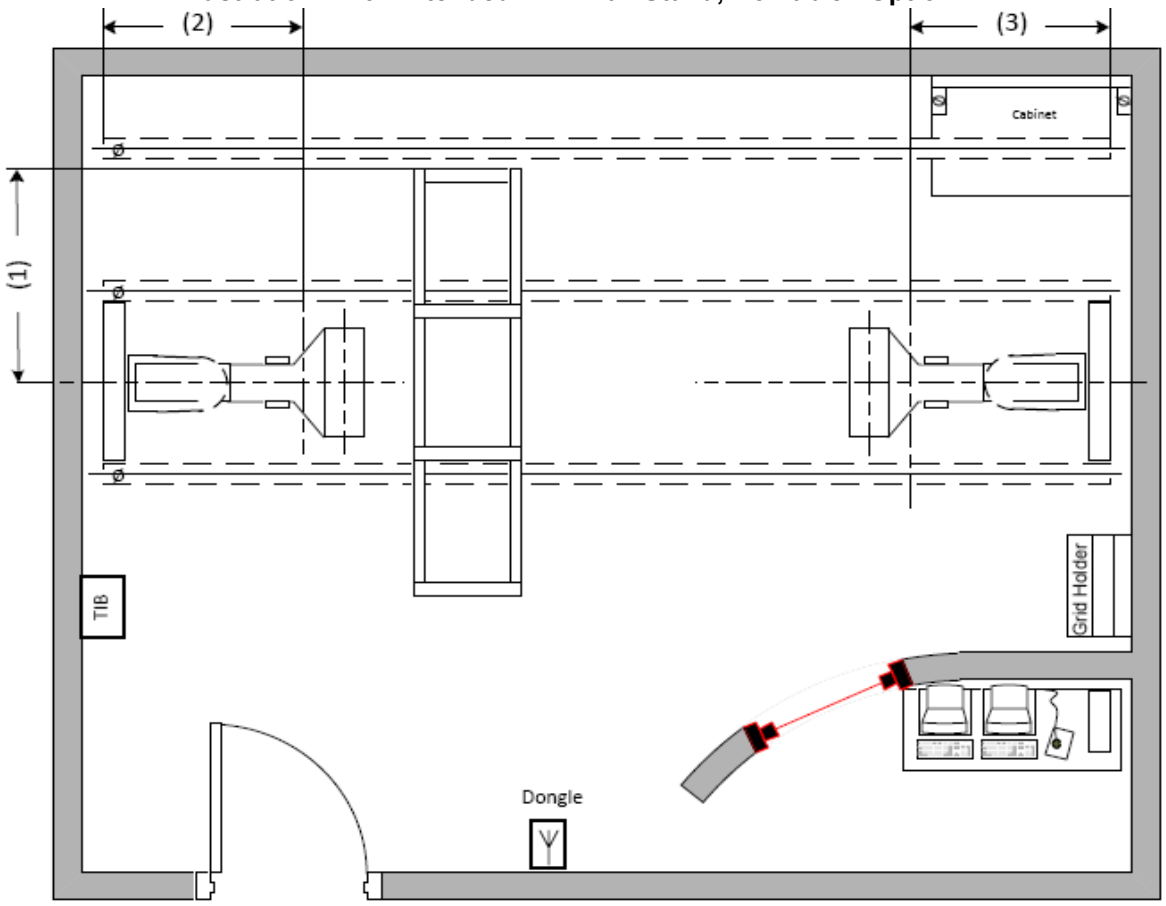
Illustration 2-45: Standard Arm Wall Stand, No Table - Option 2



ITEM	Bridge Length	Dimension			Description
			MM	In	
(1)	2M	Min	715	28.1	
		Max	1585	62.4	Back of bridge to center line of Wallstand
	3M	Min	715	28.1	
		Max	2525	99.4	
	4M	Min	715	28.1	
		Max	3848	151.5	
(2)	ALL	Min	580	22.8	Head End of rail to center line of tilted Detector
(3)	ALL	Min	745	29.3	Foot End of rail to center line of tilted Detector

The Following TOMO & Image Pasting Applications are Possible With The Layout As Shown In These Drawings	YES	NO
Wall Stand TOMO and/or Wall Stand Image Paste	✓	
Table TOMO and/or Table Image Paste		✓
Wall Stand Cross Table TOMO		✓
Extended Wall Stand TOMO		✓

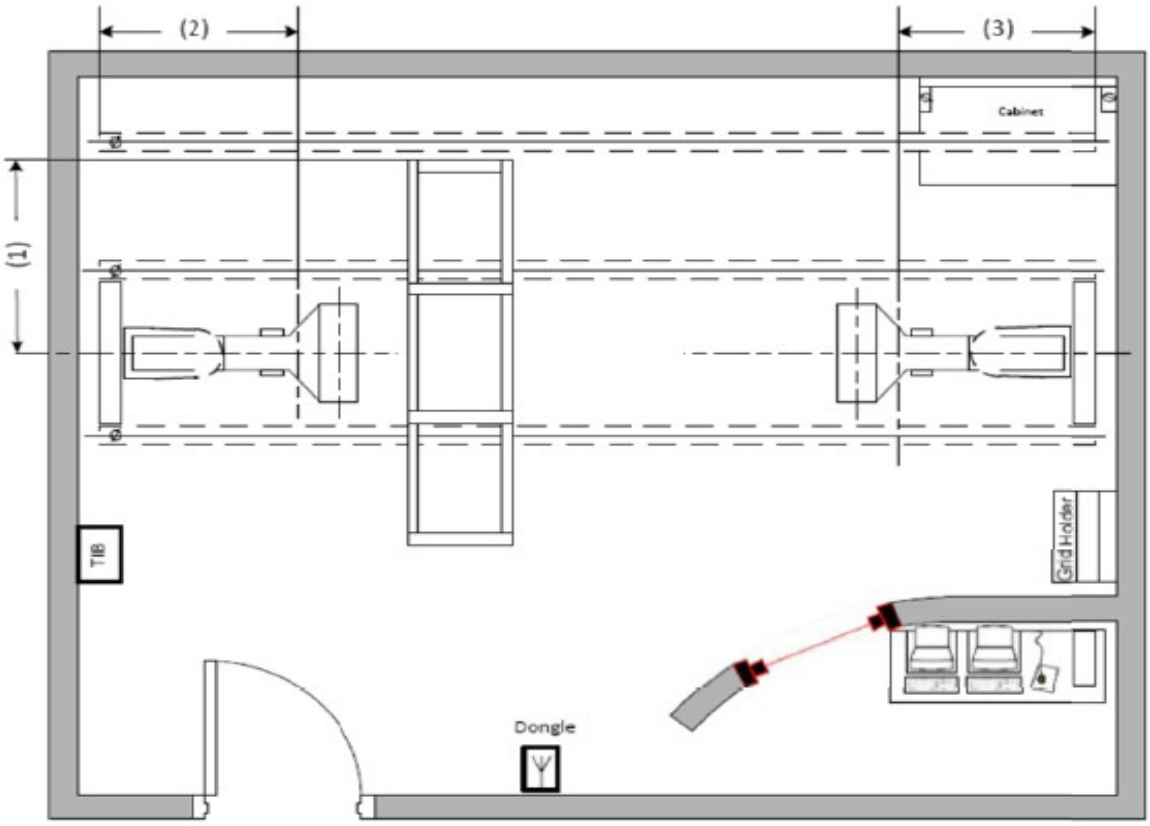
Illustration 2-46: Extended Arm Wall Stand, No Table - Option 1



ITEM	Bridge Length	Dimension			Description
			MM	In	
(1)	2M		N/A		Back of bridge to center line of Wallstand
	3M	Min	1379	54.3	
		Max	1861	73.3	
	4M	Min	1379	54.3	
		Max	3184	125.4	
(2)	ALL	Min	895	35.2	Head End of rail to center line of tilted Detector
(3)	ALL	Min	1060	41. 7	Foot End of rail to center line of tilted Detector

The Following TOMO & Image Pasting Applications are Possible With The Layout As Shown In These Drawings	YES	NO
Wall Stand TOMO and/or Wall Stand Image Paste	✓	
Table TOMO and/or Table Image Paste		✓
Wall Stand Cross Table TOMO	✓	
Extended Wall Stand TOMO	✓	

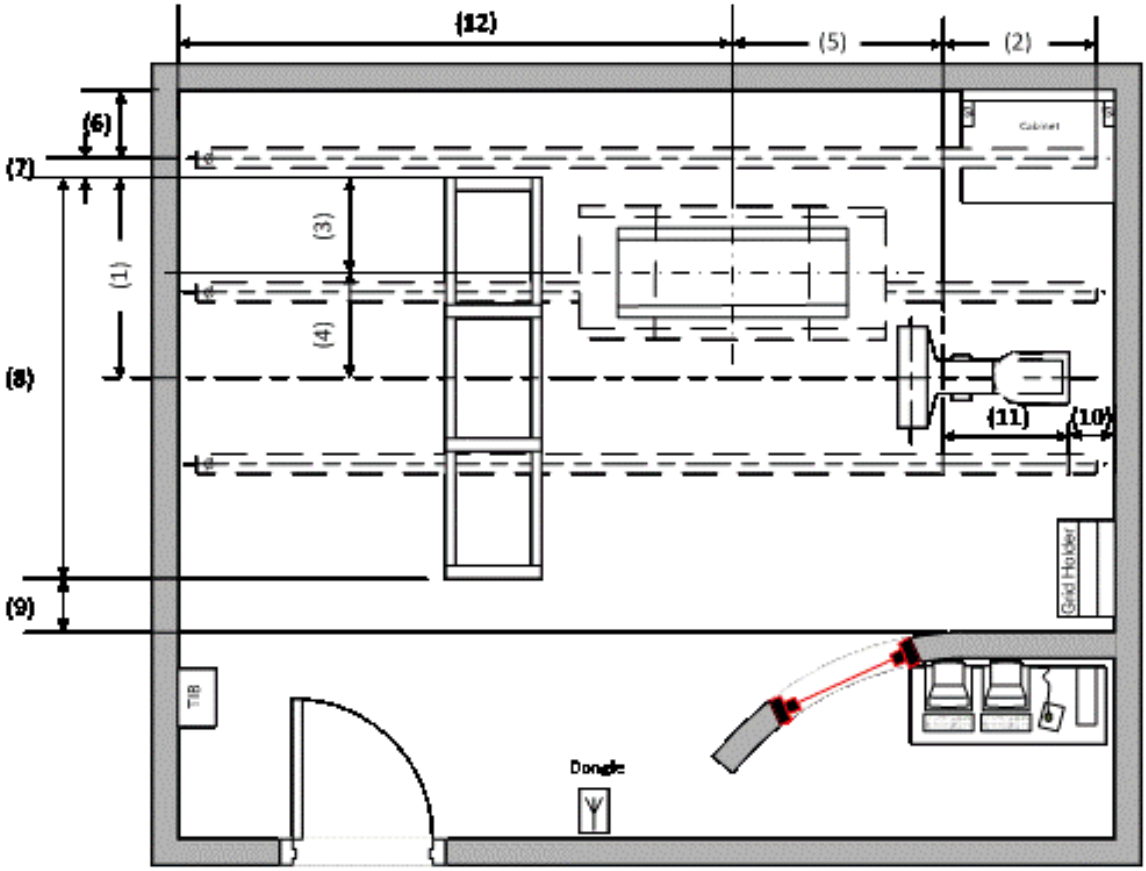
Illustration 2-47: Extended Arm Wall Stand, No Table - Option 2



ITEM	Bridge Length	Dimension			Description
			MM	In	
(1)	2M	Min	**715**	28.1	
		Max	**1585**	62.4	Back of bridge to center line of Wallstand
	3M	Min	**715**	28.1	
		Max	**2525**	99.4	
	4M	Min	**715**	28.1	
		Max	**3848**	151.5	
(2)	ALL	Min	**895**	35.2	Head End of rail to center line of tilted Detector
(3)	ALL	Min	**1060**	41.7	Foot End of rail to center line of tilted Detector

The Following TOMO & Image Pasting Applications are Possible With The Layout As Shown In These Drawings	YES	NO
Wall Stand TOMO and/or Wall Stand Image Paste	✓	
Table TOMO and/or Table Image Paste		✓
Wall Stand Cross Table TOMO		✓
Extended Wall Stand TOMO		✓

Illustration 2-48: G2 XR656 Room layout: G2 Table & WS at Foot



Item	Bridge	Limit Dimension			Description
			mm	inch	
(1)	2M	Min	1565	61.6	Back of bridge to center line of WS. 2m bridge could support WS TOMO &or IP and Table TOMO &/or IP, but can't support WS cross Table TOMO and Ext. WS TOMO.
		Max	1585	62.4	
	3M	Min	1565	61.6	Back of bridge to center line of WS. Min value1565 mm (850mm (400 half value of table width + 450 value of half distance OTS with tube center) + 715mm (615+100)), max value 1861mm (max travel range 2625mm – 764mm Cross table TOMO movement) if stretcher TOMO is needed, max value 2525mm (max travel range 2625mm – 100 Cal space) if no stretcher table TOMO feature.
		Max	1861	73.3	
	4M	Min	1565	61.6	Back of bridge to center line of WS. Min value 1565 mm (850mm (400 half value of table width + 450 value of half distance OTS with tube center) + 715mm (615+100)),max value 3184 mm (max travel range 3948.5mm – 764mm Cross table TOMO movement) if stretcher TOMO is needed, max value 3848mm (max travel range 3948mm – 100 Cal space) if no stretcher table TOMO feature.
		Max	3184	125.4	
(2)	Std WS	Min	745	29.3	Foot End of rail to center line of tilted detector.745mm (645mm + 100mm Cal space)
	Ext. WS	Min	1060	41.7	Foot End of rail to center line of tilted detector.1060mm (960mm + 100mm Cal space)
(3)	All	Min	715	28.1	Back of bridge to center line of Table.715mm (615mm + 100mm Cal space)
(4)	All	Min	850	33.5	Center line of table to center line of WS. 850mm (400 half value of table width + 450 value of half distance OTS with tube center)

(5)*	All	Min	X	XX	Center line of tilted Detector to center line of table in longitudinal, it decides room length and system advanced application. If WS cross Table TOMO or Ext. WS TOMO is required, then stretcher table is needed between WS and table, X=200mm WS tilted detector to surface +Wmm Stretcher table width + 900mm half length to table center+100mm margin, Stretcher table width W could be adjusted per real table width. If no stretcher table is needed between WS and table, For Std WS, it need min 1440mm to allow cabinet installed at foot side or min 800mm but bigger (12) to allow cabinet installed at head side; For Ext WS, it need min 1150mm to allow cabinet installed at foot side or min 485mm but bigger (12) to allow cabinet installed at head side.
(6)	All	Min	102	4.0	Drape rail to wall
(7)	All	Min	62	2.4	Back of bridge to drape rail
(8)	2M	NA	NA	NA	Length of bridge. For 3m&4m bridge, it could determine room width; For 2m bridge, room width is determined by WS and table lateral service clearance, it's min 3290mm, could reuse the same room width data 3325mm as 3m/4m bridge.
	3M	Fix	3061	120.5	
	4M	Fix	4385	172.5	
(9)	All	Min	100	3.9	Service clearance (front of bridge to wall)
(10)	All	Min	203	8.0	Back cover of WS to wall
(11)	Std WS	Fix	734	28.9	Back cover of WS to tilted detector.
	Ext. WS	Fix	1156	45.5	
(12)	Std WS	Min	1600	63.0	Half of tabletop travel range 1540mm add its service clearance 60mm
	Ext. WS	Min	1700	66.9	Need let WS SID over 1900mm. Could use 1600mm only when stretcher table is used for WS cross Table TOMO or Ext. WS TOMO.

Analysis:

1. Cabinet installed in foot side could meet smaller room size than in head side.
2. Item (5) length X decides room length and system advanced application. If WS cross Table TOMO or Ext WS TOMO is required, then stretcher table is needed between WS and table, X=200mm WS tilted detector to surface +Wmm Stretcher table width + 900mm half length to table center+100mm margin, Stretcher table width W could be adjusted per real table width.

Advanced application needs

Configuration	WS TOMO &or IP	Table TOMO &/or IP	WS cross Table TOMO	Ext. WS TOMO
Std WS	(5) min 1440mm	(5) min 1440mm	(5)min 1200+Wmm	No
Ext. WS	(5) min 1150mm	(5) min 1150mm	(5)min 1200+Wmm	(5)min 1200+Wmm
2m bridge	Yes	Yes	No	No
3m bridge	Yes	Yes	Yes	Yes
4m bridge	Yes	Yes	Yes	Yes

Note: 1). (5) min 1440mm: min data which could make cabinet to not touch table max travel range for Std WS with cabinet in foot side.

2). (5) min 1150mm: min data which could make cabinet to not touch table max travel range for Ext WS with cabinet in foot side.

3). W: Stretcher table width. L: Stretcher table Length. If WS cross Table TOMO or Ext. WS TOMO is required, stretcher table is required.

Summary Result:

w/o Control Room	Items	WS	WS TOMO &or IP	Table TOMO &/or IP	WS cross Table TOMO	Ext. WS TOMO
Min Length	(5)+(10)+(11)+(12)	Std WS	3977	3977	3737+W	NA
		Ext. WS	4209	4209	4159+W	4159+W
Min Width	(6)+(7)+(8)+(9)	All	3325	3325	1450+L or 3325	1450+L or 3325

Stretcher Table Model	H	L	W
E6401J	705	2159	711
S1700JM	700	2200	650
E6401K and E10811VB	610~1010	2437	1000

Note: 1). Room Width 1450+L(Wall to table front edge 1350+100 margin+ stretcher table length L) is required if stretcher table could go through front side door. But only width 3325mm is required if stretcher table could go trough head/foot side door.

2). Above data are MIN size with precise positioning, recommended room size is 5500*5000.

3). Ext WS room min length 4209mm is rarely used, normally need 4159 +W because customer buy Ext WS to apply stretcher table for cross table TOMO and Ext WS TOMO.

Illustration 2-49: Min size G2 XR656 room template with G2 Table & WS at Foot (3m bridge)

Assumption:

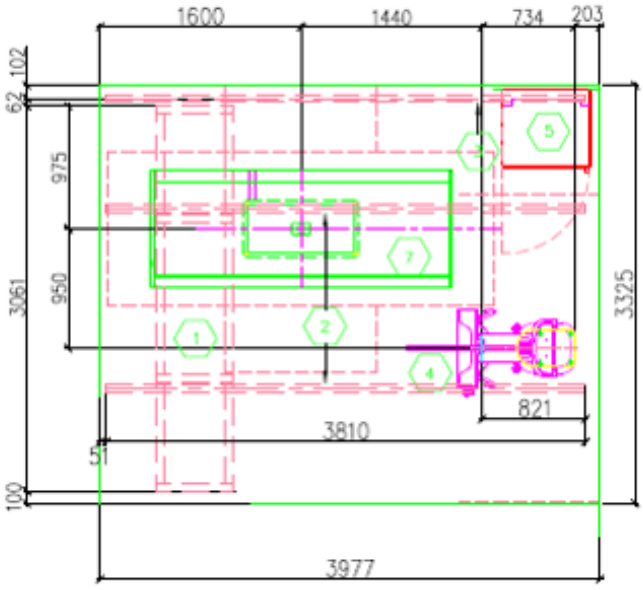
1.) Below 3 drawings are min size rooms according to previous room layout analysis, only for reference and understanding help. Need design room layout per real site room size and system configuration.

2.) No considering room door position and control room, only considering main system layout.

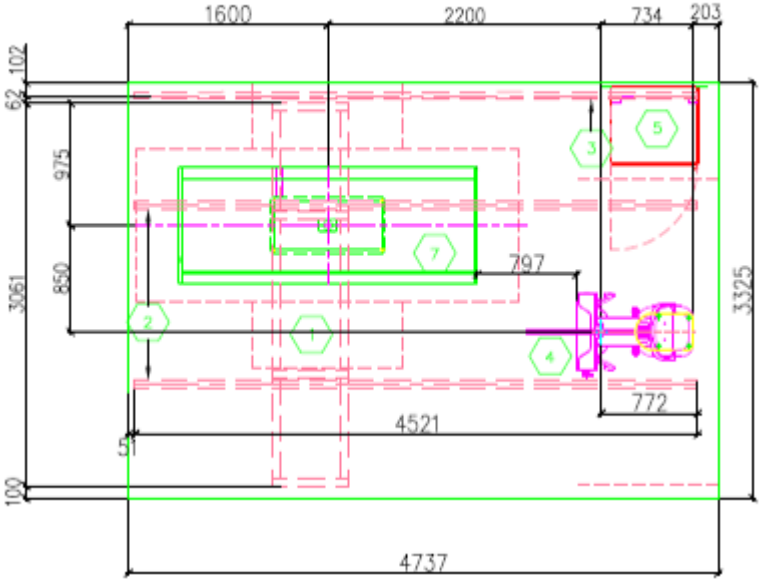
3.) Make table and WS a little nearer to front side, so below 2 distances are bigger than min size: back of bridge to table CL, table CL to WS CL.

4.) Choose the rail type most fit for the min room, make the rail nearer to head side to guarantee OTS travel range to cover head side of table, so the distance between end of rail and tilted detector is not min size in the template.

STD WS without stretcher table



STD WS with stretcher table



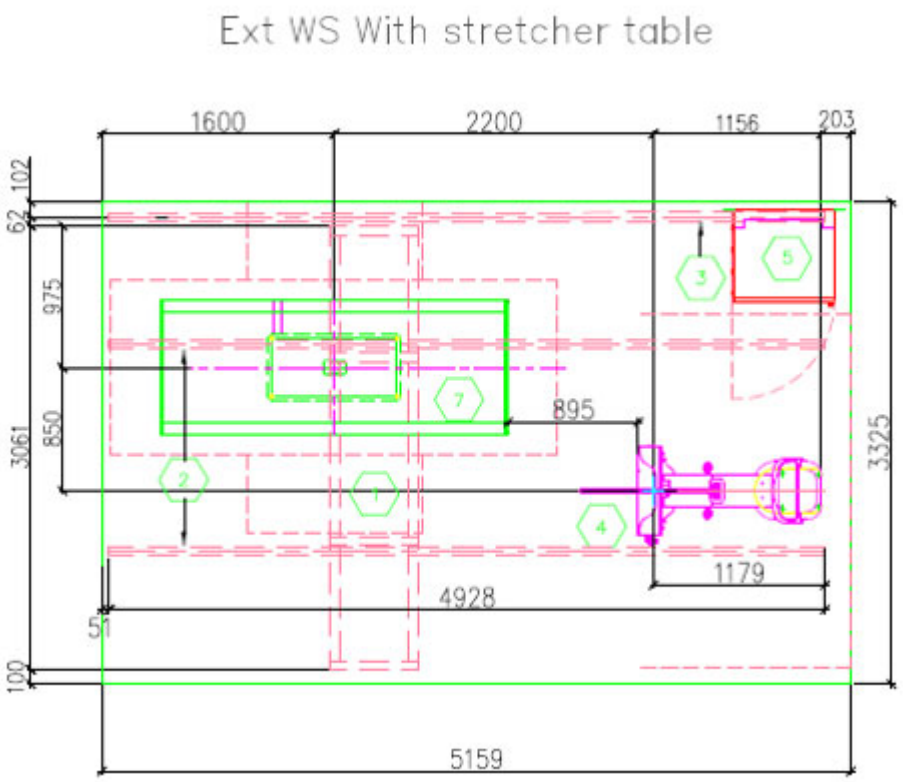
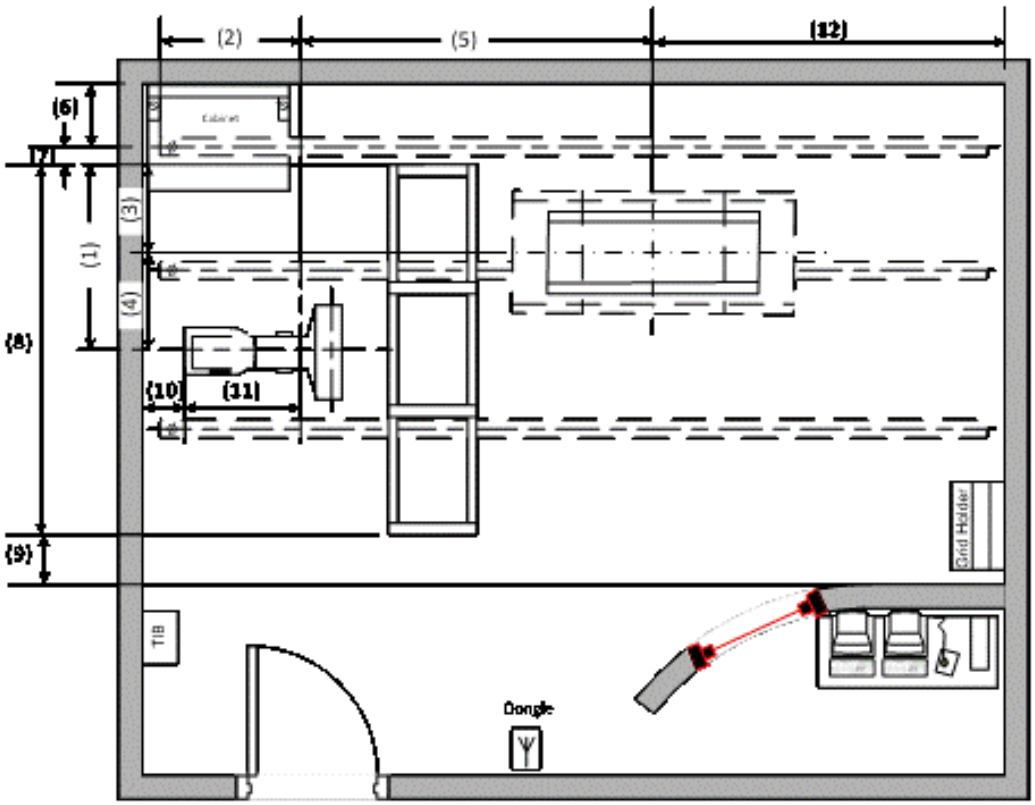

Ext WS With stretcher table
1600
2200
1156
203
102
62
975
3061
850
100
51
4928
1179
895
3325
5159
1
2
3
4
5
7

Illustration 2-50: G2 XR656 Room Layout: G2 Table & WS at Head



Item	Bridge	Limit Dimension			Description
			mm	inch	
(1)	2M	Min	1565	61.6	Back of bridge to center line of WS. 2m bridge could support WS TOMO &or IP and Table TOMO &/or IP, but can't support WS cross Table TOMO and Ext. WS TOMO.
		Max	1585	62.4	
	3M	Min	1565	61.6	Back of bridge to center line of WS. Min value1565 mm (850mm (400 half value of table width + 450 value of half distance OTS with tube center) + 715mm (615+100)), max value 1861mm (max travel range 2625mm – 764mm Cross table TOMO movement) if stretcher TOMO is needed, max value 2525mm (max travel range 2625mm – 100 Cal space) if no stretcher table TOMO feature.
		Max	1861	73.3	
	4M	Min	1565	61.6	Back of bridge to center line of WS. Min value 1565 mm (850mm (400 half value of table width + 450 value of half distance OTS with tube center) + 715mm (615+100)),max value 3184 mm (max travel range 3948.5mm – 764mm Cross table TOMO movement) if stretcher TOMO is needed, max value 3848mm (max travel range 3948mm – 100 Cal space) if no stretcher table TOMO feature.
		Max	3184	125.4	
(2)	Std WS	Min	580	22.8	Head End of rail to center line of tilted detector.580mm (480mm + 100mm Cal space)
	Ext. WS	Min	895	35.2	Head End of rail to center line of tilted detector.895mm (795mm + 100mm Cal space)
(3)	All	Min	715	28.1	Back of bridge to center line of Table.715mm (615mm + 100mm Cal space)
(4)	All	Min	850	33.5	Center line of table to center line of WS. 850mm (400 half value of table width + 450 value of half distance OTS with tube center)

(5)*	All	Min	X	XX	Center line of tilted Detector to center line of table in longitudinal, it decides room length and system advanced application. If WS cross Table TOMO or Ext. WS TOMO is required, then stretcher table is needed between WS and table, X=200mm WS tilted detector to surface +Wmm Stretcher table width + 900mm half length to table center+100mm margin, Stretcher table width W could be adjusted per real table width. If no stretcher table is needed between WS and table, For Std WS, it need min 1440mm to allow cabinet installed at head side or min 800mm but bigger (12) to allow cabinet installed at foot side; For Ext WS, it need min 1150mm to allow cabinet installed at head side or min 485mm but bigger (12) to allow cabinet installed at foot side.
(6)	All	Min	102	4.0	Drape rail to wall
(7)	All	Min	62	2.4	Back of bridge to drape rail
(8)	2M	NA	NA	NA	Length of bridge. For 3m&4m bridge, it could determine room width; For 2m bridge, room width is determined by WS and table lateral service clearance, min 3290mm, could reuse the same room width data 3325mm as 3m/4m bridge.
	3M	Fix	3061	120.5	
	4M	Fix	4385	172.5	
(9)	All	Min	100	3.9	Service clearance (front of bridge to wall)
(10)	All	Min	202	8.0	Back cover of WS to wall
(11)	Std WS	Fix	734	28.9	Back cover of WS to tilted detector.
	Ext. WS	Fix	1156	45.5	
(12)	Std WS	Min	1600	63.0	Half of tabletop travel range 1540mm add its service clearance 60mm
	Ext. WS	Min	1700	66.9	Need let WS SID meet min 1900mm. Could use 1600mm only when stretcher table is used for WS cross Table TOMO or Ext. WS TOMO.

Analysis:

1. Cabinet installed in head side could meet smaller room size than in foot side.
2. Item (5) length X decides room length and system advanced application. If WS cross Table TOMO or Ext. WS TOMO is required, stretcher table is needed, X =200mm WS tilted detector to surface +Wmm Stretcher table width + 900mm half length to table center +100mm margin, Stretcher table width W could be adjusted per real table width.

Advanced application needs

Configuration	WS TOMO &or IP	Table TOMO &/or IP	WS cross Table TOMO	Ext. WS TOMO
Std WS	(5) min 1440mm	(5) min 1440mm	(5)min 1200+Wmm	No
Ext. WS	(5) min 1150mm	(5) min 1150mm	(5)min 1200+Wmm	(5)min 1200+Wmm
2m bridge	Yes	Yes	No	No
3m bridge	Yes	Yes	Yes	Yes
4m bridge	Yes	Yes	Yes	Yes

Note: 1). (5) min 1440mm: min data which could make cabinet to not touch table max travel range for Std WS with cabinet in head side.

2). (5) min 1050mm: min data which could make cabinet to not touch table max travel range for Ext WS with cabinet in head side.

3). W: Stretcher table width. L: Stretcher table Length. If WS cross Table TOMO or Ext. WS TOMO is required, stretcher table is required.

Summary Result:

Without Control Room	Items	WS	WS TOMO &or IP	Table TOMO &/or IP	WS cross Table TOMO	Ext. WS TOMO
Min Length	(5)+(10)+(11)+(12)	Std WS	3977	3977	3737+W	NA
		Ext. WS	4209	4209	4159+W	4159+W
Min Width	(6)+(7)+(8)+(9)	All	3325	3325	1450+L or 3325	1450+L or 3325

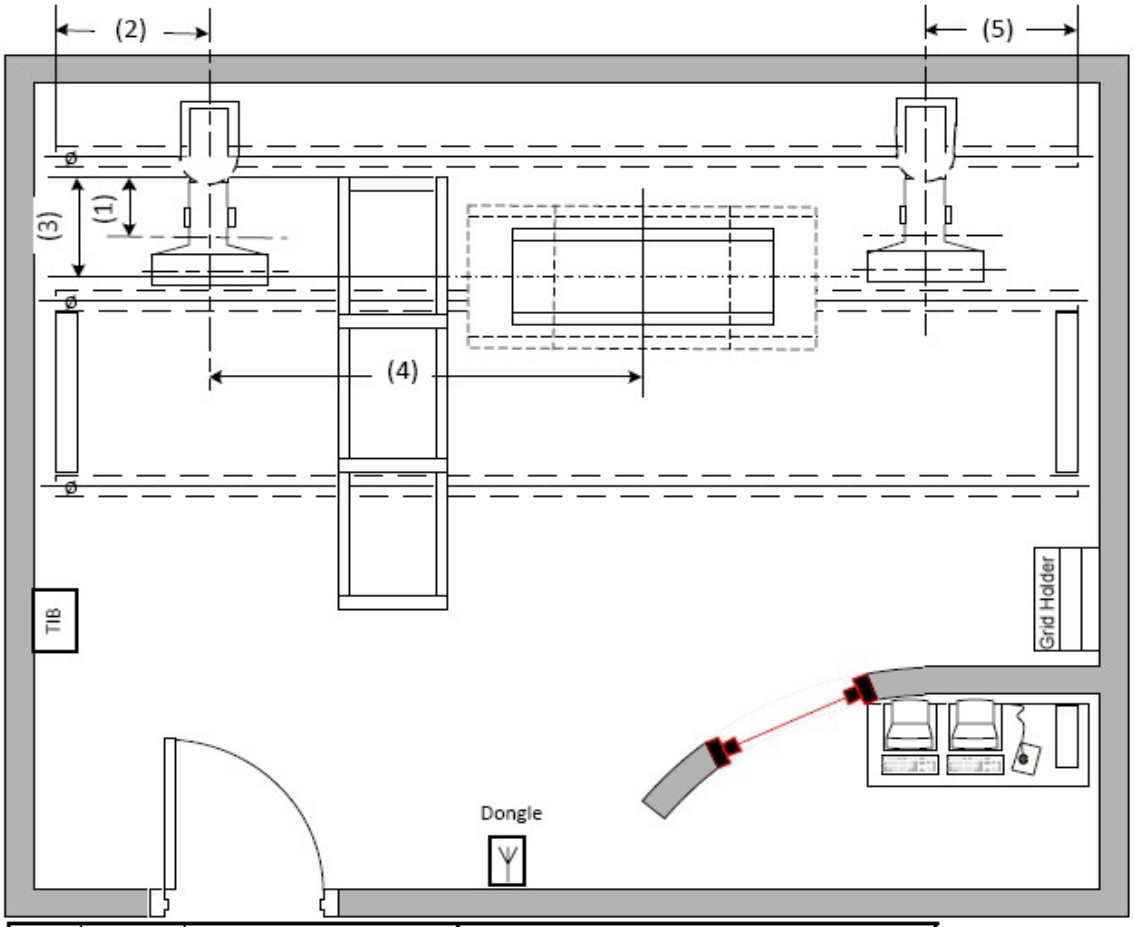
Stretcher Table Model	H	L	W
E6401J	705	2159	711
S1700JM	700	2200	650
E6401K and E10811VB	610~1010	2437	1000

Note: 1). Room Width 1450+L(Wall to table front edge 1350+100 margin+ stretcher table length L) is required if stretcher table could go through front side door. But only width 3325mm is required if stretcher table could go trough head/foot side door.

2). Above data are MIN size with precise positioning, recommended room size is 5500*5000.

3). Ext WS room min length 4209mm is rarely used, normally need 4159 +W because customer buy Ext WS to apply stretcher table for cross table TOMO and Ext WS TOMO.

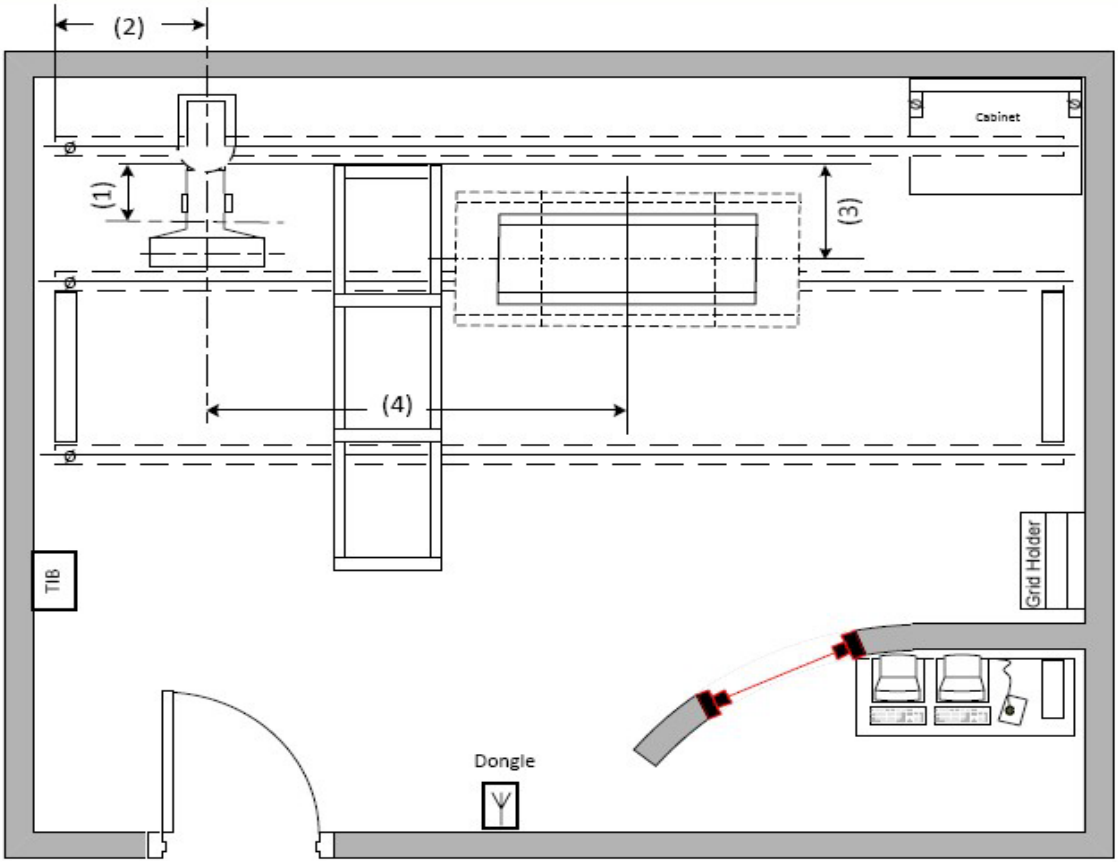
Illustration 2-51: Standard Arm Wall Stand at Rear Head/Foot, Table - Option 1



ITEM	Bridge Length	Dimension			Description
			MM	In	
(1)	2M	Min	N/A		
		Max	N/A		Back of bridge to center line of tilted Detector
	3M	Min	**400**	15.7	
		Max	**410**	16.1	
		Max SID	**1710**	67.3	
	4M	Min	**400**	15.7	
		Max	**1581**	62.2	
		Max SID	**1850**	72.8	
(2)	ALL	Min	**895**	35.2	Head End of rail to center line of Wallstand
(3)	ALL	Min	**715**	28.1	Back of bridge to center line of Table
(4)	ALL	Min	**1250**	49.2	Center line of Wallstand to Half length of table
(5)	ALL	Min	**1060**	41.7	Foot End of rail to center line of Wallstand

The Following TOMO & Image Pasting Applications are Possible With The Layout As	YES	NO
Wall Stand TOMO and/or Wall Stand Image Paste	✓	
Table TOMO and/or Table Image Paste	✓	
Wall Stand Cross Table TOMO		✓
Extended Wall Stand TOMO		✓

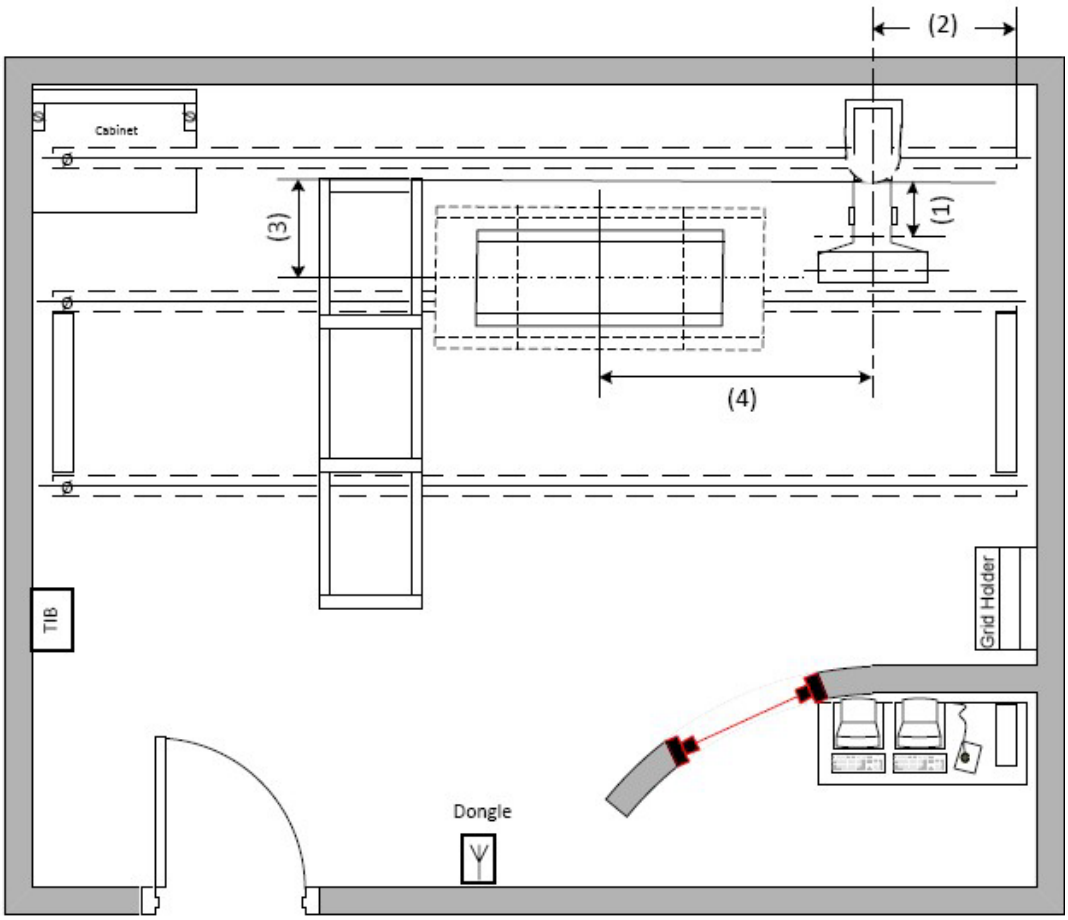
Illustration 2-52: Standard Arm Wall Stand at Rear/Head, Table - Option 2



ITEM	Bridge Length	Dimension			Description
			MM	In	
(1)	2M	Min	N/A		
		Max	N/A		Back of bridge to center line of tilted Detector
	3M	Min	**400**	15.7	
		Max	**410**	16.1	
		Max SID	**1710**	67.3	
	4M	Min	**400**	15.7	
		Max	**1581**	62.2	
		Max SID	**1850**	72.8	
(2)	ALL	Min	**1559**	61.4	Head End of rail to center line of Wallstand
(3)	ALL	Min	**715**	28.1	Back of bridge to center line of Table
(4)	ALL	Min	**2125**	83.7	Center line of Wallstand to half length center of table

The Following TOMO & Image Pasting Applications are Possible With The Layout As	YES	NO
Wall Stand TOMO and/or Wall Stand Image Paste	✓	
Table TOMO and/or Table Image Paste	✓	
Wall Stand Cross Table TOMO	✓	
Extended Wall Stand TOMO		✓

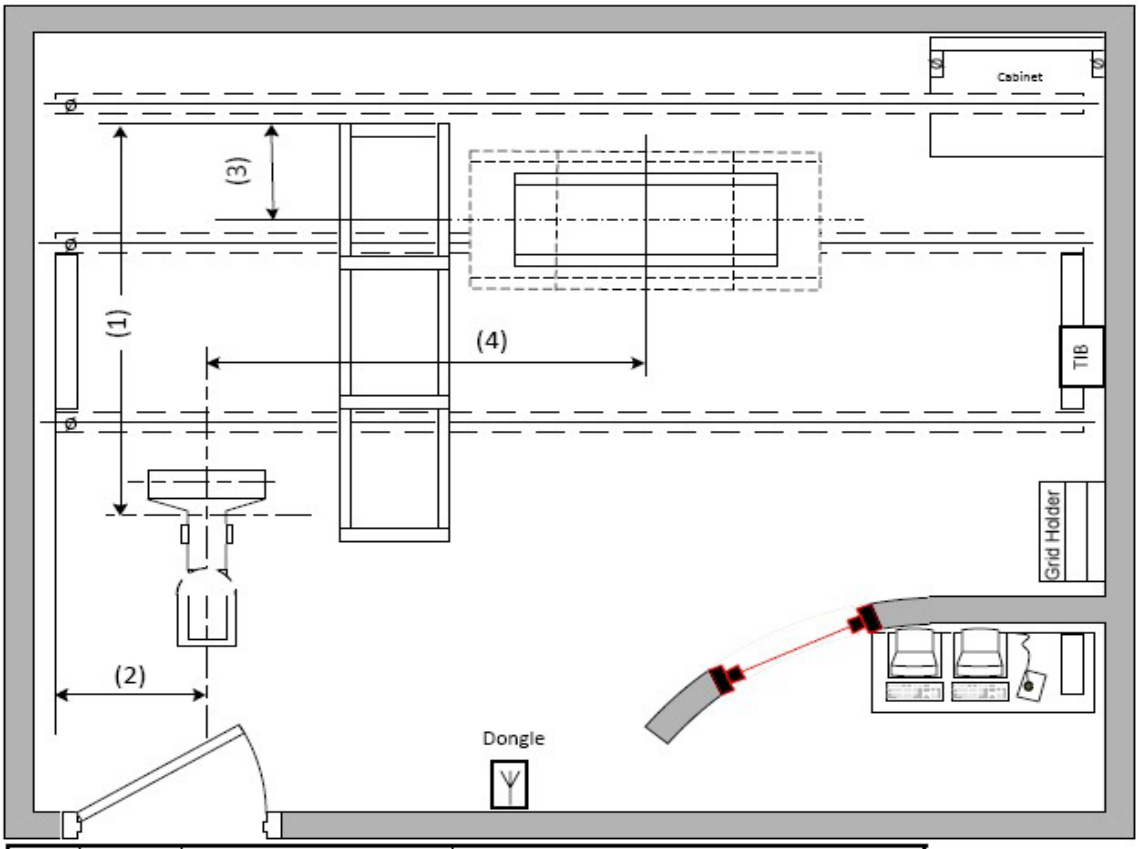
Illustration 2-53: Standard Arm Wall Stand at Rear/Foot, Table - Option 2



ITEM	Bridge Length	Dimension			Description
			MM	In	
(1)	2M	Min	N/A		
		Max	N/A		Back of bridge to center line of tilted Detector
	3M	Min	**400**	15.7	
		Max	**410**	16.1	
		Max SID	**1710**	67.3	
	4M	Min	**400**	15.7	
		Max	**1581**	62.2	
		Max SID	**1850**	72.8	
(2)	ALL	Min	**1724**	67.9	Head End of rail to center line of Wallstand
(3)	ALL	Min	**715**	28.1	Back of bridge to center line of Table
(4)	ALL	Min	**2125**	83.7	Center line of Wallstand to half length center of table

The Following TOMO & Image Pasting Applications are Possible With The Layout As	YES	NO
Wall Stand TOMO and/or Wall Stand Image Paste	✓	
Table TOMO and/or Table Image Paste	✓	
Wall Stand Cross Table TOMO	✓	
Extended Wall Stand TOMO		✓

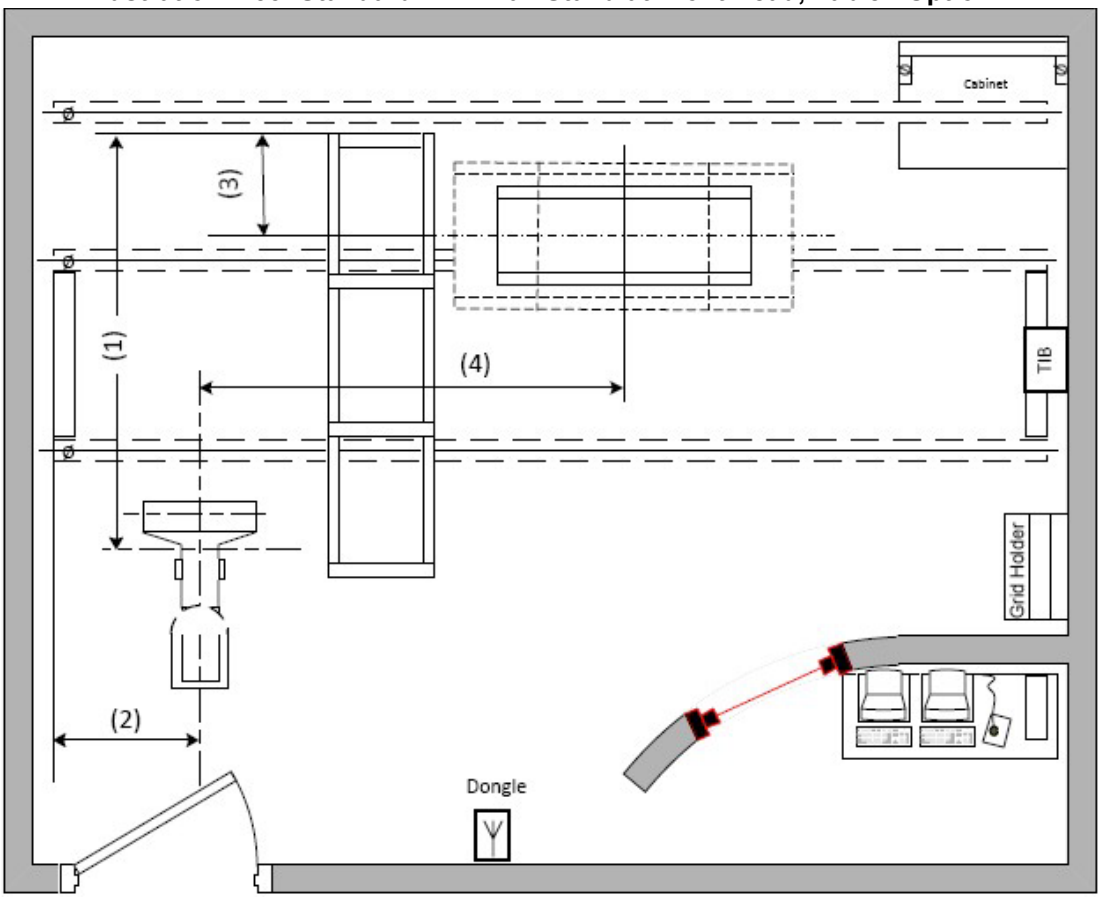
Illustration 2-54: Standard Arm Wall Stand at Front/Head, Table - Option 1



ITEM	Bridge Length	Dimension			Description
			MM	In	
(1)	2M	Min	N/A		
		Max	N/A		Back of bridge to center line of tilted Detector
	3M	Min	2200	86.6	
		Max	2210	87.0	
		Max SID	1710	67.3	
	4M	Min	2350	92.5	
		Max	3531	139.0	
		Max SID	1850	72.8	
(2)	ALL	Min	895	35.2	Head End of rail to center line of Wallstand
(3)	ALL	Min	715	28.1	Back of bridge to center line of Table
(4)	ALL	Min	1250	49.2	Center line of Wallstand to Half length of table

The Following TOMO & Image Pasting Applications are Possible With The Layout As	YES	NO
Wall Stand TOMO and/or Wall Stand Image Paste	✓	
Table TOMO and/or Table Image Paste	✓	
Wall Stand Cross Table TOMO		✓
Extended Wall Stand TOMO		✓

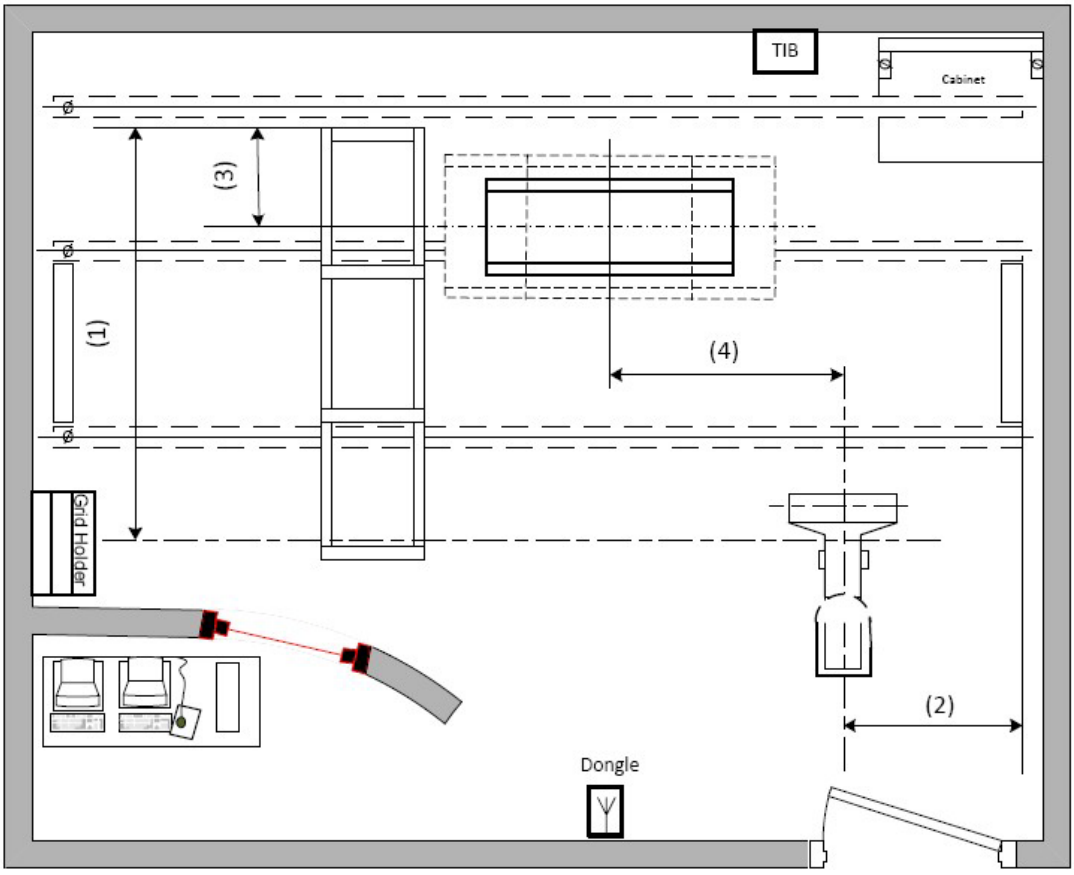
Illustration 2-55: Standard Arm Wall Stand at Front/Head, Table - Option 2



ITEM	Bridge Length	Dimension			Description
			MM	In	
(1)	2M	Min	N/A		
		Max	N/A		Back of bridge to center line of tilted Detector
	3M	Min	**2200**	86.6	
		Max	**2210**	87.0	
		Max SID	**1710**	67.3	
	4M	Min	**2350**	92.5	
		Max	**3531**	139.0	
		Max SID	**1850**	72.8	
(2)	ALL	Min	**1559**	61.4	Head End of rail to center line of Wallstand
(3)	ALL	Min	**715**	28.1	Back of bridge to center line of Table
(4)	ALL	Min	**1250**	49.2	Center line of Wallstand to Half length of table

The Following TOMO & Image Pasting Applications are Possible With The Layout As	YES	NO
Wall Stand TOMO and/or Wall Stand Image Paste	✓	
Table TOMO and/or Table Image Paste	✓	
Wall Stand Cross Table TOMO	✓	
Extended Wall Stand TOMO		✓

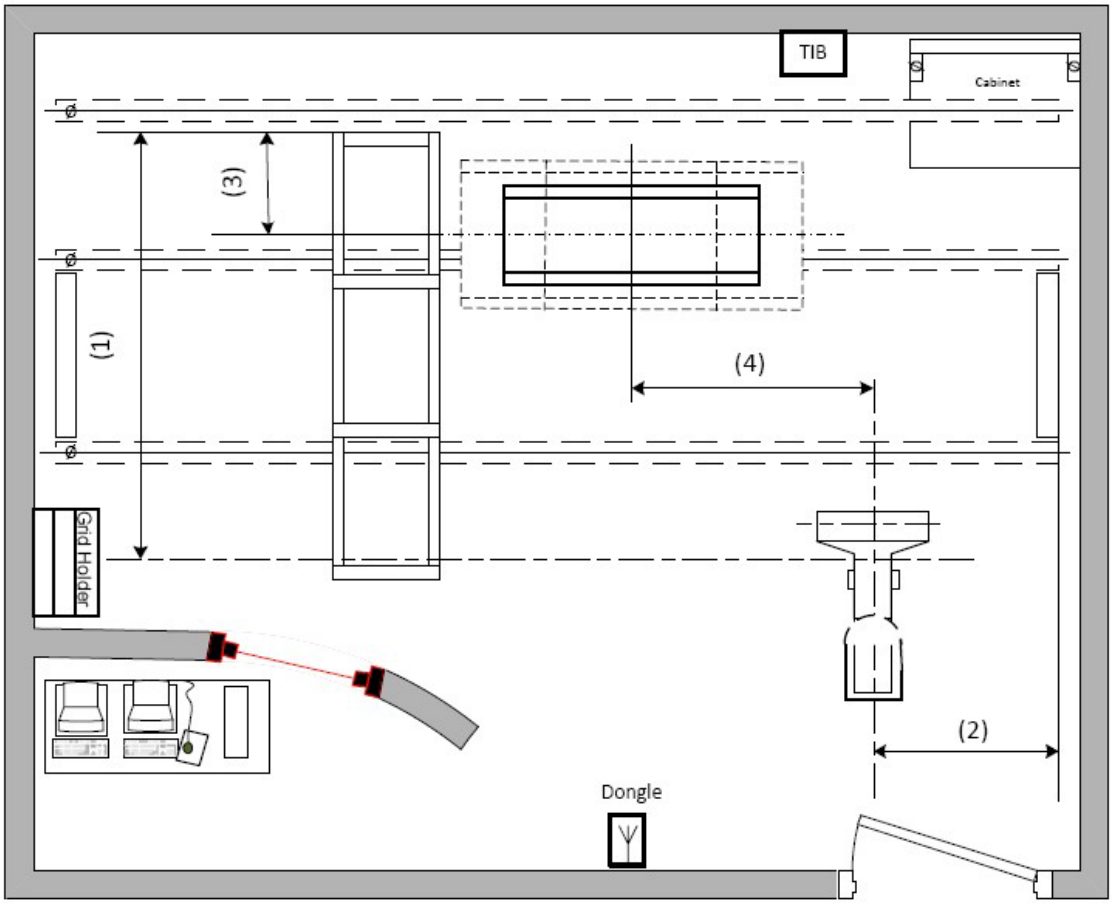
Illustration 2-56: Standard Arm Wall Stand at Front/Foot, Table - Option 1



ITEM	Bridge Length	Dimension			Description
			MM	In	
(1)	2M	Min	N/A		
		Max	N/A		Back of bridge to center line of tilted Detector
	3M	Min	**2200**	86.6	
		Max	**2210**	87.0	
		Max SID	**1710**	67.3	
	4M	Min	**2350**	92.5	
		Max	**3531**	139.0	
		Max SID	**1850**	72.8	
(2)	ALL	Min	**1060**	41.7	Foot End of rail to center line of Wallstand
(3)	ALL	Min	**715**	28.1	Back of bridge to center line of Table
(4)	ALL	Min	**1250**	49.2	Center line of Wallstand to Half length of table

The Following TOMO & Image Pasting Applications are Possible With The Layout As	YES	NO
Wall Stand TOMO and/or Wall Stand Image Paste	✓	
Table TOMO and/or Table Image Paste	✓	
Wall Stand Cross Table TOMO		✓
Extended Wall Stand TOMO		✓

Illustration 2-57: Standard Arm Wall Stand at Front/Foot, Table - Option 2



ITEM	Bridge Length	Dimension			Description
			MM	In	
(1)	2M	Min	N/A		
		Max	N/A		
	3M	Min	**2200**	86.6	Back of bridge to center line of tilted Detector
		Max	**2210**	87.0	
		Max SID	**1710**	67.3	
	4M	Min	**2350**	92.5	
		Max	**3531**	139.0	
		Max SID	**1850**	72.8	
(2)	ALL	Min	**1724**	67.9	Head End of rail to center line of Wallstand
(3)	ALL	Min	**715**	28.1	Back of bridge to center line of Table
(4)	ALL	Min	**1250**	49.2	Center line of Wallstand to Half length of table

The Following TOMO & Image Pasting Applications are Possible With The Layout As	YES	NO
Wall Stand TOMO and/or Wall Stand Image Paste	✓	
Table TOMO and/or Table Image Paste	✓	
Wall Stand Cross Table TOMO	✓	
Extended Wall Stand TOMO		✓

Section 4.0 Seismic

4.1 Overview

Seismic requirements are determined and specified by the hospital/Design Professional of record and may require approval by the specific state or country agency.

Seismic attachment hardware shown on seismic calculations may differ from hardware supplied with system. Any additional hardware that is required will be the responsibility of the institution and/or their contractor. Contact your local GE representative to obtain seismic calculations.

Seismic calculations are per California Building Code (CBC) and International Building Code (IBC).

4.2 Calculations

Seismic calculations can be obtained for the following:

- Overhead Tube Suspension (OTS)
- System Cabinet (SKL)
- Table (TBL)
- Wall Stand (WLS)
- Extended Wall Stand (WLS)
- Detector BIN

Chapter 3 Special Construction

Section 1.0 Radiation Protection

Because X-ray equipment produces radiation, special precautions may need to be taken or special site modifications may be required. The General Electric Company does not make recommendations regarding radiation protection. It is the purchasers responsibility to consult a radiation physicist for advice on radiation protection in X-ray rooms.

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Section 1.0 Environmental Requirements

1.1 Relative Humidity and Temperature

Environmental Requirements (Relative Humidity & Temperature)

Product or Component	RELATIVE HUMIDITY (Non-Condensing)		Temperature	
	IN-USE		IN-USE	
	MIN	MAX	MIN.	MAX.
URP Detector	30%	60%	15° C(59° F)	35° C (95° F)
Wall Stand Std. & Ext.	30%	60%	15° C(59° F)	35° C (95° F)
Table (TBL)	30%	60%	15° C(59° F)	35° C (95° F)
OTS	30%	60%	15° C(59° F)	35° C (95° F)
System Cabinet(SKL1)	30%	60%	15° C(59° F)	35° C (95° F)
Maxiray 100-09 X-ray Tube	30%	60%	15° C(59° F)	35° C (95° F)
Radiographic Stretcher Table (optional)	30%	60%	15° C(59° F)	35° C (95° F)
Operator Console:				
PC Tower	30%	60%	15° C(59° F)	35° C (95° F)
LCD Monitor	30%	60%	15° C(59° F)	35° C (95° F)

Limits for rates of change:

In-Use	Storage
< 10 degree C / hour	< 20 degree C / hour
< 30% / hour	< 30% / hour

NOTICE

STORAGE values for only refer to equipment that is still in shipping containers. If the equipment is partially or completely installed, refer to IN-USE values.

The operation environment is the environmental requirements for the normal use of the device during the expected service life. It dose not apply to the short term manufacturing testing and the like.

1.2 Altitude and Atmospheric Pressure

Environmental Requirements - (Altitude & Atmospheric Pressure)

PRODUCT OR COMPONENT	ALTITUDE		ATMOSPHERIC PRESSURE	
	Stationary Operating Environment and Non-operating Environment			
	MIN	MAX	MIN	MAX
Total System Limits	-30 m (-98.43 ft)	3000 m (9,842.52 ft)	70 kPa	106 kPa

Limits for rates of change:

In-Use	Storage
< 1.8 kPA / hour	< 76 kPA / hour

NOTE: Non operating environment values only refer to equipment that is still in shipping containers. If the equipment is partially or completely installed, refer to stationary operating environment values.

1.3 Heat Output

The standby and in-use heat output of each system component are provided below.

Table 4-1 Heat Outputs by Component

PRODUCT OR COMPONENT	HEAT OUTPUT			
	STANDBY		IN-USE	
WS Detector power	56 BTU/h	0.017 Kilowatt	56 BTU/h	0.017 Kilowatt
Wall Stand / Extended Wall Stand	79 BTU/h	0.023 Kilowatt	321 BTU/h	0.094 Kilowatt
TABLE Detector power	56 BTU/h	0.017 Kilowatt	56 BTU/h	0.017 Kilowatt
Table	315 BTU/h	0.092 Kilowatt	2272 BTU/h	0.666 Kilowatt
OTS & Collimator	500 BTU/h	0.147 Kilowatt	1500 BTU/h	0.440 Kilowatt
Tube Rotor	0	0	544 BTU/h	0.160 Kilowatt
System Cabinet	2437 BTU/h	0.714 Kilowatt	4869 BTU/h	1.427 Kilowatt
Z420 PC+ Monitor	601 BTU/h	0.176 Kilowatt	863 BTU/h	0.253 Kilowatt
TIB	6.75 BTU/h	0.002 Kilowatt	68 BTU/h	0.020 Kilowatt
UPS	31.61 BTU/h	0.009 Kilowatt	45.45 BTU/h	0.013 Kilowatt

1.4 EMC Requirement

Refer to the Direction 5643837-1EN Discovery XR656 G2 Specification Chapter 4 - EMC Compliance Statement

Chapter 5 Electrical

Section 1.0 System Facility Power and Grounds

1.1 Introduction

The purpose of this section is to ensure that the product is properly powered and grounded, thus ensuring the proper operation of the product installed. The information in this section should be adhered to, unless there are written deviations approved by GE Healthcare.

This section gives the sizes and procedures on how to power and ground your system. If these power and grounding instructions are not adhered to, proper operation cannot be guaranteed. Any cost associated and found to be a result of non-conformity, as stated in this section, may result in additional cost charged back to the institution and/or their contractor.

NOTICE

All system and sub-system power connections shall be made ONLY to power outlets that are connected to the system.

1.2 Power Quality

The electrical power, from its origination to the system, must adhere to the wire size and transformer sizes as prescribed in the installation drawings. The feeder voltage-drops, as well as the supplying power, must be within the given parameters. Sizing for feeder is usually calculated for a maximum of 2% voltage drop at the minimum voltage range. The actual feeder sizing may vary from the installation drawing for a facilities voltage.

Calculate feeder losses before you begin. Total feeder losses must be calculated to ensure that the losses are less than those specified in the installation drawings. Calculating the recommended minimum transformer sizing for feeding a system ensures the transformer losses are less than half of the maximum regulation for the system.

Regulation is the calculated voltage losses for the entire power distribution system (No-Load Voltage minus Full-Load Voltage) divided by the no-load voltage minus the system losses (Full-Load Voltage):

$$\text{Regulation} = \frac{\text{NoLoadVoltage} - \text{FullLoadVoltage}}{\text{FullLoadVoltage}} \times 100$$

In the X-ray room, there must be a lockable facility power disconnect. It must be installed electrically before the equipment, for the purpose of locking out the power. This must be done before service to the high voltage system is performed.

1.3 Electrical Grounds

1.3.1 System and Facility Grounds

The ground for this system must originate at the system's power source and be continuous (i.e., transformer or first access point of power into a facility, and be continuous to the system power disconnect in the room). Ground connection at the power source must be at the grounding point of the "Neutral/Ground" if a "Wye" transformer is used, or typical grounding points of a separately derived system. In the case of an external facility, it must be bonded to the facility ground point at the electrical service entrance.

The "system" ground can be spliced using "High Compression Fittings" but must be properly terminated at each distribution panel it passes through. When it is terminated, it must be connected into an approved grounding block. Incoming and outgoing grounds must terminate at this same grounding block. Grounds must only be terminated to approved grounding blocks. Grounds must never connect directly to the panels, frames or other materials in a cabinet or distribution panel.

1.3.2 Recommended Ground Wire Sizes

The ground wire impedance from the system disconnect (including the ground rod) measured to earth, must not exceed 2 ohms (as measured by one of the applicable techniques described in Section 4 of ANSI/IEEE Standard 142 - 1982).

NOTE: For general system grounding requirements and information on establishing an equipotential

grounding system, refer to:

- Direction 46-014505, Electrical Safety - Equipment Grounding
- Direction 46-014546, Electrical Safety - Leakage Currents

Section 2.0 Electrical Requirements

2.1 Generator Electrical Requirements

All system components obtain their power from the Power Distribution Unit (PDU) in the System Cabinet.**Providing power and ground wires to the PDU are the responsibility of the customer**. As an aid, wire sizes for various lengths of the power supply cable are shown in the following tables.

NOTE: The length of stripped wires should be longer than 25 mm, and tinned.

NOTE: Shunt trip circuit breaker required. The main circuit breaker supplied by the customer must be sized in accordance to local regulations.

Generator Power Specifications

Table 5-1 JEDI Generator Power Specifications

Input Voltage	380/400/415/440/460/480 VAC Wye 3-Phase and ground without neutral
Daily Voltage variations	+/- 10% (VAC) In this range, the generator will operate without any de-rating in accuracy
Nominal line frequency (Hz)	50 Hz / 60 Hz
Daily frequency variation (Hz)	+/- 3 Hz
Line Impedance	The apparent line impedance guaranteed by the customer should be equal or less than the values indicated below, according to the voltage value and the commercial power of the system. **Voltage range (V) Line Impedance (ohms)** **3 phase 50kW 65kW 80kW** 380 0.15 0.118 0.096 400 0.16 0.131 0.100 415 0.18 0.138 0.113 440 0.20 0.154 0.125 480 0.24 0.185 0.150 **NOTE:** 400-480 VAC impedance values are based on IEC 601-2-7 standard. Values are interpolated from values in standard.
Inrush current	1000 Amps. Genetrator needs a 165Amps and the fuse is a part of PDU. 1000Amps is rating at 3 phase at system I/P, for generator 1000Amps current may not be required. The max current raquired for generator is during start-up ((capacitor changing) and during peak power exposure for long durationns.
HV cable type	USA: 22mm DSI (<= 165 pF/m) HV cable connector = Federal standard
Ground Wire	Same as power cable

2.2 System Wire Sizes & kVA Load Characteristics

• Calculations based upon nominal voltage, wire size in AWG. To convert to mm2, refer to Table 5-2.

• Recommended feeder sizes from distribution transformer to the power cabinet.

• Neutral must be terminated inside the main disconnect panel and not at any GE cabinet.

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

American Wire Gauge (AWG)	Diameter (Inches)	Diameter (mm)	Cross Sectional Area (mm^2)
6	0.1620	4.11	13.30
5	0.1819	4.62	16.77
4	0.2043	5.19	21.15
3	0.2294	5.83	26.65
2	0.2576	6.54	33.61
1	0.2893	7.35	42.39
1/0	0.3249	8.25	53.46
2/0	0.3648	9.27	67.40
3/0	0.4096	10.40	84.97
4/0	0.46	11.68	107.16
250M	0.575	14.6	126.68
300M	0.630	16.0	152.0
350M	0.681	17.3	177.35
400M	0.728	18.49	202.68

Table 5-2 AWG Wire Size Conversion to mm^2

2.2.1 JEDI Generator 3-Phase 50 kW System - Minimum Wire Size

WIRE RUN LENGTH	INPUT VOLTAGE (VAC)					
	380	400	420	440	460	480
	+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%
15m (50 ft.)	*6	*6	*6	*6	*6	*6
30m (100 ft.)	5	5	*6	*6	*6	*6
46m (150 ft.)	4	4	4	4	4	4
61m (200 ft.)	3	4	4	4	4	4
77 m (250 ft)	2	2	2	3	3	4
92 m (300 ft)	1/0	1	1	2	2	2
107m (350ft)	2/0	2/0	1/0	1	1	1
122m (400 ft)	3/0	2/0	2/0	1/0	1/0	1/0
138m (450 ft)	4/0	3/0	3/0	2/0	2/0	1/0
* minimum wire size for circuit breaker, based on recommended overcurrent protection.						

2.2.2 kVA Load Characteristics 50KW

Phase	THREE PHASE					
Nominal Line Voltage (Vac)	380	400	420	440	460	480
Voltage Range (Vac)	+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%
Momentary Line Current (Amp)	110	105	100	95	92	88
Continuous Line Current (Amp)	7	6.7	6.2	6	5.7	5.5
Power Demand (kVA)	70	70	70	70	70	70
Frequency	47/53Hz and 57/63Hz					

2.2.3 JEDI Generator 3-Phase 65 kW and System - Minimum Wire Size

Table 5-3 JEDI Generator 3-Phase 65 kW System - Minimum Wire Size

WIRE RUN LENGTH	INPUT VOLTAGE (VAC)					
	380	400	420	440	460	480
	+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%
15m (50 ft.)	*4	*4	*4	*4	*4	*4
30m (100 ft.)	3	*4	*4	*4	*4	*4
46m (150 ft.)	2	2	2	3	3	*4
61m (200 ft.)	1/0	1	1	2	2	2
77 m (250 ft)	2/0	2/0	1/0	1	1	1
92 m (300 ft)	3/0	2/0	2/0	1/0	1/0	1/0
107m (350ft)	4/0	3/0	3/0	2/0	2/0	1/0
122m (400 ft)	250M	4/0	4/0	3/0	3/0	2/0
138m (450 ft)	300M	250M	4/0	4/0	3/0	3/0
* minimum wire size for circuit breaker, based on recommended overcurrent protection.						

2.2.4 kVA Load Characteristics 65KW

Table 5-4 kVA Load Characteristics 65 kW

Phase	THREE PHASE					
Nominal Line Voltage (Vac)	380	400	420	440	460	480
Voltage Range (Vac)	+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%
Momentary Line Current (Amp)	147	140	133	127	122	117
Continuous Line Current (Amp)	7	6.7	6.2	6	5.7	5.5
Power Demand (kVA)	97	97	97	97	97	97
Frequency	47/53Hz and 57/63Hz					

2.2.5 JEDI Generator 3-Phase 80 kW and System - Minimum Wire Size

Table 5-5 JEDI Generator 3-Phase 80 kW System - Minimum Wire Size

WIRE RUN LENGTH	INPUT VOLTAGE (VAC)					
	380	400	420	440	460	480
	+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%
15m (50 ft.)	*2	*2	*2	*2	*2	*2
30m (100 ft.)	*2	*2	*2	*2	*2	*2
46m (150 ft.)	1/0	1	1	*2	*2	*2
61m (200 ft.)	2/0	2/0	1/0	1/0	1	1
77 m (250 ft)	3/0	3/0	2/0	2/0	1/0	1/0
92 m (300 ft)	4/0	4/0	3/0	3/0	2/0	2/0
107m (350ft)	300M	250M	4/0	4/0	3/0	3/0
122m (400 ft)	350M	300M	250M	4/0	4/0	3/0
138m (450 ft)	400M	350M	300M	250M	250M	4.0
* minimum wire size for circuit breaker, based on recommended overcurrent protection.						

2.2.6 kVA Load Characteristics 80KW

Table 5-6 kVA Load Characteristics 80 kW

Phase	THREE PHASE					
Nominal Line Voltage (Vac)	380	400	420	440	460	480
Voltage Range (Vac)	+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%	+/- 10%
Momentary Line Current (Amp)	190	180	170	163	156	150
Continuous Line Current (Amp)	7	6.7	6.2	6	5.7	5.5
Power Demand (kVA)	125	125	125	125	125	125
Frequency	47/53Hz and 57/63Hz					

2.3 Recommended Wall “Circuit-Breaker” Ratings

Table 5-7 Wall Breaker Parameter (Theoretical Current Values)

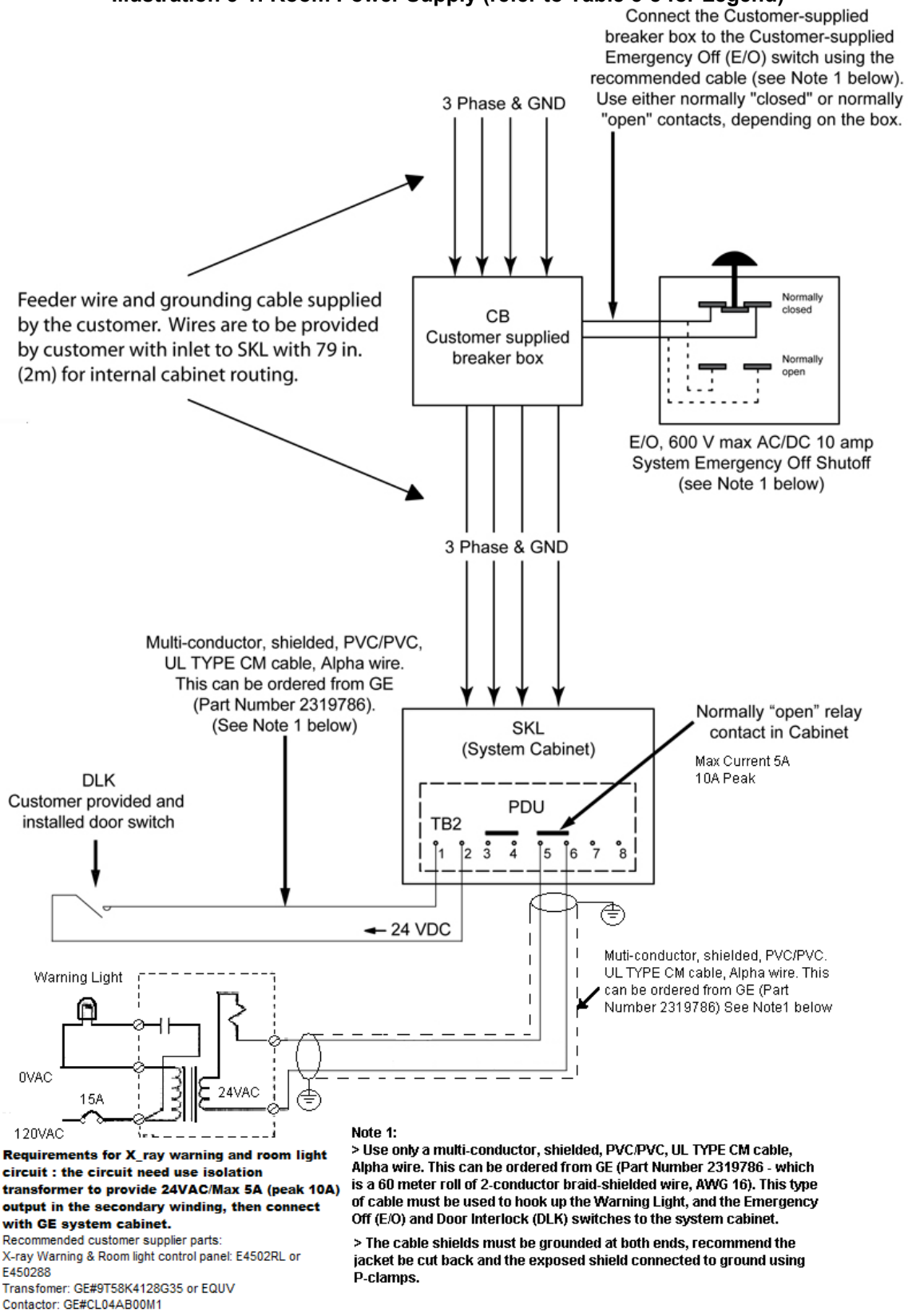
Power / Voltage	50 kW	65 kW	80 kW
380 V	55 A / 600 V	74 A / 600 V	95 A / 600 V
400 V	52 A / 600 V	70 A / 600 V	90 A / 600 V
415 V	50 A/ 600 V	67 A / 600 V	85 A / 600 V
440 V	47 A / 600 V	64 A / 600 V	82 A / 600 V
460 V	45 A/ 600 V	61 A / 600 V	78 A / 600 V
480 V	43 A / 600 V	59A / 600 V	75 A / 600 V

2.4 Wiring Electrical Power and Disconnects

This section provides additional data regarding power circuits the customer must provide, and internal electrical circuits necessary to supply the correct power to the system. Illustration 5-1 shows the room power supply installed.

2.4.1 Room Power Supply

Illustration 5-1: Room Power Supply (refer to Table 5-8 for Legend)



Requirements for X_ray warning and room light circuit : the circuit need use isolation transformer to provide 24VAC/Max 5A (peak 10A) output in the secondary winding, then connect with GE system cabinet.

Recommended customer supplier parts:
X-ray Warning & Room light control panel: E4502RL or E450288
Transfomer: GE#9T58K4128G35 or EQUV
Contactor: GE#CL04AB00M1

Note 1:

> Use only a multi-conductor, shielded, PVC/PVC, UL TYPE CM cable, Alpha wire. This can be ordered from GE (Part Number 2319786 - which is a 60 meter roll of 2-conductor braid-shielded wire, AWG 16). This type of cable must be used to hook up the Warning Light, and the Emergency Off (E/O) and Door Interlock (DLK) switches to the system cabinet.

> The cable shields must be grounded at both ends, recommend the jacket be cut back and the exposed shield connected to ground using P-clamps.

Table 5-8 Legend for Illustration 5-1

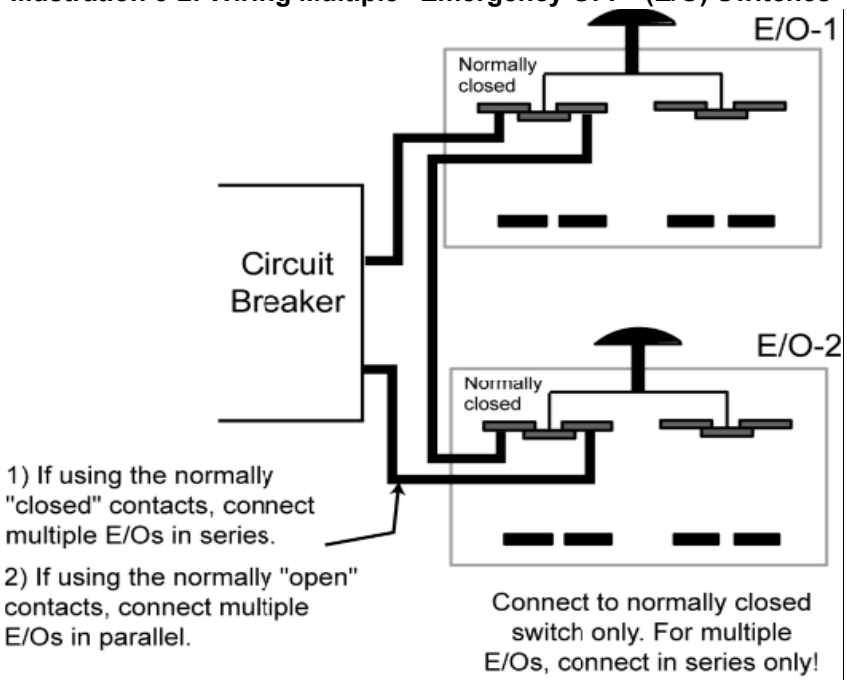
United States Key	Description
Feeder Wires and Grounding Cable	Feeder wire and grounding cable supplied by the customer. Wires are to be provided by customer with inlet to SKL with 2 meters for internal cabinet routing).
E/O (see Note below)	Emergency Off switch located near room access door. The switch is supplied by the Hospital. The recommended distance above the floor is 1.5 meters. Use only a multi-conductor, shielded cable to connect to System Cabinet.
XRL	Yellow X-ray emission indicator lamp above the room access door. 220 V in Europe/ 120 V in USA with 25 W max. bulb (per local regulations). Wires and light fixtures supplied by customer.
DLK (see Note below)	Open-door detector (per local regulations). SKL provides 24 VDC.
CB	Circuit breaker with remote trip (shunt) capabilities supplied by customer.

NOTE: Use only a multi-conductor, shielded, PVC/PVC, UL TYPE CM cable, Alpha wire. The cable shield must be grounded at both ends.with the system cabinet grounding, avoid make wireless transmission unintelligible by causing interference.

2.4.2 Multiple Emergency "OFF" Switches

The facility designer determines the quantity and locations of the Emergency OFF (E/O) switches. GE recommends placing at least one Emergency OFF switch near the doorway of every room in the system scan suite.

Illustration 5-2: Wiring Multiple "Emergency OFF" (E/O) Switches



Section 3.0 Routing Cables

3.1 General

These wires must be kept separated from each other:
• High voltage and power cables must be separated from other cables
• Separate conduits must be used for power and signal wires
Use a separate trough in the duct system, or use a separate conduit.
Minimize cable length between the line disconnect and the System Cabinet power unit to reduce voltage regulation problems and wiring costs.

3.1.1 Electrical Ducts (Recommended)

It is important that electrical ducts have separate compartments for power and signal wires. These wires must be kept separated from each other for proper system operation.

Electrical ducts have advantages, when used with a single room or two adjacent rooms. Electrical ducts combine cabling in a neat and functional appearance, with accessibility and room for expansion.

3.1.2 Conduit

If conduit is used make sure the conduit is large enough to pull the cable and connector through with all the other cables all ready in the conduit.

The use of conduit is recommended for cables running overhead between rooms, especially when a diagonal run provides the shortest cable path.

3.2 Power Distribution

The system power distribution consists of two major components that must either be customer supplied or GE Healthcare supplied. These are:
• Feeder power from Hospital distribution center to the System Cabinet load power unit (SKL).
• Feeder power must be provided via a WYE transformer only with dedicated ground. Neutral is not used.
• Power distribution from the System Cabinet load power unit (SKL) to all the components in the system room.

Usually the feeder power from the Hospital distribution center is customer supplied and the power distribution within the system is supplied by GE Healthcare.

Section 4.0 Light Specification

The monitor screen is adjusted for an optimum ambient light level of 50 lux.

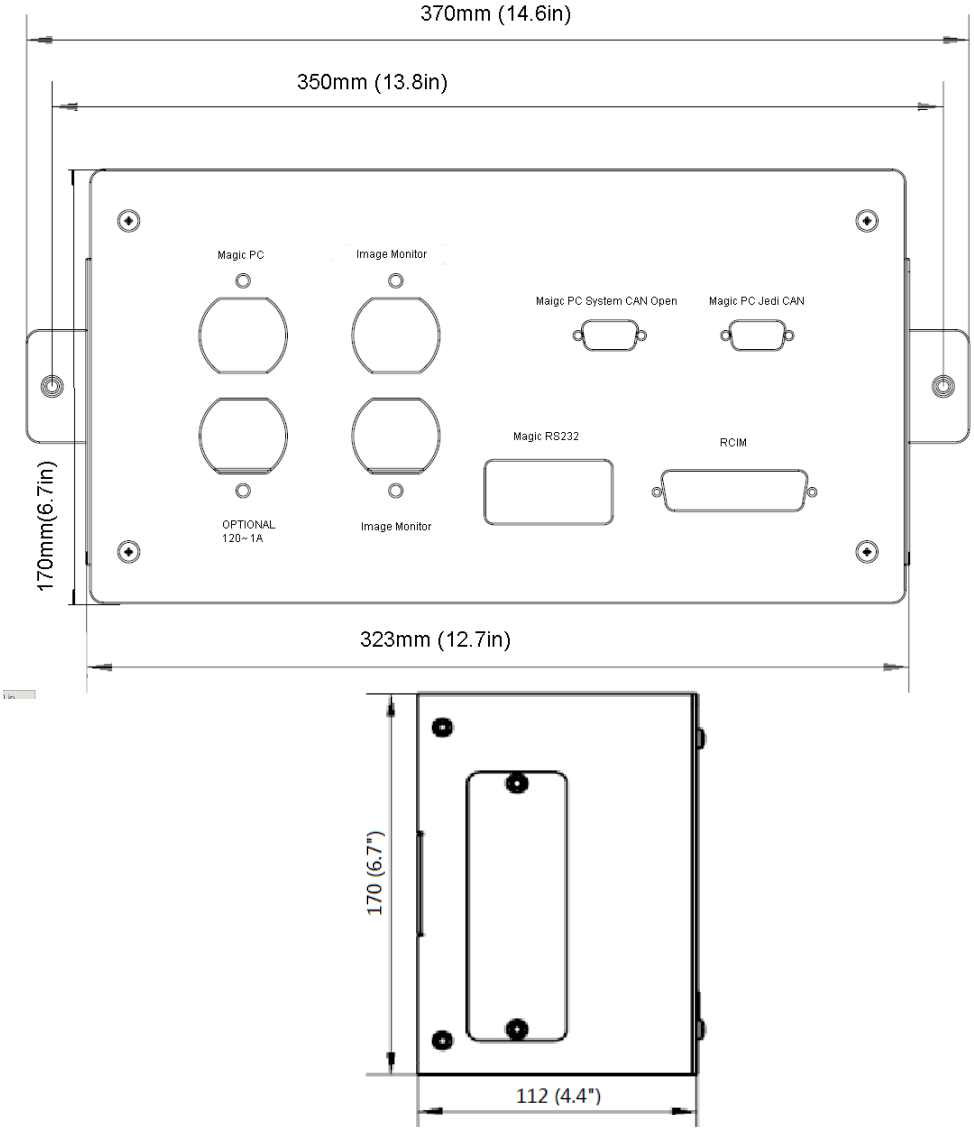
Section 5.0 Dimensioned Figures and Drawings

5.1 Wall Box

NOTE: The use of a wall box is required with this system. Wall box is used to interface the cables in exam room and patient room. The cables used with this system are terminated with connectors that can only be used with this specific wall box.

The wall box will fit best over a 370 x 170 mm (14.6 x 6.7 in) x 4" wall box (installed by electrical contractor).

Illustration 5-3: Wall box Dimensions 370 mm X 170 mm X (14.6in x 6.7in)



5.2 System Equipment Cable Entrance

Illustration 5-5: System Cabinet Cable Entrances

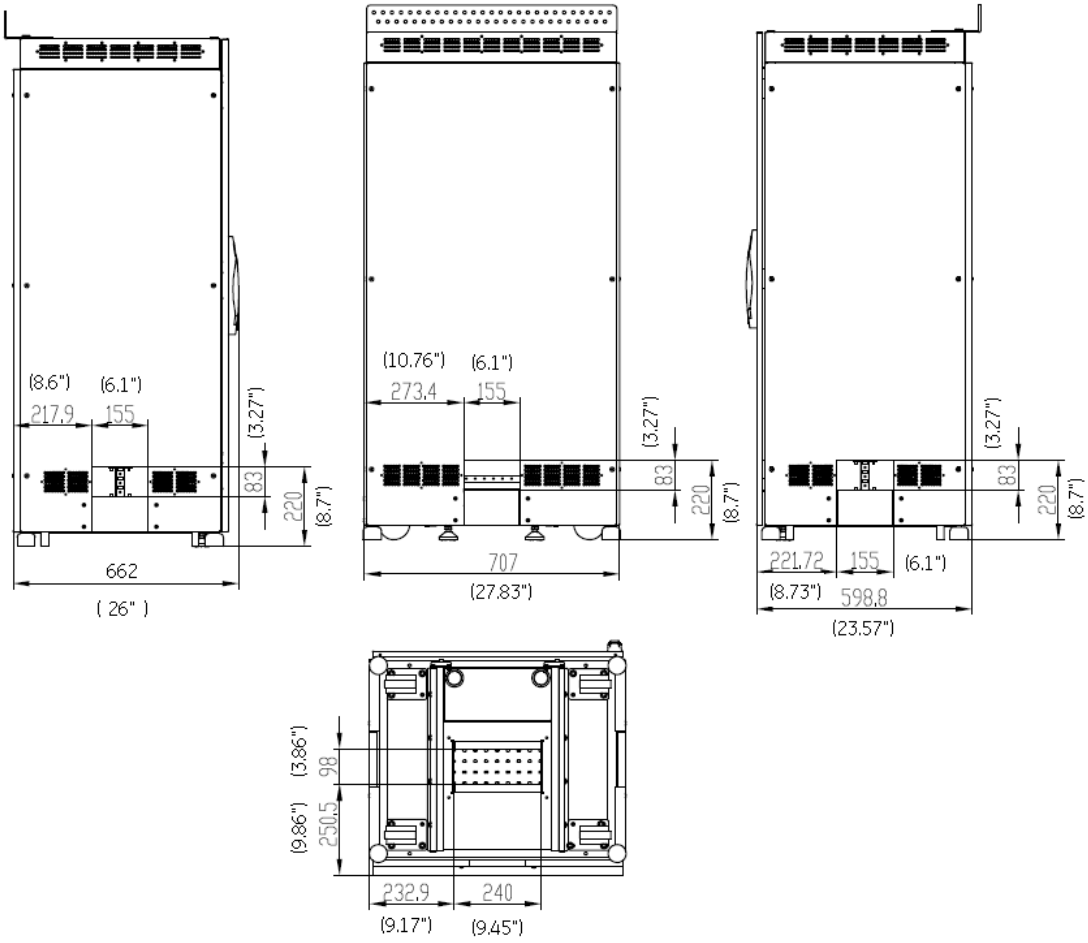
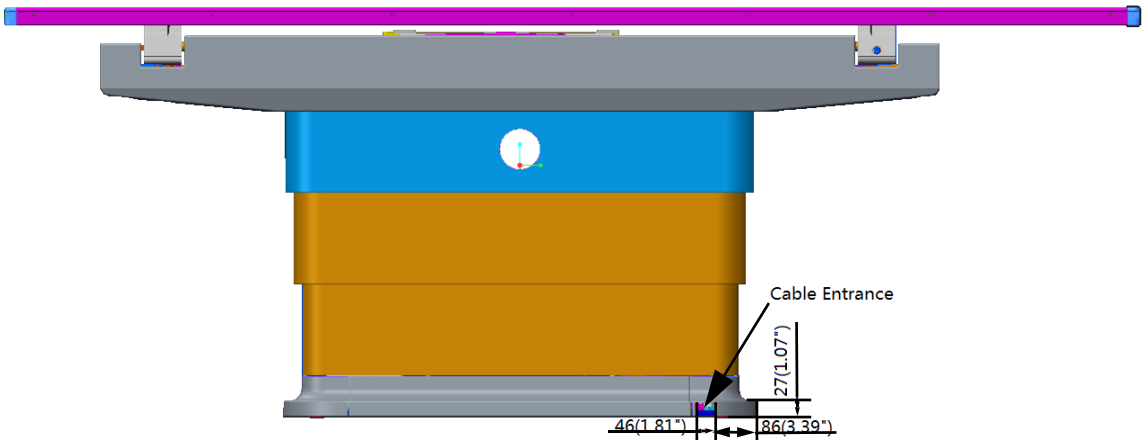


Illustration 5-6: Table Cable Entrance



NOTE: This entrance is the back side of the table and below is another cable entrance in the center of the table base.

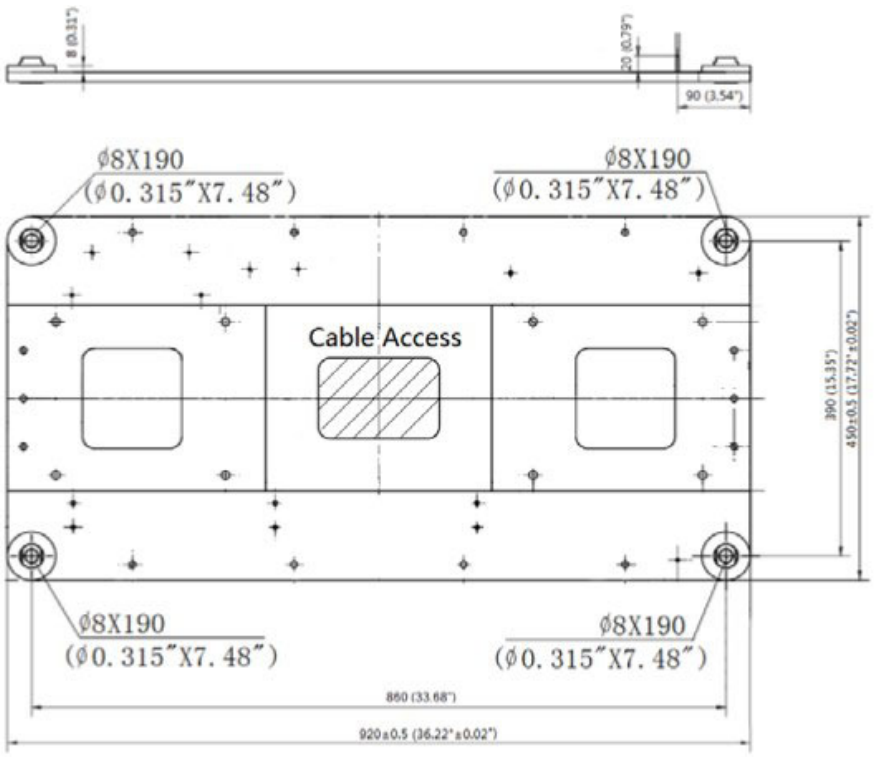
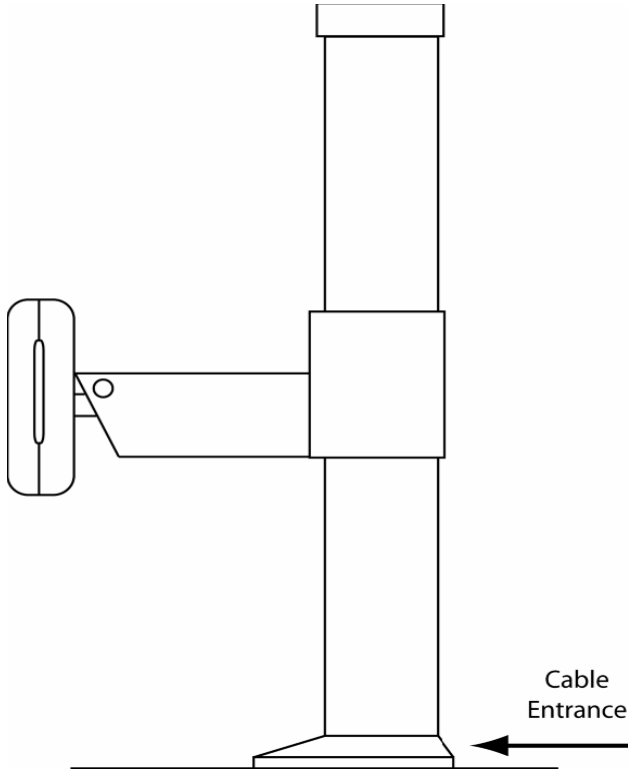


Illustration 5-7: Wall Stand Cable Entrance



5.3 Power requirements for TIB

5.3.1 TIB

The System cabinet distribute the power 120VAC to TIB J1 through MIS 020075 and TIB Ground cable PN# 5400785, See System Master Interconnect Schematic. TIB output 12VDC by tether cable to URP Detector. See Architecture

Illustration 5-8: TIB Power input and output

Tether cable 12VDC output

Chapter 6 Communications/Networking

Section 1.0 Hospital Network

1.1 Broadband Network Connection

The system is equipped with Broadband fast Ethernet hardware for Service diagnostics. Systems equipped with Digital Imaging are capable of placing electronic images on the Hospital image Ethernet Network. It is the purchasers responsibility to provide the Ethernet connection (rated at 100Mb/sec transfer rate for optimal performance) within 3 feet (0.91 meters) of the Operator Console.

The network connection is made at the Operator Console.

• 100BaseT network connection is preferred

• 10BaseT network connection is acceptable

Note: **NOTE:** If using GE PACS LITE BOX software, the GE PACS LITE BOX software revision must be 6.1d02 or greater. Older versions will not work with the system.

NOTE:

1. Connection of the product to a network that includes other equipment could result in previously unidentified risks to patients, operators or third parties;

2. The responsible organization should identify, analyze, evaluate and control these risks;

3. Subsequent changes to the network could introduce new risk and require additional analysis; and

* Changes to the network include:

* Changes in network configuration;

* Connection of additional items to the network;

* Disconnecting items from the network;

* Update of equipment connected to the network;

* Upgrade of equipment connected to the network.

NOTE: The means required to present the images for diagnostic purpose shall comply with the requirements of DICOM standards.

1.2 Phone Line(s) - Voice

It is recommended that phone line(s) be installed within 3 feet (0.91 meters) of the Operator Console and be operational prior to installation.

1.3 Remote Services Broadband Pre-Installation Requirements for Europe

• To enable an easier installation and to benefit from remote support (service and engineering teams), equipment should be Insite connected at installation.

• Thus the connectivity solution to implement should be decided during pre installation and all related data should be available before installation starts.

• For all installations make sure that you have at least one RJ45 dedicated to connect the new equipment on the LAN. In case of Broadband, this connection will also be used for the remote service of the equipment.

• GE Healthcare offers a wide range of connectivity solutions: From full GE package (GE supplies Router and customer buys the line) to customized solutions (GE adapts to customer infrastructure).

• Network devices (like CISCO Routers for instance) can be shipped with the equipment only if the Sales Representative has added the connectivity item in the order.

• For complete descriptions of these connectivity solutions, please refer to the Broadband Solutions catalogue available through your local GEHC sales and service representative.

• Connectivity Process and pre-installations checklists are available in the Broadband Connectivity Pre-Installation Manual (PIM) available through your local GE Healthcare sales and service representative.

• For each solution selected by the customer the pre-installation checklist must be fulfilled by site IT manager in order to get connectivity information (site IT manager contacts, IP address...) available at installation.

NOTE:

Connection of the product to a network that includes other equipment could result in previously unidentified risks to patients, operators or third parties;

- The responsible organization should identify, analyze, evaluate and control these risks;
- Subsequent changes to the network could introduce new risk and require additional analysis; and
  - Changes to the network include;
  - Changes in network configuration;
  - Connection of additional items to the network;
  - Disconnecting items from the network;
  - Update of equipment connected to the network;
  - Upgrade of equipment connected to the network.

Section 2.0 Networkflow Audit

Understanding how your facility leverages its network investment through our Networkflow process will help us better integrate the Discovery XR656 G2 system into your operations. The following is intended to identify the various ways the system can fit into your workflow and the ramifications of selecting one path or another. We would like to start at the beginning, with the patient arriving at your facility, going through registration/admittance/patient scheduling and proceed all the way to the read images being archived.

2.1 What is the Networkflow Audit

This audit was designed to collect information on your network, your DICOM equipment, your workflow and your dataflow. Once this information is collected, it will be used to determine the best way the system can fit into your facility. The information will also be used to ease and speed the integration of the system into your facility .This audit is intended to be performed before the system is quoted to you. With all facts uncovered, GE can prepare a more accurate quote and minimize "surprises" at the time of install.

You should fill this out with the GE Healthcare representative. They will be able to answer any questions you may have.

2.2 Facility Information

☐ Name of facility:	☐ Room #:
☐ Workflow contact:	☐ Phone:
☐ Network Infrastructure contact:	☐ Phone:
☐ DICOM Device contact:	☐ Phone:
☐ Other contact:	☐ Phone:
☐ GEHC Sales Representative:	
☐ GE Healthcare Auditor:	

2.3 Workflow Analysis

When the patient arrives in the system room for the exam, how is the patient data entered into the system?

☐	Manually typed	☐	Entered via barcode reader Barcode format:_____	☐	Downloaded from HIS/RIS

If the patient information was downloaded from a HIS/RIS system, how would the query be

structured? (Pick all that apply)

☐	By date	☐	By modality	☐	By patient information
☐	Other method - Please explain:	_____			

In retrieving patient schedule information, do you query

☐	Once at the start of the shift	☐	Several times during a shift	☐	Before each patient

What percent of images acquired are reviewed via softcopy? _____%
What percent of images acquired are printed? _____%

Once the digital diagnostic images are acquired, what is your facility's default workflow? (Pick one)

☐	Manually send	☐	Automatically push

(Pick all that apply)

☐	Review station(s)	☐	Archive system(s)	☐	Printer(s)

When images are configured for automatic push, what would you like to be sent to PACS/archive/ review stations?

☐	Raw	☐	Processed	☐	Raw and Processed

When images are printed, on what device is the print command originated? (Pick all that apply)

☐	The system	☐	A review workstation	☐	A PACS system

How soon after the images are acquired is the first image quality check done?

☐	Before the next image is shot	☐	Before the patient leaves	☐	After patient leaves

When it comes to image quality, would you prefer to;

☐ Consider all images good unless marked bad

☐ Consider all images bad unless marked good

2.4 The Physical Network

Physical infrastructures vary widely from institution to institution. GE Healthcare tried to pick the most popular networking connection to ease integration into your facility's network.

In the system room, this facility;

☐	Has 100baseT installed	☐	Has 10baseT installed	☐	Has a different network installed
☐	Will have 100baseT installed	☐	Will have 10baseT installed	☐	We don't have a network installed

Do you segment your network using subnets?

☐	Yes	☐	No

Our equipment's IP addresses are:

☐	Static	☐	Acquired via DHCP	☐	A combination of both methods

2.5 System Parameters

The Discovery XR656 G2 system default uses the following IP Addresses internally:

- 192.168.1.1 eth0
- 192.168.2.1 eth1
- 192.168.3.1 br0 (eth2/3)
- 192.168.1.30 detector IP before detector boot
- 192.168.1.50 detector IP after boot in table
- 192.168.2.45 detector IP after boot in WS
- 192.168.3.50 detector IP after boot in Tether/wireless

NOTICE

If the hospital network uses 192.168.x.x, there will be a conflict. If this conflict occurs, you must contact your GE Service Representative to change the internal IP Addresses used by the system.

Discovery XR656 G2 System

Host Name: _____

Network (IP) Address: _ _ _ . _ _ _ . _ _ _ . _ _ _

Subnet Mask: _ _ _ . _ _ _ . _ _ _ . _ _ _

Router IP: _ _ _ . _ _ _ . _ _ _ . _ _ _

Scheduled Station AE Title: _____

The Host Name is the network's name for the Discovery XR656 G2 system.

IP addresses uniquely identify a device on a network. IP addresses are constructed of 32 bits, usually displayed as four numbers separated by a period. Please indicate the Network (IP) Address that will be assigned to the system.

Subnets are a method of logically dividing a network into smaller blocks. This is usually done based upon locality, functionality or security requirements. If your facility will place the system on a subnet, please list the Subnet Mask and Router IP.

The Scheduled Station AE (Application Entity) Title is the name your HIS/RIS system will use to send worklist information to the Discovery XR656 G2 system.

Table 6-1 Remote Host Data

Remote Hosts	**Include a DICOM Compliance Statement for each device**				
This remote Host is a:	☐Review Work Station ☐Archival Device ☐PACS System ☐MPPS Server	☐Review Work Station ☐Archival Device ☐PACS System ☐MPPS Server	☐Review Work Station ☐Archival Device ☐PACS System ☐MPPS Server		Information on Discovery XR656 G2 The system allows you to configure only 1 HIS/RIS server. The system allows you to configure only 1 MPPS server. The system allows configuration of multiple printers and multiple PACS/archive/review stations. The Host Name of all the nodes configured on the system should be unique within the system.
Manufacturer/Model:					
Software/Firmware version:					

Table 6-1 Remote Host Data

Network (IP) Address: DICOM Compliance Level: Image Types Supported: Supports Multi-framing: Host Name:	_ _ _ . _ _ _ . _ _ _ . _ _ _ ☐1.0 ☐2.0 ☐3.0 ☐Not DICOM Compliant ☐DX ☐CR ☐Yes ☐No	_ _ _ . _ _ _ . _ _ _ . _ _ _ ☐1.0 ☐2.0 ☐3.0 ☐Not DICOM Compliant ☐DX ☐CR ☐Yes ☐No	_ _ _ . _ _ _ . _ _ _ . _ _ _ ☐1.0 ☐2.0 ☐3.0 ☐Not DICOM Compliant ☐DX ☐CR ☐Yes ☐No		
Do you plan to use this device as a: Remote Host Server? AE Title:	☐Yes ☐No If "yes" provide:	☐Yes ☐No If "yes" provide:	☐Yes ☐No If "yes" provide:		
Port Number:					

Table 6-2

Remote Hosts	**Include a DICOM Compliance Statement for each device**				
Query/Retrieve? Query/Retrieve AE Title:	☐Yes ☐No If "yes" provide:	☐Yes ☐No If "yes" provide:	☐Yes ☐No If "yes" provide:		
Port Number:					
Query/Retrieve by:	☐Study ☐Patient	☐Study ☐Patient	☐Study ☐Patient		
Storage Commitment? Storage Commitment AE Title:	☐Yes ☐No If "yes" provide:	☐Yes ☐No If "yes" provide:	☐Yes ☐No If "yes" provide:		
Port Number:					
Network (IP) Address:	_ _ _ . _ _ _ . _ _ _ . _ _ _ . _ _ _ . _ _ _ . _ _ _ . _ _ _ . _ _ _ . _ _ _ . _ _ _				
MPPS Server? AE Title:	☐Yes ☐No If "yes" provide:	☐Yes ☐No If "yes" provide:	☐Yes ☐No If "yes" provide:		
Port Number:					

Table 6-2

Network (IP) Address:	_ _ _ . _ _ _ . _ _ _ . _ _ _	_ _ _ . _ _ _ . _ _ _ . _ _ _	_ _ _ . _ _ _ . _ _ _ . _ _ _	

2.6 Devices & Services Audit

Use the following narrative to complete the form on the previous page.

REMOTE HOSTS: Remote hosts are DICOM devices to which the Discovery XR656 G2 system can push an image. Remote hosts can be review workstations, archival devices, or PACS systems.Please indicate the type of remote host. Now indicate the manufacturer and model name or number.

Compatibility can vary with software versions, please indicate the version of device firmware/software the device will be running.

List the device's **IP address.**

The answers to the next several items can be found in the device's DCS (DICOM Conformance Statement).

Please indicate the highest level of **DICOM conformance** for this device. If the device is not DICOM compliant, please indicate so and move on to the next device.

If the device does have some level of DICOM conformance please return a copy of the DICOM Conformance Statement with this completed form.

DICOM supports a number of **image types**. Please indicate if this device supports the DX and/or the CR image types.

The **host name** is the name that will appear on the screen and users will use to indicate this device. Please list the host name.

The next four sections address the four services that remote host devices may offer. Each of the services will have its own AE (application entity) title and port number. The AE title is the name given to a service or application provided by a DICOM device. The

port number is a logical designation within the device. These pieces of information are available in the device's DCS.

Being a **remote host server** allows the Discovery XR656 G2 system to push images to other devices. If you want the device to accept this service, check yes and provide the AE title and port number.

Being a **query/retrieve** service class provider allows the Discovery XR656 system to query this device and retrieve images stored there. If you want this device to provide these services to the Discovery XR656 system check yes and fill in the requested items.

The **query/retrieve** by study or patient controls how much the user is able to retrieve at one time. For study, the user may retrieve studies, series, images. For patient, the user may retrieve all of the study attributes plus a patient's entire image collection.

A **storage commitment** provider confirms that images sent by the Discovery XR656 G2 system to an archival system were received and stored. Note - This option is only available when the Discovery XR656 G2 system is sending DX type images. If your device supports both DX image types and storage commitment check yes and provide the AE title, the port number and the network (IP) address.

The **MPPS server** receives the messages sent by the Discovery XR656 G2 system. These messages consist of information such as when the exam started and closed, how many images were acquired, dose information, etc. This information is then updated on the Hospital Scheduling system. If the site has an MPPS server, provide the AE Title, IP address and port number.

Table 6-3

Printers	Include a DICOM Compliance Statement for each printer	
Manufacturer/Model:		
Software/Firmware Version:		
Prints via Spooler:	☐Yes ☐No	☐Yes ☐No
Network (IP) Address:	_ _ _ . _ _ _ . _ _ _ . _ _ _	_ _ _ . _ _ _ . _ _ _ . _ _ _
DICOM Compliance Level:	☐1.0 ☐2.0 ☐3.0 ☐Not DICOM Compliant	☐1.0 ☐2.0 ☐3.0 ☐Not DICOM Compliant
Host Name:		
Printer AE Title:		
Port Number:		

Printers: As with the remote hosts, please list the manufacturer and the model name/number. The software/firmware version should also be entered. Next, supply the IP address of the printer.

Indicate the DICOM compliance level of the printer. If it is not DICOM compatible, please indicate so.

DICOM compatibility does not guarantee all functions will work properly. **Include every unique printer's DICOM Compliance Statement.**

Supply the Host name for the printer.

Look in the DCS for the printer's AE title and port number.

Table 6-4

RIS Systems	Include a DICOM Compliance Statement for each device	
Manufacturer/Model:		
Software/Firmware Version:		
Network (IP) Address:	_ _ _ . _ _ _ . _ _ _ . _ _ _	_ _ _ . _ _ _ . _ _ _ . _ _ _
DICOM Compliance Level:	☐1.0 ☐2.0 ☐3.0 ☐Not DICOM Compliant	☐1.0 ☐2.0 ☐3.0 ☐Not DICOM Compliant
Host Name:		
HIS/RIS AE Title:		
Port Number:	☐DX ☐CR	☐DX ☐CR
Modality used for Scheduling:		

RIS Systems: As with the remote hosts please list the manufacturer and the model name/number. The software/firmware version should also be entered.	Fill in the Host name.
Indicate the IP address the device is using as well as the DICOM compliance level. Please include the DCS for the RIS with this completed form.	Look in the DCS for the AE title and port number. Please indicate if this device supports the DX and/or the CR image types. This information should also be in the device's DCS.

2.7 Data Flow Analysis

Now that we have outlined the way your facility works and the devices you work with, we would like to define how the images flow through your network.

The Discovery XR656 G2 system is an acquisition-only device. Because of that fact you will need to move acquired images off the system and into your work/data flow. Please use the chart below to describe your data flow. As an example, if your facility reviewed images as the first step after acquisition, the review box would be checked in the first column of the Task row (shaded) and the review workstation would be checked in the first column of the Device row. You should use each of the functions once.

1st step after acquisition	2nd step after acquisition	3rd step after acquisition
☐ Archive	☐ Archive	☐ Archive
☐ Print	☐ Print	☐ Print
☐ Review	☐ Review	☐ Review
☐ Archive device	☐ Archive device	☐ Archive device
☐ PACS	☐ PACS	☐ PACS
☐ Printer	☐ Printer	☐ Printer
☐ Review Workstation	☐ Review Workstation	☐ Review Workstation
☐ Spooler ? Printer(s)	☐ Spooler ? Printer(s)	☐ Spooler ? Printer(s)
☐ Spooler ? Review Workstation(s)	☐ Spooler ? Review Workstation(s)	☐ Spooler ? Review Workstation(s)

Printing: It is important to us to understand the path your images follow before they are printed. We are now looking to answer the question of what road an image most typically travels on its way to be printed regardless if that is the first step in your process or not. Please try to find in the list below the path that best describes the path the image takes from acquisition to printing.

☐ XR System ? Printer

☐ XR System ? Spooler ? Printer(s)

☐ XR System ? Archive Device ? Printer

☐ XR System ? Archive Device ? Spooler ? Printer (s)

☐ XR System ? Archive Device ? Review Workstation ? Printer

☐ XR System ? Archive Device ? Review Workstation ? Spooler ? Printer

☐ XR System ? PACS ? Printer

☐ XR System ? PACS ? Spooler ? Printer

☐ XR System ? Review Workstation ? Printer

☐ XR System ? Review Workstation ? Spooler ? Printer

☐ XR System ? Other: _____ ? Printer(s)

Image Review: Now let's trace the path from acquisition to image review. Again, pick the item below that best describes how the image flows from the Discovery XR656 G2 system to the radiologist.

☐ XR System ? Printer ? Printed Film ? Radiologist

☐ XR System ? Review Workstation ? Radiologist

☐ XR System ? Archive Device ? Review Workstation ? Radiologist

☐ XR System ? PACS ? Radiologist

☐ XR System ? PACS ? Review Workstation ? Radiologist

☐ XR System ? Other: _____ ? Radiologist

Archive: The final part of this triad is archiving images. Pick the item below that best describes the flow of images to be archived.

☐ XR System ? Archive Device

☐ XR System ? PACS

☐ XR System ? Printer ? Printed Film ? Filing System

☐ XR System ? Review Workstation ? Archive Device

☐ XR System ? Review Workstation ? PACS

☐ XR System ? Other: _____ ? Archive Device

2.8 What Will Happen Next?

Next, your completed audit sheet will be analyzed by your GE Healthcare representative and any issues identified.

Chapter 7 Cable Information

Section 1.0 Introduction

The following information is provided as an aid to make the physical installation of system cables easy and efficient. In the tables that follow, the physical characteristics of each cable and its associated connectors is provided. Thus making it easier to plan cable paths and clearances in advance. Physical characteristics are given for each available cable length. Review cable lengths carefully and choose lengths appropriate for your installation prior to the equipment arriving, to avoid unnecessary installation delays.

Remember, it is up to you to make sure that all cables are routed and connected in accordance with all regulatory laws that may apply.

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Section 2.0 Cable Information

2.1 System Cabinet to OTS with 2-meter bridge

ITEM	PART NO.	DESCRIPTION	MIS NO	LENGTH	USABLE LENGTH	RATING VOLTAGE	CONNECTOR SIZE (MM) L*W*D
1	5139257	MIS CABLE-Standard Length OTS CAN	020012	15M (49.21FT)	14.5M (47.57FT)	350ACV 500VDC	42 x 17 x 63
2	5139257-2	OTS MIS Cable-Standard length Stator, Fan and Pressure Switch	020013	15M (49.21FT)	14.5M (47.57FT)	350ACV 500VDC	42 x 40 x 30
3	5139257-3	OTS MIS Cable-Standard Length 120 VAC	020014	15M (49.21FT)	14.5M (47.57FT)	350ACV 500VDC	42 x 15 x 30
4	5139257-4	OTS MIS Cable-Standard Length High Voltage Anode	020015	15M (49.21FT)	14.5M (47.57FT)	75KV	190 X 80 X 80
5	5139257-5	OTS MIS Cable-Standard Length High Voltage Cathode	020016	15M (49.21FT)	14.5M (47.57FT)	75KV	190 X 80 X 80
6	5139257-6	OTS MIS Cable-Standard Length Ground	020017	15M (49.21FT)	14.5M (47.57FT)	300V	φ15 X 35

2.2 System Cabinet to OTS with 3 meter or 4 meter bridge

ITEM	PART NO.	DESCRIPTION	MIS NO	LENGTH	USABLE LENGTH	RATING VOLTAGE	CONNECTOR SIZE (MM) L*W*D
1	5139257-7	MIS CABLE-Standard Length OTS CAN	020012	20M (65.62FT)	19.5M (63.98FT)	350ACV 500VDC	42 x 17 x 63
2	5139257-8	OTS MIS Cable-Standard length Stator, Fan and Pressure Switch	020013	20M (65.62FT)	19.5M (63.98FT)	350ACV 500VDC	42 x 40 x 30
3	5139257-9	OTS MIS Cable-Standard Length 120 VAC	020014	20M (65.62FT)	19.5M (63.98FT)	350ACV 500VDC	42 x 15 x 30
4	5139257-10	OTS MIS Cable-Standard Length High Voltage Anode	020015	20M (65.62FT)	19.5M (63.98FT)	75KV	190 X 80 X 80
5	5139257-11	OTS MIS Cable-Standard Length High Voltage Cathode	020016	20M (65.62FT)	19.5M (63.98FT)	75KV	190 X 80 X 80
6	5139257-12	OTS MIS Cable-Standard Length Ground	020017	20M (65.62FT)	19.5M (63.98FT)	300V	φ15 X 35

2.3 G2 Table Standard Length MIS Cable 5496118

ITEM	PART NO.	DESCRIPTION	MIS NO	LENGTH	USABLE LENGTH	RATING VOLTAGE	CONNECTOR SIZE (MM) L*W*D
1	5307318-4	Table Ion chamber MIS cable	020045	16M (52.49FT)	15.5M (50.85FT)	350ACV 500VDC	45 x 20 x 45
2	5368672-4	Table Detector Ethernet MIS cable	020003	50M (164.04FT)	49.5M (162.40)	350ACV 500VDC	20 x 12 x 40
3	5336729-4	Table Power MIS cable	020005	16M (52.49FT)	15.5M (50.85FT)	350ACV 500VDC	30 x 25 x 30
4	5336730-4	Table DPS MIS cable	11753A	16M (52.49FT)	15.5M (50.85FT)	350ACV 500VDC	30 x 21 x 87
5	5336731-4	Table Can MIS cable	11632A	16M (52.49FT)	15.5M (50.85FT)	350ACV 500VDC	35 x 20 x 45
6	5336736-4	Table Ground MIS cable	11752A	16M (52.49FT)	15.5M (50.85FT)	300V	φ10 X 35
7	5336737-4	Table Emergency Stop MIS cable	11754A	16M (52.49FT)	15.5M (50.85FT)	350ACV 500VDC	35 x 20 x 45

2.4 G2 Table Long Length MIS Cables 5496119

ITEM	PART NO.	DESCRIPTION	MIS NO	LENGTH	USABLE LENGTH	RATING VOLTAGE	CONNECTOR SIZE (MM) L*W*D
1	5307318-5	Table Ion chamber MIS cable	020045	21M (68.90FT)	20.5M (67.26FT)	350ACV 500VDC	45 x 20 x 45
2	5368672-4	Table Detector Ethernet MIS cable	020003	50M (164.04FT)	49.5 (162.40FT)	350ACV 500VDC	20 x 12 x 40
3	5336729-5	Table Power MIS cable	020005	21M (68.90FT)	20.5M (67.26FT)	350ACV 500VDC	30 x 25 x 30
4	5336730-5	Table DPS MIS cable	11753A	21M (68.90FT)	20.5M (67.26FT)	350ACV 500VDC	30 x 21 x 87
5	5336731-5	Table Can MIS cable	11632A	21M (68.90FT)	20.5M (67.26FT)	350ACV 500VDC	35 x 20 x 45
6	5336736-5	Table Ground MIS cable	11752A	21M (68.90FT)	20.5M (67.26FT)	300V	φ10 X 35
7	5336737-5	Table Emergency Stop MIS cable	11754A	21M (68.90FT)	20.5M (67.26FT)	350ACV 500VDC	35 x 20 x 45

2.5 Standard WS Length Version 5401578

ITEM	PART NO.	DESCRIPTION	MIS NO	LENGTH	USABLE LENGTH	RATING VOLTAGE	CONNECTOR SIZE (MM) L*W*D
1	5336717-2	Substitute 5146500-1 for Rohs compliance, FeiTian II WS CAN and CANopen Cable	11644A	15M (49.21FT)	14.5M (47.57FT)	350ACV 500VDC	35 x 20 x 45
2	5336733-2	Substitute 5146500-30 for Rohs compliance, FeiTian II WS ION Chamber Cable	020021	15M (49.21FT)	14.5M (47.57FT)	350ACV 500VDC	45 x 20 x 45
3	5336732-2	Substitute 5146500-3 for Rohs compliance, FeiTian II WS DPS Power Cable	11755A	15M (49.21FT)	14.5M (47.57FT)	350ACV 500VDC	30 x 21 x 87
4	5336722-2	Substitute 5146500-2 for Rohs compliance, FeiTian WS Power Cable	11756A	15M (49.21FT)	14.5M (47.57FT)	350ACV 500VDC	30 x 21 x 87
5	5336738-2	Substitute 5146500-5 for Rohs compliance, FeiTian II WS Ground Cable	11757A	15M (49.21FT)	14.5M (47.57FT)	300V	φ10 X 35
6	5368672-4	PC Ethernet cable to Wall stand	20100A	50M (164.04FT)	49.5M (162.40FT)	350ACV 500VDC	20 x 12 x 40

2.6 Ext WS Length Version 5262569-3

ITEM	PART NO.	DESCRIPTION	MIS NO	LENGTH	USABLE LENGTH	RATING VOLTAGE	CONNECTOR SIZE (MM) L*W*D
1	5336717	Substitute 5146500-1 for Rohs compliance, FeiTian II WS CAN and CANopen Cable	11644A	20M (65.62FT)	19.5M (63.98FT)	350ACV 500VDC	35 x 20 x 45
2	5336733	Substitute 5146500-30 for Rohs compliance, FeiTian II WS ION Chamber Cable	020021	20M (65.62FT)	19.5M (63.98FT)	350ACV 500VDC	45 x 20 x 45
3	5368672-4	PC Ethernet cable to Wall Stand	20100A	50M (164.04FT)	49.5M (162.40FT)	350ACV 500VDC	20 x 12 x 40
4	5336732	Substitute 5146500-3 for Rohs compliance, FeiTian II WS DPS Power Cable	11755A	20M (65.62FT)	19.5M (63.98FT)	350ACV 500VDC	30 x 21 x 87
5	5336722	Substitute 5146500-2 for Rohs compliance, FeiTian WS Power Cable	11756A	20M (65.62FT)	19.5M (63.98FT)	350ACV 500VDC	30 x 21 x 87
6	5336738	Substitute 5146500-5 for Rohs compliance, FeiTian II WS Ground Cable	11757A	20M (65.62FT)	19.5M (63.98FT)	300V	φ10 X 35

2.7 WallBox

ITEM	PART NO.	DESCRIPTION	MIS NO	LENGTH	USABLE LENGTH	RATING VOLTAGE	CONNECTOR SIZE (MM) L*W*D
1	5336719	Substitute 5146500-15 for Rohs compliance, FeiTian II WBI Jedi CAN Cable	11760A	20M (65.62FT)	19.5M (63.98FT)	350ACV 500VDC	35x20x45
2	5336720	Substitute 5146500-16 for Rohs compliance, FeiTian II WBI CAN Cable	11761A	20M (65.62FT)	19.5M (63.98FT)	350ACV 500VDC	35x20x45
3	5146500-18	FeiTian WBI Ground Cable	11764A	20M (65.62FT)	19.5M (63.98FT)	300V	φ10 X 35
4	5146500-17	FeiTian WBI CRE Power Cable	11763A	20M (65.62FT)	19.5M (63.98FT)	350ACV 500VDC	28 X 20 X 45
5	5341237-2	26 PIN HD D-SUB CABLE(From System Cabinet to Wallbox)	020064	20M (65.62FT)	19.5M (63.98FT)	350ACV 500VDC	45 x 20 x 45

2.8 FlashPad Tether

ITEM	PART NO.	DESCRIPTION	MIS NO	LENGTH	USABLE LENGTH	RATING VOLTAGE	CONNECTOR SIZE (MM) L*W*D
1	5402662	TIB Power Cable	020075	20M (65.62FT)	19.5M (63.98FT)	350ACV 500VDC	35 x 40 x 87
2	5393576-2	TIB Ethernet Cable	020077	25M (82.02FT)	24.5M (80.38FT)	350ACV 500VDC	20 x 12 x 40
3	5389155-2	FlashPad Tether with Plug Asm, 10m	NA	10M (32.81FT)	9.5M (31.17FT)	350ACV 500VDC	100 x 28 x 110
4	5389155	FlashPad Tether with Plug Asm, 4m	NA	4M (13.12FT)	3.5M (11.48FT)	350ACV 500VDC	100 x 28 x 110
5	5389155-4	FlashPad Tether with Plug Asm, 7m	NA	7M (22.97FT)	6.5M (21.33FT)	350ACV 500VDC	100 x 28 x 110

2.9 Dongle

ITEM	PART NO.	DESCRIPTION	MIS NO	LENGTH	USABLE LENGTH	RATING VOLTAGE	CONNECTOR SIZE (MM) L*W*D
1	5412201	Gryphon Dongle Ground cable	NA	24M (78.74FT)	23.5M (77.10FT)	300V	φ35 X 50

2.10 Computer

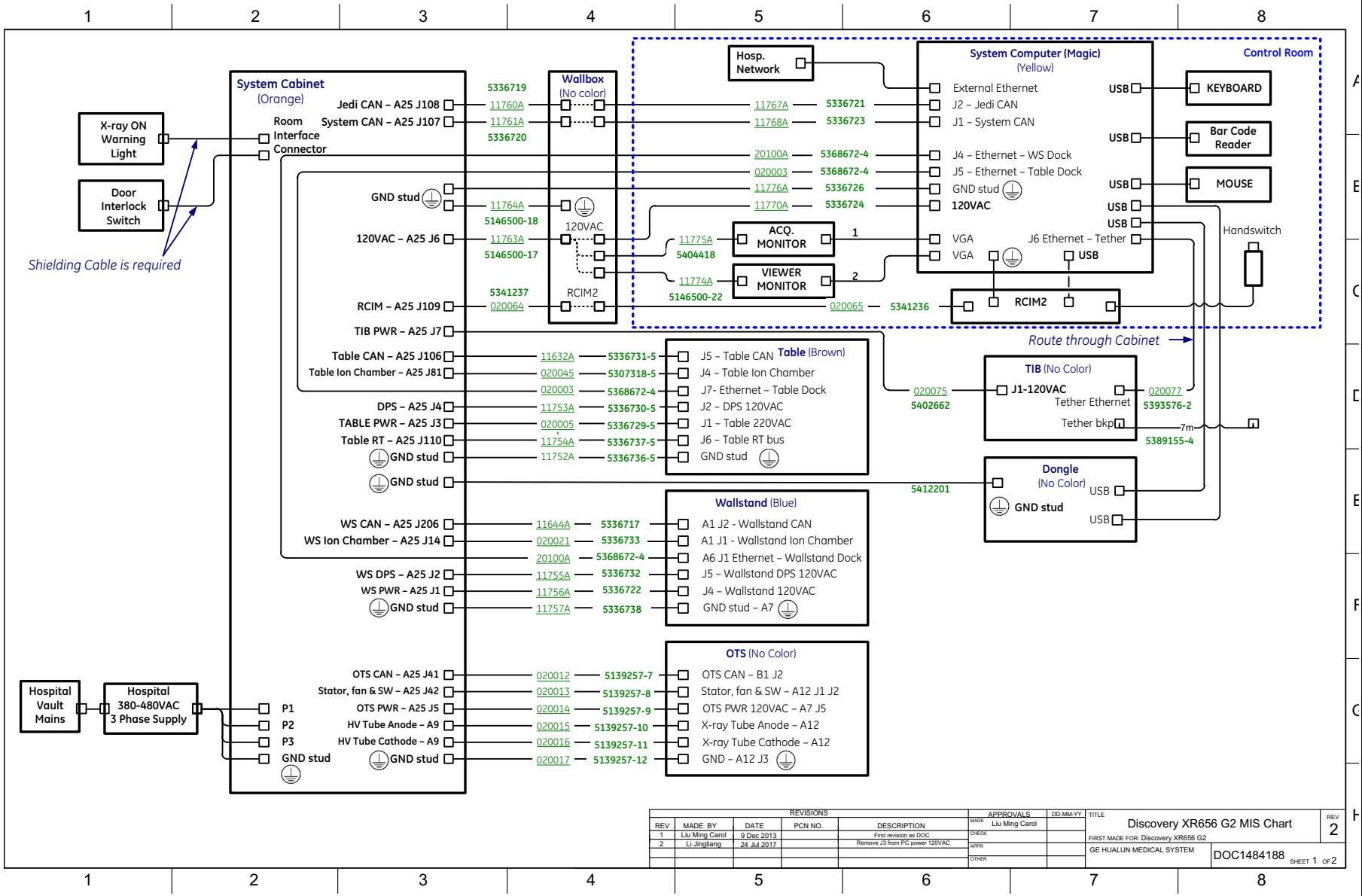
ITEM	PART NO.	DESCRIPTION	MIS NO	LENGTH	USABLE LENGTH	RATING VOLTAGE	CONNECTOR SIZE (MM) L*W*D
1	5146500-22	FeiTian Image Monitor Cable (Viewer Monitor)	11774A	3M (9.84FT)	2.8M (9.19FT)	350ACV 500VDC	35 x 42 x 60
2	5404418	2th monitor power cable (ACQ.Monitor)	11775A	3M (9.84FT)	2.8M (9.19FT)	350ACV 500VDC	35 x 40 x 60
3	5336721	Substitute 5146500-19 for Rohs compliance, FeiTian Magic PC Jedi CAN Cable	11767A	3M (9.84FT)	2.8M (9.19FT)	350ACV 500VDC	35 x 20 x 45
4	5336723	Substitute 5146500-20 for Rohs compliance, FeiTian II Magic PC System CANopen Cable	11768A	3M (9.84FT)	2.8M (9.19FT)	350ACV 500VDC	35 x 20 x 45
5	5336726	Substitute 5146500-24 for Rohs compliance, FeiTian Magic PC Ground Cable	11776A	18M (59.06FT)	17.5M (57.41FT)	300V	φ10 X 35
6	5336724	Substitute 5146500-21 for Rohs compliance, FeiTian II Magic PC Power Cable	11770A	3M (9.84FT)	2.8M (9.19FT)	350ACV 500VDC	35 x 40 x 60

2.11 RCIM II

ITEM	PART NO.	DESCRIPTION	MIS NO	LENGTH	USABLE LENGTH	RATING VOLTAGE	CONNECTOR SIZE (MM) L*W*D
1	5341236	26 PIN HD D-SUB CABLE	020065	3M (9.84FT)	2.8M (9.19FT)	350ACV 500VDC	45 x 20 x 45

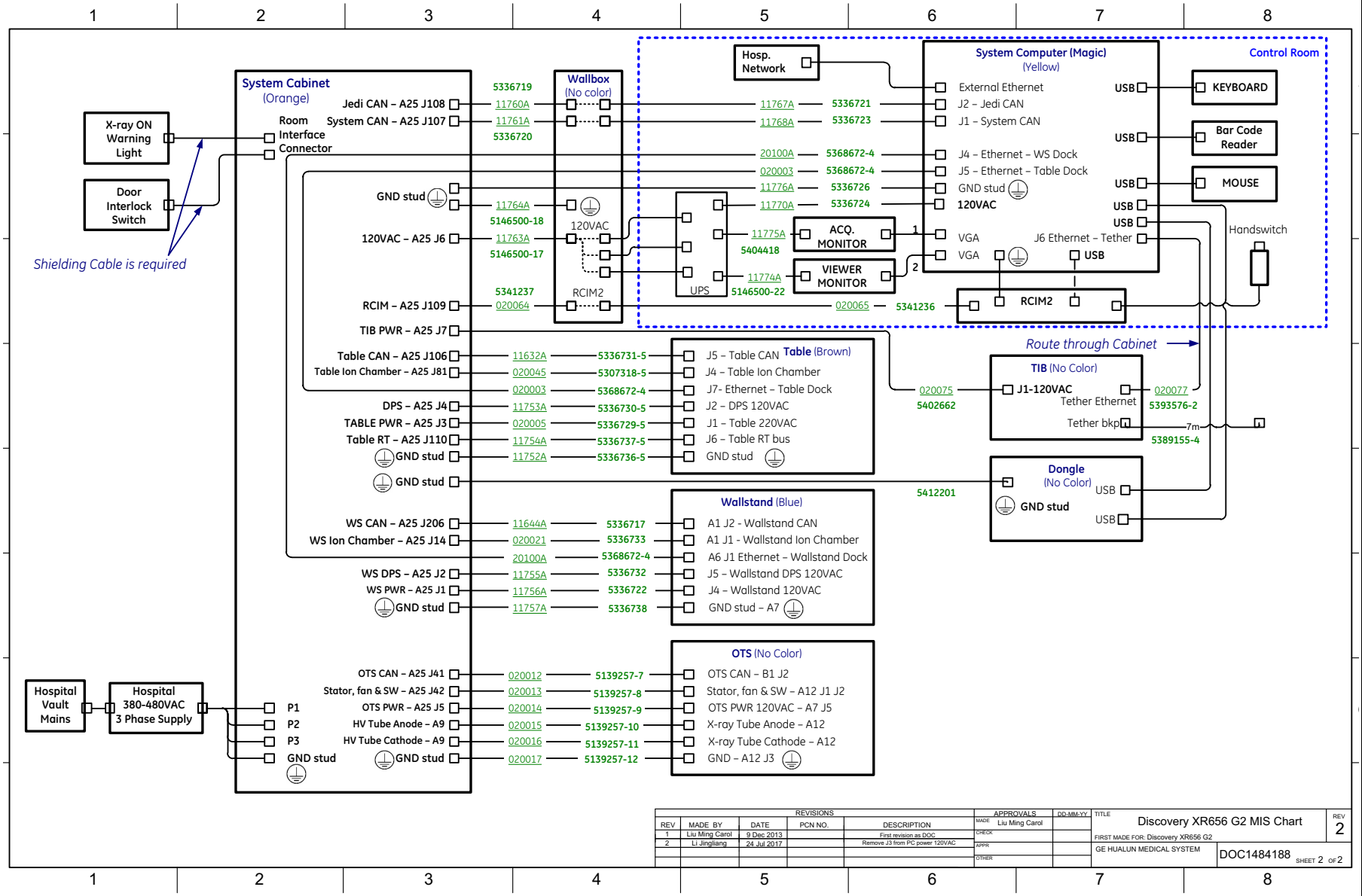
Section 3.0 System Master Interconnect Schematic (MIS Chart)

System MIS Cable Chart without UPS



REVISIONS					APPROVALS		DD-MM-YY	TITLE	REV
REV	MADE BY	DATE	PCN NO.	DESCRIPTION	MADE	Liu Ming Carol		Discovery XR656 G2 MIS Chart	2
1	Liu Ming Carol	9 Dec 2013		First revision as DOC	CHECK			FIRST MADE FOR: Discovery XR656 G2	
2	Li Jingliang	24 Jul 2017		Remove J3 from PC power 120VAC	APPR			GE HUALUN MEDICAL SYSTEM	DOC1484188 SHEET 1 OF 2
					OTHER				

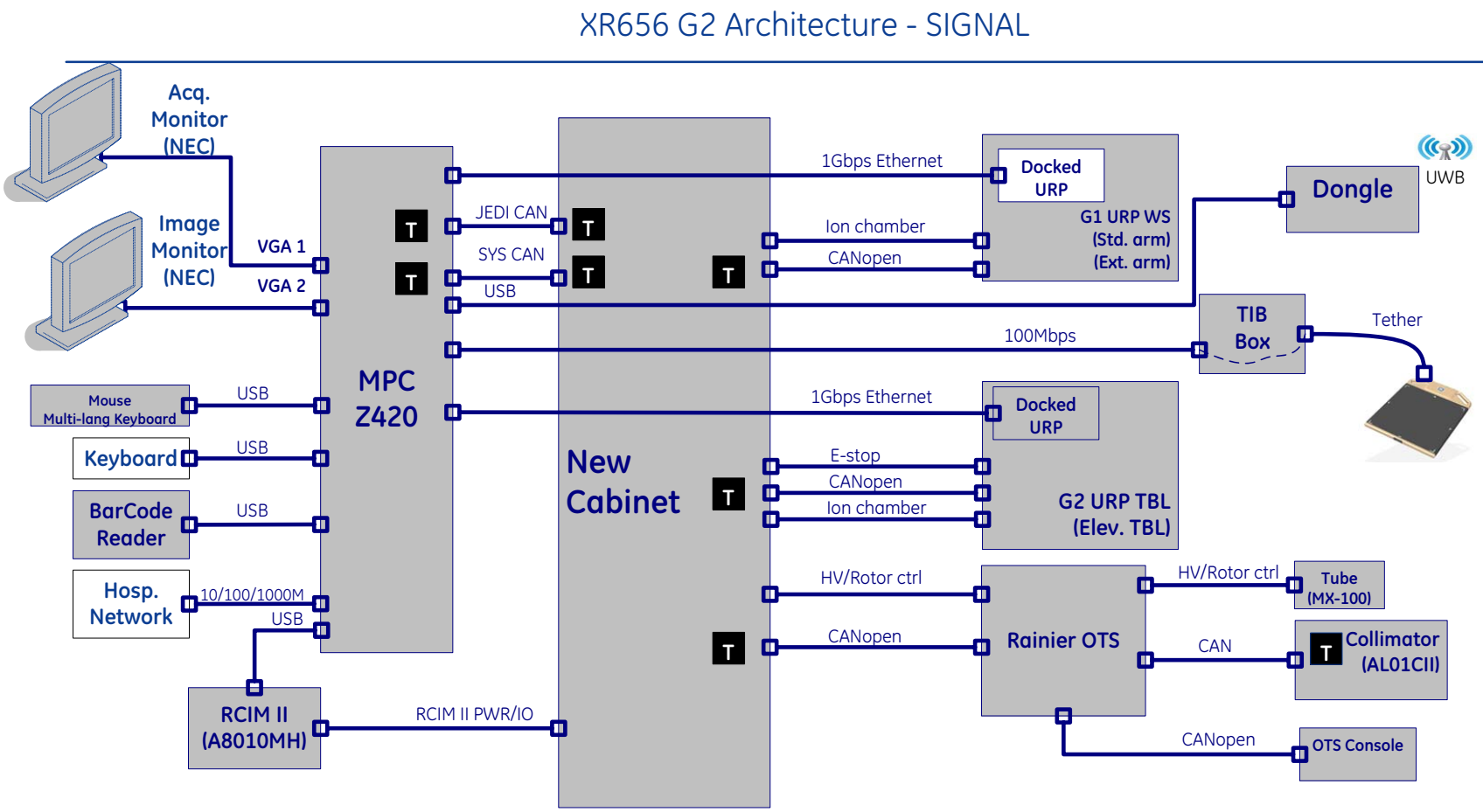
System MIS Cable Chart with UPS

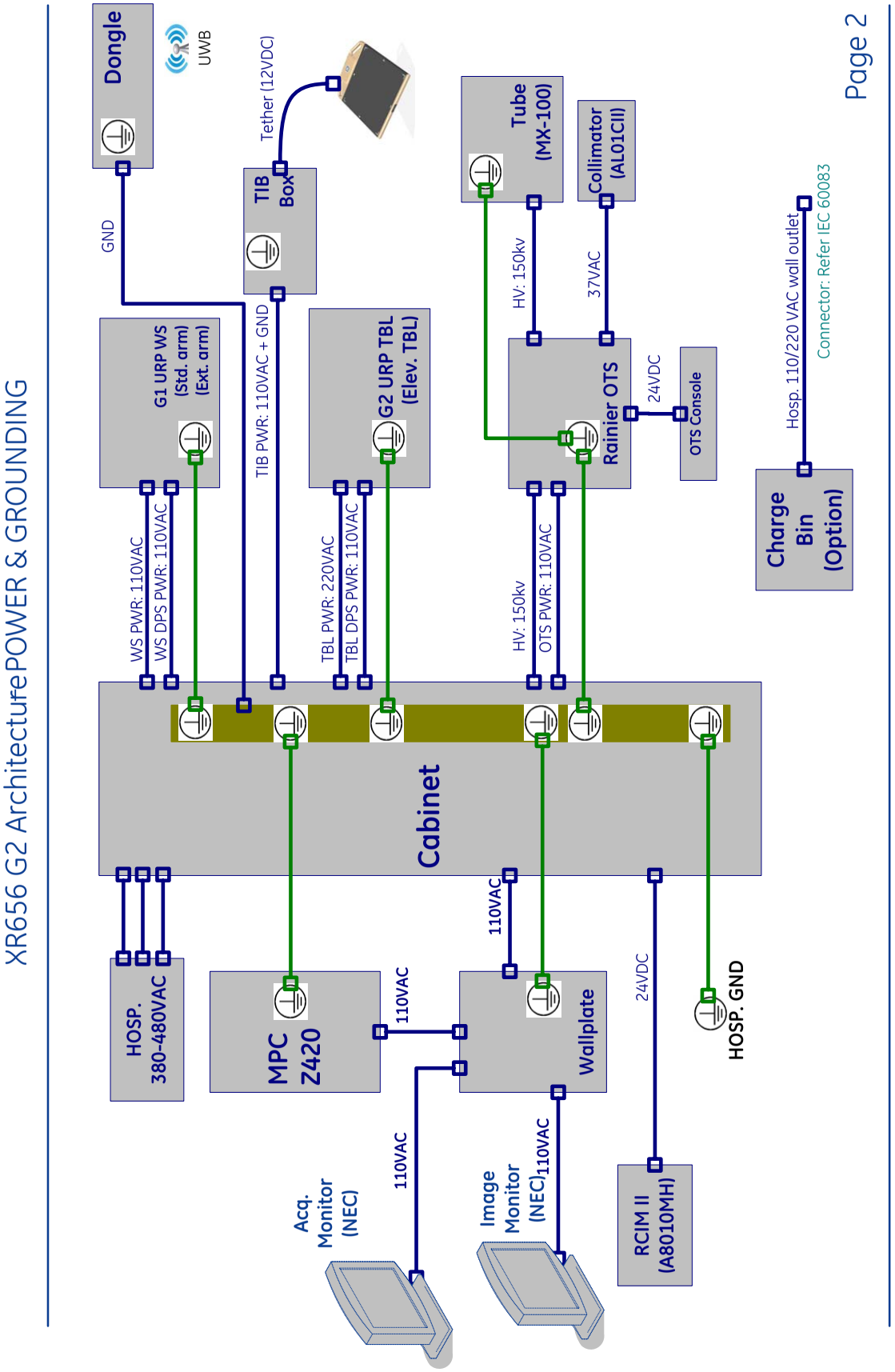


REVISIONS					APPROVALS	DD-MM-YY
REV	MADE BY	DATE	PCN NO.	DESCRIPTION	MADE Liu Ming Carol	
1	Liu Ming Carol	9 Dec 2013		First revision as DOC	CHECK	
2	Li Jingliang	24 Jul 2017		Remove J3 from PC power 120VAC	APPR	
					OTHER	

TITLE: Discovery XR656 G2 MIS Chart — REV 2
FIRST MADE FOR: Discovery XR656 G2
GE HUALUN MEDICAL SYSTEM — DOC1484188 SHEET 2 OF 2

Section 4.0 System Architecture




XR656 G2 ArchitecturePOWER & GROUNDING
Page 2
Dongle
UWB
Tether (12VDC)
TIB Box
GND
TIB PWR: 110VAC + GND
Tube (MX-100)
Collimator (AL01CII)
HV: 150kv
37VAC
G1 URP WS (Std. arm) (Ext. arm)
G2 URP TBL (Elev. TBL)
Rainier OTS
24VDC
OTS Console
Hosp. 110/220 VAC wall outlet
Connector: Refer IEC 60083
Charge Bin (Option)
WS PWR: 110VAC
WS DPS PWR: 110VAC
TBL PWR: 220VAC
TBL DPS PWR: 110VAC
HV: 150kv
OTS PWR: 110VAC
Cabinet
HOSP. 380-480VAC
MPC Z420
110VAC
110VAC
Wallplate
24VDC
HOSP. GND
Acq. Monitor (NEC)
110VAC
Image Monitor (NEC)
110VAC
RCIM II (A8010MH)

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